DRAFT ENVIRONMENTAL IMPACT REPORT

Lancaster Landfill and Recycling Facility

VOLUME II - APPENDICES

County Case No. 93070

State Clearinghouse No. 93101036

April 1997

County of Los Angeles
Department of Regional Planning

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SCREENCHECK
DRAFT ENVIRONMENTAL IMPACT REPORT
LANCASTER LANDFILL AND RECYCLING CENTER EXPANSION
VOLUME II

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APPENDIX A

INITIAL STUDY, NOTICE OF PREPARATION AND RESPONSES TO NOTICE OF PREPARATION

9267-601

Los Angeles County
DEPARTMENT OF
REGIONAL PLANNING
320 West Temple Street
Los Angeles
California 90012
974-6411
James E. Hartl, AICP
Planning Director

June 30, 1993

Bryan A. Stirrat & Associates Inc.
1360 Valley Vista Drive, Suite 200
Diamond Bar, CA 91765

RE: INITIAL STUDY DETERMINATION LETTER
PROJECT NO. 93070

On June 28, 1993 *, the staff of the Department of Regional Planning completed its review of the Environmental Questionnaire and other data regarding your project and made the following determination as to the type of environmental document required.*

( ) Use of previously prepared Environmental Document
( ) Categorical Exemption
( ) Negative Declaration
( ) Mitigated Negative Declaration
( ) Other: _____
*(/) **Environmental Impact Report (EIR)***

In order to commence the EIR process, a Notice of Preparation (NOP) must be circulated and the required fee paid. As such, please submit 30 *acceptable copies of the items on the attached list to accompany the NOP and a $5,000.00 processing fee.* ***NOTE: This must be done within 30 days from the above date or your file will be terminated.*** *Additional fees may be requested later to cover costs exceeding this amount.*

Subsequent to the NOP, you are required to submit two copies of a screencheck document in the form of a Draft EIR for staff review. Staff will review and require appropriate revision to your document to reflect the independent, impartial and factual analysis of the County. It is advisable that you achieve this objective early in the process to avoid unnecessary delays. When the Draft EIR is deemed complete you will be required to submit 50 or more copies for circulation. The EIR is to address at least the factors checked in the attached Initial Study. You or your consultant must contact staff for additional instruction/information received prior to commencing preparation of the Draft EIR.

If you have any questions regarding the above determination or environmental document preparation, please contact Paul McCarthy *of the Impact Analysis Section at (213) 974-6461.*

Very truly yours,

DEPARTMENT OF REGIONAL PLANNING
James E. Hartl, AICP
Director of Planning

Frank Meneses
Section Head
Impact Analysis

JEH:FM:pr

Attachment

ITEMS NEEDED FOR NOTICE OF PREPARATION CIRCULATION

1. *A typewritten 8 1/2 x 11 sheet or sheets with the following information.*

   A. *Project number and name of project (if any).*

   B. *A complete and detailed description of the proposed project including projected amount of grading, size of project and off-site improvements required. (roads, sewer extensions etc.)*

   C. *An accurate description of the location of the project including address and a vicinity map (if in a rural or undeveloped area, project site should be plotted on a U.S.G.S. 15' or 7 1/2' topographical map identified by quadrangle name).*

   D. *Actions required to approve the project such as a plan amendment (including the appropriate local plan), zone change (from/to), Conditional Use Permit (purpose), oak tree permit (number of trees to be removed /total trees) parking permit (purpose), etc. Applicant should contact the Departmental Lead Section for data and/or confirmation of this information.*

   E. *Probable environmental effects of the project as summarized from the Initial Study.*

2. *Detailed Plot plan of the project or a tentative tract map or parcel map if it is a subdivision.*

3. *A 500-foot radius land use map of the subject property. Large area projects may require a larger radius. Staff may be contacted if clarification is required.*

4. *Any supplemental information to aid in reviewing the project must be approved by staff prior to submittal.*

Staff will review these items prior to circulation of the NOP. Inaccurate, self-serving, or poorly prepared submittals will result in delays and costs to the applicant. Questions should be directed to the Impact Analysis Section at (213) 974-6461.

PROJECT N . . : 93070

STAFF USE ONLY

CASES: CUP 1483

* * * * INITIAL STUDY * * * *

COUNTY OF LOS ANGELES
DEPARTMENT OF REGIONAL PLANNING

GENERAL INFORMATION

Map/Case Date: 5-25-93 Staff Member: C. TYISKA

Thomas Guide: 1991 148 USGS Quad: LANCASTER EAST

Location: 600 EAST AVENUE "F", LANCASTER

Description of Project: EXTEND CUP 1483 AND EXPAND EXISTING LANDFILL AND RECYCLING CENTER; CONTIGUOUS VERTICAL AND HORIZONTAL (WESTERLY) EXPANSION OF THE EXISTING LANCASTER LANDFILL AND RECYCLING CENTER, AND A NON-CONTIGUOUS HORIZONTAL EXPANSION TO THE EAST, SEPARATED FROM THE EXISTING SITE BY A COUNTY ROAD (10TH STREET EAST)

Gross Area: 276 ACRES

Environmental Setting: EXISTING OFFICES AND BUILDINGS, VACANT DESERT LAND, FLAT LANDSCAPE, SCRUB VEGETATION, JOSHUA TREES, GRASSES, DESERT HORNED LIZARD, MOJAVE GROUND SQUIRREL, JACKRABBITS, RODENTS, AND OTHER COMMON BIRDS; SUITABLE HABITAT FOR THE DESERT TORTOISE EXIST ON SITE.

Zoning: D-2-1 General Plan: NON URBAN

Community/Areawide Plan: NONURBAN 1 (0.5 DU/AC)

ajor projects in area:

roject Numbers	Description

NOTE: For EIR's, above projects are not sufficient for cumulative analysis.

REVIEWING AGENCIES

Responsible Agencies

- ☐ None
- ☑ Regional Water Quality Control Board
  - ☐ Los Angeles Region
  - ☑ Lahontan Region
- ☐ Coastal Commission
- ☐ _____

Trustee Agencies

- ☐ None
- ☑ State Fish and Game
- ☐ State Parks
- ☐ _____
- ☐ _____

Special Reviewing Agencies

- ☐ None
- ☐ Topanga-Las Virgenes Conservation District
- ☐ Santa Monica Mountains Conservancy
- ☐ National Parks
- ☐ National Forest
- ☑ Edwards Air Force Base
- ☑ PUBLIC WORKS GEOLOGY/SOILS
- ✓ CALTRANS
- ✓ DRAINAGE/GRADING
- ✓ HEALTH DEPT.
- ✓ FIRE DEPT.
- ✓ WASTE MANAGEMENT
- ✓ UCLA ARCHEOLOGICAL
- ✓ CITY OF LANCASTER
- ✓ TRAFFIC/LIGHTING

Regional Significance

- ☐ None
- ☐ SCAG Criteria
- ☑ Air Quality
- ☐ Water Resources
- ☐ Santa Monica Mtns Area

IMPACT ANALYSIS MATRIX:

CATEGORY	Factor	PAGE	ANALYSIS SUMMARY (see individual pages for details) No Impact/Insignificant Impact	Significant Impact Potential Concern	
NATURAL HAZARDS	Geotechnical	5		✓	HIGH GROUND WATER LEVEL
	Flood	6		✓	500 YR FLOOD AREA
	Fire	7		✓	FLAMABLE MATERIALS
	Noise	8	✓		
NATURAL RESOURCES	Water Quality	9		✓	SEPTIC TANKS, BLUE LINE STREAM
	Air Quality	10		✓	HAZARDOUS EMISSIONS
	Biota	11		✓	DESERT TORTOISE
CULTURAL RESOURCES/ VISUAL	Cultural Resources	12			CONSULT UCLA
	Visual Qualities	13	✓	✓	
SERVICES	Traffic/Access	14		✓	TRANSPORT OF MATERIALS
	Sewage Disposal	15	✓		
	Education	16	✓		
	Fire/Sheriff	17	✓		
	Utilities	18	✓		
OTHER	General	19	✓		
	Environ. Safety	20		✓	HAZARDOUS WASTE / PRESSURE TANKS

DETERMINATION: On the basis of this Initial Study, the Department of Regional Planning finds that this project qualifies for the following environmental document:

Preliminary	FINAL	
☐	☐	NEGATIVE DECLARATION, inasmuch as the proposed project will not have a significant effect on the environment.
☐	☐	NEGATIVE DECLARATION, inasmuch as the changes required for the project will reduce impacts to insignificant levels (see "Conditions", page 4).
☑	☑	ENVIRONMENTAL IMPACT REPORT, inasmuch as there is substantial evidence that the project may have a significant impact due to factors listed above as "significant".

☐ Determination appealed—see attached sheet.

Environmental Finding (Negative Declarations):

☐ ND An Initial Study was prepared on this project in compliance with the State CEQA Guidelines and the environmental reporting procedures of the County of Los Angeles. It was determined that this project will not exceed the established threshold criteria for any environmental/service factor and, as a result, will not have a significant effect on the physical environment.

☐ MDC An Initial Study was prepared on this project in compliance with the State CEQA Guidelines and the environmental reporting procedures of the County of Los Angeles. It was originally determined that the proposed project may exceed established threshold criteria. The applicant has agreed to modification of the project so that it can now be determined that the project will not have a significant effect on the physical environment. The modification to mitigate this impact(s) is identified on the Acceptance Letter included as part of this Initial Study.

NOTE: Findings for Environmental Impact Reports will be prepared as a separate document following the public hearing on the project.

Reviewed by: CHRIS TYSKA 5/25/93 Date: 5-25-93

☐ Prior to ( ) recordation of the final map ( ) issuance of a building permit and as a means of mitigating potential environmental impacts, it must be demonstrated to the satisfaction of the Regional Planning Commission that sewer connection permits can be obtained from ( ) county Sanitation District No.___ ( ) Las Virgenes Municipal Water District or its legal successor that meet the requirements of the California Regional Water Quality Control Board pursuant to Division 7 of the Water Code.

☐ Prior to alteration of any streambeds, and as a means of mitigating potential environmental impacts, the applicant shall enter into an agreement with the California State Department of Fish and Game, pursuant to Sections 1601 through 1603 of the State Fish and Game Code.

☐ Prior to ( ) tentative approval ( ) scheduling before the Zoning Board ( ) scheduling before the Regional Planning Commission, and as a means of mitigating potential environmental impacts, the applicant shall submit an archaeology report for the entire project site (unless otherwise noted) prepared by a qualified archaeologist, and comply with mitigation measures suggested by the archaeologist and approved by the Department of Regional Planning.

☐ Prior to ( ) tentative approval ( ) scheduling before the Zoning Board ( ) scheduling before the Regional Planning Commission, and as a means of mitigating potential environmental impacts, the applicant shall agree to suspend construction in the vicinity of a cultural resource encountered during development of the site, and leave the resource in place until a qualified archaeologist can examine them and determine appropriate mitigation measures. The applicant shall agree to comply with mitigation measures recommended by the archaeologist and approved by the Department of Regional Planning.

☐ As a condition of ( ) final approval ( ) the grant ( ) approval of the zoning ordinance, and as a means of mitigating potential environmental impacts, the applicant shall dedicate to the County of Los Angeles, ( ) the right to prohibit construction over an area demarcated on the ( ) tentative map ( ) plot plan, ( ) construction of more than one residence of commercial unit and related accessory building on any one lot on the project site. A note to this effect shall be ( ) placed on final map or on the Grant Waiver ( ) recorded on the title

☐ Prior to ( ) tentative approval ( ) recordation of the final map ( ) scheduling before the Zoning Board ( ) scheduling before the Regional Planning Commission, and as a means of mitigating potential environmental impacts, the applicant shall drill and test flow a well(s) to the satisfaction of the Department of Public Works/Engineering Division. A warning note shall be ( ) placed on the final map and in the CC&Rs ( ) recorded on the title, indicating that the area has a limited groundwater supply and that water may not be available during periods of severe drought. A copy of the ( ) CC&Rs shall be submitted to the Department of Regional Planning and subsequently recorded with the final map ( ) title shall be submitted to the Department of Regional Planning for approval.

☐ As a condition of ( ) final approval ( ) the grant ( ) approval of the zoning ordinance, and as a means of mitigating potential environmental impacts, a warning note shall ( ) be placed in the CC&Rs ( ) recorded on the title, indicating that the area has a limited groundwater supply during periods of severe drought. A copy of the ( ) CC&Rs shall be submitted to the Department of Regional Planning for approval and subsequently recorded with the final map ( ) title shall be submitted to the Department of Regional Planning for approval.

☐ Prior to recordation of the final map, the subdivider shall be required to enter into an agreement with the County to pay to the County a sum not to exceed $3,500.00 per residential unit, and not to be less than $2,000.00 per residential unit for the purpose of contributing to the proposed Road Benefit District prior to occupancy or upon demand of payment by the County Road Commission. Security for the performance of said agreement shall be guaranteed by the filing of a bond by a duly authorized surety.

☐ Prior to scheduling for public hearing, and as a means of mitigating any environmental impacts associated with the distance of the project to the nearest fire station, the applicant shall agree to comply with recommendations of the County Forester and Fire Warden.

☐ _____

_____

_____

_____

_____

_____

☐ See attached paged for additional Project/Changes/Conditions

ENVIRONMENTAL ANALYSIS

1.0 Hazard Factors

1.1 Geotechnical

SETTING/IMPACTS:

	Y	N	
a.	☐	☑	Is the project site located in an active or potentially active fault zone?
b.	☐	☑	Is the project site located in an area containing a major landslide(s)?
c.	☐	☑	Is the project site located in an area having high slope instability?
d.	☑	☐	Is the project site subject to high subsidence, high groundwater level, or hydrocompaction?
e.	☐	☑	Is the proposed project considered a sensitive use (school, hospital, public assembly site) located in close proximity to a significant geotechnical hazard?
f.	☐	☐	Other factors?

MITIGATION MEASURES:

Standard mitigation measures are: ☐ Building Ordinance No. 2225--Sections 308B, 309, 310 and 311 and Chapters 29 and 70.

Other considerations: ☐ Lot Size ☐ Project Design

Public Works - Geology & Soils

CONCLUSION:

Considering the above information, could the project have a significant impact on, or be impacted by, geotechnical factors?

☑ Yes ☐ No

1.2 Flood

SETTING/IMPACTS:

	Y	N	
a.	☑	☐	Is a major drainage course, as identified on USGS quad sheets by a dashed line, located on the project site?
b.	☑	☐	Is the project site located within or does it contain a floodway or floodplain? 500 YR FLOOD AREA
c.	☐	☑	Is the project site located in or subject to high mudflow conditions?
d.	☐	☑	Will the project contribute, or be subject to, high erosion and debris deposition from run-off?
e.	☐	☑	Other factors?

MITIGATION MEASURES:

Standard mitigation measures are:

☐ Building Ordinance No. 2225--Section 308A

☐ Flood Control District Drainage Concept

☐ Ordinance No. 12,114 (Floodways)

Other considerations: ☐ Lot Size ☐ Project Design

Public Work - Geology & Soils

CONCLUSION:

Considering the above information, could the project have a significant impact on, or be impacted by, flood (hydrological) factors?

☑ Yes ☐ No

1.3 Fire

SETTING/IMPACTS

	Y	N	
a.	☐	☑	Is the project site located in a high fire hazard area (Fire Zone 4 or Quinton/Redgate fire classification)?
b.	☐	☑	Is the project site in a high fire hazard area and served by inadequate access due to length, width, surface material, turnarounds, or grade?
c.	☐	☑	Is the project site in a high fire hazard area and has more than 75 dwelling units on a single access?
d.	☐	☑	Is the project site located in an area having inadequate water and pressure to meet fire flow standards?
e.	☑	☐	Is the project site located in close proximity to potential dangerous fire hazard conditions/uses (such as refineries, flammables, explosives manufacturing)?
f.	☑	☐	Does the proposed use constitute a potentially dangerous fire hazard condition/use? FLAMMABLE MATERIALS ON SITE
g.	☐	☑	Other Factors? _____

MITIGATION MEASURES:

Standard mitigation measures are: ☐ Fire Ordinance No. 2947

☐ Water Ordinance No. 7834 ☐ Fire Prevention Manual Regulation No. 12

Other considerations: ☐ Project Design

FIRE DEPT

CONCLUSION:

Considering the above information, could the project have a significant impact on, or be impacted by, fire hazard factors?

☑ Yes ☐ No

1.4 Noise

SETTING/IMPACT:

	Y	N	
a.	☐	☑	Is the project site located near a high noise source (airports, railroads, freeways, industry)?
b.	☐	☑	Will the project substantially increase ambient noise levels, including those associated with special equipment (such as air conditioning units) or parking areas associated with the project?
c.	☐	☑	Is the proposed use considered sensitive (school, hospital, senior citizen facility)?
d.	☐	☑	Other factors?

MITIGATION MEASURES:

Standard mitigation measures are: ☐ Building Ordinance No. 2225--Chapter 35

☐ Noise Ordinance No. 11,778

Other considerations: ☐ Lot Size ☐ Project Design

☐ Compatible Use

CONCLUSIONS:

Considering the above information, could the project have a significant impact on, or be adversely impacted by, noise?

☐ Yes ☑ No

2.0 Natural Resources

2.1 Water Quality

SETTING/IMPACT:

	Y	N	
a.	☑	☐	Will the proposed project require the use of a private sewage disposal system?
	☑	☐	If the answer is yes, is the project site located in an area having known septic tank limitations due to high groundwater or other geotechnical limitations? MODERATE
	☑	☐	Is the project proposing on-site systems located in close proximity to a drainage course? BLUE LINE
b.	☐	☑	Will the proposed project place industrial waste (corrosive or toxic materials) into a private sewage disposal system or a community system?
c.	☐	☑	Is the project site located in an area having known water quality problems and proposing the use of individual water wells?
d.	☐	☑	Other factors?

MITIGATION MEASURES:

Standard mitigation measures are:

☐ Plumbing Code--Ordinance No. 2269

☐ Health Ordinance No. 7583--Chapter 5

☐ Industrial Waste Permit

Other considerations: ☐ Lot Size ☐ Lot Design

HEALTH DEPT
WASTE MANAGEMENT
WATER QUALITY CONTROL

CONCLUSIONS:

Considering the above information, could the project have a significant impact on, or be impacted by, water quality problems?

☑ Yes ☐ No

2.2 Air Quality

SETTING/IMPACT:

	Y	N	
a.	☐	☑	Will the proposed project exceed the State's criteria for regional significance (generally (a) 500 dwelling units for residential uses or (b) 40 gross acres, 650,000 square feet of floor area, or 1,000 employees non-residential uses)?
b.	☐	☑	Is the proposal considered a sensitive use (schools, hospitals, parks) and located near a freeway or heavy industrial use?
c.	☐	☑	Will the project increase local emissions to a significant extent due to increased traffic congestion or use of a parking structure?
d.	☑ MAYBE	☐	Will the project generate or is the site in close proximity to sources which create obnoxious odors and/or hazardous emissions?
e.	☐	☑	Other factors:

MITIGATION MEASURES:

Standard mitigation measures are: ☐ Health and Safety Code, Section 40506

Other considerations: ☐ Project Design ☐ Air Quality Management Plan

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

CONCLUSIONS:

Considering the above information, could the project have a significant impact on, or be impacted by, air quality?

☑ Yes ☐ No

2.3 Biota

SETTING/IMPACTS

a. ☐ ☑ Is the project site located within a Significant Ecological Area or Significal Ecological Area Buffer?

b. ☐ ☑ Does the project site contain a major riparian habitat?

c. ☑ ☐ Does the project site contain oak or other unique native trees?
JOSHUA TREES

d. ☑ ☐ Other factors?
HABITAT FOR DESERT TORTOISE

MITIGATION MEASURES:

Other considerations: ☐ Lot Size ☑ Project Design

☐ Oak Tree Permit

BIOTA REPORT

CONCLUSIONS:

Considering the above information, could the project have a significant impact on biotic resources?

☑ Yes ☐ No

3.0 Cultural Resources/Visual

3.1 Archaeological/Historical/Paleontological

SETTING/IMPACTS

	Y	N	
a.	☑	☐	Is the project site in or near an area containing known archaeological resources or containing features (drainage course, spring, knoll, rock outcroppings, or oak trees) which indicate potential archaeological sensitivity?
b.	☑	☐	Does the project site contain rock formations indicating potential paleontological resources?
c.	☑	☐	Does the project site contain known historic structures or sites?
d.	☐	☑	Other factors?

MITIGATION MEASURES:

Other considerations: ☐ Lot Size ☐ Project Design

Consult UCLA

CONCLUSIONS:

Considering the above information, could the project have a significant impact on archaeological, historical, or paleontological resources?

☑ Yes ☐ No

3.2 Visual Qualities

SETTING/IMPACTS:

	Y	N	
a.	☐	☑	Is the project site substantially visible from or will it obstruct views along a scenic highway (as shown on the Scenic Highway Element) or located within a scenic corridor?
b.	☐	☑	Is the project substantially visible from or will it obstruct views from a regional riding or hiking trail?
c.	☐	☑	Is the project site located in an undeveloped or undisturbed area which contains unique aesthetic features?
d.	☐	☑	Is the proposed use out-of-character in comparison to adjacent uses because of height, bulk, or other features?
e.	☐	☑	Will the project obstruct unique views from surrounding residential uses?
f.	☐	☑	Will the project create substantial sun shadow or glare problems?
g.	☐	☑	Other factors:

MITIGATION MEASURES

Other considerations: ☐ Lot Size ☐ Lot Design ☐ Compatible Use

CONCLUSION:

Considering the above information, could the project have a significant impact on scenic qualities.

☐ Yes ☑ No

4.0 Services

4.1 Traffic/Access

SETTING/IMPACTS:

	Y	N	
a.	☐	☑	Does the project contain 25 dwelling units, or more and located in an area with known congestion problems (mid-block or intersections)?
b.	☐	☑	Will the project result in any hazardous traffic conditions?
c.	☐	☑	Will the project result in parking problems with a subsequent impact on traffic?
d.	☐	☑	During an emergency (other than fire hazards), will inadequate access result in problems for emergency vehicles or residents/employees in the area?
e.	☐	☑	Other factors? TRAFFIC / TRANSPORT OF MATERIALS

MITIGATION MEASURES:

Other considerations: ☐ Project Design

CALTRANS

CONCLUSION:

Considering the above information, could the project have a significant impact on the physical environment due to traffic/access?

☐ Yes ☐ No

4.2 Sewage Disposal

SETTING/IMPACTS:

	Y	N	
a.	☐	☑	If served by a community sewage system, are there any known capacity problems at the treatment plant?
b.	☐	☑	Are there any known capacity problems in the sewer lines serving the project site?
c.	☐	☑	Other factors?

MITIGATION MEASURES:

Standard mitigation measures are:

☐ Plumbing Code--Ordinance No. 2269

☐ Sanitary Sewers and Industrial Waste Ordinance No. 6130

Other considerations: _____

CONCLUSION:

Considering the above information, could the project have a significant impact on the physical environment due to sewage disposal facilities?

☐ Yes ☑ No

4.3 Education

SETTING/IMPACTS:

	Y	N	
a.	☐	☑	Are there known capacity problems at the district level?
b.	☐	☑	Are there known capacity problems at individual schools which will serve the project site?
c.	☐	☑	Are there any known student transportation problems?
d.	☐	☑	Other factors?

MITIGATION MEASURES:

Other considerations: ☐ SB 201 Funds ☐ Site Dedication

CONCLUSION:

Considering the above information, could the project have a significant impact on the physical environment due to educational facilities/services?

☐ Yes ☑ No

4.4 Fire/Sheriff Services

SETTING/IMPACTS:

	Y	N	
a.	☐	☑	Are there any known staffing or response time problems at the fire station or sheriff's substation serving the project site?
b.	☐	☑	Are there any special fire or law enforcement problems associated with the project or the general area?
c.	☐	☑	Other factors?

MITIGATION MEASURES:

Other considerations:

CONCLUSION:

Considering the above information, could the project have a significant impact on the physical environment due to fire/sheriff services?

☐ Yes ☑ No

4.5 Utilities/Other Services

SETTING/IMPACTS:

	Y	N	
a.	☐	☑	Is the project site in an area known to have an inadequate water supply to meet domestic needs?
b.	☐	☑	Is the project site in an area known to have an inadequate water supply and/or pressure to meet fire fighting needs?
c.	☐	☑	Are there any known problems with providing other utility services, such as electricity, gas, propane?
d.	☐	☑	Are there any known service problem areas?
e.	☐	☑	Other factors?

MITIGATION MEASURES:

Standard mitigation measures are:

☐ Plumbing Code (Ordinance No. 2269)

☐ Water Ordinance No. 7834

Other considerations: ☐ Lot Size ☐ Project Design

CONCLUSION:

Considering the above information, could the project have a significant impact on the physical environment due to utilities/services?

☐ Yes ☑ No

5.0 Other Factors

5.1 General Factors

SETTING/IMPACTS:

	Y	N	
a.	☐	☑	Will the project result in an inefficient use of energy resources?
b.	☐	☑	Will the project result in a major change in the pattern, scale, or character of the general area or community?
c.	☐	☑	Will the project result in a significant increase in light and/or glare?
d.	☐	☑	Will the project result in a significant reduction in the amount of agricultural land?
e.	☐	☑	Other factors?

MITIGATION MEASURES:

Standard mitigation measures are:

☐ State Administrative Code, Title 24, Part 5, T-20 (Energy Conservation)

Other considerations: ☐ Lot Size ☐ Project Design ☐ Compatible Use

CONCLUSION:

Considering the above information, could the project have a significant impact on the physical environment due to ?

☐ Yes ☑ No

5.2 Environmental Safety

SETTING/IMPACTS:

	Y	N	
a.	☐	☑	Are any hazardous materials used, produced, or stored on-site?
b.	☑	☐	Are any hazardous wastes stored on-site?
c.	☑	☐	Are any pressurized tanks to be used on-site?
d.	☐	☑	Are any residential units, schools, or hospitals located within 500 feet?
e.	☐	☑	Other factors?

MITIGATION MEASURES:

HEALTH DEPT
FIRE DEPT

CONCLUSION:

Considering the above information, could the project have a significant impact on public safety?

☑ Yes ☐ No

Los Angeles County
Department of Regional Planning

Director of Planning. James E. Hartl, AICP

NOTICE OF PREPARATION

DATE: September 30, 1993
TO: Distribution List
FROM: Los Angeles County Department of Regional Planning, Impact Analysis Section (LACDRP)
SUBJECT: Notice of Intent to Prepare a Draft Environmental Impact Report
PROJECT: Expansion of the Lancaster Landfill and Recycling Center
APPLICANT: Waste Management of Lancaster

The County of Los Angeles will be the lead agency for the subject project and will take responsibility for preparation of the Environmental Impact Report (EIR). In order to address the concerns of all responsible agencies, interested agencies, organizations and individuals in the Draft EIR, your comments regarding the scope and content of the document are being requested. Following is general information regarding the proposed project.

LOS ANGELES DEPARTMENT OF REGIONAL PLANNING CASE NUMBER: 93070

PROJECT NAME: Lancaster Landfill and Recycling Center Expansion EIR

PROJECT LOCATION: The project site is at the existing Lancaster Landfill and Recycling Center which is located within the unincorporated portion of Los Angeles County. The landfill is located in a remote area two miles northeast of the City of Lancaster (Figure 1, Site Vicinity Map) in the Antelope Valley. The current site address is 600 East Avenue "F", Lancaster, California 93535.

PROJECT DESCRIPTION SUMMARY

The proposed project consists of expanding the existing 100-acre landfill by 170± acres horizontally and a vertical expansion of both the existing landfill and expansion areas to an

elevation of 2,395 feet. This vertical expansion is approximately a 40-foot increase to the current permitted final elevation. The existing landfill is currently accepting up to 525 tons per day (tpd). Based on projections of an increase in population, the waste stream is expected to increase four percent annually. By the proposed closure date of the expanded site in 2030, the site would be accepting up to 1700 tpd. The landfill expansion will provide an additional 17.5 million cubic yards of refuse disposal capacity. For complete details of the project, please see the following project description.

PROJECT DESCRIPTION: The proposed project consists of a contiguous vertical and horizontal (westerly) expansion of the existing Lancaster Landfill and Recycling Center and a non-contiguous horizontal expansion to the east, separated from the existing site by a County road known as 10th Street East (see Figure 2, Plot Plan).

The area consisting of the contiguous horizontal and vertical expansion is referred to as the Western Expansion. The non-contiguous expansion area is referred to as the Eastern Expansion. The Western Expansion would consist of approximately 60 ± acres. The Eastern Expansion would encompass about 110 ± acres of primarily undeveloped land. A model airplane field currently comprises a small portion of the Eastern Expansion area (see Figure 3, Land Use Map). Part of the existing landfill's groundwater treatment system also extends into the Eastern Expansion area.

The proposed landfill expansion would continue to be operated as a Class III landfill facility as classified by the Regional Water Quality Control Board (RWQCB). Class III wastes consist of non-hazardous municipal, commercial, and demolition wastes. Liquid and hazardous wastes are not accepted at this facility. The landfill operator is proposing to receive sewage sludge and asbestos waste which are described as special wastes in the California Code of Regulations (CCR), Title 14, Chapter 9, Article 6.1, Section 18722 (j). The site is currently accepting up to 525 tons per day (tpd) of Class III waste and is permitted to accept up to 1000 tpd. The site is expected to increase its waste inflow by four percent annually. The projected closure date is 2030 at which time the site would be accepting up to 1700 tpd. The landfill expansion, if approved, will provide an additional estimated 17.5 million cubic yards (mcy) of refuse disposal capacity. Construction of the

landfill expansion would include grading/excavation of approximately 6.5 mcy of soil and engineered containment systems meeting state and federal standards such as a composite clay and synthetic bottom liner and leachate management system. A landfill gas control system is already in place and a groundwater treatment system is currently being installed. Monitoring systems are in place for landfill gas and groundwater to detect any potential off-site migration along the perimeter of the site.

The proposed final topography for the site has been designed with consideration given to both aesthetics and environmental control features. This topography will be covered with soil or other suitable material capable of meeting performance standards current at the time of closure. The covered landfill will then be vegetated with select desert-type plants. The final landscaping plan will blend the finished sanitary landfill character with that of the surrounding area.

Prior to starting landfill operations in the expansion areas, the following site preparation work would be performed:

- Required access roads would be constructed. The existing access road on Avenue F will be utilized for the Western Expansion and two new paved access ways will be provided for the Eastern Expansion landfill operation; one on the east side of 10th Street East, south of East Avenue F and one on the south side of East Avenue F, east of 10th Street East.

- Drainage facilities such as perimeter ditches, berms, culverts, and sedimentation ponds would be constructed.

- Additional required fencing, signs and entry gates, survey datum elevations, and stakes indicating grades and construction limits would be constructed.

The facility has been and will be operated and constructed to minimize potential environmental impacts associated with the site. The following on-site procedures will be followed to mitigate potential environmental impacts:

- Odors will be controlled through application of daily cover or alternative daily cover (i.e., Sani Cover Tarp by Fluid Systems, Inc.) over the day's refuse and by collecting and destroying landfill generated gas.
- Dust will be controlled by watering and applying dust palliatives on haul roads; applying fine water spray on soil cover over work areas when conditions cause the formation of fugitive dust; planting temporary vegetative cover on intermediate soil cover and stockpiles; planting and maintaining a vegetative cover on completed fill slopes and excavation surfaces.

- Litter control will be implemented through a variety of methods including the use of wind screens, sheltering the working face, landfill personnel picking up litter, and requiring that all loads be covered.

- Vector control is provided by applying daily cover and routine inspection of the site for signs of rodent activity or fly breeding. If such vector activity is observed, a pest control specialist will be consulted to mitigate the vector nuisance.

- Fires will be prevented or controlled by maintaining on-site water supplies. The gatehouse, maintenance building, administrative building, and landfill equipment building have been equipped with suitable fire extinguishers for minor fires and personnel safety. The administrative building also has five sprinklers. Any minor fire that occurs on the landfill will be extinguished by landfill personnel using water. Larger fires will require a response by the local fire department.

ACTIONS REQUIRED TO APPROVE PROJECT: The subject EIR is being prepared as required to support an application for an amended Conditional Use Permit [Case No. 1483-(5)] from the LACDRP to expand the landfill and extend the site life to the year 2030. Additional approvals which are required by other agencies for project approval include the following revised or amended permits: Solid Waste Facilities Permit (SWFP) issued by the California Integrated Waste Management Board (CIWMB), Waste Discharge Requirements (WDRs) issued by the Lahontan Regional Water Quality Control Board

(LRWQCB), and possibly Permits to Construct and Operate issued by the South Coast Air Quality Management District (SCAQMD). A Finding of Conformance with the Los Angeles County Integrated Waste Management Plan will also be required. Other permits may be identified as being necessary during the preparation of the EIR.

PROBABLE ENVIRONMENTAL EFFECTS OF THE PROJECT: The following items have been identified by the LACDRP, Impact Analysis Section, to be probable environmental effects of the project:

- Geotechnical - concerns regarding possible groundwater penetration through the refuse prism.

- Flood - concerns regarding the sites location in a 500-year flood area and the nearby Armagosa Creek as a possible major drainage course.

- Fire - concerns regarding storage and use of flammable materials onsite.

- Water Quality - concerns regarding use of a private sewage disposal system and the impacts on a blue line stream indicated on the USGS map for the project area.

- Air Quality - concerns regarding landfill emissions, particularly air toxics.

- Biota - concerns regarding Joshua Trees onsite and possible habitat for the Desert Tortoise and Mojave Ground Squirrel.

- Cultural Resources - concerns regarding any archeological artifacts existing onsite.

- Traffic - concerns regarding traffic caused by construction and increased disposal operations.

- Environmental Safety - concerns regarding hazardous waste screening and temporary storage and the use and storage of pressurized tanks.

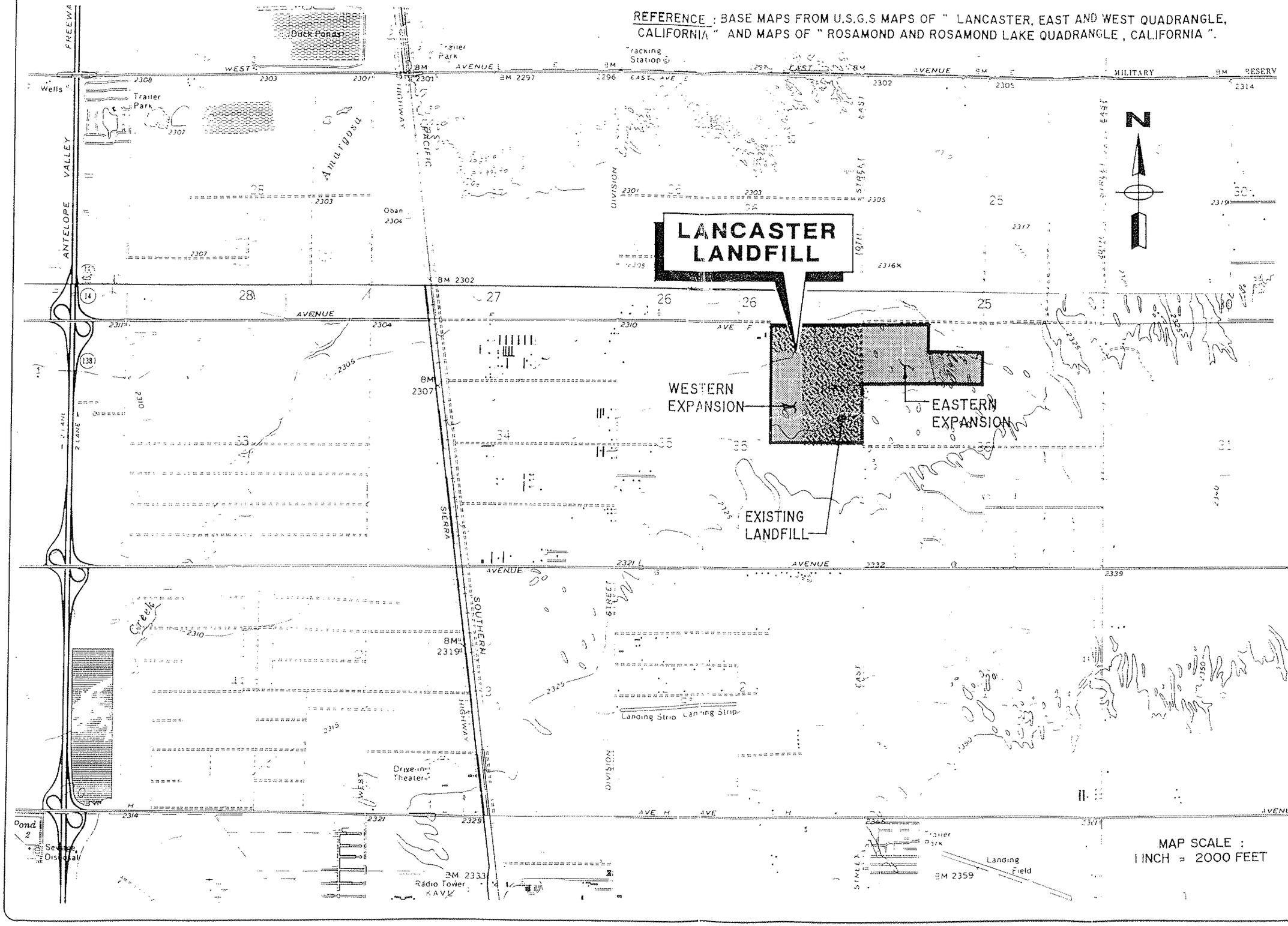
An Initial Study with a detailed Project Description has been completed by the project applicant and reviewed by the LACDRP. This document may be reviewed for additional information regarding the proposed project.

A discussion of possible impacts and mitigation measures for each of the above issues will be included in the EIR. An analysis of cumulative impacts and reasonable and feasible alternatives to the project will also be provided.

Please send your comments on the issues to be addressed for this project on or before November 5, 1993 to Mr. Paul McCarthy at the County of Los Angeles, Department of Regional Planning, Impact Analysis Section at 320 West Temple Street, Los Angeles, California 90012, (213) 974-6461.

REFERENCE : BASE MAPS FROM U.S.G.S MAPS OF " LANCASTER, EAST AND WEST QUADRANGLE, CALIFORNIA " AND MAPS OF " ROSAMOND AND ROSAMOND LAKE QUADRANGLE , CALIFORNIA ".

FIGURE 1

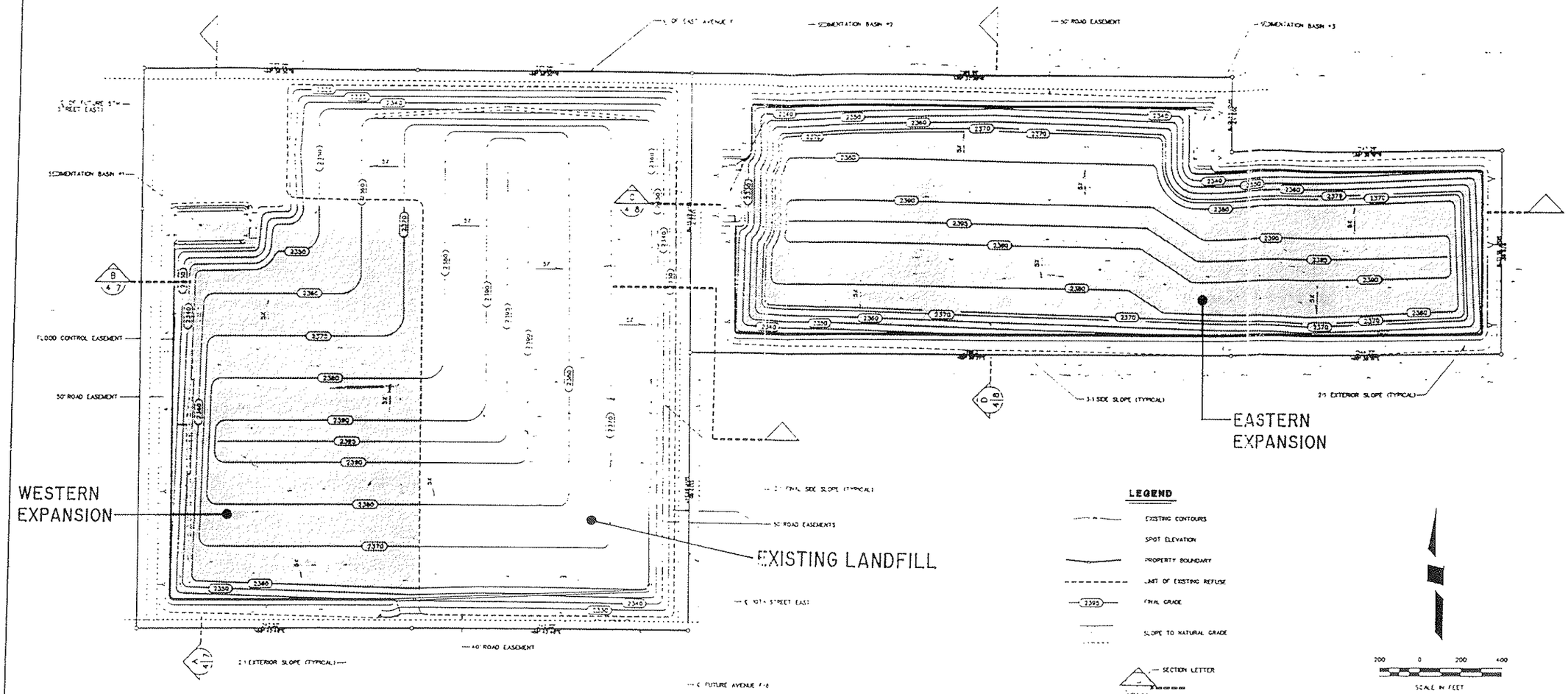


JOB NO. 9267
DATE APRIL 1993
DRAWN BY PTN
CHECKED BY VB

SITE VICINITY MAP

LANCASTER LANDFILL AND RECYCLING CENTER

BAS
BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1360 VALLEY VISTA DRIVE • DIAMOND BAR, CA 91765
(714) 860-7777



NOTES

AERIAL PHOTOGRAPHY BY WALKER & ASSOCIATES OF SEATTLE, WASHINGTON FLOWN FEBRUARY 27, 1992 AT A SCALE OF 1"=100' AND 2' INTERVAL CONTOURS

PROPERTY BOUNDARY WEST OF 10TH STREET EAST PREPARED BY _____ LANCE MILL (CA. U.S. NO 4089). DATED 8-10-81.

PROPERTY BOUNDARY EAST OF 10TH STREET EAST PREPARED BY KEITH ENGINEERING, PALMDALE, CA. 1988.

ELEVATIONS ARE RELATIVE TO U.S.G.S. MEAN SEA LEVEL DATUM

PROPRIETARY NOTE

THIS DRAWING AND ALL INFORMATION CONTAINED HEREIN, INCLUDING BUT NOT LIMITED TO ANY AND ALL DESIGNS AND SPECIFICATIONS (ALL THE FOREGOING BEING HEREIN AFTER COLLECTIVELY REFERRED TO AS "DRAWINGS") ARE PROPERTY OF WASTE MANAGEMENT OF CALIFORNIA, INC. (WMC). THE DRAWINGS ARE NOT TO BE USED EXCEPT AS EXPRESSLY AUTHORIZED BY WMC. THE RECIPIENT OF THE DRAWINGS COVENANTS AND AGREES NOT TO REPRODUCE, FURTHER DISSEMINATE OR IN ANY WAY DISCLOSE THE CONTENT OF DRAWINGS TO ANY THIRD PARTY WITHOUT FIRST HAVING OBTAINED WMC'S PRIOR WRITTEN CONSENT. RECIPIENT AGREES TO RETURN THE DRAWINGS AND ANY COPIES TO WMC IMMEDIATELY UPON WMC'S REQUEST

FIGURE 2

DRAFT

SECDONOHUE
ENVIRONMENT & INFRASTRUCTURE
SYSTEM DESIGN

REV	DATE	BY	APP BY
DES BY	VDC	PROJECT NO: 444105	DATE: FEBRUARY 1993
DRN BY	DALEE	PROJECT TITLE: LANCASTER LANDFILL AND RECYCLING CENTER HORIZONTAL EXPANSION CONDITIONAL USE PERMIT PLANS	
CHK BY		SHEET TITLE: PLOT PLAN	
APP BY			
DRW BY			
APP BY	VDC		

Waste Management of Lancaster
LANCASTER, CALIFORNIA

SHEET
SHEET NO

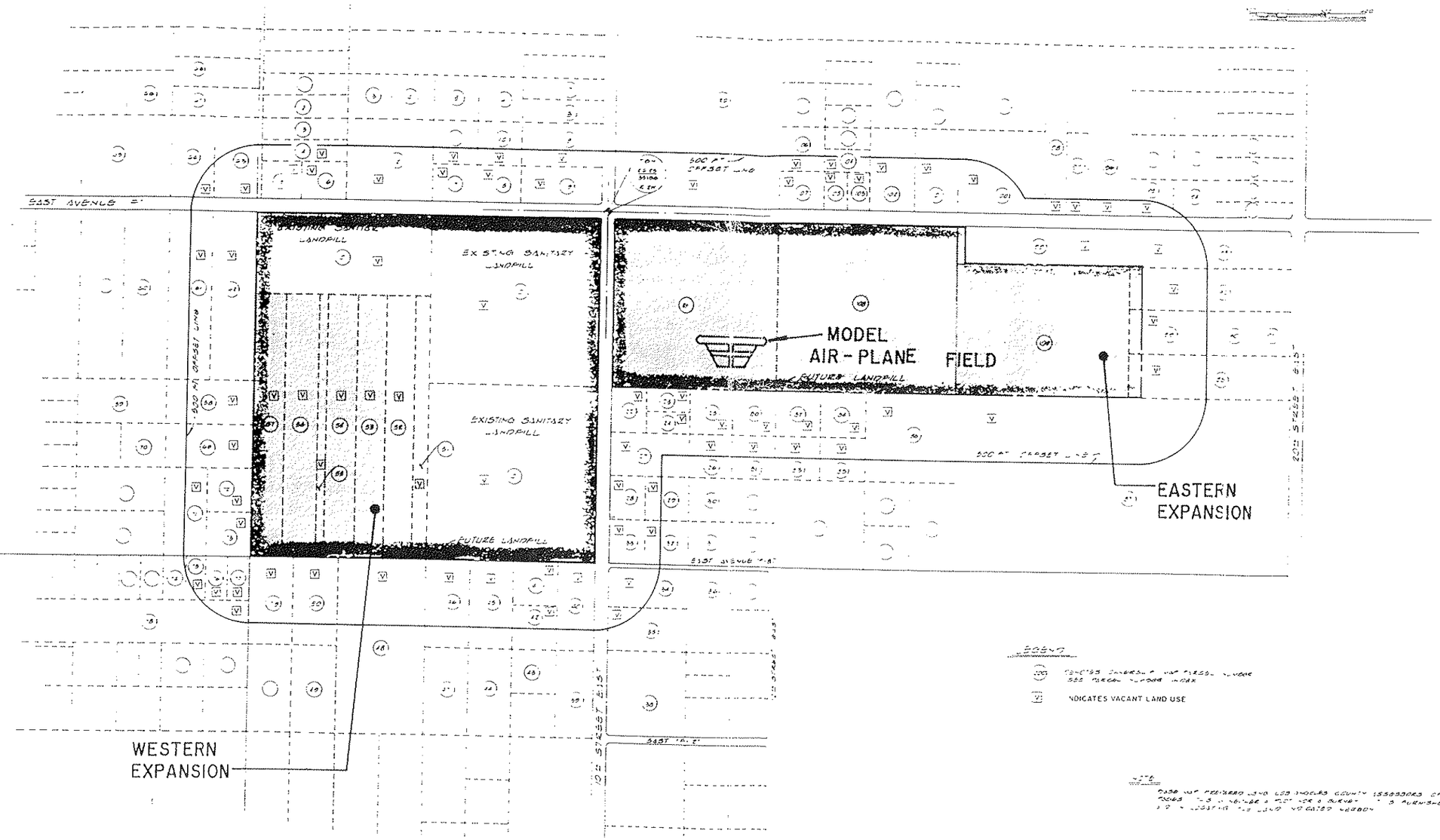


FIGURE 3

NO.	REVISION DESCRIPTION	BY:

PLANS PREPARED BY:
BAS
BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS
1999 FAIRWAY DRIVE, WALNUT, CA. 91789
(714)594-5008

DATE

LANCASTER LANDFILL AND RECYCLING CENTER

LAND USE MAP

DESIGNED BY:	SCALE: HORIZ. 1"=500'	VERT
DRAWN BY: D.S. & P.T.N.	DATE: 5/93	FILE NO. 3267-450
CHECKED BY: J.B.	DATE: 5/93	
APPROVED BY:	DATE:	SHEET OF

LANCASTER LANDFILL AND RECYCLING CENTER EXPANSION EIR

NOP COMMENTS RECEIVED

1. County of Los Angeles, Sheriff's Department, November 2, 1993.
2. City of Lancaster, Department of Community Development, November 3, 1993.
3. Edwards Air Force Base, Department of the Air Force, October 26, 1993.
4. California Department of Transportation (Caltrans), October 27, 1993.
5. California Integrated Waste Management Board, October 29, 1993.
6. Department of Health Services, County of Los Angeles, October 19, 1993.
7. Southern California Gas Company, October 6, 1993.
8. California Archaeological Inventory, UCLA Institute of Archaeology, October 8, 1993.
9. County of Los Angeles, Public Library, October 7, 1993.
10. County of Los Angeles, Department of Parks and Recreation, November 2, 1993.
11. County of Los Angeles, Department of Public Works, November 22, 1993.
12. State of California, Department of Fish and Game, November 23, 1993.
13. California Regional Water Quality Control Board, Lahontan Region, November 30, 1993.

SHERMAN BLOCK, SHERIFF

County of Los Angeles
Sheriff's Department Headquarters
4700 Ramona Boulevard
Monterey Park, California 91754-2169

(805) 948-8466

November 2, 1993

Mr. Paul McCarthy
County of Los Angeles
Department of Regional Planning
Impact Analysis Section
320 West Temple Street
Los Angeles, California 90012

Dear Mr. McCarthy:

We have received your notice of Preparation Draft Environmental Impact Report regarding the expansion of the Lancaster landfill and recycling center. The proposed expansion will not have any significant impact on the Los Angeles County Sheriff's Department or on law enforcement in the City of Lancaster.

If I can be of further assistance, feel free to contact Deputy Michael Kuper at Antelope Valley Station, 1010 West Avenue J, Lancaster, Monday through Friday, 8:00 a.m. to 9:00 a.m., 805-948-8466.

Sincerely,

SHERMAN BLOCK, SHERIFF

Tony F. Welch, Captain
Commander, Antelope Valley Station

City of Lancaster

44933 North Fern Avenue
Lancaster, California 93534-2461
805-723-6000

November 3, 1993

Arnie Rodio
Mayor

Frank C Roberts
Vice Mayor

Rev Henry W Hearns
Councilman

George Lee Root
Councilman

George Runner
Councilman

James C Gilley
City Manager

Mr. Paul McCarthy
Impact Analysis Section
L.A. County Department of Regional Planning
320 West Temple Street
Los Angeles, California 90012

Subject: Notice of Preparation for Project No. 93070/CUP 1483
600 East Avenue F
Expansion of Lancaster Landfill and Recycling Center

Dear Mr. McCarthy:

Thank you for the opportunity to review the Notice of Preparation for the proposed expansion of the Lancaster Landfill and Recycling Center. The City's Department of Public Works requests that the following impacts and recommended mitigation measures be considered in the environmental impact report:

1. Potential Significant Environmental Impact: The project will encourage an inefficient use of potential energy sources (i.e., refuse) and will not encourage diversion of resources (i.e., recyclable materials) from the waste stream.

   Recommended Mitigation Measure: Waste Management of Lancaster shall install adequate facilities on-site to divert recyclable materials from landfill disposal at a rate of 25% by 1995 and 50% by 2000. These diversion rates are consistent with those imposed on local governments by enactment of the California Solid Waste Management Act of 1989 (Assembly Bill 939). The project proponent may divert the materials from landfill disposal either prior to, or after receiving, the refuse at the site.

2. Potential Significant Environmental Impact: The project site is subject to flooding hazards and the project may exacerbate flooding hazards in the area.

   Recommended Mitigation Measure: Construction of flood channels shall be provided in accordance with the 1987 Antelope Valley Comprehensive Plan of Flood Control and Water Conservation. This would include a 100-foot-wide earthen channel easterly of and adjacent to future 5th Street East and, if located on the site, a 90-foot-wide earthen channel that runs 700 feet westerly of future 20th Street East.

3. Potential Significant Environmental Impact: The proposed project will necessitate relocation of a Primary Urban Trail shown on the City's Master Plan of Trails from 12th Street East to adjacent to the future drainage channel near 20th Street East. This may result in significant aesthic impacts and wind erosion impacts on the regional trail.

Recommended Mitigation Measure: Dense landscaping shall be installed along the eastern boundary of the project or westerly of and adjacent to the regional trail (as applicable).

4. Potential Significant Environmental Impact: The operation of the existing landfill has contributed significantly to the deterioration of Avenue G between Division Street and the Antelope Valley Freeway. The proposed expansion will increase the amount of truck traffic on Avenue G and further impact this roadway. The project may have impacts on other roadways in the area.

   Recommended Mitigation Measures:

   a. Avenue G shall be reconstructed between Division Street and the Antelope Valley Freeway.

   d. The arterial streets adjacent to the site (i.e., 10th Street East and Avenue F, including its easterly extension) shall be fully improved to appropriate County standards for arterial streets.

   In addition, the environmental impact report should include a Land Use Analysis as required by the 1992 Congestion Management Program for Los Angeles County and the project shall be subject to any mitigation identified as part of that analysis.

Thank you for your consideration of these comments. If you have any questions, please contact Jeff Long or Neil Hudson at (805) 723-6040.

Sincerely,

Susan J. Barnett

Susan J. Barnett
Environmental Coordinator
Department of Community Development

SB
cc: Jeff Long, Director of Public Works
Neil Hudson, City Engineer
Ray Olson, Source Reduction and Recycling Coordinator
Hong Liu, Traffic Safety Engineer

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR FORCE FLIGHT TEST CENTER (AFMC)
EDWARDS AIR FORCE BASE, CALIFORNIA

AFFTC/XRX
1 South Rosamond Blvd
Edwards AFB CA 93524-1036

26 Oct 93

93070

Los Angeles County Department of Regional Planning
Impact Analysis Section
ATTN: Mr Paul McCarthy
320 West Temple Street
Los Angeles CA 90012

Dear Mr McCarthy

Thank you for the opportunity to comment on Notice of Intent to Prepare a Draft Environmental Impact Report on Expansion of the Lancaster Landfill and Recycling Center. Based on the information provided, the Air Force Flight Test Center (AFFTC) at Edwards Air Force Base has no comments regarding the proposal.

The AFFTC appreciates the continued efforts of your department in assuring compatible land use in the Los Angeles County area. If I can be of any assistance to you in the future, please feel free to contact me or David Rose at (805) 277-3837.

Sincerely

David Rose

for ROBERT D. JOHNSTONE
Chief, Plans and Policies Division

STATE OF CALIFORNIA—BUSINESS AND TRANSPORTATION AGENCY PETE WILSON, Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 7, 120 SO. SPRING ST.
LOS ANGELES, CA 90012-3606
TDD (213) 620-3550

October 27, 1993

IGR/CEQA/NOP
LA County
Department of
Regional Planning
Lancaster Landfill
Project No. 93070
SCH No. 93101036
Vic LA-14-71.99

Paul McCarthy
L.A. County Regional Planning
320 W. Temple Street
Los Angeles, CA 90012

Dear Mr. McCarthy:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above referenced project involving the expansion of the Lancaster Landfill and Recycling Center Expansion EIR. Based on the information received, we have the following comments:

We are concerned with the increase in truck turning movements at the SR-14 Ave 'F' on-off ramps and at Sierra Highway Crossroad. Please provide an analysis of possible impacts and mitigation measures to the State Transportation System. This can be in the form of a traffic study or a brief summary report. the following are items that should be included:

a) Level of service before and after project implementation.
b) Traffic impacts on the State Route 14, specially at the Ave 'F' on and off-ramps and at Sierra Highway Crossroad, and any other significantly affected ramps, streets, crossroads and controlling intersections, as well as an analysis of existing and future conditions on mainline freeway.
c) Traffic generation (ADT, AM and PM peak hour); distribution; and assignments.
d) Future conditions which include both project and project + cumulative traffic generated.
e) Traffic mitigation, if any, to be proposed.

Any transport of heavy construction equipment which require the use of oversize transport vehicles on State Highways will require a Caltrans transportation permit. We recommend that truck trips be limited to off-peak commute periods.

We also suggest the City consider measures requiring developer "Contributions" or "Fair-share" funding to be set aside for future improvements to the existing transportation facilities. What this means is that any assessment fees for mitigation should be of such proportion as to not only cover local impacts but should be extended to cover Freeway/Highway mainline deficiencies that occur as a result of the additional traffic generated by this project.

We look forward to reviewing the DEIR. To expedite the review process, you may send two copies to the undersigned at the following address:

Wilford Melton
District 7 IGR/CEQA Coordinator
Advance Planning Branch 4-11G
120 So. Spring Street
Los Angeles, CA 90012

If you have any questions regarding these comments, please call me at (213) 897-1338.

Sincerely,

Wilford Melton

WILFORD MELTON
Senior Transportation Planner
IGR/CEQA Coordinator
Advance Planning Branch

cc: State Clearinghuse
1400 Tenth Street, Sacramento, CA 95814

gg/10016

STATE OF CALIFORNIA

Pete Wilson, Governor

CALIFORNIA INTEGRATED WASTE MANAGEMENT BOARD
8800 Cal Center Drive
Sacramento, California 95826

93070

October 29, 1993

Paul McCarthy
County of Los Angeles
Department of Regional Planning
Impact Analysis Section
320 West Temple Street
Los Angeles, California 90012

Subject: Notice of Preparation (NOP) for a Draft Environmental Impact Report (DEIR) for the Lancaster Landfill and Recycling Center, SWIS # 19-AA-0050, requiring a revision of the solid waste facilities permit (SWFP), Los Angeles County

Dear Mr. McCarthy:

California Integrated Waste Management Board (CIWMB) staff have reviewed the NOP for the proposed project.

Project Description

Waste Management of Lancaster has filed an application with the Los Angeles County Department of Regional Planning to amend the Conditional Use Permit [Case No. 1483-(5)] for the purpose of expanding the landfill and extending the closure date to the year 2030. In addition, the operator is proposing to accept asbestos and sewage sludge. The facility is located in a remote area approximately 2 miles northeast of the City of Lancaster. The current site address is 600 East Avenue "F", Lancaster, California, 93535.

The proposed project consists of a contiguous vertical and horizontal expansion, referred to as the Western Expansion, containing approximately 60 acres of the existing facility; and, a non-contiguous horizontal expansion encompassing approximately 110 acres to the east, referred to as the Eastern Expansion, which is separated from the existing site by a County Road known as 10th Street East. Part of the landfill's groundwater treatment system extends into the Eastern Expansion area.

The site would be expanded vertically to an elevation of 2,395 feet mean sea level (MSL) and refuse disposal capacity increased by an estimated 17.5 million cubic yards (mcy). The facility is projected to receive up to 1,700 tons per day by the year 2030. The expansion would include grading/excavation of approximately 6.5 mcy of soil and engineered containment systems

such as a composite clay and synthetic bottom liner and leachate management system. A landfill control system is already in place and a groundwater treatment system is currently being installed. Monitoring systems are in place for landfill gas and groundwater to detect any potential off-site migration along the perimeter of the site.

Site preparation prior to commencement of operations in the expansion areas would include the following construction:

- Access roads for the Eastern Expansion area, one on the east side of 10th Street East, south of East Avenue F, and one on the south side of East Avenue F,
- drainage facilities such as perimeter ditches, berms, culverts, and sedimentation ponds,
- additional required fencing, signs and entry gates, survey datum elevations, and stakes indicating grades and construction limits.

Potential environmental impacts will be mitigated by the following procedures:

- Odors will be controlled through the use of daily cover or alternative daily cover and by the collection and destruction of landfill gas.
- Dust will be controlled by watering and applying dust pallatives on haul roads, applying fine water spray on soil cover over work areas when conditions cause the formation of fugitive dust, planting temporary vegetative cover on intermediate soil cover and stockpiles, and planting and maintaining a vegetative cover on completed fill slopes and excavation surfaces.
- Litter will be controlled through a variety of methods including the use of wind screens, sheltering of the working face, site personnel pick-up of landfill litter, and requiring that all loads be covered.
- Vector control is provided by applying daily cover and routine inspection of the site for signs of rodent activity or fly breeding. If such vector activity is observed, a pest control specialist will be consulted.
- Fires will be prevented or controlled by maintaining on-site water supplies. The gatehouse, maintenance

> building, administrative building, and landfill equipment building have been equipped with suitable fire extinguishers for minor fires and personnel safety. The administrative building also contains five sprinklers. Minor landfill fires will be extinguished with water by site personnel and larger fires by the local fire department.

CIWMB staff agree with the determination that preparation of an Environmental Impact Report is necessary and offer the following comments:

General Comments

Staff ask that the following comments be addressed in the DEIR:

> California Environmental Quality Act (CEQA) compliance is required for the establishment, expansion or change in operations of a Solid Waste Facility and the issuance or revision of a SWFP. The DEIR should include details of the project which will enable decision-makers to 1) identify potential impacts from the proposed project(s), 2) determine whether any such impacts are significant, and 3) ascertain whether significant impacts can be mitigated to a level of insignificance as required by the California Environmental Quality Act (CEQA). Article 10, Section 15151 of CEQA states:
>
> > An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences.

In order for an environmental document to be considered adequate by CIWMB staff, the potential significant adverse environmental impacts associated with the project's implementation must be identified clearly in the DEIR and discussed in relative detail, including identification of significant and/or adverse environmental impacts which cannot be mitigated which may require a written finding(s) of overriding considerations. Article 9, Section 15126 of the CEQA Guidelines states:

> Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects.

CIWMB staff requests that the DEIR be a self supporting document containing all information and data and/or specific references to support project suppositions and declarations.

NOTE: Pages 1-2 of the NOP states, "The proposed project consists of expanding the existing 100-acre landfill by 170± acres horizontally and a vertical expansion of both the existing landfill and expansion areas to an elevation of 2,395 feet." However, the governing SWFP, issued on June 24, 1992, already allows vertical expansion of the existing landfill to an elevation of 2,395 feet MSL.

Special Wastes

Page 2 of the NOP states, "The landfill operator is proposing to receive sewage sludge and asbestos waste which are described as special wastes." Special wastes may require special collection, treatment, handling, and/or disposal techniques. Potential impacts resulting from the handling, processing, and disposal of asbestos containing wastes and sewage sludge should be addressed in the DEIR.

Asbestos

Several agencies are potentially involved with the regulation and enforcement of asbestos containing wastes. The Air Resources Board and/or local air districts enforce National Emission Standards for Hazardous Air Pollutants (NESHAP); the Department of Toxic Substances Control (DTSC) enforces hazardous material laws and regulations that include the classification, agency notifications, transportation and disposal of hazardous asbestos; Cal/OSHA enforces worker health and safety laws and regulations that include safety requirements for possible exposures to asbestos; the State Water Resources Control Board and the Regional Water Quality Control Boards enforce laws and regulations pertaining to the protection of the waters of the State of California and regulate asbestos through Waste Discharge Requirements; the Contractors Licensing Board enforces licensing of Licensed Asbestos Contractors. The requirements of these agencies should be reviewed by the project proponent to assist in the development of health and safety plans, design and operation plans, etc. and discussed in the DEIR. Potential impacts which can not be mitigated by these agencies requirements should be addressed in the DEIR.

Will the asbestos wastes contain more than 1% friable asbestos by weight? Will it be mixed with other wastes or monofilled?

Sewage Sludge

Will sewage sludge be landspread or landfilled? Sewage sludge may be a source of subsurface contamination and health impacts. What is the maximum allowable moisture content? Will it be tested for hazardous constituents? If sewage sludge is determined to be hazardous, what procedures will be implemented to prevent disposal at this facility and to ensure disposal at an appropriate Class I or Class II facility? What average daily volume/tonnage and maximum daily volume/tonnage of sewage sludge will be accepted for landspreading or landfilling? Sewage sludge requires special handling and disposal. The DEIR should address potential impacts resulting from the handling and disposal of sewage sludge. The DEIR should include discussion of 40 CFR Part 503, the federal requirements pertaining to sewage sludge.

Landfill Gas

Page 3 of the NOP states, "A landfill gas control system is already in place." Will the expansion areas be equipped with a landfill gas control (LFG) system? The NOP also indicates that a monitoring system is in place to detect any potential off-site migration of LFG along the perimeter of the site. Will this monitoring system be expanded to detect LFG at the perimeter of the expansion areas? What concentrations of methane have been detected at the current site boundary? Are levels of methane above the lower explosive limit (LEL)? Where in relation to the dwelling units are monitoring wells to be located? Board staff are concerned with possible health and safety effects resulting from landfill gas migration from the landfill. Landfill gas concentrations in the on-site and off-site structures could endanger health and safety. Appropriate mitigation measures should be a condition of approval.

Noise

Activities associated with the proposed project may result in an increase in on-site and off-site noise levels. The Site Vicinity Map indicates that two structures are within a few hundred feet of the proposed Western Expansion area. Are these structures residences/sensitive receptors? A

noise study may be required to identify the extent of noise impacts at the sensitive receptors during operations. Appropriate noise attenuating mitigation measures which can be implemented to reduce noise levels during operations should be determined and implemented by the operator.

Cumulative Impacts

It is important that the DEIR address the cumulative impacts resulting from the individual/proposed project(s) and the combined projects as well as those incremental impacts resulting from the proposed project's implementation.

Land Use Compatibility

The surrounding land use must be designated as compatible with the proposed/current land use(s) at the project site. The local government, in whose jurisdiction the facility is located, must make a finding that the facility is consistent with the General Plan [Public Resources Code (PRC), Section 50000.5] and is identified in the most recent County Integrated/Solid Waste Management Plan [PRC, Section 50000].

Information to be Included in the EIR

Hazardous Waste Program

A Household Hazardous Waste Management Program (HHWP) should be developed and included with the proposed project in order to prevent the acceptance or disposal of hazardous waste(s). Specific components of the HHWP should include, but not be limited to: methods of separation for hazardous wastes from the waste stream; storage facility design, location, security and length of storage; load checking procedures and the number of designated load checkers; posting of signs; education and training of personnel in the identification and handling of hazardous substances, including the education of commercial and industrial haulers in the policies of the landfill; and identification of the ultimate disposal location for hazardous materials temporarily stored at the landfill.

Risk of Upset/Human Health

In the event of an accident, explosion, fire, or the release of hazardous substances due to upset conditions or mechanical malfunctions, an Emergency Response Preparedness

Plan should be prepared and available at the facility. Personnel should be properly trained to handle emergency situations, including identification, location and use of fire suppression equipment, procedures for evacuation of the premises, and notice for contacting the appropriate authorities in the event of such an occurrence. CIWMB staff request that such a plan be included/described in the DEIR with the appropriate mitigation measures in the event of such an occurrence.

Please be aware that the California Code of Regulations (CCR), Title 8, Section 3203 (as amended by Senate Bill 198) requires all employers in the State to implement and maintain an effective Injury Prevention Program (IPP). The Labor and Penal Codes have been amended to provide administrative, civil, and criminal penalties for failure to comply and/or for injuries/ deaths occurring due to the absence of an effective IPP.

Increased Disposal Capacity

The DEIR should thoroughly assess potential impacts and mitigations associated with the horizontal and vertical expansion for this facility, including those to subsurface settlement, groundwater, and surface runoff.

Increased Tonnage

An increase to a maximum daily capacity of 1700 tpd could result in substantial environmental impacts: traffic, emissions, degradation of access roads, odor, dust, increased vectors, litter, air quality degradation, leachate production and landfill gas generation. With the increased amounts of wastes entering the facility, increased leachate and LFG production will contribute to any existing impacts to the underlying soils and groundwater. What cumulative impacts could result from receipt of the additional waste? Will the size of the working face increase? If so, to what size? The DEIR should thoroughly assess potential impacts and mitigations associated with increased tonnage.

Page 2 of the NOP states, "The projected closure date is 2030 at which time the site would be accepting up to 1700 tpd." Is it proposed that the maximum daily permitted tonnage will be 1700 tpd? Increases in throughput beyond those addressed in the DEIR may require future CEQA compliance. Total maximum daily tonnages, included with the average daily municipal solid waste (MSW) tonnages of

each waste category (i.e. residential, commercial, etc.) and type (i.e. construction and demolition, sewage sludge, etc.), should be projected **up to the landfill closure date.** Population projections with an analysis of the existing and proposed service areas should be included to support the projected tonnages. Additional wastes will cause the proposed capacity and subsequent site-life to be altered.

A discussion of the implementation of Assembly Bill 939 goals must be considered when projecting site-life and tonnages. Will wastes be accepted from out-of-county? Would out-of-county wastes be required to have recyclable materials removed?

Water

Page 3 of the Initial Study indicates that a high groundwater table is a potential concern. What is the highest anticipated/historical groundwater elevation? Will waste be placed within 5 feet of the highest anticipated groundwater elevation?

Following is a list of concerns, beyond those described in the NOP, which should also be addressed in the DEIR:

* Potential impacts to any groundwater resource area(s) underneath the landfill should be discussed in detail.

* Identification of the nearest residential domestic wells and associated impacts thereof, including contingency plans in the event of a well contamination.

* Current water quality assessment data (SWAT) evaluating the extent of landfill leachate contaminant migration, groundwater gradient flow, groundwater elevation(s), and an indication of whether measured levels of contaminants are above the maximum allowable concentration levels (MCL).

* Surface water quality monitoring program, if any, testing criterion, testing schedule, results and findings.

* Vadose zone contamination monitoring and control systems/methods, design, location, testing criterion and schedule, if any.

* A complete discussion of the structural integrity of the module/lift design, structural integrity of the final landfill configuration, and landfill liner design, including, but not limited to, the hydraulic conductivity (cm/sec) of the clay portion of the liner, underlying soils, and the soils to be used for final cover.

* Location and depths of existing and proposed landfill gas (LFG) monitoring and/or collection probes, groundwater monitoring wells, and the leachate collection and removal systems (LCRS), including the testing criterion and schedule during operation, closure and postclosure maintenance periods.

* Program for monitoring of landfill decomposition gases at the landfill and any structures adjacent to the landfill.

* Identification of the landfill's proposed operating and closure design for surface drainage/runoff and collection. Identify surface runoff, creeks, rivers and/or diversion channels in areas adjacent to the landfill. Discuss the proposed materials to be used for daily and intermediate cover. Indicate the location and permeability of any existing and/or proposed diversion berm(s) which will redirect flow away from/around the landfill. What will mitigate the potential for impacts to downstream wildlife habitat associated with the New River? 7

* Frequency of seismic activity as well as a range of most probable earthquake (MPE) magnitudes and maximum ground acceleration (MGA). A map which delineates the Imperial Fault on-site should be included.

* Identification of the nearest residential and/or commercial/industrial receptors. Noise, odor control and dust control contingency plans should be developed in the event that complaints are lodged against the operator.

* Testing criterion for acceptance of designated waste(s), including the frequency of testing, and the procedures to ensure the aforementioned waste(s) are designated to be non-hazardous.

* Impacts associated with the co-disposal of special waste(s), if any, with MSW.

* A discussion of the infrastructure, existing and planned, which will support any increase in traffic associated with any increase in tonnages.

* A complete description of the proposed facility's equipment and fire protection system/equipment, including, but not limited to, equipment containing fire extinguishers. What is the response time for the nearest Los Angeles County Fire Department location?

* Complete description of any materials recovery operations and on-site storage of materials separated on-site and off-site from the waste stream for recycling.

* List accessible first aid equipment and employee training as well as provisions for the permanent water supply.

* Description of the security on landfill property, including fencing, gates and access roads located on a map.

* Time frame for project implementation.

Mitigation Reporting or Monitoring Program (MRMP)

As required by Public Resources Code Section (PRC) 21081.6, the Lead Agency should submit a MRMP at the time of local adoption of the Environmental Impact Report. This should identify the impacts associated with the proposed project, identify mitigation measures to reduce impacts to a less than significant level, identify agencies responsible for ensuring the implementation of the proposed mitigations, and identify a monitoring/tracking mechanism.

CIWMB staff requests the preceding information pursuant to PRC, Section 21160:

> Whenever any person applies to any public agency for a lease, permit, license, certificate, or other entitlement for use, the public agency may require that person to submit data and information which may be necessary to enable the public agency to determine whether the proposed project may have a significant
>
> effect on the environment or to prepare an environmental impact report.

To assist the lead agency in preparation of the proposed Draft EIR, Board staff have attached a Disposal Site EIR Checklist.

Thank you for the opportunity to comment on this project. If you have any questions regarding these comments, please contact me at (916) 255-2405.

Sincerely,

Brian Larimore

Brian Larimore, Associate WMS
Environmental Review Section
Permitting and Enforcement Division

Attachment

cc: Sara Stremple
State Clearinghouse
1400 Tenth Street
Sacramento, CA 95814

Tadese Gebre-Hawariat, CIWMB Permits
Lew Elliott, CIWMB Enforcement

DISPOSAL SITE EIR CHECKLIST

I. GENERAL BACKGROUND INFORMATION

A. Project Location

B. Need for the Project

C. Area Served

D. Population Served

E. Population Projections

F. Existing Facilities

G. Conformance to County Solid Waste Management Plan

H. Regional Map

I. Designation in General Plan

II. PROJECT DESCRIPTION

A. Site Description

1. Topographic map showing site location

2. Size of the site (acres)

3. Site layout map (showing areas to be filled, sequence of filling, and property boundaries)

4. Total capacity of the site

5. Average quantity of waste to be received daily

6. Expected site life (years)

7. Current land use

8. Current zoning

9. All land use within 1000 feet of site boundaries -See Gov't Code Section 66784.2

10. Owner/operator of the Landfill

11. Classification of site (Class I, II, III etc.)

12. Classification of wastes to be received (Group 2, 3, etc.)

13. Ultimate end use of site

14. Maximum height of fill

15. Public and/or private use

16. Permits required by local and state agencies to implement the project - in sequence

B. Operations Description

1. Compliance with CWMB standards for handling and disposal (Title 14 CCR)

2. Method of disposal (area/trench/canyon)

a) Construction of cells - height of cells, compaction

3. Depth of excavation

4. Maximum height of completed fill

5. Cover types - daily, intermediate

a) Frequency of cover

b) Thickness of cover

c) Suitability of cover material

d) Volume of cover material needed for the entire project

e) Source and supply of cover - to end of site life

6. Anticipated waste compaction (lbs./cu. yd.)

7. Number & Job Titles of employees

8. Equipment - e.g. compactor, water truck, scraper, track dozer

9. Hours/days of operation - days/weeks of operation per year

10. Fire control provisions - on-site; nearest fire dept.

11. Vector control provisions - flies, rodents, birds, mosquitoes

12. Litter control provisions - fences, litter pick-up schedule

13. Traffic

    a) Access routes

    b) Present loading - project induced load

    c) On-site roads

14. Scales - number, weight limits, computerized recording

15. Odor control provisions

16. Dust control provisions

17. Record keeping

18. Erosion controls for wind, vehicular, run-on, run-off - e.g. berms, conduits, levees

19. Sedimentation controls - e.g. silt collection ponds

20. Landfill gas monitoring and quality assurance/quality control systems

21. Groundwater/Vadose zone monitoring sytems

22. Leachate controls

    a) Liner (if applicable)

        1. Permeability of liner (cm/sec)

        2. Sensitivity of line to acidic or caustic compounds

        3. Quality Assurance/Quality Control - installation

    b) Compaction of underlying soils

        1. Permeability achieved after compaction (cm/sec)

    c) Collection system

        1. Maximum gpm or gpd the system can handle: pumping, storage, disposal

    d) Recirculation

    e) Impermeable barriers

1. Permeability of barrier (cm/sec)

23. Leachate monitoring system

24. Description of storage or disposal areas for bulky items

25. Provisions for special wastes handled (e.g., liquids, sludge, etc.)

26. Resource recovery provisions - salvaging

27. Fencing and provisions for site security

28. Police protection

29. Drainage facilities and surface water routing

30. Flood protection facilities

31. Site improvements

a) Water

b) Bathroom and Shower

c) Telephone

d) Electricity and Gas

e) Sewage disposal system - septic, sewer

C. Closure Procedures

1. Final cover

a) Thickness

b) Permeability (cm/sec)

c) Grading

2. Revegetation

3. Responsibility for maintenance

4. Responsibility for monitoring

5. Length of maintenance

6. Closure/Post-closure maintenance fund

III. EXISTING ENVIRONMENT

A. Climate

1. Average precipitation

   a) Seasonal

   b) Annual

2. Seasonal temperaute range

3. Wind

   a) Direction - seasonal

   b) Velocity - seasonal

4. Evaporation rate

   a) Seasonal

   b) Annual

B. Air

1. Baseline air quality data

2. Existing vehicular emissions

   a) Landfill equipment

   b) Refuse vehicles

3. Projected vehicular emissions

   a) Landfill equipment

   b) Refuse vehicles

4. Evaporative emissions (from wastes disposed at site)

C. Surface Water

1. Existing surface waters (streams, rivers, etc.)

2. Drainage courses

3. Average seasonal flows

4. Greatest anticipated 24 hour or 6 day rainfall amount

5. Beneficial uses of waters - portable, agricultural, recreational

6. Water quality analysis - physical, organic, inorganic analyses

7. Watershed characteristics - sources, outflows

D. Subsurface Water

1. Existing subsurface water (aquifer, aquiclude, etc.)

2. Water quality analysis (from site specific tests)

3. Beneficial uses of waters

4. Location of private & public wells within 1 mile of site

5. Minimum depth of groundwater (from site specific tests) - seasonal

E. Geology

1. Description of subsurface strata (in place)

   a) Unified Soil Classification (CH, OH, etc.)

   b) Percent passing #200 sieve

   c) Liquid limit

   d) Plasticity index

   e) Underlying geologic formation - e.g. igneous, metamorphic, sedimentary

2. Permeability of soil (from field samples and not textbook figures)

3. Seismicity

   a) Faults underlying the site

   b) Estimate of seismic risk at the site (distance to nearest fault, maximum projected earthquake of the fault, etc.)

   c) Distance to nearest fault system

4. Boring logs (including boring locations)

5. Mineral deposits

F. Land

1. Descriptions of the site surface

2. Visibility from surrounding area

3. Maximum slopes on the site

4. Slope stability (recommended allowable cut)

G. Flora

1. Description of site flora

2. Vegetation which will require permanent removal

3. Relation between vegetation and slope stability and erodability

4. Rare and endangered flora

H. Fauna

1. Description of site fauna

2. Resident population of rodents and other vectors

3. Rare and endangered fauna

I. Noise

1. Background noise levels at and adjacent to the site

2. Location of noise receptors

3. Noise levels generated by landfill operation - peak and 8-hour maximum dB exposures in relation to OSHA regulations

J. Social

1. Growth inducement

2. Land use compatibility

a) Zoning

b) General plan compatibility

c) Regional plan compatibility

d) Adjacent land use

3. Aesthetics

a) Viewshed impact

K. Historic

1. Archaeological sites

2. Historical sites

IV. IMPACTS, MITIGATIONS, AND IRREVERSIBLE IMPACTS

A. Climate

B. Air

C. Surface Water

D. Subsurface Water

E. Geology

F. Land

G. Flora

H. Fauna

I. Noise

J. Social

K. Historic

L. Human Health & Safety

V. ALTERNATIVES

A. Alternative locations reviewed (not an in depth analysis but a general description)

B. Transfer station for waste transport to another landfill

C. Resource recovery and/or processing, and disposal of residual wastes

D. Other alternatives

E. No project

F. Larger & smaller project

VI. SUMMARY

A. Brief summary of project and existing environment

B. Identification (by use of matrix, outline, table, etc.) of all projects impacts and their respective mitigation measures

VII. ORGANIZATION AND PEOPLE CONSULTED

A. Public meetings

B. Public response to the local project

C. Persons contributing to the report and their qualifications

D. Persons consulted

COUNTY OF LOS ANGELES - DEPARTMENT OF HEALTH SERVICES
ENVIRONMENTAL HEALTH - HEALTH FACILITIES
SOLID WASTE MANAGEMENT PROGRAM
2525 Corporate Place-Monterey Park, CA 91754 (213) 881-4151,

October 19, 1993

Paul McCarthy
County of Los Angeles
Department of Regional Planning,
Impact Analysis Section
320 West Temple Street
Los Angeles, Ca. 90012

SUBJECT: Notice of Intent to Prepare Draft Environmental Impact Report for expansion of the Lancaster Landfill (SWFP #19-AA-0050)
LACDRP Case Number: 93070

Dear Mr. McCarthy:

Thank you for the opportunity to comment on the above referenced document. The initial study has adequately identified those significant areas where potential environmental impacts may exist. We would request, though, that you consider the impacts associated with Section 1.4 - Noise. A detailed noise study should be conducted to assess the noise impacts as it affects employees, usually from equipment use and machinery.

In addition, new California State Regulations are being implemented to conform to the Federal Subtitle D Regulations that regulate solid waste landfills. These regulations should be considered during this planning period. One of the regulations, Title 14 of the California Code of Regulations, Section 17258.10. Airport Safety - requires that owners or operators of sites that are located within 10,000 feet of any airport runway end used by turbojet aircraft or within 5,000 feet of any airport runway end used by only piston-type aircraft must demonstrate that the sites are designed and operated so that the site does not pose a bird hazard to aircraft. The owner/operator must also notify the affected airport and the Federal Aviation Administration (FAA) if landfill lateral expansion proposals are located within a five-mile radius of any airport runway end used by turbojet or piston-type aircraft. Therefore, the Draft Environmental Impact Report (DEIR) should describe the nearest airport locations and if there will be any impacts the landfill owner/operator must address.

We agree that a DEIR is the appropriate document for this project. Please provide us with that document when it becomes available. If you have any questions, please call me at (213) 881-4151.

Very truly yours,

Connie Rocke

Connie Rocke, R.E.H.S.
Solid Waste Management Program

The Gas Co.

North Counties Region
Transmission

October 6, 1993

County of Los Angeles
Department of Regional Planning
Impact Analysis Section
320 West Temple Street
Los Angeles, CA 90012

Attention: Mr. Paul McCarthy

Subject: Environmental Impact Report-Lancaster Landfill

I have reviewed the subject location and find that North Counties Transmission Region of the Southern California Gas Company does not operate or maintain any facilities in or near the project area.

Our Northern Distribution Region may have facilities in the area. If you have not sent them a review package their address is;

Southern California Gas Company
Northern Distribution Region
Planning Department
P.O.Box 2300
Chatsworth, CA 91313-2300

If you have any questions or require additional information you may contact me at (805)253-7066.

Sincerely,

R.M. Wilkinson

R.M. (Ron) Wilkinson

RW

Southern Californ
Gas Company
22245 Placerita
Newhall, CA
Mailing Address:
Box 221300
Newhall, CA
91322-1300
tel 805 259-4600

#4740

California Archaeological Inventory

Regional Information Center
Orange Los Angeles Ventura

Mailing Address: Archaeological Information Center
UCLA Institute of Archaeology
Fowler Museum of Cultural History
Los Angeles, CA 90024-1510
Phone: (310) 825-1980 FAX: (310) 206-4723

Cultural Resources Records Search
Quick Check

Lead Agency: County of Los Angeles, Dept. of Regional Planning

Permit/Project #: 93070 CUP 1483 Date: October 8, 1993

Case Planner: P. McCarthy Attached USGS Quad: _____

Brief Project Description: Extend and expand existing landfill and recycling center.

*** UCLA ARCHAEOLOGICAL INFORMATION CENTER INITIAL RECORDS SEARCH**

/ / The project area has been surveyed by a professional archaeologist and no cultural resources were found.

/ / The project area has been surveyed by a professional archaeologist and cultural resources were found.

X The project area has not been surveyed by a professional archaeologist but cultural resources are likely to be in the area.

/ / The project area has not been surveyed by a professional archaeologist and cultural resources are not likely to be in the area.

RECOMMENDATIONS

X A Phase I ** archaeological survey should be done by a professional archaeologist prior to approval of project plans.

/ / A Phase II ** testing program for determination of significance.

/ / A professional archaeologist should be retained to monitor any earth moving operations.

/ / No archaeological work is needed prior to approval of the project plans but a halt-work condition should be in place in the event of cultural resources being discovered during construction.

COMMENTS

There are 10 recorded archaeological sites and 8 recorded isolates within 2 miles of the project area. The project area has not been surveyed.

* This Quick Check does not cover cultural heritage sites, either listed or pending, such as historic buildings or points of interest.

** Phase I survey and Phase II testing includes a complete records search, field evaluation, and a final report with results and recommendations.

Date Completed: 10/8/93 Signature: Elizabeth E. Soriano

Letter attached / / (310) 825-1980

County of Los Angeles Public Library
7400 East Imperial Hwy., P.O. Box 7011, Downey, CA 90241-7011
(310) 940-8461, TELEFAX (310) 803-3032

Library

SANDRA F. PEUBEN
COUNTY LIBRARIAN

9378

October 7, 1993

Paul McCarthy
County of Los Angeles
Department of Regional Planning
Impact Analysis Section
320 W. Temple Street
Los Angeles, California 90012

Dear Mr. McCarthy:

NOTICE OF INTENT TO PREPARE DRAFT ENVIRONMENTAL IMPACT REPORT - LANCASTER LANDFILL AND RECYCLING CENTER

This is in response to your correspondence regarding the Notice of Intent to Prepare a Draft Environmental Impact Report, Lancaster Landfill and Recycling Center. We have reviewed this material and have determined that this proposed project will have no impact on the services provided by the County of Los Angeles Public Library.

Please let me know if you have any questions. I can be reached at (310) 940-8450.

Very truly yours,

Frederick M. Hungerford
Head, Staff Services

FH:jam\f

c: David Flint

COUNTY OF LOS ANGELES
DEPARTMENT OF PARKS AND RECREATION

Rodney E. Cooper, Director

RECEIVED
11-2-93

November 2, 1993

Mr. Paul McCarthy
Impact Analysis Section
County of Los Angeles
Department of Regional Planning
320 West Temple Avenue
Los Angeles, California 90012

Dear Mr. McCarthy:

NOTICE OF PREPARATION
Landcaster Landfill and Recycling Center Expansion
PROJECT # 93070

The Department of Parks and Recreation has reviewed the above named document, our comments and concerns are as follows.

Regional Hiking and Equestrian Trails

The Antelope Valley Trails, Recreation and Environmental Council (AVTREC) indicates on their local trails plan maps that there is a proposed regional trail extending North from 12th Street through the proposed eastern expansion of the Landcaster Landfill. Trails planning efforts can be coordinated with Elaine MacDonald, President of AVTREC at (805) 946-1976.

We appreciate the opportunity to review this document. If you have any questions or need further information, please contact me at (213) 738-2960.

Sincerely,

Joan Rupert

Joan A. Rupert,
Departmental Facilities Planner I

Bertha Ruiz

By: Bertha Ruiz
Park Planning Student Assistant

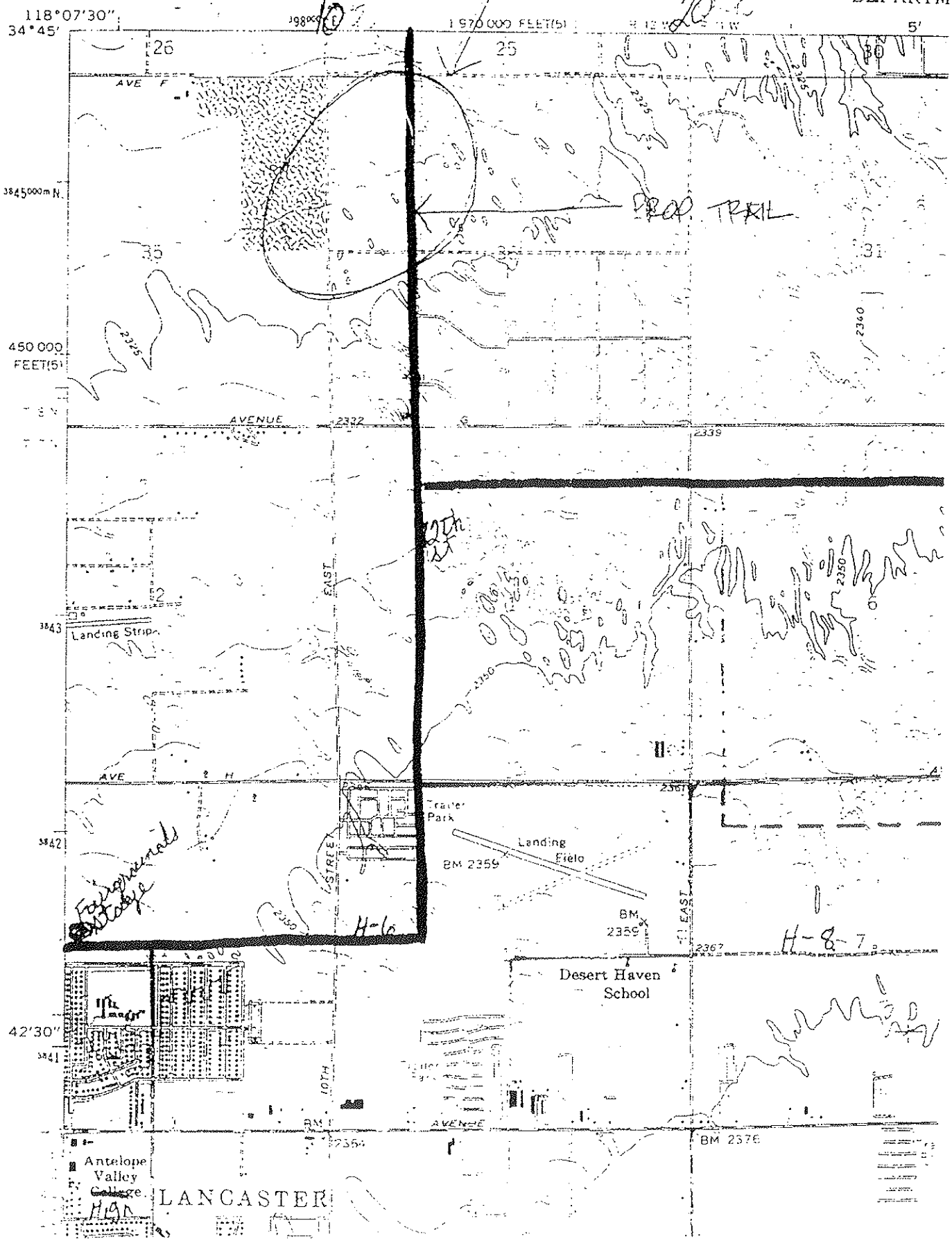
br:93070

LANCASTER EAST QUAD.

Multi U
Bicycle
Urban

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STA
DEPARTM



COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (818) 458-5100

THOMAS A. TIDEMANSON, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O.BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

Date NOVEMBER 22, 1993

IN REPLY PLEASE REFER TO FILE. P-4

Mr. Frank Meneses
Section Head, Impact Analysis Section
Department of Regional Planning
County of Los Angeles
320 West Temple Street
Los Angeles, CA 90012

Attention DAVE McCARTHY

Dear Mr. Meneses:

RESPONSE TO REVIEW OF ENVIRONMENTAL DOCUMENTS

Enclosed are comments from the following Divisions within this Department regarding PROJECT No. 93070 :

- [x] Land Development - Drainage and Grading
- [x] Materials Engineering - Geology and Soils
- [x] Traffic and Lighting
- [ ] Waterworks and Sewer Maintenance
- [x] Waste Management
- [x] Other TRANSPORTATION PLANNING

If you have any questions regarding the comments, please contact the person listed on the enclosed comments. For additional information, please contact Ms. Clarice Nash at (818) 458-4334.

Very truly yours,

T. A. TIDEMANSON
Director of Public Works

Michael H. Nagao

MICHAEL H. NAGAO
Planning Division
Drainage Planning/Environmental Section

MA:aa
RPD

48-0014 DPW 4/86

LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS
LAND DEVELOPMENT DIVISION

☐ FINAL MAP REPORT

☐ LAND USE REPORT

Files Nos. 2-15.311 2-15.313 1.21

Review of NOP 73070, CUP 1483
Lancaster Landfill Expansion

TO: Planning Division

ATTN: Clarice Nash

Map or Transmittal Letter Date
10.14.93

Assignment No. _____

_____ 1. The Drainage and Grading Section has no requirements for this subdivision/application.

_____ 2. The subdivision/site is reasonably free of flood hazard.

_____ 3. Portions of the property are subject to sheet overflow, (and) ponding, ( ) and mudflows from steep hillsides.

_____ 4. Portions of the subdivision/site lying in and adjacent to ( ) steep hillsides, ( ) natural watercourses, ( ) _____ are subject to flood hazard because of ( ) tidal/wave action, ( ) overflow, ( ) erosion, ( ) mudflow and/or deposition of debris.

✓ 5. This project will not significantly affect the environment as far as the Section's interests are concerned, provided the appropriate ordinances and codes are followed.

_____ 6. Place a note of flood hazard on the final map/grant of waiver and submit engineering documentation to support those limits.

_____ 7. Dedicate to the City/County the right to restrict the erection of buildings in the flood hazard areas.

_____ 8. Adequate engineering documentation must be submitted showing that building sites are available and are free of flood hazard.

_____ 9. Provide a drainage concept prior to approval of the tentative map. Sufficient information must be submitted to the Department showing the extent of the drainage problem and proposed solution.

_____ 10. Provide improvements to eliminate the flood hazard. Improvements may include ( ) storm drains and/or channels, ( ) debris control facilities, ( ) vehicular access to structures, ( ) _____.

_____ 11. Dedicate fee title/an easement/future easement to the District/County of Los Angeles/City of _____ providing adequate right of way for _____.

_____ 12. Show on the final map the Flood Control District's right of way for _____. A permit will be required for any construction affecting the District's right of way or facilities.

_____ 13. Approval of the _____ is recommended subject to conditions noted herein or shown on the returned map.

_____ 14. The recordation of this map will not unreasonably interfere with the free and complete exercise of the easement held by the District/County.

_____ 15. The _____ is unsatisfactory. Note the reasons stated herein or shown on returned map.

_____ 16. Proposed grading must be in compliance with Chapter 70 of the County Building Code.

Comments:

Information relative to the above comments may be obtained by contacting:

Engineering Investigator _____ Telephone (818) 458-4920

Approved by J. C. Sewell Date of Report Nov 3, 1993

Drainage and Grading Section

October 26, 1993

TO: Brian Sasaki
Planning Division

Attention Clarice Nash

FROM: Victor C. Martinez
Materials Engineering Division

REVIEW OF ENVIRONMENTAL DOCUMENTS

The attached documents for the 600 E Ave. F Project, No. 93070 have been reviewed by the Materials Engineering Division.

Comments are attached.

If you have any questions, please contact Mr. Frederick Gharib at (818) 458-4925.

VCM:sm
ME-0/ME:EIR.93070

Attach.

DEPARTMENT OF PUBLIC WORKS
MATERIALS ENGINEERING DIVISION

DEVELOPMENT REVIEW SECTION
ENVIRONMENTAL DOCUMENTS REVIEW

	GEOTECHNICAL ENGINEER	ENGINEERING GEOLOGIST
PROJECT IDENTIFICATION 93070		
LOCATION Lancaster		
DATE RECEIVED 10-7-93 DEADLINE 10-28-93		
DATA REVIEWED N.O.P.		
The proposed project has no significant effects on the checked environmental factor(s) from a geology and soils standpoint provided the appropriated ordinances and codes are followed.		
Review of the initial study/~~geotechnical report~~ indicates that the proposed project will have significant effects on the checked environmental factor(s) from a geology and/or soils standpoint. See discussion.	X	✓
~~The environmental document~~ is inadequate from a geology and soils standpoint. See discussion.		
DATE REVIEW COMPLETED	10/21/93	10-13-93

DISCUSSION OF POTENTIALLY SIGNIFICANT EFFECTS AND/OR REPORT INADEQUACIES

Geology The site may contain soils subject to hydroconsolidation.

Soils

See geology discussion.

Original to: Planning Division or
LDMA/Procession Center Section
cc: Development Review Section File

Rev. 10/13/92
FORM NO. 9

July 6, 1993

TO: Brian T. Sasaki
Planning Division

FROM: Ken E. Weary
Traffic and Lighting Division

NOTICE OF CONSULTATION
PROJECT NUMBER 93070
LANCASTER LANDFILL AND RECYCLING CENTER
EXPANSION PROJECT

As requested, we reviewed the subject document. The project applicant is proposing to amend the Conditional Use Permit for the subject facility to allow for the expansion of the Landfill Operation Area. The proposed landfill expansion areas will be located within the southwest and southeast quadrants of Avenue F and 10th Street East.

We believe that the proposed landfill expansion could significantly impact the adjacent roadways and intersections. A traffic study should be prepared to identify the traffic impacts and ensure that appropriate mitigation measures are proposed. The study should address the cumulative impacts generated by this and nearby developments and include levels of service analyses for affected intersections and freeway interchanges. The study should also address the pavement integrity of adjacent roadways and intersections. If traffic signals or other mitigation measures are warranted at the affected intersections, the developer should contribute to the cost. In addition, the developer should determine his proportionate share of mitigation costs and submit this information to this Department for review and approval. A copy of our Traffic/Access Guidelines is attached.

If you have any questions, please contact Mr. Joaquin Herrera of our Traffic Investigations and Studies Section at Extension 5909.

JH:dg
T-2/93070

Attach.

cc: Carl L. Blum
Land Development

November 4, 1993

TO: Brian T. Sasaki

FROM: Barry S. Witler
Transportation Planning

REVIEW OF EXPANSION OF LANCASTER LANDFILL AND RECYCLING CENTER

As requested, we have reviewed the subject document and offer the following comments.

The County of Los Angeles presently has no master planned highways within the immediate vicinity of the project site. Due to the increase in traffic activity expected to be generated by the proposed project, we recommend that the applicant discuss the adequacy of the present circulation system (based on the Antelope Valley Highway Plan) to support the cumulative traffic impact of the project based on build-out of the area in the year 2010.

Should the applicant's traffic study find the circulation system to be inadequate to support the cumulative traffic under build-out conditions for the area, specific mitigation measures should be provided.

If you have any questions, please contact Mr. Quang Luong at Extension 4317.

QL:nr
P-3:wp/28

cc: Planning (Witler)

November 4, 1993

TO: Brian T. Sasaki
Planning Division

FROM: David M. Smith
Waste Management Division

**NOTICE OF INTENT (NOI) TO
PREPARE A DRAFT ENVIRONMENTAL IMPACT REPORT (DEIR)
LANCASTER LANDFILL AND RECYCLING CENTER EXPANSION**

We have reviewed the above-captioned NOI to prepare a DEIR for the Lancaster Landfill and Recycling Center Expansion in reference to Waste Management Division's area of responsibility, and in concert with our previous response dated July 22, 1993, to the Notice of Consultation/Initial Study dated June 2, 1993. The following comments are offered:

General Comment

In addition to the comments presented hereon, comments 3, 4, 6, and 10 of our July 22, 1993, response to the Notice of Consultation/Initial Study (copy attached) still apply and should be addressed in the DEIR.

Solid Waste

1. Project Location

   Revise to indicate that the project site is not limited to the existing landfill area.

2. Page 2, Paragraph 1

   The DEIR should indicate the estimated quantities of incoming materials for diversion, disposal or daily cover. Estimates for future quantities of wastes should also be provided in table format through the expected closure date.

3. Page 2, Paragraph 4

   The DEIR should address in detail the wastes that will and will not be accepted at this facility. It should also provide details on the programs and mitigation measures that will be implemented to ensure that unacceptable materials will not be disposed.

4. Page 2, Paragraph 4

√ The DEIR should address what minimum compaction rates the landfill will achieve. Additionally, conversion must be provided to indicate estimated additional capacity in tons.

5. Page 4, Paragraph 6

√ The DEIR should list all required permits and the associated responsible agencies.

Water Quality/Stormwater Discharge

The DEIR should address the impact the proposed project will have on stormwater runoff. Additionally, reference should be made to National Pollution Discharge and Elimination System Industrial and Construction Activities permits issued by the State Water Resources Control Board.

Underground Tanks

Should the proposed project include the removal or installation of underground storage tanks, this office must be contacted for issuance of the necessary permits.

Industrial Waste

Should any operation at the facility generate industrial wastewater, the DEIR must address how the wastewater will be managed. Additionally, this office must be contacted for issuance of the necessary permits.

Initial Study

Corrections should be made to the Initial Study as follows:

Page 3

Numbers 12 and 13 appear to be in error. Please review and revise as appropriate.

Page 14, Section 4.0

This page appears to be incomplete. Please review and revise as appropriate.

Page 20, Section 5.2 letter "a"

Revise to yes as there are two underground diesel storage tanks on site.

DMS:jk
WM-2\DAVE\LANCASTER.NOI

Attach.

File

July 22, 1993

TO: Brian T. Sasaki
Planning Division

Attention Clarice Nash

FROM: David M. Smith
Waste Management Division

NOTICE OF CONSULTATION/INITIAL STUDY
LANCASTER LANDFILL AND RECYCLING CENTER EXPANSION PROJECT 93070
UNINCORPORATED COUNTY AREA

We have reviewed the Initial Study for a draft Environmental Impact Report (EIR) for the Lancaster Landfill expansion project. The project consists of a contiguous vertical and horizontal (westerly) expansion of the existing Lancaster Landfill, and a noncontiguous horizontal expansion to the east, separated from the existing site by a County road. In reference to our areas of responsibility, the following comments are offered:

1. The proposed expansion project of the existing Lancaster Landfill and Recycling Center will require a Finding of Conformance from the Los Angeles County Solid Waste Management Committee/Integrated Waste Management Task Force.

2. The Initial Study should be revised as follows:

   a. Item 4.0(e) should be changed to <u>yes</u> because an increase in daily waste inflow from 400 tons per day (TPD) to 1,700 TPD will result in an increase in truck traffic.

   b. We concur that an EIR needs to be prepared for this project.

3. The landfill gas management and migration detection system for the existing Landfill operation may be insufficient to meet the needs of the proposed project. Any proposed landfill gas monitoring and subsurface migration control system or expansion of the existing system will require review and approval by this Department.

   The draft EIR should include a discussion on the type, size, and spacing of methane gas migration detection and/or control systems that will be used to detect and control the subsurface lateral migration of Landfill gas beyond the perimeter of the Landfill.

4. The draft EIR should include legible plot plans (drawn to scale with a North arrow) of the site, showing, and clearly labeling the following items:

   a. ✓ Property lines, adjacent, and cross streets

   b. Existing and/or proposed structures indicating the use and the type of occupancy

   c. ✓ Vehicle entrance and exit routes

   d. ✓ Site topography with contours showing current and final grading elevations, including cross sections

   e. ✓ Cross-sectional views of the existing grading and final grading elevations

   f. Boundary of refuse disposal areas

   g. Location of the perimeter landfill gas migration monitoring and/or control systems

   h. Location and cross section(s) of existing and proposed drainage facilities.

   i. Stamp/seal and signature of a California Registered Civil Engineer

5. The draft EIR should include a discussion of the drainage concepts, including such drainage facilities as perimeter ditches, berms, culverts, and sedimentation ponds to handle surface runoffs, stormwater, and other hydrological conditions at the site.

6. The service area for the proposed expansion project is defined to include San Bernardino County (400 TPD). For the purposes of achieving the requirements of AB 939, as amended; the draft EIR should include a discussion of the method(s) that will be used to monitor, and record the sources of waste processed, recycled and/or disposed at the Landfill.

7. The draft EIR should include a description of the leachate collection and removal systems proposed for the expansion project. It should also include a discussion of the type of treatment system proposed for the collected leachate (i.e., on-site or off-site), and how the treated leachate and effluent will be managed.

8. Should any operation within the subject development include the modification, removal, or installation of underground storage tanks and/or industrial waste control or disposal facilities, Waste Management Division must be contacted for required approvals and operating permits.

9. This environmental document needs to fully assess the impact, if any, on the quality of stormwater as the result of the project. Mitigation measures, if necessary, should be incorporated into the project. The document should reference National Pollutant Discharge Elimination System Permit CA0061654 issued by the California Regional Water Quality Control Board, Los Angeles Region, to the County and local agencies. The document should indicate compliance with all relevant stormwater quality management programs of the Federal, State, County, and local agencies.

10. Any mitigation measure monitoring program performed by the Los Angeles County Department of Public Works, Waste Management Division, will require a funding account to be established by the project proponent to pay for the required services. The amount of necessary funds will be determined at the time monitoring will be performed. The Department of Public Works, Waste Management Division, must be contacted to establish the funding account.

If you have any questions regarding these comments, please contact me at Extension 3561.

MA:jk
WM-2\MARTINS\EXPANSION

STATE OF CALIFORNIA—THE RESOURCES AGENCY PETE WILSON, *Governor*

DEPARTMENT OF FISH AND GAME
330 GOLDEN SHORE, SUITE 50
LONG BEACH, CA 90802

(310) 590-5113

November 23, 1993

RECEIVED
DEC 1 3 1993
GLOBAL ENVIRONMENTAL

Mr. Paul McCarthy
Los Angeles County Regional Planning
320 West Temple Street
Los Angeles, California 90012

Dear Mr. McCarthy:

Notice of Preparation for a Draft Environmental Impact Report (DEIR), Lancaster Landfill and Recycling Center SCH 93101036, Los Angeles County

The Department of Fish and Game (Department) appreciates this opportunity to comment on the above-referenced project, relative to impacts to biological resources. To enable Department staff to adequately review and comment on the proposed project, we recommend the following information be included in the DEIR:

1. A complete assessment of the flora and fauna within and adjacent to the project area, with particular emphasis upon identifying endangered, threatened, and locally unique species and sensitive habitats.

   a. A thorough assessment of rare plants and rare natural communities, following the Department's May 1984 Guidelines for Assessing Impacts to Rare Plants and Rare Natural Communities (Attachment 1).

   b. A complete assessment of sensitive fish, wildlife, reptile, and amphibian species. Seasonal variations in use of the project area should also be addressed. Focused species-specific surveys, conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, are required. Acceptable species-specific survey procedures should be developed in consultation with the Department and the U.S. Fish and Wildlife Service.

   c. Rare, threatened, and endangered species to be addressed should include all those which meet the California Environmental Quality Act (CEQA) definition (see CEQA Guidelines, § 15380).

d. The Department's California Natural Diversity Data Base in Sacramento should be contacted at (916) 327-5960 to obtain current information on any previously reported sensitive species and habitat, including significant Natural Areas identified under Chapter 12 of the Fish and Game Code.

2. A thorough discussion of direct, indirect, and cumulative impacts expected to adversely affect biological resources, with specific measures to offset such impacts.

   a. CEQA Guidelines, § 15125(a) directs that knowledge of the regional setting is critical to an assessment of environmental impacts and that special emphasis should be placed on resources that are rare or unique to the region.

   b. Project impacts should also be analyzed relative to their effect on off-site habitats and populations. Specifically, this should include nearby public lands, open space, adjacent natural habitats, and riparian ecosystems. Impacts to and maintenance of wildlife corridor/movement areas should be fully evaluated and provided.

   c. A cumulative effects analysis should be developed as described under CEQA Guidelines, § 15130. General and specific plans, as well as past, present, and anticipated future projects, should be analyzed relative to their impacts on similar plant communities and wildlife habitats.

3. A range of alternatives should be analyzed to ensure that alternatives to the proposed project in this area are fully considered and evaluated. A range of alternatives which avoid or otherwise minimize impacts to sensitive biological resources should be included. Specific alternative locations should also be evaluated in areas with lower resource sensitivity, where appropriate.

   a. Mitigation measures for project impacts to sensitive plants, animals, and habitats should emphasize evaluation and selection of alternatives which avoid or otherwise minimize project impacts. Off-site compensation for unavoidable impacts through acquisition and protection of high-quality habitats elsewhere should be required.

b. The Department considers Rare Natural Communities as threatened habitats that are both regional and local significance. Thus, these communities should be fully avoided and otherwise protected from project-related impacts (Attachment 2).

c. The Department generally does not support the use of relocation, salvage, and/or transplantation as mitigation for impacts to rare, threatened, or endangered species. Department studies have shown that these efforts are experimental in nature and largely unsuccessful.

4. If the project has the potential to adversely affect species of plants or animals listed under the California Endangered Species Act (CESA), either during construction or over the life of the project, a CESA-Memorandum of Understanding (CESA-MOU) must be obtained under Section 2081 of the Fish and Game Code. CESA-MOU's are issued to conserve, protect, enhance, and restore State-listed threatened or endangered species and their habitats. Early consultation is encouraged, as significant modification to a project and mitigation measures may be required in order to obtain a CESA-MOU.

a. A Department-approved Mitigation Agreement and Mitigation Plan are required for plants listed as rare under the Native plant Protection Act.

5. The Department opposes the elimination of watercourses and/or their channelization or conversion to subsurface drains. All wetlands and watercourses, whether intermittent or perennial, must be retained and provided with substantial setbacks which preserve the riparian and aquatic values and maintain their value to on-site and off-site wildlife populations.

a. The Department has direct authority under Fish and Game Code Section 1600 et. seq. in regard to any proposed activity which would divert, obstruct, or affect the natural flow or change the bed, channel, or bank of any river, stream, or lake. Departmental jurisdiction under Section 1600 et. seq. applies to all lands within the 100-year floodplain. Early consultation is recommended, since modification of the proposed project may be required to avoid or reduce impacts to fish and wildlife resources.

b. A discussion of potential adverse impacts from any increased runoff, sedimentation, soil erosion, and/or urban pollutants on streams and watercourses on or near the project site, with mitigation measures proposed to alleviate such impacts.

Thank you for this opportunity to comment. Questions regarding this letter and further coordination on these issues should be directed to Ms. Chanelle Davis, Wildlife Biologist, at (909) 627-1613.

Sincerely,

Fred Worthley
Regional Manager
Region 5

Attachments

cc: Ms. Chanelle Davis
Department of Fish and Game
Chino Hills, California

Ms. Mary Meyer
Department of Fish and Game
Ojai, California

Mr. John Sunada
Department of Fish and Game
Long Beach, California

Ms. Becky Jones
Department of Fish and Game
Palmdale, California

Mr. Kris Lal
Department of Fish and Game
Long Beach, California

Mr. James Applegate
U.S. Fish and Wildlife Service
Carlsbad, California

State Clearinghouse
Sacramento, California

State of California
THE RESOURCES AGENCY
Department of Fish and Game
May 4, 1984

GUIDELINES FOR ASSESSING THE EFFECTS OF PROPOSED DEVELOPMENTS ON RARE AND ENDANGERED PLANTS AND PLANT COMMUNITIES

The following recommendations are intended to help those who prepare and review environmental documents determine when a botanical survey is needed, who should be considered qualified to conduct such surveys, how field surveys should be conducted and what information should be contained in the survey report.

1. Botanical surveys that are conducted to determine the environmental effects of a proposed development should be directed to all rare and endangered plants and plant communities. Rare and endangered plants are not necessarily limited to those species which have been "listed" by state and federal agencies but should include any species that, based on all available data, can be shown to be rare and/or endangered under the following definitions.

   A species, subspecies or variety of plant is "endangered" when the prospects of its survival and reproduction are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, over-exploitation, predation, competition or disease. A plant is "rare" when, although not presently threatened with extinction, the species, subspecies or variety is found in such small numbers throughout its range that it may be endangered if its environment worsens.

   Rare plant communities are those communities that are of highly limited distribution. These communities may or may not contain rare or endangered species. The most current version of the California Natural Diversity Data Base's Outline of Terrestrial Communities in California may be used as a guide to the names of communities.

2. It is appropriate to conduct a botanical field survey to determine if, or the extent that, rare plants will be affected by a proposed project when:

   a. Based on an initial biological assessment, it appears that the project may damage potential rare plant habitat;

   b. Rare plants have historically been identified on the project site, but adequate information for impact assessment is lacking; or

   c. No initial biological assessment has been conducted and it is unknown whether or not rare plants or their habitat exist on the site.

3. Botanical consultants should be selected on the basis of possession of the following qualifications (in order of importance):

   a. Experience as a botanical field investigator with experience in field sampling design and field methods;

   b. Taxonomic experience and a knowledge of plant ecology;

   c. Familiarity with the plants of the area, including rare species; and

   d. Familiarity with the appropriate state and federal statutes related to rare plants and plant collecting.

4. Field surveys should be conducted in a manner that will locate any rare or endangered species that may be present. Specifically, rare or endangered plant surveys should be:

   a. Conducted at the proper time of year when rare or endangered species are both "evident" and identifiable. Field surveys should be scheduled (1) to coincide with known flowering periods, and/or (2) during periods of phenological development that are necessary to identify the plant species of concern.

b. Floristic in nature. "Predictive surveys" (which predict the occurrence of rare species based on the occurrence of habitat or other physical features rather than actual field inspection) should be reserved for ecological studies, not for impact assessment. Every species noted in the field should be identified to the extent necessary to determine whether it is rare or endangered.

c. Conducted in a manner that is consistent with conservation ethics. Collections of rare or suspected rare species (voucher specimens) should be made only when such actions would not jeopardize the continued existence of the population and in accordance with applicable state and federal permit regulations. Voucher specimens should be deposited at recognized public herbaria for future reference. Photography should be used to document plant identification and habitat whenever possible, but especially when the population cannot withstand collection of voucher specimens.

d. Conducted using systematic field techniques in all habitats of the site to ensure a reasonably thorough coverage of potential impact areas.

e. Well documented. When a rare or endangered plant (or rare plant community) is located, a California Native Species (or Community) Field Survey Form or equivalent written form should be completed and submitted to the Natural Diversity Data Base.

Reports of botanical field surveys should be included in or with environmental assessments, negative declarations, EIR's and EIS's, and should contain the following information:

a. Project description, including a detailed map of the project location and study area.

b. A written description of biological setting referencing the community nomenclature used and a vegetation map.

c. Detailed description of survey methodology.

d. Dates of field surveys.

e. Results of survey (including detailed maps).

f. An assessment of potential impacts.

g. Discussion of the importance of rare plant populations with consideration of nearby populations and total species distribution.

h. Recommended mitigation measures to reduce or avoid impacts.

i. List of all species identified.

j. Copies of all California Native Species Field Survey Forms or Natural Community Field Survey Forms.

k. Name of field investigator(s).

l. References cited, persons contacted, herbaria visited, and disposition of voucher specimens.

Top Priority Rare Natural Communities
From Region Five

Code Number	Location[1]	Few Records	Name
S1.1 Rank:			
21330	Cis		Southern Dune Scrub
31200	Cis		Southern Coastal Bluff Scrub
32400	Cis		Maritime Succulent Scrub
32720	Cis		Riversidean Alluvial Fan Sage Scrub
37C30	Cis	Y	Southern Maritime Chaparral
42110	Cis		Valley Needlegrass Grassland
43000	Des	Y	Great Basin Grassland
43???	Des	Y	Mojave Desert Grassland
47000	Cis		Pebble Plains
51???	Cis	Y	Southern Sedge Bog
52310	Cis		Cismontane Alkali Marsh
61700	Des		Mojave Riparian Forest
61810	Des		Sonoran Cottonwood Willow Riparian
61820	Des		Mesquite Bosque
75100	Des	Y	Elephant Tree Woodland
75200	Des	Y	Crucifixion Thorn Woodland
75300	Des	Y	Allthorn Woodland
400	Des	Y	Arizonan Woodland
81600	Cis		Southern California Walnut Forest
81820	Cis	Y	Mainland Cherry Forest
83122	Cis	Y	Southern Bishop Pine Forest
83140	Cis		Torrey Pine Forest
85330	Des	Y	Desert Mountain White Fir Forest
S 1.2 Rank:			
21230	Cis		Southern Foredunes
35410	Des		Mono Pumice Flat
44310	Cis		Southern Interior Basalt Fl. Vernal Pool
S2.1 Rank:			
32300	Cis	Y	Venturan Coastal Sage Scrub
32500	Cis		Diegan Coastal Sage Scrub
32710	Cis	Y	Riversidian Upland Coastal Sage Scr.
32730	Cis	Y	Riversidean Desert Sage Scrub
35300	Des	Y	Sagebrush Steppe
36120	Des	Y	Desert Sink Scrub
37122	Cis	Y	Mafic Southern Mixed Chaparral
44321	Cis		San Diego Mesa Hardpan Vernal P.
44322	Cis		San Diego Mesa Claypan Vernal P.
45310	Des		Alkali Meadow
52120	Cis		Southern Coastal Salt Marsh
52320	Cis		Coastal Brackish Marsh
52410	Des		Transmontane Alkali Marsh

[1] coded as either cis (for cismontane) or des (for desert)

Code Number	Location[2]	Few Records	Name
52410	Cis		Coastal and Valley Freshwater Marsh
61320	Cis		S. Arroyo Willow Riparian Forest
63320	Cis		Southern Willow Scrub
61610	Des		Modoc-G.Bas. Cottonwood Willow Rip.
63600	Des	Y	Modoc-Great Basin Riparian Scrub
63700	Des	Y	Mojave Desert Wash Scrub
71180	Cis	Y	Engelmann Oak Woodland
71181	Cis	Y	Open Engelmann Oak Woodland
71182	Cis	Y	Closed Engelmann Oak Woodland
71190	Cis	Y	Island Oak Woodland
71210	Cis		California Walnut Woodland
81700	Cis	Y	Island Ironwood Forest
81810	Cis		Island Cherry Forest
83230	Cis		S. Interior Cypress Forest
84150	Cis	Y	Bigcone Spruce-Canyon Oak Forest
S2.2 Rank:			
21100	Cis	Y	Active Coastal Dunes
22100	Des		Active Desert Dunes
22200	Des		Stab. and Part. Stab. Desert Dunes
22300	Des	Y	Stab. and Part. Stab. Desert Sandfield
34220	Des	Y	Mojave Mixed Steppe
52420	Des	Y	Transmontane Freshwater Marsh
84140	Cis	Y	Coulter Pine Forest
91130	Cis	Y	S. California Fellfield
91140	Des	Y	White Mountains Fellfield
S2.3 Rank:			
86400	Des		Bristlecone Pine Forest
86700	Des	Y	Limber Pine Forest

[2] coded as either cis (for cismontane) or des (for desert)

GLOBAL RANKING

The *global rank* (G-rank) is a reflection of the overall condition of an element throughout its global range.

SPECIES LEVEL

G1 = Less than 6 viable EOs OR less than 1000 individuals OR less than 2000 acres.
G2 = 6-20 EOs OR 1000-3000 individuals OR 2000-10,000 acres.
G3 = 21-100 EOs OR 3000-10,000 individuals OR 10,000-50,000 acres
G4 = Apparently secure; this rank is clearly lower than G3 but factors exist to cause some concern; i.e. there is some threat, or somewhat narrow habitat.
G5 = Population demonstrably secure to ineradicable due to being commonly found in the world.

SUBSPECIES LEVEL

Subspecies receive a T-rank attached to the G-rank. With the subspecies, the G-rank reflects the condition of the entire species, whereas the T-rank reflects the global situation of just the subspecies.

For example: *Chorizanthe robusta* var. *hartwegii*.
This plant is ranked G2T1. The G-rank refers to the whole species range of *Chorizanthe robusta*. The T-rank refers only to the global condition of var. *hartwegii*.

STATE RANKING

The *state rank* is assigned much the same way as the global rank, except state ranks in California often also contain a threat number attached to the S-rank.

Less than 6 EOs OR less than 1000 individuals OR less than 2000 acres = S1:
- S1.1 = very threatened
- S1.2 = threatened
- S1.3 = no current threats known

6-20 EOs OR 1000-3000 individuals OR 2000-10,000 acres = S2:
- S2.1 = very threatened
- S2.2 = threatened
- S2.3 = no current threats known

21-100 EOs OR 3000-10,000 individuals OR 10,000-50,000 acres = S3:
- S3.1 = very threatened
- S3.2 = threatened
- S3.3 = no current threats known

S4 Apparently secure within California; this rank is clearly lower than S3 but factors exist to cause some concern; there is some threat, or somewhat narrow habitat. NO THREAT NUMBER.

S5 Demonstrably secure to ineradicable in California. NO THREAT NUMBER.

Notes:

Uncertainty about the rank of an element is expressed in two major ways:

By expressing the rank as a range of values: i.e. S2S3 means the rank is something between S2 and S3.

By adding a "?" to the rank:
i.e. S2? This represents more certainty than S2S3.

Other symbols:

GH All sites are historical; the element has not been seen for at least 20 years but suitable habitat still exists (SH = All California sites are historical).
GX All sites are extirpated; this element is extinct in the wild (SX = All California sites are extirpated).
GXC Extinct in the wild; exists in cultivation.
G1Q The element is very rare, but there is a taxonomic question associated with it.

ATTACHMENT 2

Sensitivity of Top Priority Rare Natural Communities
in Southern California

Sensitive rankings are determined by the Department of Fish and Game, California Natural Diversity Data Base and based on either number of known occurrences (locations) and/or amount of habitat remaining (acreage). The three rankings used for these top priority rare natural communities are as follows:

S1. - Less than 6 known locations and/or less than 2,000 acres of habitat remaining

S2. - Occurs in 6-20 known locations and/or 2,000-10,000 acres of habitat remaining

S3. - Occurs in 21-100 known locations and/or 10,000-50,000 acres of habitat remaining

The number to the right of the decimal point after the ranking refers to the degree of threat posed to that natural community regardless of the ranking. For example:

S1.1 = very threatened

S2.2 = threatened

S3.3 = no current threats known

(continued)

Sensitivity Rankings (February 1992)

RANK	COMMUNITY NAME	
S1.1	Mojave Riparian Forest	Southern Dune Scrub
	Sonoran Cottonwood Willow Riparian	Southern Coastal Bluff Scrub
	Mesquite Bosque	Maritime Succulent Scrub
	Elephant Tree Woodland	Riversidean Alluvial Fan Sage Scrub
	Crucifixion Thorn Woodland	Southern Maritime Chaparral
	Allthorn Woodland	Vallley Needlegrass Grassland
	Arizonan Woodland	Great Basin Grassland
	Southern California Walnut Forest	Mojave Desert Grassland
	Mainland Cherry Forest	Pebble Plains
	Southern Bishop Pine Forest	Southern Sedge Bog
	Torrey Pine Forest	Cismontane Alkali Marsh
	Desert Mountain White Fir Forest	
S1.2	Southern Foredunce	
	Mono Pumice Flat	
	Southern Interior Basalt Fl. Vernal Pool	
S2.1	Venturan Coastal Sage Scrub	Coastal and Valley Freshwater Marsh
	Diegan Coastal Sage Scrub	S. Arroya Willow Riparian Forest
	Riversidean Upland Coastal Sage Scrub	
	Riversidean Desert Sage Scrub	Southern Willow Scrub
	Sagebrush Steppe	Modoc-G.Bas. Cottonwood Willow Rip.
	Desert Sink Scrub	Modoc-Great Basin Riparian Scrub
	Mafic Southern Mixed Chaparral	Mojave Desert Wash Scrub
	San Diego Mesa Hardpan Vernal P.	Englemann Oak Woodland
	San Diego Mesa Claypan Vernal P.	Open Englemann Oak Woodland
	Alkali Meadow	Closed Engelmann Oak Woodland
	Southern Coastal Salt Marsh	Island Oak Woodland
	Coastal Brackish Marsh	California Walnut Woodland
	Transmontane Alkali Marsh	Island Ironwood Forest
	S. Interior Cypress Forest	Island Cherry Forest
	Bigcone Spruce-Canyon Oak Forest	
S2.2	Active Coastal Dunes	Mojave Mixed Steppe
	Active Desert Dunes	Transmontane Freshwater Marsh
	S. California Fellfield	Coulter Pine Forest
	Stab. and Part. Stab. Desert Dunes	White Mountains Fellfield
	Stab. and Part. Stab. Desert Sandfield	
S2.3	Bristlecone Pine Forest	
	Limber Pine Forest	

STATE OF CALIFORNIA
PETE WILSON, Governor

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION
VICTORVILLE BRANCH OFFICE
15428 CIVIC DRIVE, SUITE 100
VICTORVILLE, CA 92392-2359
(619) 241-6583
FAX No. (619) 241-7308

November 30, 1993

Post-It™ brand fax transmittal memo 7671 | # of pages ▸ 2

To	From
Christine Argobast	Paul McCarthy
Co.	Co. Regional Planning
Dept.	Phone # 213-974-6461
Fax # 909-860-8017	Fax #

Paul McCarthy
County of Los Angeles
Department of Regional Planning
320 West Temple Street
Los Angeles, CA 90012

Dear Mr. McCarthy:

REVIEW OF NOTICE OF PREPARATION FOR THE LANCASTER LANDFILL AND RECYCLING CENTER

Regional Board staff reviewed the subject notice and has the following comments for the Draft Environmental Impact Report (DEIR) for the expansions of the Lancaster Landfill:

1. Regional Board staff would like to remind the project proponents that all Municipal Solid Waste (MSW) landfills which will have accepted wastes after October 9, 1991, are subject to those applicable requirements of the federal Subtitle D regulations of RCRA (40 CFR, Parts 257 and 258) in addition to the requirements prescribed under the state's Chapter 15 regulations (Title 23, CCR). The requirements under the federal Subtitle D regulations will be issued by the Regional Board in accordance with the State Water Board's Policy for Regulation of Discharge of Municipal Solid Waste (Resolution 93-62).

   Implementation of both state and federal regulations may cause confusion in the management of a MSW landfill. For this reason, Regional Board staff has given public meetings, and would be willing to consider scheduling workshops and other meetings on the applicable regulations of Subtitle D and Chapter 15.

   The DEIR should address all criteria relevant to waste, siting, design and construction, monitoring and closure and postclosure under the applicable requirements of the state's Chapter 15 regulations and under the applicable requirements of the federal Subtitle D regulations.

2. The Notice of Preparation mainly refers to three types of expansions as:

   a. Continuous horizontal expansion;

   b. Continuous vertical expansion; and

   c. Non-continuous expansion.

   Regional Board staff would like to draw the attention of the project proponents to the use of this terminology. According to the terminology and definitions developed under the Subtitle D regulations, three types of landfills are recognized if they will have received wastes after October 9, 1993, as follows:

a. Existing landfills which will continue receiving wastes into an area limited to the existing footprint which is defined by the lateral boundary of the wastes disposed as of October 9, 1993;

b. Lateral expansions which will receive wastes beyond the lateral extensions of the existing footprint; and

c. New landfills which have not received wastes into any parts of the landfills before October 9, 1993.

Determination of the regulatory status of a MSW landfill and applicability of federal MSW regulations rely significantly on these terms. For instance, if any part of the landfill is classified as lateral expansion, it is subject to composite liner requirements under design criteria and ground water monitoring can be phased in within a given time period. However, if it is classified as a new landfill, both design and monitoring requirements must be met before receiving wastes.

The three classes of the landfill expansions mentioned in the Notice of Preparation do not seem to match any of the landfill categories recognized under Subtitle D. Especially, the meaning of "non-contiguous expansion" is not clear. If a MSW landfill is planned to have a lateral expansion, this expansion includes a continuum in the waste bodies of the existing part and the planned expansion. If the planned MSW landfill does not have any lateral continuum with any existing MSW landfill, it may be regarded as a new landfill.

Regional Board staff requests that these terms be redefined in the DEIR in order to determine the regulatory status of the expansions clearly.

If you have any questions regarding any parts of this response, please contact Kim Cebecioglu at (619) 241-7353.

Sincerely,

Ken Carter
Senior Engineer

lc-c/lancastr.ltr

cc: Lew Elliot, CA Integrated Waste Management Board, Valencia

APPENDIX B

RESPONSE TO COUNTY DEPARTMENTAL COMMENTS

COUNTY OF LOS ANGELES
FIRE DEPARTMENT

COUNTY OF LOS ANGELES

FIRE DEPARTMENT

1320 NORTH EASTERN AVENUE
LOS ANGELES, CALIFORNIA 90063-3294

(213) 881-2481

P. MICHAEL FREEMAN
FIRE CHIEF
FORESTER & FIRE WARDEN

RECEIVED
SEP
By

September 17, 1996

Mr. Kerwin Chih
County of Los Angeles
Department of Regional Planning
320 West Temple Street
Los Angeles, CA 90012

Dear Mr. Chih:

SUBJECT: ENVIRONMENTAL IMPACT REPORT – (CITY OF LANCASTER) LANDFILL AND RECYCLING FACILITY – SCH NO. 93101036 – (EIR #363, 1996)

We have reviewed the Screencheck Draft Environmental Impact Report for the proposed landfill expansion located at 600 East Avenue F, approximately two miles northeast of the City of Landcaster in an unincorporated area of Los Angeles County.

The subject development will receive fire protection and paramedic service from the County of Los Angeles Fire Department. Fire Station 33, located at 44806 N. Cedar Avenue, Lancaster, CA 93534-3213, and Fire Station 117, located at 44851 30th Street East, Lancaster, CA 93535-1338, are the jurisdictional engine companies for this property.

Fire Station 117 has a four-person engine company. Fire Station 33 has a light task force consisting of a two-person engine and a four-person quint (a hybrid engine/ladder truck apparatus) as well as a two-person paramedic squad.
A development of this nature will place a greater demand on existing fire protection and paramedic resources.

The applicant shall participate in an appropriate financing mechanism to provide funds for fire protection facilities which are required by new commercial, industrial or residential development in an amount proportionate to the demand created by this project. The developer shall contact the County of Los Angeles Fire Department at (213) 881-2404 to discuss mitigation arrangements.

The following analysis of information should be included in the Final Environmental Impact Report:

P.04 805 945 2269 waste management Sep-26-96 16:26

A fuel management/modification and fire hazard reduction plan should be developed and implemented prior to construction.

Appropriate soil erosion control structures and vegetative cover must be provided to prevent erosion. Plants suited to the climate of the area should be considered including drought tolerant (xeriphytic) species.

Landscape design and construction should consider utilizing low-fuel volume and drought tolerant species.

Due to the wildland fire hazard surrounding the project, we do not recommend using highly flammable and heavy fuel volume Eucalyptus, Pines, Junipers or Cyprus plant species.

The existing vegetation may be utilized to create a fire safe environment. Shrub species such as Toyon, Saltbush, and Holly Leaf Cherry, as well as tree species such as Locust, Sycamore and most fruit trees can be maintained in a fire safe condition, provided they are not overtopping any structure.

The flora and fauna analysis should address any rare, endangered and/or sensitive species that exist on the project site. The preservation, relocation and/or construction impacting any of these species should be fully explained in the EIR.

The project may be close to a source of reclaimed water. If it is, we recommend the use of reclaimed water for irrigation of all landscaped areas.

Areas designated as open space shall not be utilized for equipment or vehicle storage, or for access to the area of development. Such areas shall not be used for dumping of fill materials.

This project will require an EIR fee deposit of $1,000 payable to the Los Angeles County Fire Department at the time the DEIR is submitted for review (see enclosed.)

If you have any additional questions, please contact this office at (213) 881-2481.

Very truly yours,

David R. Leininger

DAVID R. LEININGER, ASSISTANT CHIEF, FORESTRY DIVISION
PREVENTION BUREAU

DRL:jmb

Enclosure

LOS ANGELES COUNTY FIRE DEPARTMENT
ENVIRONMENTAL REVIEW FEES & DEPOSITS

Effective September 11, 1991, whenever a review for impact on the fire prevention, natural resources, and/or fire resource allocation responsibilities of the Fire Department is required, as part of the environmental review process, the applicant shall pay a minimum deposit fee of $1,000 from which actual costs shall be billed and deducted. Additional deposits may have to be made if actual review costs exceed 80% of deposited funds. A larger deposit may be made for more complex projects to ensure prompt continuation of environmental review efforts. All unused funds shall be refunded to the applicant.

All Environmental Review Deposits should be made payable and sent to:

Los Angeles County Fire Department
1320 North Eastern Avenue
Los Angeles, CA 90063-3294
Attn: Fiscal Services Division, Room 225

If you have any questions regarding the Environmental Review Fee or Deposit amount, please call the Forestry Division at (213) 881-2481.

If you have any questions regarding your Environmental Review Deposit status, please contact the Fiscal Services Division at (213) 881-2322.

EIRFEES/B-10/WP
Issue Date: 02/25/92

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS

January 31, 1997

JN: 9267

Mr. David R. Leininger
County of Los Angeles
Fire Department
Forestry Division
1320 North Eastern Avenue, Room 160
Los Angeles, California 90063-3294

RE: LANCASTER LANDFILL AND RECYCLING CENTER EXPANSION SCREENCHECK DRAFT EIR, SCH NO. 93101036 (EIR #363,1996) RESPONSE TO COMMENTS

Dear Mr. Leininger:

Included herein for your review are responses to your agency's comments on the above referenced document, submitted to the Los Angeles County Department of Regional Planning (DRP) in a letter dated September 17, 1996. Each of your comments is listed below with a response following.

General Response: Section 5.3.1.1, page 5.3-2 of the DEIR has been revised to indicate the two stations which will provide fire protection and paramedic service for the site. In addition, Section 5.3.4, page 5.3-6 has been revised to indicate that the applicant will participate in an appropriate financing mechanism to provide funds for fire protection facilities proportionate to the demand created by this project.

Comment 1: A fuel management/modification and fire hazard reduction plan should be developed and implemented prior to construction.

Response: The site currently has a Spill Countermeasure and Control Plan and Emergency Management Plan which meets your requirements for the above requested plan. These plans are referenced and discussed in Section 5.3.4, page 5.3-4 of the DEIR.

Comment 2: Appropriate soil erosion control structures and vegetative cover must be provided to prevent erosion. Plants suited to the climate of the area should be considered.

Response: Erosion control measures are discussed in Sections 3.8, page 3-43 and 5.2.4, page 5.2-5 of the DEIR. Section 3.8, page 3-43 has been revised to indicate that vegetation suited to the climate of the area will be utilized including drought tolerant species.

Comment 3: Landscape design and construction should consider utilizing low-fuel volume and drought tolerant species.

Response: Section 4.5.4, page 4-23 of the DEIR has been revised to state that landscaping will utilize low fuel volume and drought tolerant species.

Comment 4: Due to the wildland fire hazard surrounding the project, we do not recommend using highly flammable and heavy fuel volume Eucalyptus, Pines, Junipers or Cyprus plant species.

Response: Section 4.5.4, page 4-23 of the DEIR has been revised to discuss not utilizing the heavy fuel volume plant species for the site's landscape.

Comment 5: The existing vegetation may be utilized to create a fire safe environment. Shrub species such as Toyon, Saltbush, and Holly Leaf Cherry, as well as tree species such as Locust, Sycamore and most fruit trees can be maintained in a fire safe condition, provided they are not overtopping any structure.

Response: Those species listed above do not currently exist nor are they proposed as part of the project since the climate will not sustain these plants without irrigation. No changes to the DEIR have been made in response to this comment.

Comment 6: The flora and fauna analysis should address any rare, endangered and/or sensitive species that exist on the project site. The preservation, relocation and/or construction impacting any of these species should be fully explained in the DEIR.

Response: Section 5.7 of the DEIR fully discusses the flora and fauna analysis performed for the site and any rare, endangered and/or sensitive species existing on-site as well as mitigation measures proposed for the project.

Comment 7: The project may be close to a source of reclaimed water. If it is, we recommend the use of reclaimed water for irrigation of all landscaped areas.

Response: There is no off-site source of reclaimed water near the site; however, the site does operate a groundwater pump and treat system to restore groundwater quality. Extracted groundwater is treated and discharged to injection wells east of the landfill, is used for dust control, landscape irrigation and for emergency fire suppression. Section 3.5.6, page 3-28 of the DEIR has been revised to discuss this.

Comment 8: Areas designated as open space shall not be utilized for equipment or vehicle storage, or for access to the area of development. Such areas shall not be used for dumping of fill materials.

Response: Section 3.1, page 3-1 of the DEIR has been revised to indicate that open space designated areas surrounding the site property will not be utilized for storage, access or dumping of fill materials.

Comment 9: This project will require an DEIR fee deposit of $1,000 payable to the Los Angeles County Fire Department at the time the DEIR is submitted for review.

Response: The project applicant is in the process of paying this fee deposit.

We hope our responses to the above comments are to your satisfaction. We have enclosed revised pages which correspond to those revisions discussed above for your review. Revised text is italicized for your ease in reviewing. It is necessary that the DRP receive a letter of approval of these responses from your agency so that this document may be submitted for public review. Your expedience in approving these responses/revisions would be greatly appreciated.

Should you have any questions please call me or Ms. Virginia Becerra at (909) 860-7777.

Very truly yours,

Christine M. Arbogast

Christine M. Arbogast, P.E.
Division Manager
Solid Waste Management Division

VB/CMA

Attachments

c: Doug Corcoran - WML
Rod Collins - WML
Kerwin Chih - DRP

3.0 PROJECT DESCRIPTION

This chapter describes the general characteristics of the proposed LLRC expansion (hereinafter referred to as the "project"), the key development and operational features of the proposed landfill project, and the environmental measures proposed by the project applicant, WMC or incorporated into the project design.

3.1 PROJECT LOCATION AND BOUNDARIES

The proposed project is to expand the boundaries of an existing Class III sanitary landfill which is located within the unincorporated portion of Los Angeles County in a sparsely developed area two miles northeast of the City of Lancaster (see Figure 3-1). The project applicant, Waste Management of Lancaster, currently owns 276 acres at the intersection of 10th Street East and Avenue F. The existing permitted landfill operates on 102 acres of this property, of which 82 acres is within the boundaries of the permitted refuse footprint. The remaining 20 acres is occupied by ancillary facilities.

Current land use surrounding the immediate site is predominantly open space with some mobile homes and a small radio station transmitter located within a distance of one mile. The surrounding area is zoned D-2-1 (Desert/Mountain one acre minimum) and D-2-2 (Desert/Mountain two acre minimum).

The proposed landfill site is comprised of the current landfill area, the Western Expansion Area (WEA) and the Eastern Expansion Area (EEA). The WEA will consist of approximately 62 acres now used as a borrow area. The EEA will encompass approximately 112 acres of presently undeveloped land and is separated from the existing site by a County road (10th Street East). Figure 3-2, Site Plan, shows the limits of the existing site and proposed expansion areas and landfill footprint. Figure 3-3, Existing Topography, is a topographical map of the site. *Any open space designated areas surrounding the project site will not be utilized by the project for equipment or vehicle storage, access to the area of development or for dumping of fill materials.* Figure 3-3a, Existing Landfill Facilities, depicts the infrastructure and support facilities which currently exist at the landfill. This includes a welding shop, maintenance building, office building and gate house, two scales, two underground fuel tanks and fuel pumping stations, a truck and landfill equipment wash pad, potable

3.5.6 WATER SUPPLY

Water will be needed at the site for dust control and compaction, fire protection, and drinking water for site personnel. Current estimated daily water consumption for dust control and compaction at the site is estimated to be 44,600 gallons per day (gpd). The average demand for the proposed project over the lifetime of the facility is estimated to be about 55,750 gpd. Projections are based on existing and proposed landfills in California.

It is anticipated that this water need will continue to be met by utilizing one existing well currently used for site operations and treated groundwater from the groundwater remediation system.

VOCs have been detected in groundwater samples from monitoring wells located within the shallow groundwater aquifer at the landfill. In 1990, 25 temporary monitoring wells were installed at the site to define the areas of impacted groundwater in the aquifer beneath the site. In 1991, based on monitoring results from these wells, two primary areas of impacted groundwater were identified. A northerly plume is located in the northern portion of the WEA. According to the landfill operator, the source of the plume may be the former truck washing area located south of the maintenance yard. A southerly plume is located offsite, south of the current site's southern boundary. The source of the southerly plume appears to be located to the northwest of the southeast corner of the existing landfill. No VOCs have been detected in the 250 feet deep production wells at the site.

In February 1994, a groundwater remediation program was implemented at the landfill to clean-up the contaminated groundwater. Five groundwater extraction wells were installed to pump and treat the contaminated groundwater. Three extraction wells are located on the landfill site and two are located south of the landfill perimeter. This treatment consists of pumping the groundwater through activated carbon filters to remove VOCs from the water.

The groundwater remediation system currently treats 140 gallons per minute (gpm) of groundwater, 24 hours per day, for a total of 201,000 gpd. Treated groundwater is pumped back into the ground through five groundwater recharge wells located in the proposed future EEA. Currently, the landfill operator is using the treated groundwater for dust control, *landscape irrigation and emergency fire suppression.* It is anticipated

- ❑ Inattentiveness
- ❑ Horseplay
- ❑ Walking behind trucks
- ❑ Improper hand signals/backing of trucks
- ❑ Heavy equipment movement
- ❑ Non-essential vehicles parking in the staging area
- ❑ Scavenging
- ❑ Excessive Speeds

The LLRC utilizes employees designated as Landfill Spotters to control the active disposal area traffic and to minimize the occurrence of the above activities. The main function of the Landfill Spotter is to direct traffic into and out of the active unloading area, to ensure safe and orderly working conditions and check loads for household hazardous waste or other unacceptable waste streams. This is accomplished by performing many different tasks. These include:

- ❑ Interacting with drivers and equipment operations.
- ❑ Directing trucks to an open unloading area.
- ❑ Being familiar with different types of trucks.
- ❑ Keeping the active face free of obstruction
- ❑ Directing small vehicles out of the active area and to hand unloading area.
- ❑ Notifying Supervisor/Safety Coordinator/Scalehouse of unusual occurrences.
- ❑ Maintaining radio communications with supervisor, as needed.
- ❑ Notifying Supervisor of any suspected hazardous or unacceptable waste.

By utilizing a spotter at all times to control the active disposal area will minimize the likelihood of accident occurrences at the LLRC.

3.8 LANDFILL CLOSURE

The closure procedure for the LLRC will begin in the northeast corner of the current landfill area and proceed towards the southwest corner of the WEA. This final closure operation for the western site is labeled as Phase III on Figure 3-5. Phase III final closure operations will begin when refuse filling of Phase IV of the EEA is underway. Perimeter slopes will be closed first and vegetated where practical in areas which have already reached final grades prior to the completion of top deck refuse

placement. Excess excavation material from Phases IV and V will be used as final cover material for Phase III.

Phase IX closure will proceed from the northwest corner of Phase IV and proceed in a southeasterly direction. The final closure of the EEA is labeled as Phase IX on Figure 3-5. Phase IX will begin while Phases VII and VIII are active. Phase IX will eventually be completed over the southeastern corner of Phase VIII after the refuse limits are reached. Final cover material for Phase IX will be provided by excess excavation material from Phases VI, VII, and VIII.

Final landfill slopes will be constructed no steeper than 3:1 and no flatter than five percent as shown on Figure 3-6. This design will minimize erosion potential and will allow for a sufficient post-settlement landfill slope to encourage surface water sheet-flow drainage. Final cover, in accordance with current regulations, will be applied to final refuse slopes within six months following final refuse grade elevations. The details of the final cover system are shown on Figure 3-7.

In order to verify that the low-permeability soil barrier layer has been properly placed during final cover construction, field tests will be conducted periodically as part of the final cover quality assurance/quality control procedures. Results of all field, construction, and laboratory tests conducted to document compliance with regulatory requirements will be maintained at the facility for future reference.

Revegetation of the site will occur upon placement of final cover to provide open space compatible with the surrounding sparse land use. *Vegetation suited to the climate of the area will be utilized including drought tolerant species.* All closure measures will be implemented to ensure compliance with 14 CCR, Chapter 3, Article 7.8, and Federal Subtitle D standards.

3.9 LANDFILL POST-CLOSURE

A post-closure maintenance program will be conducted at the landfill so that containment and monitoring facilities retain their integrity. Surface drainage control facilities, vegetated soil cover areas, all monitoring facilities, and access roads will be routinely inspected and repaired as necessary. A post-closure maintenance program will be prepared as part of final closure approvals and will be followed in order to preclude problems associated with: leachate generation due to infiltration of surface water into the landfill, gas venting through

established financial assurance plan to cover the costs of closure and post-closure maintenance.

The post-closure maintenance plan will include final cover maintenance and repair, maintenance of all collection systems and monitoring systems, procedures for monitoring and reporting for all control and collection systems, perimeter and structure monitoring, emergency response plan, and a cost estimate for all post-closure maintenance and monitoring.

The end use of the site upon final closure is to be open space. Landscaping will be accomplished through hydroseeding utilizing native, *low fuel volume and drought tolerant species of vegetation. Highly flammable and heavy fuel volume plants such as Eucalyptus, Pines, Junipers or Cyprus plant species will not be considered for the site due to the wildland fire hazard surrounding the project.* No irrigation or other land use is proposed.

The second condition would result from high intensity rain. Under "existing conditions" some of this water might flow away from the site by channel flow (particularly on the EEA), but most of it will remain in depression storage, and will infiltrate through cracks to depths of a few inches. Under the "development scenario" most of this water would move away from the site through peripheral diversion channels, and eventually become stored at Rosamond Lake. A credible, worst-case scenario would be a 24-hour storm that delivers three inches of rain. Given the area of the site and assuming perfect efficiency (i.e., runoff with no absorption into the soil), this precipitation rate would contribute a total of 43.5 acre-feet of additional water to the inflow of Rosamond Lake. A more normal event might be a six-hour storm delivering one inch of rain, which would contribute a total of 14.5 acre-feet of additional water to the inflow of Rosamond Lake.

The rates of surface runoff toward Rosamond Lake might increase slightly on account of the project. Rosamond Lake has a surface area of approximately 16,000 acres, so the addition of 14.5 acre-feet of water (in the case of a six-hour storm) or 43.5 acre-feet of water (in the case of the 24-hour storm) would result in negligible increases in the level of the lake of 0.01 to 0.03 inch, respectively.

The assumption of perfect efficiency, i.e., 100 percent runoff of all precipitation, is very conservative in light of the very dry climate in the area. In reality, no runoff will reach Rosamond Lake in all but the most severe storms, due to the high rate of infiltration that would be expected between the site and Rosamond Lake.

5.2.4 MITIGATION MEASURES

Interim drainage controls are designed to prevent stormwater from entering the active working area, and prevent surface water ponding and soil cover erosion within the landfill limits. Stormwater will be managed during filling activities through the construction of temporary and permanent diversion ditches and sedimentation ponds.

An extraction system, with a flame arrest in the flare station, is now in place at LLRC. The system is designed to operate 24 hours a day and collect gas which is drawn from the system by blowers. This system currently operates intermittently due to the low quantities of gas being generated by the disposed refuse. The gas is fed into a flare station for combustion. Current procedures for this system include system leak checks and the flare arrest equipment.

The LLRC maintains one 3,500-gallon water truck and two bulldozers on-site that are available 24 hours per day for fire prevention and protection. All trucks, bulldozers and heavy equipment at the landfill have a fire extinguisher, as required by law. A fire extinguisher is also in every vehicle and building on-site.

5.3.1.1 FIRE PROTECTION SERVICE

Fire protection service for the LLRC is provided by the Los Angeles County Fire Department. The site is within the area served by Station 33, located at 44806 *North Cedar Avenue in Lancaster and Fire Station 117, located at 44851 30th Street East in Lancaster. Fire Station 33 has a light task force consisting of a two-person engine and a four-person quint (a hybrid engine/ladder truck apparatus) as well as a two-person paramedic squad. Fire Station 117 has a four-person engine company.*

5.3.2 THRESHOLDS OF SIGNIFICANCE

Any of the following impacts regarding fire hazards would be considered a potentially significant impact:

- ❑ Substantially increase the potential for landfill fires.
- ❑ Require additional fire protection staff or equipment to maintain an acceptable level of service.

handle the expansion. There are no significant fire hazards associated with the proposed project.

A Spill Countermeasure and Control Plan (SCCP) and Emergency Management Plan has been prepared for the RWQCB and CIWMB in accordance with Title 14 and Title 23, outlining fire hazard reduction procedures and actions to be taken in case of a fire. The following measures would be taken if a fire occurs in a refuse area:

1. Burning refuse will be excavated and separated from the fill area and covered immediately with on-site soil.

2. If necessary, water will be applied to the burning refuse using the on-site water truck.

3. The Los Angeles County Fire Department will be summoned if site personnel and equipment cannot extinguish the fire.

The following actions will be taken if a fire occurs in the 100-foot buffer zone areas surrounding the landfill:

1. Maximum effort will be made to prevent the fire from reaching refuse fill areas by utilizing on-site assets to:

   - ❑ Excavate a fire break between the landfill and the oncoming fire. Excavated soils will be bermed on the fire side of the fire break for additional protection.

   - ❑ Wet down areas between the fire break and refuse area using the on-site water truck.

2. Notify the Los Angeles County Fire Department.

The following actions will be taken if a fire occurs in a site structure:

1. Notify the Los Angeles County Fire Department.

g. Dumping operations shall be carried on in such a manner as to minimize the possibility of fires occurring in the waste material. Under no circumstances shall any exposed surface or face of combustible materials be left uncovered at the close of daily operations.

h. Any fire which occurs on the premises shall be reported immediately to the Fire Department and it shall be the responsibility of the operator to immediately extinguish any such fire. A telephone shall be installed for the purpose of notifying the Fire Department in case of fire.

i. Provisions shall be made to control or prevent the blowing of papers or other combustible waste materials into the brush or outside the established dumping areas. The premises shall be kept free of any accumulations of waste combustible material which might constitute a fire menace.

The applicant shall participate in an appropriate financing mechanism to provide funds for fire protection facilities which are required by new commercial, industrial or residential development in an amount proportionate to the demand created by this project.

Continued implementation of the mitigation measures listed above will reduce potential fire hazard impacts to a less than significant level.

COUNTY OF LOS ANGELES

FIRE DEPARTMENT

1320 NORTH EASTERN AVENUE
LOS ANGELES, CALIFORNIA 90063-3294

(213) 881-2481

P. MICHAEL FREEMAN
FIRE CHIEF
FORESTER & FIRE WARDEN

March 5, 1997

Christine M. Arbogast, P.E.
Bryan A. Stirrat & Associates
Civil and Environmental Engineers
1360 Valley Vista Drive
Diamond Bar, CA 91765

SUBJECT: **ENVIRONMENTAL IMPACT REPORT – (CITY OF LANCASTER)**
LANCASTER LANDFILL AND RECYCLING CENTER EXPANSION
SCREENCHECK DRAFT EIR, STATE CLEARING HOUSE #93101036
RESPONSE TO COMMENTS – (EIR #410/1997)

Your letter of January 31, 1997, including your response to our comments regarding the Lancaster Landfill and Recycling Center Expansion Screencheck Draft Environmental Impact Report has been reviewed by the Planning, Engineering and Forestry Divisions of the County of Los Angeles Fire Department. The following are their comments:

The development of this project must comply with all applicable code and ordinance requirements for construction, access, water mains, fire flows and fire hydrants.

Commercial, multiple-residential fire flows shall be 5,000 gallons per minute at 20 pounds per square inch residual pressure for a five-hour duration will be required.

All on-site driveways shall provide a minimum unobstructed width of 26 feet clear to the sky to within 150 feet of all portions of the exterior walls of the first story of any building.

The minimum width of 26 feet shall be increased when any of the following conditions exist for commercial/industrial developments:

28 feet: When buildings are more than three stories in height or 35 feet in height above ground level. The centerline of the access roadway shall be located parallel to and within 30 feet of the exterior wall on one side of the proposed structure.

MAR 10 1997

High density residential (apartments, condominiums, etc.) shall provide a minimum clear width of 26 feet which allows no parking and shall be designated as a fire lane with appropriate signage.

34 feet: Allows parallel parking on one side of the access way.

36 feet: Allows parallel parking on both sides of the access way, except in front of fire hydrants.

All driveways shall be labeled as "Fire Lane" on the final building plans. Labeling is necessary to ensure access for Fire Department use.

Additional fire life safety requirements will be addressed at building plan check. Fire Department requirements for access, fire flow and hydrants are addressed at the Los Angeles County Subdivision Committee meeting when approval for tentative subdivision maps are considered.

In addition, the following fire prevention requirements must be provided:

Class II Standpipe System: Shall be provided and located within 200 feet of dumping operations and shall have sufficient 1½ inch hose with a variable-fog nozzle to reach all portions of such operations.

a. In lieu of a Class II standpipe system, the use of water tender trucks may be permitted, provided each is equipped with 2½ inch outlets for Fire Department use.

Access Roads: Approved access roads shall be provided and maintained at all times around the dumping areas to provide access for firefighting equipment.

a. Weeds, grass and combustible vegetation shall be removed for a distance of ten feet on both sides of all access reads used by rubbish trucks or the public.

Firebreaks: A firebreak with clearance of all dry weeds and grass shall be provided around the dumping areas. Secondary firebreaks, as required by the Fire Department, shall be provided and maintained in order to prevent the spread of fire beyond the dump facility. Such secondary firebreaks shall be not less than 60 feet in width.

Fencing: The property shall be adequately fenced to prevent entry of authorized persons and gates shall be locked at all times when the facility is not supervised. An attendant shall be on duty when the site is open to the public.

Smoking Restrictions: "NO SMOKING" signs shall be posted on the facility and at all entrances to the facility. Smoking regulations, as required by this Department, will be strictly enforced.

Fires in Dumping Operations: Dumping operations shall be carried on in such a manner as to minimize the possibility of fires occurring in the waste material. Waste material dumped on the premises shall be immediately mixed with earth, and under no circumstances shall any exposed surface of the face of combustible materials be left uncovered at the close of daily operations.

Reporting of Fires: Any fire which occurs on the premises shall be reported immediately to the Fire Department and it shall be the responsibility of the operator to immediately extinguish any such fire. A telephone shall be installed for the purpose of notifying the Fire Department in case of fire.

Should any questions arise regarding engineering or water and access, please feel free to contact Ms. Janna Masi at (213) 890-4243.

If you have any additional questions, please contact this office at (213) 881-2481.

Very truly yours,

DAVID R. LEININGER, ASSISTANT CHIEF, FORESTRY
FORESTRY DIVISION, PREVENTION BUREAU

DRL:lc

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS

March 27 1997 JN: 9267

Mr. David R. Leininger
County of Los Angeles
Fire Department
Forestry Division
1320 North Eastern Avenue, Room 160
Los Angeles, California 90063-3294

RE: LANCASTER LANDFILL AND RECYCLING CENTER EXPANSION SCREENCHECK DRAFT EIR, SCH NO. 93101036 (EIR #410,1997) RESPONSE TO COMMENTS

Dear Mr. Leininger:

This letter is in response to your agency's comments on the above referenced document, submitted to Bryan A. Stirrat & Associates, Inc. (BAS) in a letter dated March 5, 1997. Upon review of the comments, it was determined that all applicable comments are currently incorporated in the subject EIR reviewed by your department. The comment concerning the minimum driveway width and clearance was not included, therefore, this requirement has been included as item "f" in Section 5.3.4 - Mitigation Measures.

Should you have any questions please call me or Ms. Virginia Becerra at (909) 860-7777.

Very truly yours,

Christine M. Arbogast

Christine M. Arbogast, P.E.
Division Manager
Solid Waste Management Division

VB/CMA

c: Janna Masi - Los Angeles County Fire Prevention Engineering
Doug Corcoran - WML
Rod Collins - WML
Kerwin Chih - DRP

(H:\Shared\SWMD\Lancast\1997:0325L-DL:3/27/97)

1360 Valley Vista Drive • Diamond Bar, CA 91765 • (909) 860-7777 • FAX (909) 860-8017

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (818) 458-5100

HARRY W. STONE, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O.BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

DATE September 19, 1996

IN REPLY PLEASE REFER TO FILE: P-4

Mr. Frank Meneses
Section Head, Impact Analysis Section
Department of Regional Planning
County of Los Angeles
320 West Temple Street
Los Angeles, CA 90012-3828

Attention Mr. Kerwin Chih

Dear Mr. Meneses:

RESPONSE TO REVIEW OF ENVIRONMENTAL DOCUMENTS

Enclosed are comments from the following Divisions within this Department regarding Lancaster Landfill and Recycling Facility Expansion:

- [X] Land Development - Drainage and Grading
- [X] Materials Engineering - Geology and Soils
- [X] Traffic and Lighting
- [ ] Waterworks and Sewer Maintenance
- [ ] Environmental Programs
- [X] Other Transportation Planning Division

If you have any questions regarding the comments, please contact the person listed on the enclosed comments. For additional information, please contact Mr. Vik Bapna at (818) 458-4363.

Very truly yours,

HARRY W. STONE
Director of Public Works

TERRI M. GRANT
Planning Division
Environmental/Special Studies Section

FORM 36/my 9/23/96

Enc.

DEPARTMENT OF PUBLIC WORKS - COUNTY OF LOS ANGELES
BUILDING AND SAFETY/LAND DEVELOPMENT DIVISION - PLAN CHECKING SECTION
DRAINAGE AND GRADING UNIT

September 3, 1996

TO: Planning Division
Attn: Yolanda

RE: REVIEW OF DEIR FOR LANCASTER LANDFILL AND RECYCLING FACILITY EXPANSION

We have reviewed the sections of the subject environmental document addressing drainage issues and have the following comments:

1. This project will not significantly affect the environment as far as the Section's interests are concerned, provided the appropriate ordinance and codes are followed.

If you have any questions regarding the comments above, please contact the undersigned at (818) 458-4943.

Prepared by Rm Lacayo

RL
LANCASTE.LAN

Date August 13, 96

TO: Robert D. Pedigo
Hydraulic/Water Conservation Division

✓ Lynn D. Nicholson
Materials Engineering Division

✓ Ken E. Weary
Traffic and Lighting Division

Fred Rubin
Environmental Programs Division

Brian Hooper
Waterworks and Sewer Maintenance Division

✓ Ron Lacayo
Building & Safety/Land Dev. Division

✓ Barry Wittler
Transportation Planning Division

FROM: Dave Yamahara
Planning Division

REVIEW OF ENVIRONMENTAL DOCUMENTS

Please review and provide comments on the attached Review of Environmental Document for the proposed Lancaster Landfill & Recycling Facility Expansion.
Your comments should be in the form of paragraphs that can be incorporated in a response letter to the Lead Agency.

We would appreciate your comments as soon as possible, but no later than Sept. 13 / 96. If you cannot meet this deadline, contact Yolanda Correa at Extension 4304. If we fail to meet the deadline, the law does not require the Lead Agency to address our comments in their environmental document.

Please include the name of a contact person in your Division with your comments.

If you have any further questions or comments, please contact Vik Bapna from the Planning Division at Extension 4363.

FORM.2
km/P-2

Attach.

cc: Planning (Grant)

08/96

September 4, 1996

TO: Dave Yamahara
Planning Division

Attention Vikram Bapna

FROM: Lynn D. Nicholson
Materials Engineering Division

REVIEW OF ENVIRONMENTAL DOCUMENTS

The attached documents for the Screencheck Draft Project, No. 93070, have been reviewed by the Materials Engineering Division.

Comments are attached.

If you have any questions regarding this matter, please contact Fred Gharib at (818) 458-4925.

sm
ME-0/EIR:93070

Attach.

GEOTECHNICAL REVIEW OF ENVIRONMENTAL DOCUMENTS

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS
MATERIALS ENGINEERING DIVISION

PROJECT IDENTIFICATION 93070 LOCATION Lancaster
DATE RECEIVED 8/18/96 DEADLINE 9/3/96 DATE REVIEW COMPLETED 9/3/96
DATA REVIEWED screencheck Draft EIR

[X] The proposed project has no significant effects from a geology and soils standpoint, provided the appropriate ordinances and codes are followed.

[ ] Review of the initial study/geotechnical report indicates that the proposed project will/will not have significant effects on the checked environmental factor(s) from a geology and/or soils standpoint. See discussion.

[ ] The environmental document is inadequate from a geology and soils standpoint. See discussion.

DISCUSSION OF POTENTIALLY SIGNIFICANT EFFECTS AND/OR REPORT INADEQUACIES

Geology

Soils

Geotechnical Engineer

Engineering Geologist

Original to: Planning Division or
LDMA/Processing Center Section
cc: Development Review Section File

Rev. 02/15/86
R-88/FORM.9

213 626 0434 10-03-96 02:47PM P005 #43

September 17, 1996

TO: Dave Yamahara
Planning Division

FROM: K. E. Weary
Traffic and Lighting Division

DRAFT ENVIRONMENTAL IMPACT REPORT (JULY 1996)
LANCASTER LANDFILL AND RECYCLING FACILITY
PROJECT NO. 93070

As requested, we have reviewed the Traffic Section of the document. The proposed project is for the expansion of the existing landfill operation area. The project will be located in the southwest and southeast quadrants of Avenue F and 10th Street East.

The proposed project consists of the expansion of the existing 102 acres to 276 acres by expanding 62 acres west of the existing site designated as the western expansion and another 112 acres to the east designated as the eastern expansion. The proposed expansion will increase the daily landfill operation from 650 tons per day (tpd) to 1,700 tpd at its ultimate capacity in the Year 2010. The expansion will result in an increase of approximately 182 truck trips and 36 passenger car trips per day from its current use.

We recommend the traffic study (Appendix G) be revised to include the following.

- The future forecast of traffic volumes is based on using the Year 2010 Lancaster Traffic Model which has not been reviewed and approved by this Department. We are aware that the County together with the Cities of Lancaster and Palmdale are developing a joint model for the North County area. Since there is no traffic model for the North County area acceptable for use in the traffic study, the future forecast of traffic volumes should be based on a list of known related projects in the area which can be obtained from the Planning Departments of the County and the City of Lancaster.

- The level of service (LOS) calculations should be conducted in the order of the following traffic scenarios.

  (a) Existing;
  (b) Existing plus ambient growth of the area (one percent);
  (c) Traffic in (b) plus project traffic; and
  (d) Traffic in (c) plus other related projects traffic.

- The study indicates Avenue F will become the principal east-west access in the future and will result in shifting of the project traffic circulation in the area. Based on the project traffic distribution shown in Figure 4-2, the following locations should be evaluated to determine the structural adequacy for the roadway pavement.

  - Avenue F east and west of 10th Street East
  - Avenue G west of 10th Street East
  - 10th Street south and north of Avenue F

- Page 13 of the traffic study indicates that eight study intersections are analyzed and the results are summarized in Table 3-5. However, Table 3-5 shows that 11 intersections were analyzed.

We recommend that the City of Lancaster and the State of California Department of Transportation review this project for impacts/mitigations within their jurisdictions.

If you have any questions, please contact Garland Seto of our Traffic Investigations and Studies Section at Extension 5909.

GS:lg
T-2/LLFE

cc: Ronald J. Ornee

September 5, 1996

TO: Terri M. Grant
Environmental and Special Studies

FROM: Barry S. Witler, Barry S. Witler
Transportation Planning/Assessments

SCREENCHECK DRAFT ENVIRONMENTAL IMPACT REPORT
LANCASTER LANDFILL AND RECYCLING FACILITY

As requested, we have reviewed the subject document and offer the following comments.

In our comments on the project's Initial Study and Notice of Preparation, we recommended that the applicant evaluate the adequacy of the area's circulation system in supporting the cumulative traffic impact of the project based on build-out of the area. This analysis should be predicated on having a circulation network based on the County's Antelope Valley Highway Plan.

The year 2010 traffic projections presented in the DEIR were based on a traffic model that incorporated the City of Lancaster's Land Use and Circulation policies. Therefore, the conclusions derived by the applicant from the model may only be acceptable if the applicant could reasonably demonstrate that the study area will be under the City's jurisdiction upon buildout. Otherwise, we recommend that the applicant present an analysis based on the County's Land Use and Circulation policies. The revised analysis should examine impacts for truck traffic on the County's Highway Plan. Avenue G is a local street on the County's Highway Plan; truck traffic generated by the proposed project may significantly impact this roadway. Mitigation measures should be proposed based on the revised analysis.

If you have any questions, please contact Mr. Andy Narag at Extension 4356.

AHN:nr
P-3:llrc

cc: Planning (Witler)

November 4, 1993

TO: Brian T. Sasaki

FROM: Barry S. Witler
Transportation Planning

Barry S. Witler

REVIEW OF EXPANSION OF LANCASTER LANDFILL AND RECYCLING CENTER

As requested, we have reviewed the subject document and offer the following comments.

The County of Los Angeles presently has no master planned highways within the immediate vicinity of the project site. Due to the increase in traffic activity expected to be generated by the proposed project, we recommend that the applicant discuss the adequacy of the present circulation system (based on the Antelope Valley Highway Plan) to support the cumulative traffic impact of the project based on build-out of the area in the year 2010.

Should the applicant's traffic study find the circulation system to be inadequate to support the cumulative traffic under build-out conditions for the area, specific mitigation measures should be provided.

If you have any questions, please contact Mr. Quang Luong at Extension 4317.

QL:nr
P-3:wp/28

cc: Planning (Witler)

January 7, 1997

TO: David Yamahara
Planning Division

Attention Terri Grant

FROM: David M. Smith
Environmental Programs

SCREENCHECK DRAFT ENVIRONMENTAL IMPACT REPORT (DEIR)
LANCASTER LANDFILL AND RECYCLING FACILITY EXPANSION

In response to your request dated October 3, 1996, we have reviewed the subject document in reference to our areas of responsibility. The following is provided:

GENERAL COMMENTS

1. The DEIR should use the most currently available data and cite the source of that data.

2. Any mitigation measure monitoring program performed by the Los Angeles County Department of Public Works, Environmental Programs Division, will require a funding account to be established by the project proponent to pay for the required services. The amount of necessary funds will be determined at the time monitoring will be performed. Department of Public Works, Environmental Programs Division, must be contacted to established the funding account.

SPECIFIC COMMENTS

1. Sections 2.2.4 and 2.2.5, beginning page 2-4

   The DEIR must be updated to reflect current information on remaining disposal capacity rather than 1992-93 information.

2. Section 2.2.5, Waste Stream, page 2-6

   It is stated in the document that 18 percent of the incoming waste consists of construction/demolition wastes. Much of this waste could be readily salvaged and/or recycled, providing savings in landfill's airspace. The DEIR should state what salvage/recycling activities the project proponent will implement on-site to maximize available landfill space

and extend the life of the landfill.

Also, the acronym "AB 939" should be defined and/or described before its use in this context.

3. Section 2.2.7, Discretionary Permits, page 2-10

The proposed project will require a Finding of Conformance with the Los Angeles County Solid Waste Management Plan. This Finding is granted by the Los Angeles County Solid Waste Management Committee/Integrated Waste Management Task Force. The Department of Public Works serves as staff to the Task Force, but does not grant the Finding.

4. Table 2-2, following page 2-10

On page 1 of this table, the third paragraph under the Mitigation Measures column should be revised to read "Landfill gas migration and monitoring wells will be installed and monitored around the perimeter of the expansion areas as required by the local Air Quality Management District, the County Department of Public Works, and the County Department of Health Services (the Local Enforcement Agency), as applicable."

5. Section 3.0, Project Description, beginning page 3-1

The project description needs to be expanded to clearly identify all the elements of the proposed project, such as any proposed expansion of the Recycling Center and development of other support facilities.

6. Section 3.3.2.1, Countywide Disposal Capacity Status

In order to more fully assess the adequacy of the remaining Class III disposal capacity, this section needs to be expanded to reflect the impact of the recent BKK Landfill closure and the prohibition on the disposal of non-inert solid waste at the Azusa Land Reclamation Landfill on the rate of depletion of the existing disposal capacity in Los Angeles County.

7. Section 3.5.5.2, Residential and Commercial Recycling, paragraph one, page 3-29

Expand this paragraph to identify the three categories of residential recyclable materials that are currently being collected or proposed for collection at the landfill.

8. Section 3.6.2, Entrance and Support Facilities, page 3-34

Revise to include the requirement that any building or enclosed structure on or within 1,000 feet of this landfill will be constructed with a methane gas protection system in accordance with Section 110.3 of the County Building Code.

9. Section 3.7.4, Air and Gas Monitoring, page 3-44

The DEIR should indicate any proposed landfill gas monitoring and subsurface migration control system or expansion of existing system will require review and approval by this Department.

10. Section 3.7.5.3, Litter

Expand this section to include the requirements for tarping of all the trucks entering the landfill. In addition, indicate what measures the landfill owner/operator will implement in the event of accidental releases of litter on the roads adjacent to the landfill.

11. Section 4.5.2, Countywide Integrated Waste Management Plan, page 4-19

a. Expand the first paragraph to indicate that the CIWMP will consist of all cities'/County's Source Reduction and Recycling Elements, Household Hazardous Waste Elements, Non-Disposal Facility Elements, the Countywide Siting Element, and the Summary Plan.

b. Rewrite the second paragraph to correctly indicate the purpose of the Countywide Siting Element (CSE). As mandated by State Law the CSE must address the solid waste disposal need of the County for a 15-year planning period. This must include the management of the residual solid waste that cannot be reduced, reused, recycled, or composted.

OTHER COMMENTS

Underground Tanks

Should the proposed project include the removal or installation of underground storage tanks, this office must be contacted for issuance of the necessary permits.

Industrial waste

Should any operation at the facility generate industrial wastewater, the DEIR must address how the wastewater will be managed. Additionally, this office must be contacted for issuance of the necessary permits.

Water Quality/Stormwater Discharge

The DEIR should address the impact the proposed project will have on stormwater runoff. Additionally, reference should be made to National Pollution Discharge and Elimination System Industrial and Construction Activities Permits issued by the State Water Resources Control Board.

If you have any questions regarding these comments, please contact me at Extension 3561.

P:\FARZAN\LANCAST4.EIR

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS

January 31, 1997

JN: 9267

Mr. David M. Smith
Los Angeles County
Department of Public Works
Environmental Programs Division
Post Office Box 1460
Alhambra, California 91802-1460

RE: LANCASTER LANDFILL AND RECYCLING CENTER EXPANSION SCREENCHECK DRAFT EIR, SCH NO. 93101036 RESPONSE TO COMMENTS

Dear Mr. Smith:

Included herein for your review are responses to your agency's comments on the above referenced document included in your memorandum dated January 7, 1997. Each of your comments is listed below with a response following.

General Comments

Comment 1: The DEIR should use the most currently available data and cite the source of that data.

Response: The most current available data has been used and cited in the DEIR. Sections 2.2.4 and 4.5.2 have been revised to reflect updated information.

Comment 2: Any mitigation measure monitoring program performed by the Los Angeles County Department of Public Works, Environmental Programs Division, will require a funding account to be established by the project proponent to pay for the required services. The amount of necessary funds will be determined at the time monitoring will be performed. Department of Public Works, Environmental Programs Division, must be contacted to establish the funding account.

Response: A mitigation measure monitoring program has not been developed for this project at this time. At the time a program is established, the Department of Public Works (DPW), Environmental Programs Division will be contacted regarding the establishment of a funding account for any monitoring to be performed by DPW, Environmental Programs Division staff.

1360 Valley Vista Drive • Diamond Bar, CA 91765 • (909) 860-7777 • FAX (909) 860-8017

Specific Comments

Comment 1: Sections 2.2.4 and 2.2.5, beginning page 2-4 - The DEIR must be updated to reflect current information on remaining disposal capacity rather than 1992-93 information.

Response: Table 2-1 of the DEIR has been revised to reflect the most recent data available on remaining disposal capacity.

Comment 2: Section 2.2.5, Waste Stream, page 2-6 - It is stated in the document that 18 percent of the incoming waste consists of construction/demolition wastes. Much of this waste could be readily salvaged and/or recycled, providing savings in the landfill's airspace. The DEIR should state what salvage/recycling activities the project proponent will implement on-site to maximize available landfill space and extend the life of the landfill.

Also, the acronym "AB 939" should be defined and/or described before its use in this context.

Response: Section 3.4.4 of the DEIR has been revised to include a discussion of the construction and demolition material recycling procedures being conducted at the site. Other recycling procedures proposed for the site are discussed in Section 3.5.5. Section 2.2.5 of the DEIR has been revised to define "AB 939".

Comment 3: Section 2.2.7, Discretionary Permits, page 2-10 - The proposed project will require a Finding of Conformance with the Los Angeles County Solid Waste Management Plan. This Finding is granted by the Los Angeles County Solid Waste Management Committee/Integrated Waste Management Task Force. The Department of Public Works serves as staff to the Task Force, but does not grant the Finding.

Response: Section 2.2.7 of the DEIR has be revised to reflect that the Finding of Conformance is with the Los Angeles County Solid Waste Management Committee/Integrated Waste Management Task Force.

Comment 4: Table 2-2, following page 2-10 - On page one of this table, the third paragraph under the Mitigation Measures column should be revised to read "Landfill gas migration and monitoring wells will be installed and monitored around the perimeter of the expansion areas as required by the local Air Quality Management District, the County Department of Public Works, and the County Department of Health Services (the Local Enforcement Agency), as applicable."

Response: Page one of Table 2-2 has been revised to reference these agencies, as applicable.

Comment 5: Section 3.0, Project Description, beginning page 3-1 - The project description needs to be expanded to clearly identify all the elements of the proposed project, such as any proposed expansion of the Recycling Center and development of other support facilities.

Response: Section 3.0 of the DEIR includes a discussion of a proposed redemption center (Section 3.5.5.1) and the current and proposed recycling procedures conducted on-site (Section 3.5.5.2). The existing facilities (i.e., office trailers, maintenance facilities) will be relocated to the new facility area as described in Section 3.6.2, Entrance and Support Facilities. Other support facilities (i.e., access roads, drainage, environmental monitoring systems, etc.) are discussed in Sections 3.6, 3.7, and 3.8.

Comment 6: Section 3.3.2.1, Countywide Disposal Capacity Status - In order to more fully assess the adequacy of the remaining Class III disposal capacity, this section needs to be expanded to reflect the impact of the recent BKK Landfill closure and the prohibition on the disposal of non-inert solid waste at the Azusa Land Reclamation Landfill on the rate of depletion of the existing disposal capacity in Los Angeles County.

Response: Table 3-2, referenced in Section 3.3.2.1, comments on the closure of the BKK Landfill and the Lopez Canyon Landfill. Therefore, the discussion in this section already takes these two items into consideration. The discussion in this section is based on an analysis prepared by your agency in January, 1996 as a snap shot in time of the disposal capacity status in the County of Los Angeles. The closing of the Azusa Land Reclamation Landfill to municipal solid waste occurred after the analysis was prepared. Section 3.3.2.1 has been revised to discuss the prohibition of municipal solid waste at the Azusa Land Reclamation Landfill and its effect on the analysis presented.

As mentioned in the DEIR on page 3-14, Section 3.3.2.1, these figures can only be regarded as very rough approximations in light of the very dynamic nature of the solid waste disposal business in southern California. Section 3.3.2.2, page 3-14 states that, "Regardless of ongoing changes in other landfills within and outside of Los Angeles County, prudent planning should strive to ensure sufficient landfill capacity for the Antelope Valley area, given the expanding population of the region."

Comment 7: Section 3.5.5.2, Residential and Commercial Recycling, paragraph one, page 3-29 - Expand this paragraph to identify the three categories of residential recyclable materials that are currently being collected or proposed for collection at the landfill.

Response: A discussion of the three categories of recyclable materials that are being collected at the landfill (e.g., green material, newsprint and commingled recyclables) has been included in Section 3.5.5.2 of the DEIR.

Comment 8: Section 3.6.2, Entrance and Support Facilities, page 3-34 - Revise to include the requirement that any building or enclosed structure on or within 1,000 feet of this landfill will be constructed with a methane gas protection system in accordance with Section 110.3 of the County Building Code.

Response: Section 3.6.2, page 3-31 of the DEIR has been revised to indicate that all construction will be performed in compliance with applicable local, State and Federal building requirements, including requirements for a methane gas protection system in accordance with Los Angeles County Building Code, Section 110.3.

Comment 9: Section 3.7.4, Air and Gas Monitoring, page 3-44 - The DEIR should indicate any proposed landfill gas monitoring and subsurface migration control system or expansion of existing system will require review and approval by this Department.

Response: Section 3.7.4, page 3-40 has been revised to state that proposed probe locations and frequency of monitoring will be required to meet "...Los Angeles County Building Code requirements, as appropriate."

Comment 10: Section 3.7.5.3, Litter - Expand this section to include the requirements for tarping of all the trucks entering the landfill. In addition, indicate what measures the landfill owner/operator will implement in the event of accidental releases of litter on the roads adjacent to the landfill.

Response: Section 3.7.5.3, page 3-41 of the DEIR has been revised as requested.

Comment 11: Section 4.5.2, Countywide Integrated Waste Management Plan, page 4-19

a. Expand the first paragraph to indicate that the CIWMP will consist of all cities'/County's Source Reduction and Recycling Elements, Household Hazardous Waste Elements, Non-Disposal Facility Elements, the Countywide Siting Element, and the Summary Plan.

b. Rewrite the second paragraph to correctly indicate the purpose of the Countywide Siting Element (CSE). As mandated by State Law the CSE must address the solid waste disposal need of the County for a 15-year planning period. This must include the management of the residual solid waste that cannot be reduced, reused, recycled, or composted.

Response: Section 4.5.2, page 4-19 of the DEIR has been revised as requested.

Other Comments

Comment 1: Underground Tanks - Should the proposed project include the removal or installation of underground storage tanks, this office must be contacted for issuance of the necessary permits.

Response: No removal or installation of underground tanks is proposed for the project. No changes to the DEIR have been made in response to this comment.

Comment 2: Industrial Waste - Should any operation at the facility generate industrial wastewater, the DEIR must address how the wastewater will be managed. Additionally, this office must be contacted for issuance of the necessary permits.

Response: Section 3.7.2, page 3-39 of the DEIR has been revised to state that permits for disposal of collected leachate will be obtained from the appropriate regulatory agencies. The site has current permits for existing landfill operations (e.g., condensate storage, carbon tanks and truck wash).

Comment 3: Water Quality/Stormwater Discharge - The DEIR should address the impact the proposed project will have on stormwater runoff. Additionally, reference should be made to National Pollution Discharge and Elimination System Industrial and Construction Activities Permits issued by the State Water Resources Control Board.

Response: Sections 5.5.1.2, page 5.5-6 and 5.5.4, page 5.5-10 of the DEIR have been revised to discuss the Stormwater Pollution Prevention Plan (SWPPP) under which the site currently monitors stormwater and will continue to for the expansion. Section 3.7.3, page 3-39 references the NPDES General Storm Water Permit issued for the site.

We hope our responses to the above comments are to your satisfaction. We have enclosed revised pages which correspond to those revisions discussed above for your review. Revised text is italicized for your ease in reviewing. It is necessary that the DRP receive a letter of approval of

these responses so that this document may be submitted for public review. Your expedience in approving these responses/revisions would be greatly appreciated.

Should you have any questions please call me or Ms. Virginia Becerra at (909) 860-7777.

Very truly yours,

Christine M. Arbogast

Christine M. Arbogast, P.E.
Division Manager
Solid Waste Management Division

VB/CMA

Attachments

c: Doug Corcoran - WML
Rod Collins - WML
Kerwin Chih - DRP

TABLE 2-1
AREA, AIRSPACE AND REFUSE CAPACITY SUMMARY

	Existing Site	West Expansion[3]	East Expansion	Total
Area (acres)	102	62	112	276
Refuse Capacity[1] - cubic yards[2] - tons	*690,000*[4] *470,000*	5,625,000 3,375,000	8,909,000 5,345,400	*15,224,000* *9,190,400*

1 Refuse capacity = airspace less daily, interim, and final cover.
2 1,200 pounds/cubic yard refuse density, or 0.6 tons/cubic yard.
3 Does not include existing site.
4 Remaining *permitted capacity* as of *January, 1996.*

2.2.5 WASTE STREAM

The landfill applicant is currently permitted to accept up to 1,000 tons per day (tpd) of municipal solid waste and is proposing to accept up to 1700 tpd by the year 2010. The percent of incoming waste as presented in the site's 1992 Report of Disposal Site Information (RDSI) is 22 percent municipal refuse, 27 percent commercial/industrial wastes, 18 percent construction/demolition wastes, and 33 percent mixed waste. Similar waste types and quantities are proposed for the project. These percentages will change over time due to the effects of the implementation of *the California Integrated Waste Management Act of 1989 also known as Assembly Bill 939* (AB 939) programs.

These municipal solid waste categories are described as follows:

- Municipal Refuse and Commercial/Industrial: Includes solid waste generated by residences, commercial accounts such as retail stores, restaurants, bars and offices, and nonhazardous waste generated by the industrial sector.
- Construction/Demolition: Includes construction and demolition materials such as wood, metal, glass, concrete and asphalt.
- Mixed Waste: Includes paper, green and wood wastes, glass, plastic, etc.

2.2.7 DISCRETIONARY ACTIONS/PERMITS REQUIRED

The proposed expansion of the LLRC will require new permit approvals from several regulatory agencies. These include, but are not limited to the following:

- *Finding of Conformance with the Los Angeles County Solid Waste Management Plan from the Los Angeles County Solid Waste Management Committee/Integrated Waste Management Task Force;*
- WDRs Permit from the California Regional Water Quality Control Board, Lahontan Region;
- Conditional Use Permit from the Regional Planning Commission of Los Angeles County;
- Solid Waste Facilities Permit (SWFP) from the Los Angeles County Department of Health Services (the Local Enforcement Agency or LEA) and the CIWMB.

2.2.8 SUMMARY OF IMPACT ANALYSES

The environmental impacts and mitigation measures for the proposed project are summarized in Table 2-2.

The only impact associated with the project which is not reduced to a less than significant level after implementation of feasible mitigation measures is emissions of No_x.

TABLE 2-2
PROJECT IMPACTS SUMMARY TABLE

Issue Area	Environmental Impact	Mitigation Measures	Residual (Impact) After Mitigation
1. Air Quality	Emissions of NO_x exceed significance threshold. Significant cumulative impacts are expected due to emissions of NO_x, Carbon Monoxide and Reactive Organic Gas.	Evaluate feasibility of using Turbo-charged or intercooled diesel engines to reduce NO_x emissions. Maintain all landfill equipment according to manufacturers specifications to reduce NO_x emissions. Shutdown all diesel equipment if expected to be idle more than 10 minutes.	Significant for NO_x but insignificant for So_x, CO, reactive organic gas and particulates.
	Expansion of the landfill is expected to increase the amount of emissions from off-site vehicles, fugitive dust and landfill gas. Emissions increases due to the project will not exceed significance thresholds established by the SCAQMD for the region for SO_x, CO, reactive organic gas or particulates. Odors and landfill gas will continue to be generated at the landfill.	Current dust suppression methods will be used to control dust emissions. Regular surface sweeps of the landfill using an organic vapor analyzer (OVA) to detect landfill gas will be made of the expansion area and the results will be presented in the quarterly report to SCAQMD. Repairs *and upgrades* will be made to the landfill surface and gas extraction systems as necessary to maintain compliance. Landfill gas migration and monitoring probes will be installed and monitored around the perimeter of the expansion areas as required by *the Local Air Quality Management District in Rule 1150.1, the County Department of Public Works in L.A. County Building Code, Section 110.3, and the County Department of Health Services (the Local Enforcement Agency) in CCR, Title 14, as applicable. Current probes will be maintained.* Evaluate operations equipment for feasibility of powering equipment with engines which meet on-highway emissions standards. Submit report of evaluation study results prior to commencing operations. Investigate feasibility of retarding fuel injection timing of diesel powered operation equipment to lower NO_X emissions. Maintain all operations equipment according to manufacturers' specifications and schedules. Instruct all equipment operators to shut down any diesel equipment expected to idle for longer than ten minutes. Investigate the feasibility of developing and implementing an employee ride share program.	Less than significant.

TABLE 2-2
PROJECT IMPACTS SUMMARY TABLE

Issue Area	Environmental Impact	Mitigation Measures	Residual (Impact) After Mitigation
2. Geotechnical			
Earthquake	The landfill gas collection system, water treatment plant, two office structures, maintenance buildings, construction equipment and refuse trucks might be exposed to earthquake hazards.	Prepare an earthquake preparedness plan.	Less than significant.
Unstable Earth Conditions	Temporary unstable earth conditions could occur during the course of excavation operations.	Ensure that interim slopes during landfill development do not exceed gradients of 1.5:1.	Less than significant.
Drainage	The building of two new refuse prisms will result in a change in topography and ground surface relief which will block existing drainage patterns in the Eastern Expansion Area. The increase in topography is not expected to have an impact on the Western Expansion Area.	Construct peripheral drainage channels around the Eastern Expansion Area to route drainage around the refuse prism into existing drainage courses.	Less than significant.
Wind Erosion	At the maximum erosion rate, the development of the Western and Eastern Expansion Areas could result in a total eroded mass of 1,392 tons per year.	Develop the landfill in phases and continue to implement dust control program to minimize wind erosion.	Less than significant.
3. Flood			
Fluvial Process	The Eastern Expansion Area has well defined drainage patterns that would be blocked by the east refuse prism.	Construct peripheral diversion channels designed to accommodate unusual flow events that might turn into debris flows. Ensure that final construction drawings will be designed in accordance with the conceptual designs described in this EIR.	Less than significant.
Water Infiltration	Under low intensity rains, water will infiltrate quickly and very little runoff will occur. Under high intensity rains, most of the water will move away from the site through peripheral diversion channels and eventually be stored at Rosamond Lake.	Construct drainage diversion ditches to carry surface water runoff away from the working face.	Less than significant.

TABLE 2-2
PROJECT IMPACTS SUMMARY TABLE

Issue Area	Environmental Impact	Mitigation Measures	Residual (Impact) After Mitigation
3. Flood (continued) Stormwater Runoff	The project may slightly increase the rate of surface runoff due to a change in topography.	Construct sedimentation ponds to retain storm water on site and maintain pre-disturbance run off rates. Dedicate 100-foot wide drainage easement along the east side of future 5th Street East for construction of a flood control channel in accordance with the Antelope Valley Flood Control and Water Conservation Plan. The additional runoff would result in negligible, if any, increases in the water level of Rosamond Lake.	Less than significant.
4. Fire Fire Hazard	Potential impacts associated with fire hazard include Truck Fires and delivery of surrounding refuse.	Remove debris from undercarriages and engine compartments of landfill equipment. Conduct annual training of all landfill personnel in fire prevention, fire extinguisher use, and emergency response procedures. Maintain 100 foot wide buffer zone at perimeter of expansion areas. Revise emergency response plan, include expansion area.	Less than significant.
5. Noise	Short-term impact on ambient noise levels due to construction activities; additional traffic will result in increased noise levels in the surrounding areas; landfill operations noise levels will increase. Noise increases due solely to the project are all less than 1 dBA; traffic on the nearby roadways will be the predominant noise sources.	New working face areas will be shielded behind berms to reduce off-site noise impacts. Construction activities associated with development of new landfill cells which are adjacent to existing residential development shall be limited to the hours of 7:00 a.m. to 7:00 p.m. Monday through Friday only. Maintain all construction and operations equipment noise mufflers to minimize noise generation.	Less than significant.

TABLE 2-2
PROJECT IMPACTS SUMMARY TABLE

Issue Area	Environmental Impact	Mitigation Measures	Residual (Impact) After Mitigation
6. Water Quality			
Groundwater	Potential to substantially degrade groundwater quality. Potential for groundwater contamination through abandoned groundwater recharge wells in the Eastern Expansion Area.	Ensure that Final Construction Drawings for LCRS, Base Liner and Groundwater Monitoring Program are consistent with conceptual designs presented in this document. A Construction Quality Assurance Plan shall be prepared and approved for installation of the base liner system and the LCRS, and a proactive Water Quality Monitoring Program will be implemented in compliance with State and Federal Subtitle D requirements. Existing wells will be properly decommissioned in accordance with agency requirements prior to excavation and liner installation.	Less than significant.
		Require that any existing wells are sealed and decommissioned by pressure grouting or other suitable method prior to landfill development.	Less than significant.
Water Table	Potential change in the configuration of the water table.	None required. The main source of groundwater recharge to the Lancaster sub-basin is runoff from the San Gabriel Mountains and is not direct precipitation in the valley.	Less than significant.
7. Biota			
Construction Impacts Joshua Trees, Wildlife Species, Plant Species.	The project would result in the removal of approximately 50 acres of Joshua Tree Woodland Habitat and as many as 122 Joshua Trees. The project would also result in the phased removal of approximately 70 acres of disturbed shadscale scrub habitat.	Impacts to habitat areas will occur in phases over the life of the project. Revegetation of individual landfill cells using native species will restore vegetative cover. Revegetation is expected to take 50-100 years to re-establish a functional perennial plant community that approaches existing cover, density, and species composition capable of supporting wildlife.	Less than significant.

TABLE 2-2
PROJECT IMPACTS SUMMARY TABLE

Issue Area	Environmental Impact	Mitigation Measures	Residual (Impact) After Mitigation
7. Biota (continued)			
Operations Impact	Proposed project may attract an increased number of pest species, which could increase predatory pressure on newly hatched offspring of the Federally Threatened, Desert Tortoise.	Prior to initiating earth-disturbing activities in the expansion areas, conduct timely surveys to determine presence/absence of any sensitive plant species in those areas. If any such species are found, coordinate with CDFG and USFWS in implementing a transplantation program to undisturbed areas. Prior to initiating earth-disturbing activities in the expansion areas, conduct timely surveys for desert tortoises. If any individuals are found in these areas, coordinate with CDFG and USFWS in implementing a relocation program to undisturbed areas. Restrict the size of the working face and utilize daily cover of soil (or approved alternative covers) to reduce attraction of bird species, particularly ravens. Landfill operating procedures will restrict the size of the working face of the landfill and all exposed refuse will be covered daily to reduce the attraction of birds, mammal and insect pests.	Less than significant.
8. Cultural and Paleontological Resources			
Cultural	No direct or indirect impacts can be foreseen at this time. No significant impact on known cultural resources in the general area.	If previously unknown cultural resources are discovered, all construction activities will be halted and a qualified archeologist will be brought onsite to evaluate the resources.	Less than significant.
Paleontological	Potential for exposure of fossils during grading operations which will destroy the fossils. This destruction would be a potentially significant adverse impact on the region's paleontological resources.	A qualified paleontologist shall be retained to perform periodic inspections of excavations and, if necessary, salvage exposed fossils.	Less than significant.

TABLE 2-2
PROJECT IMPACTS SUMMARY TABLE

Issue Area	Environmental Impact	Mitigation Measures	Residual (Impact) After Mitigation
9. Traffic/Access Traffic Volume	The project traffic from the landfill expansion will contribute to increases in the existing traffic volumes in the area. However, even cumulative traffic impacts forecast to the year 2010 show no significant traffic impacts in the vicinity of the site. However, the project does impact the pavement structure at Avenue F between Division Street and 10th Street East and 10th Street East between Avenue F and Avenue G.	Contribute on a fair-share, pro-rata basis to the City of Lancaster for reconstruction of the pavement and thickening of the base/subbase.	Less than significant.
10. Environmental Safety Hazardous Waste/Materials	East and 10th Street East between Avenue F and Avenue G. Hazardous waste materials will not be accepted at the landfill facility; however, insignificant quantities of hazardous materials may be disposed of even though the inspection procedures are strictly enforced. The potential also exists for radioactive wastes to be disposed of at the landfill.	During landfill operations: 1) the existing refuse inspection program shall be continued for expansion operations, 2) in the event that hazardous waste is discovered, the landfill operator shall notify the County of Los Angeles Forester and Fire Warden, and 3) a radiation detector has been installed at the gate house in order to detect the presence of radioactive materials.	Less than significant.

reasonable excess over the population estimate. Growth of communities is based upon a complex intertwining of local, national, and international economic and social factors.

These factors may accelerate the rate of growth for short periods without basically altering the horizon year forecast. In the same way, they can periodically decelerate for short periods but with the same eventual outcome.

TABLE 3-1
ANTELOPE VALLEY PROJECTED POPULATION GROWTH
1980 - 2000

Year	Population	Net Gain
1980	107,000	
1985	121,000	14,000
1990	155,000*	34,000
1995	188,000*	33,000
2000	218,000*	30,000

Source: Antelope Valley Areawide General Plan, a component of the Los Angeles County General Plan. Adopted by the Board of Supervisors on December 4, 1986.
* Projected in 1986; current actual population is estimated to be nearly 220,000.

3.3.2 DISPOSAL CAPACITY STATUS

3.3.2.1 COUNTYWIDE DISPOSAL CAPACITY STATUS

In preparing the draft Los Angeles County Countywide Siting Element (dated January, 1996), the Los Angeles County Department of Public Works *(DPW)* determined the remaining permitted disposal capacity of all the existing solid waste disposal facilities in the County. This information is represented in Table 3-2, and is current as of January, 1996 *which is the most current information available from the DPW.* Table 3-2 does not reflect the approval of any proposed expansions, new landfills *or changes which have taken place at the disposal facilities since January, 1996.* Table 3-2 takes into account the following:

- Average daily disposal rates for 1995 in tons based on a six-day per week operation for the period of October 1, 1994 through September 30, 1995 including in-county and out-of-county waste disposal.
- Quantity of municipal solid waste disposed in 1995 (in million tons).
- Estimated remaining permitted capacity in million tons and million cubic yards.

TABLE 3-2

REMAINING PERMITTED COMBINED DISPOSAL CAPACITY OF EXISTING SOLID WASTE DISPOSAL FACILITIES IN LOS ANGELES COUNTY AS OF JANUARY 1996

Facility	Solid Waste Facility Permit	Location City / Unincorporated Area	Operation Days/week	Jan. 1996 SWFP Daily Capacity	LUP Daily Capacity	1995 Average Daily Disposal 6 days/ week (Tons) (See Note 1) Source			Quantity of MSW Disposed in 1995 (Million Tons) (See Note 1) Source			Estimated remaining permitted capacity (effective January 1996)		Comments
				Tons	Tons	In-County	Out-of-County	Total	In-County	Out-of-County	Total	Million Tons	Million (a) Cubic Yards	
CLASS III LANDFILLS														
Antelope Valley	19-AA-0009	Palmdale	7	1,400 (b)	—	548	—	548	0.17	—	0.17	2.13	3.55	The proposed expansion in the unincorporated area is not fully permitted as of 1/1/96.
Azusa Land Reclamation	19-AA-0013	Azusa	6	6,000 (c)	—	1,188	140	1,328	0.37	0.04	0.41	3.09 (d)	4.41	Class III portion of the Landfill only. WDRs require closure of the facility by 12/31/97. See footnote (d).
BKK	19-AF-0001	West Covina	6	12,000 (e)	—	8,748	953	9,701	2.73	0.30	3.03	2.65	4.42	Date of closure 9/15/96 per a settlement dated 1/17/96 between BKK Corporation and the City of West Covina.
Bradley	19-AR-0008	Los Angeles	6	7,000	—	4,475	9	4,484	1.40	0.003	1.40	7.51	10.72	LUP expires 4/13/2007.
Brand Park	19-AA-0006	Glendale	5	102	—	22	—	22	0.0068	—	0.01	0.59	0.99	Limited to City of Glendale Department of Public Works use only.
Burbank	19-AA-0040	Burbank	5	240	—	134	—	134	0.04	—	0.04	6.36	10.60	Limited to the City's use only and provided waste is collected by the City's staff.
Calabasas	19-AA-0056	Uninc.	6	3,500	—	2,017	317	2,334	0.63	0.099	0.73	15.00	30.00	Limited to the Calabasas Wasteshed only.
Chiquita Canyon	19-AA-0052	Uninc.	7	5,000	—	1,337	151	1,489	0.42	0.047	0.46	1.65	2.74	LUP expires 11/24/97.
Lancaster	19-AA-0050	Lancaster	6	1,000	—	338	258	596	0.11	0.08	0.19	0.47	0.69	Approximate closure date 4/98.
Lopez Canyon	19-AA-0820	Los Angeles	5	4,000	4,000	2,927	—	2,927	0.91	—	0.91	0.52 (f)	0.83	LUP expires 7/1/96. Limited to City of Los Angeles use only and subject to collection of waste by the City Bureau of Sanitation.
Pebbly Beach	19-AA-0061	Uninc.	6	33	—	13	—	13	0.004	—	0.004	0.040	0.06	Summer time capacity is 30 tpd.
Puente Hills	19-AA-0053	Uninc.	6	13,200	13,200	10,334	7	10,341	3.22	0.002	3.23	29.33	62.40	LUP limits waste disposal to 72,000 tons per week. Does not accept waste from the City of Los Angeles and Orange County.
San Clemente	19-AA-0063	Uninc.	2	1.5	—	2	—	2	0.0007	—	0.0007	0.048	0.38	Landfill owned and operated by the U. S. Navy.
Scholl Canyon	19-AA-0012	Glendale	6	3,400	—	1,487	0.39	1,487	0.46	0.0001	0.4641	10.90	22.71	Limited to the Scholl Canyon wasteshed only.
Spadra	19-AA-0015	Uninc./ Pomona	6	3,700	—	1,994	130	2,124	0.62	0.040	0.6626	2.15	5.08	LUP limits the waste disposal rate to 15,000 tons per week. The facility does not accept waste from the City of Los Angeles and Orange County.
Sunshine Canyon	19-AA-0853	Uninc.	6	6,600	6,600	—	—	—	—	—	—	16.90	23.72	Not operational as of 1/1/96.
Two Harbors	19-AA-0062	Uninc.	5	—	—	0.54	—	0.54	0.0002	—	0.0002	—	—	Facility closed 9/30/95.
Whittier (Savage Canyon)	19-AH-0001	Whittier	6	350	—	228.85	—	229	0.07	—	0.0714	2.66	4.44	Limited to the City of Whittier use only.
TOTAL				67,527		35,792	1,966	37,758	11.17	0.61	11.78	102.19	187.74	
UNCLASSIFIED LANDFILLS (INERT SOLID WASTE ONLY)														
Azusa Land Reclamation	19-AA-0013	Azusa	6	6,500 (i)	—	—	—	—	—	—	—	26.500	17.667	Unclassified portion of the Landfill only.
Peck Road/ Gravel Pit	19-AR-0838	Monrovia	6	1,210	—	338	2	340	0.11	0.001	0.106	10.076	6.717	
Reliance Pit #2	19-AR-0854	Irwindale	5	6,000	—	1,345	56	1,401	0.42	0.017	0.437	16.563	11.042	
TOTAL				13,710		1,682	58	1,740	0.52	0.02	0.543	53.139	35.426	
TRANSFORMATION FACILITIES														
Commerce Refuse To-Energy Facility	19-AA-0506	Commerce	7	1,000	—	278	48	326	0.09	0.015	0.10	467 (g)	—	Assumed to remain operational during the 15 - year planning period.
Southeast Resource Recovery Facility	19-AK-0083	Long Beach	7	2,240	—	1,289	201	1,490	0.40	0.063	0.46	1,510 (h)	—	Assumed to remain operational during the 15 - year planning period.
TOTAL				3,240		1,567	249	1,816	0.49	0.078	0.57	1,977	—	

NOTES:

1. Disposal quantities are based on tonnages reported by owners/operators of permitted solid waste disposal facilities to the DPW as a part of 1995 DQRD and/or Solid Waste Management Fee invoice payments. The 1995 disposal tonnages listed above are based on tonnage figures for the period of October 1, 1994 through September 30, 1995. These figures will be updated in the final CSE once complete 1995 DQRD are available.
2. Estimated Remaining Permitted Capacity based on landfill owner/operator responses to a written survey conducted by the DPW in January 1995 as well as a review of site specific permit criteria established by local land use agencies, LEAs, CRWQCBs, and the SCAQMD.

FOOTNOTES:

(a) Conversion factor based on in-place solid waste density if provided by landfill operators, otherwise a conversion factor of 1,200 lb/cy was used.
(b) Antelope Valley Landfill's daily capacity of 1,400 tons is based on the SWFP issued on 12/26/95.
(c) Permitted daily capacity of 6,500 tpd consists of 6,000 tpd of refuse and 500 tpd of inert waste. Refuse disposal is limited to the Class III portion of the Landfill.
(d) The CRWQCB-Los Angeles Region approved WDRs which allow the Landfill to continue accepting MSW through 12/31/97. In the interim, BFI must demonstrate that ground water protection can be ensured for the landfill to be allowed to continue accepting MSW beyond 12/31/97.
(e) Daily capacity established in 6/90 Notice and Order, as amended by the City of West Covina.
(f) Remaining permitted capacity based on LUP expiration date of 7/1/96.
(g) Based on SWFP limit of 2,800 tons per week, expressed as a daily average, six days/week.
(h) Based on SWFP limit of 471,000 tons per year, expressed as a daily average, six days/week.
(i) See footnote (c). Waste quantities (inert waste plus refuse) cannot exceed 6,500 tpd.

Source: Los Angeles County Department of Public Works, January 1996.

Abbreviations:

BFI	Browning-Ferris Industries, Inc.,
CRWQCB	California Regional Water Quality Control Board
CSE	Countywide Siting Element
DQRD	Disposal Quantity Reporting Data
DPW	Los Angeles County Department of Public Works
LEA	Local Enforcement Agency
LUP	Land Use Permit
MSW	Municipal Solid Waste
SCAQMD	South Coast Air Quality Management District
SWFP	Solid Waste Facility Permit
tpd-6	Tons per day, 6 days/ week
Uninc.	Unincorporated
WDRs	Waste Discharge Requirements

According to this table from the Countywide Siting Element, the residents and businesses in Los Angeles County disposed of approximately 12.3 million tons of solid waste in 1995 at existing permitted land disposal and transformation facilities located in and out of the County. This disposal quantity translates into an average disposal rate of approximately 39,280 tons per day (six-day week) countywide with 35,790 tons per day being disposed at Class III landfills. Table 3-2 shows that, as of January 1, 1996, the remaining permitted Class III landfill capacity in Los Angeles County is estimated at 102.2 million tons. Based on the 1995 average disposal rate of 35,790 tons per day (six-day week), excluding waste being imported to the County, this capacity will be mathematically exhausted in less than nine years or in the year 2005.

According to the Countywide Siting Element, however, in order to make a realistic assessment of the adequacy of the remaining Class III disposal capacity, many factors must be taken into consideration which severely hinder the accessibility of the remaining disposal capacity or affect solid waste generation. These factors include: expiration of the Land Use Permit; Waste Discharge Requirements Permit; Solid Waste Facilities Permit; air quality permits; restrictions on the acceptance of waste generated outside jurisdictional and/or wasteshed boundaries; permit restrictions on the amount of waste that can be accepted daily and/or weekly; geographic barriers; and/or limitations on the amount of waste that can be handled by a facility on a daily basis due to lack of manpower and equipment. When these factors are considered, the analysis indicates that a permitted daily disposal capacity shortfall may occur as early as 1999 as indicated in Table 3-3 (also taken from the Countywide Siting Element). Table 3-3 provides a "time-to-crisis" analysis for Los Angeles County which considers waste generation projections based on the CIWMB's recently adopted Adjustment Methodology, existing permitted disposal capacity only, full implementation of AB 939 waste diversion programs and, as indicated above, the achievement of the 25 and 50 percent waste diversion mandates by 1995 and the year 2000, respectively. The analysis considers full use of the permitted disposal capacity available at the recently approved expansion of the Sunshine Canyon Landfill beginning July 1, 1996. *It also includes a permitted daily capacity of 6,000 tpd of refuse for the Azusa Land Reclamation facility which has since been revoked (October, 1996). This would result in a 6,000 tpd reduction in the daily disposal capacity shown on Table 3-3.*

TABLE 3-3

SCENARIO A
TIME -TO-CRISIS ANALYSIS

ASSUMING NO NEW OR EXPANDED LANDFILLS DURING THE PLANNING PERIOD

Based on October 1, 1994 through September 30, 1995 six day average tonnages and assuming AB 939 diversion is fully implemented
Los Angeles County Countywide Siting Element

Year	Waste Generation Rate	Percent Diversion	Total Disposal Need	Maximum Daily Transformation Capacity	Landfill Disposal Need	Daily Disposal Capacity Shortfall (Excess)
	(tpd-6)		(tpd-6)	(tpd-6)	(tpd-6)	(tpd-6)
1995	50,129	25.00%	37,596			
1996	52,332	30.00%	36,632	1,977	34,655	(22,425)
1997	53,587	35.00%	34,832	1,977	32,855	(8,784)
1998	53,714	40.00%	32,228	1,977	30,251	(2,543)
1999	54,057	45.00%	29,731	1,977	27,754	4,629
2000	54,903	50.00%	27,452	1,977	25,475	2,477
2001	56,188	50.00%	28,094	1,977	26,117	4,435
2002	57,267	50.00%	28,634	1,977	26,657	4,904
2003	58,344	50.00%	29,172	1,977	27,195	5,372
2004	59,302	50.00%	29,651	1,977	27,674	17,789
2005	60,212	50.00%	30,106	1,977	28,129	18,200
2006	61,052	50.00%	30,526	1,977	28,549	24,565
2007	61,822	50.00%	30,911	1,977	28,934	24,899
2008	62,524	50.00%	31,262	1,977	29,285	25,205
2009	63,158	50.00%	31,579	1,977	29,602	25,480
2010	63,725	50.00%	31,863	1,977	29,886	25,727

ASSUMPTIONS:

1. The waste Generation Rate was estimated using the CIWMB's adjustment methodology, utilizing population and economic projections available from the State Department of Finance and the Southern California Association of Governments.
2. 25% Diversion Rate in 1995 increases to 50% by 2000 and thereafter.
3. Sunshine Canyon Landfill becomes operational on July 1, 1996.

NOTES:

1. The 1995 diposal need quantity will be updated in the final CSE once complete 1995 Disposal Quantity Reporting Data are available.
2. "tpd-6": tons per day, 6 days per week.

Source: Los Angeles County Department of Public Works, January 1996.

3.3.2.2 ANTELOPE VALLEY DISPOSAL CAPACITY STATUS

To provide a more local representation of remaining disposal capacity, pertinent information from Table 3-2 for the Antelope Valley and Lancaster Landfills which comprise the Class III landfill facilities in the Antelope Valley has been summarized separately below:

Facility	Jan. 1996 SWFP Daily Capacity (Tons)	1995 Average Daily Disposal (Tons)			Quantity of MSW Disposed in 1995 (Million Tons)			Estimated remaining permitted capacity (effective Jan. 1996)	
		Source			Source				
		In-County	Out-of-County	Total	In-County	Out-of-County	Total	Millions Tons	Million Cubic Yards
Antelope Valley **	1400 *	548	--	548	0.17	--	0.17	2.13	3.55
Lancaster	1000	338	258	596	0.11	0.08	0.19	0.47	0.69
Total		**886**	**258**	**1144**	**0.28**	**0.08**	**0.36**	**2.6**	**4.24**

* Based on a revised SWFP issued on 12/26/95.

** Information does not reflect a proposed expansion in the unincorporated area which was not fully permitted as of 1/1/96.

Based on a total 1995 average daily disposal rate of 1,144 tons per day (six-day week), including waste being imported to the County, the capacity in the Antelope Valley will be mathematically exhausted in slightly more than seven years. The remaining capacity for the LLRC will be exhausted in slightly more than two years. As previously discussed for the entire County and presented in Table 3-3, many factors can reduce the mathematically computed remaining capacity including the ability for both the Antelope Valley and Lancaster Landfills to take in more than double their current average daily disposal rate. This could in theory cause these facilities to reach their current remaining capacity in half the time projected.

These figures can only be regarded as very rough approximations in light of the very dynamic nature of the solid waste disposal business in southern California. Currently proposed landfill expansions and rail-haul projects have the potential to significantly impact solid waste disposal rates and trends throughout the region. These projects, as they apply to the LLRC expansion project, are discussed in greater detail in Section 7.0 of this document.

Regardless of ongoing changes in other landfills within and outside of Los Angeles County, prudent planning should strive to ensure sufficient landfill capacity for the Antelope Valley area, given the expanding population of the region. This is consistent with the Countywide Siting Element's goals and policies which specifically state that to

and 5,345,400 tons in the EEA. This additional refuse capacity is expected to extend the life of the landfill until at least the year 2010. If the other facility in the region (e.g., the Antelope Valley Landfill) reaches its permitted capacity and closes within this time frame, it is possible that the LLRC will begin to receive at least some of the waste from that area. According to information presented in Table 3-2, it is estimated that the Antelope Valley Landfill would reach its current remaining capacity in approximately 13 years, based on the current average daily inflow rate (1995 average of 548 tons per day), however, it should be noted that the current permit for the site has a closure date of July, 1999. The operator for the Antelope Valley Landfill is currently pursuing a revision to its permit to expand that facility which would increase the current capacity and site life.

3.4.3 SITE DESIGNATION

The existing LLRC is operating as a Class III (formerly Class II-2) (nonhazardous municipal solid waste) sanitary landfill facility. Landfills are classified according to their ability to contain waste as defined in the CCR, Title 23, Chapter 15, Section 2533. The site will be accepting special wastes as described below as part of the proposed project.

3.4.4 WASTES TO BE RECEIVED

The landfill is currently permitted to accept up to 1,000 tons per day of municipal solid waste and the applicant proposes to accept up to 1,700 tons per day. The percent of incoming waste as presented in the site's 1992 RDSI is 22 percent municipal refuse, 27 percent commercial/industrial wastes, 18 percent construction/demolition Wastes, and 33 percent mixed waste. These municipal solid waste categories are described as follows:

- Municipal Refuse and Commercial/Industrial: Includes solid waste generated by residences, commercial accounts such as retail stores, restaurants, bars and offices, and nonhazardous waste generated by the industrial sector.
- Construction and Demolition: Includes construction and demolition materials such as wood, metal, glass, concrete and asphalt.
- Mixed Waste: Includes paper, green and wood wastes, glass, plastic, etc.

Similar waste types and quantities are proposed for the project although the percentage mix may change over time due to ongoing recycling and source reduction. *The construction and demolition material is currently recycled. The components of this material are commonly metal, wood, asphalt and concrete. When construction and demolition material is identified at the gatehouse, the generator is directed to one of three storage areas: woodwaste, asphalt/concrete or metal. The construction and demolition material must be segregated into its components by the generator in order to be recycled. After an adequate amount of material is accumulated in the storage area, the material is either transported for recycling or recycled on-site for re-use/re-sale.*

3.4.4.1 SPECIAL WASTES

The site does not accept any special wastes. The landfill operator is proposing to receive sewage sludge and asbestos waste which are described as special wastes in CCR, Title 14, Chapter 9, Article 6.1, Section 18722(j). These special wastes are those which require collection, processing, handling and disposal procedures different than those normally associated with municipal solid wastes and are not considered hazardous. The site also accepts what WMC terms "Special Wastes" which are hard to handle wastes requiring internal company review. The site operator uses a Special Waste Implementation Plan to handle these wastes. A brief description of the special wastes proposed to be accepted for the new project follows.

3.4.4.1.1 Sewage Sludge

The project site is permitted under its current Waste Discharge Requirements from the RWQCB to receive dewatered sewage sludge with 50 percent solids or more.

Any sludge, prior to acceptance at the site, will be tested for heavy metals and moisture content. Depending on the situation, Total Petroleum Hydrocarbons (TPH) or testing of additional constituents may also be required for the sludge. Lab analysis will be submitted to the LLRC for review. After approval by LLRC staff, the sludge will be accepted at the site.

LLRC has submitted a proposal to the LEA to use sludge as a soil amendment. This proposal involves disking sewage sludge into interim cover areas on the landfill to enhance revegetation efforts. Approval was granted on May 9, 1995 by the LEA. The

3.5.4.2 INTERMEDIATE COVER

When no additional waste materials are scheduled to be placed over the surface of an advancing lift within 180 days, or some other period prescribed in the WDRs issued by the RWQCB, the top and side slopes of the lift will be covered with a minimum 12-inch compacted thickness of intermediate soil cover.

3.5.5 RECYCLING PROCEDURES

As part of a developing response to the requirements of AB 939, the following describes the recycling elements which will be initiated at the LLRC. These operations were included in the site's recently revised SWFP.

3.5.5.1 REDEMPTION CENTER

For customers using their own vehicles such as pick-ups, etc. to haul waste to the landfill, a redemption center will be operated on-site to accept aluminum and bi-metal cans, glass bottles, Polyethylene Terephthalate (PET) and newspaper. Customers will be encouraged to separate recyclables from refuse prior to coming to the facility. There are several established redemption centers within the Lancaster city limits between the landfill and the overwhelming majority of the Antelope Valley population. Therefore, it is anticipated that most customers with recyclables will use those centers because they are more conveniently located than the LLRC. Landfill staff have the address and phone numbers of these centers and refer inquiries regarding redemption centers to those facilities.

As discussed in the Special Wastes section, woodwaste recovery is also expected to be a part of future operations. A diversion amount of 200 to 250 cy/day could be expected.

3.5.5.2 RESIDENTIAL AND COMMERCIAL RECYCLING

A curbside recycling program has been implemented to collect commingled recyclables from local residences. Three categories of recyclables *(e.g., green material, newsprint and commingled recyclables)* are collected by Waste Management of Lancaster collection vehicles and are stored on-site for transport to

processing facilities. In addition, cardboard and office paper is collected from local businesses. The following information details the two operations.

Refuse/recyclable collection vehicles weigh-in at the landfill gate, proceed to the working face to dump refuse, return to the landfill gate to weigh out, and finally proceed to the transport containers to dump the commingled recyclables.

Cardboard and office paper are collected separately from refuse. Front-end loader trucks are used to collect corrugated cardboard and office paper. As with the curbside collection vehicles, the quantity and origin of cardboard or office paper will be determined and recorded prior to transfer to the transport roll-offs. Collected materials will be transferred to transport roll-off containers on-site which are transported off-site as they are filled.

In the future, an onsite sort line and balers may be added to increase efficiency and local control of recyclable tracking. Specific records of refuse and recyclable weights and origin will be maintained on site to ensure proper application of AB 939 credits.

EMPLOYEE CLASSIFICATION	NUMBER OF PERSONNEL
Sorters	14
Supervisor	1
Forklift Operator	1
Loader	1
Bailer Operator	1
Quality Control	2

Should an onsite sort line and balers be added to existing operations, additional employees will be required.

3.5.5.3 COMPOSTING

LLRC has incorporated composting into its site operations. The compost feedstock is green material and shredded woodwaste. LLRC does not amend the compost with any sludge or animal manure. The facility currently composts about 60 cubic yards of green material.

that treated groundwater will continue to be used for dust control throughout the life of the groundwater remediation program, which is expected to terminate in three to ten years. At that time, the operator will switch over to using on-site wells for all water needs, as was done prior to the implementation of the groundwater remediation program. Potable water needs are met by an existing site well in the uncontaminated 250 foot deep aquifer beneath the site. On-site extraction wells provide a total of approximately 70 gpm of available water on a continued basis. There will be no new water sources needed or developed for the proposed expansion project, and no need to hook-up to any public or private water providers in the area.

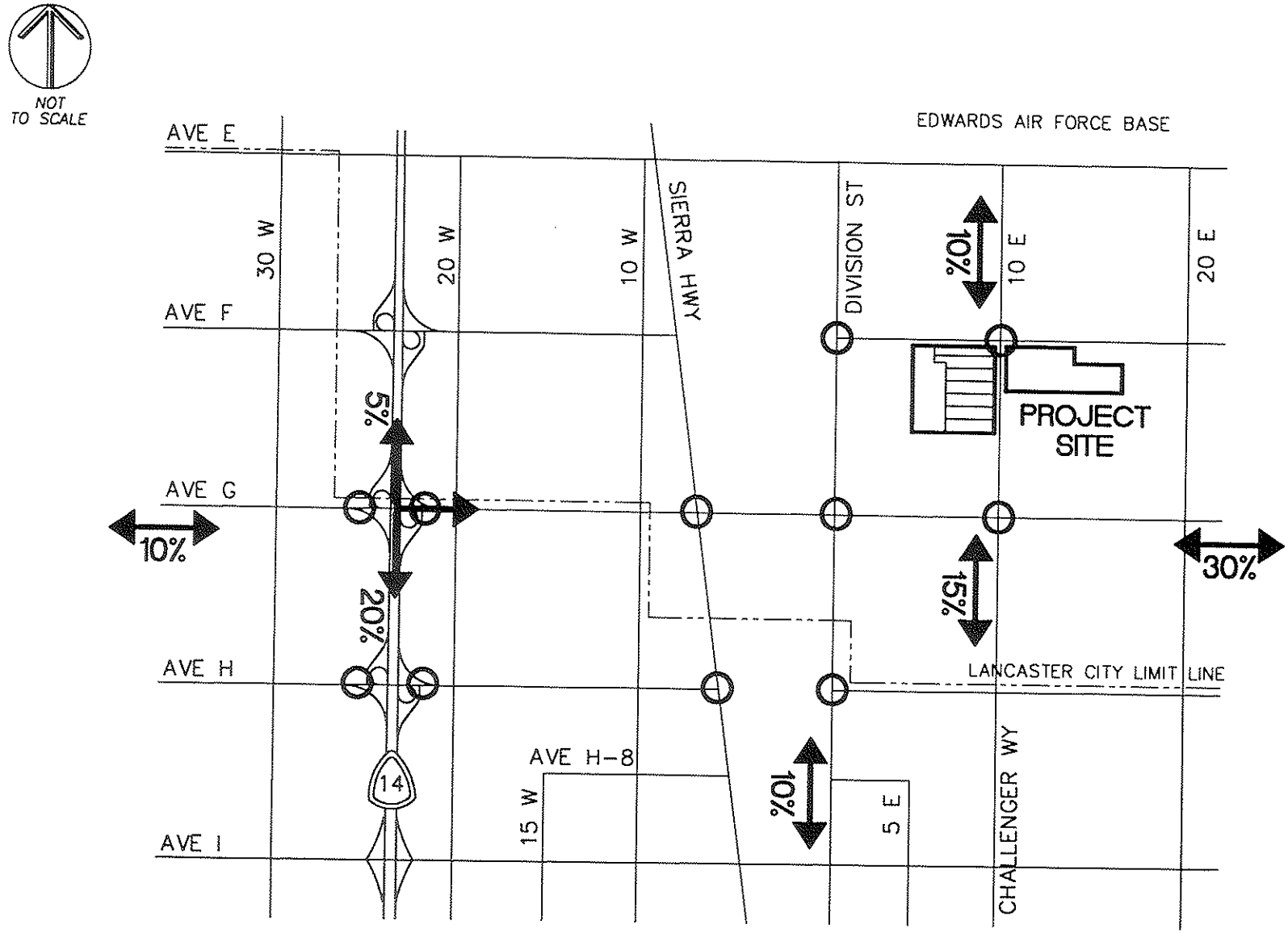
3.6 PROJECT DESIGN FEATURES

Construction of the landfill expansion will include new entrance facilities, haul roads and engineered containment systems (i.e., base liner, leachate management systems, etc.) for most of the expansion to separate and completely isolate the new areas. The new western expansion refuse face will not be completely isolated from the existing refuse face. The following describes the proposed infrastructure, liner design including the excavation plan, fill sequencing plans and cover design as well as landfill stability. The environmental control and monitoring systems are discussed separately in Sections 3.7 and 3.8.

3.6.1 ACCESS ROADS/SITE SECURITY

The existing site is currently accessible via Avenue F, a two-lane County highway. The entrance is a 40-foot wide all-weather access. The site entrance plan is shown in Figure 3-3. Road improvements which may be undertaken in the future include addition of left-turn lanes at 10th Street East and East Avenue F as a safety measure. Access to the landfill is restricted by security fencing surrounding the site and a gate which is attended during operating hours and locked when the site is closed. "No Trespassing" signs are posted at minimum 250-foot intervals along the landfill perimeter. The site entrance is located on East Avenue F approximately 2,450 feet west of the East Avenue F and 10th East Street intersection.

Refuse truck traffic going to the landfill currently uses the routes indicated on Figure 3-4, Traffic Access Routes, which depicts the percentage of incoming truck traffic which comes to the landfill on various routes. Haul roads to allow refuse



LANCASTER LANDFILL AND RECYCLING CENTER

FIGURE 3-4

TRAFFIC ACCESS

Source : Rust Design Report 1994

vehicle access to the active disposal areas will be constructed as shown on the Site Development Plans. Modifications may be made as necessary by the Landfill Manager to allow for safe and efficient operation. These roads will be constructed at grades no steeper than ten percent.

The temporary roads generally will be abandoned as landfilling progresses and these roads are covered by advancing lifts of refuse. Traffic will be directed by site personnel, road signs, barricades, and/or pylons.

3.6.2 ENTRANCE AND SUPPORT FACILITIES

A new facility area will be provided in the northwest corner of the EEA (see Figure 3-2). This new facility area will be constructed concurrently with the development of Phase IV in the EEA (see Excavation Plan, Subsection 3.3, below). Two paved access ways will be provided for the EEA landfill operation, one on the east side of 10th Street East, south of East Avenue F and one south of the existing dirt road access to the Antelope Valley Model Airfield on 10th Street East (See Figure 3-2). The existing facilities (office trailers, maintenance facilities) will be relocated to this new facility area. *All construction will be performed in compliance with applicable local, State and Federal building requirements, including applicable requirements for a methane gas protection system in accordance with Los Angeles County Building Code, Section 110.3.*

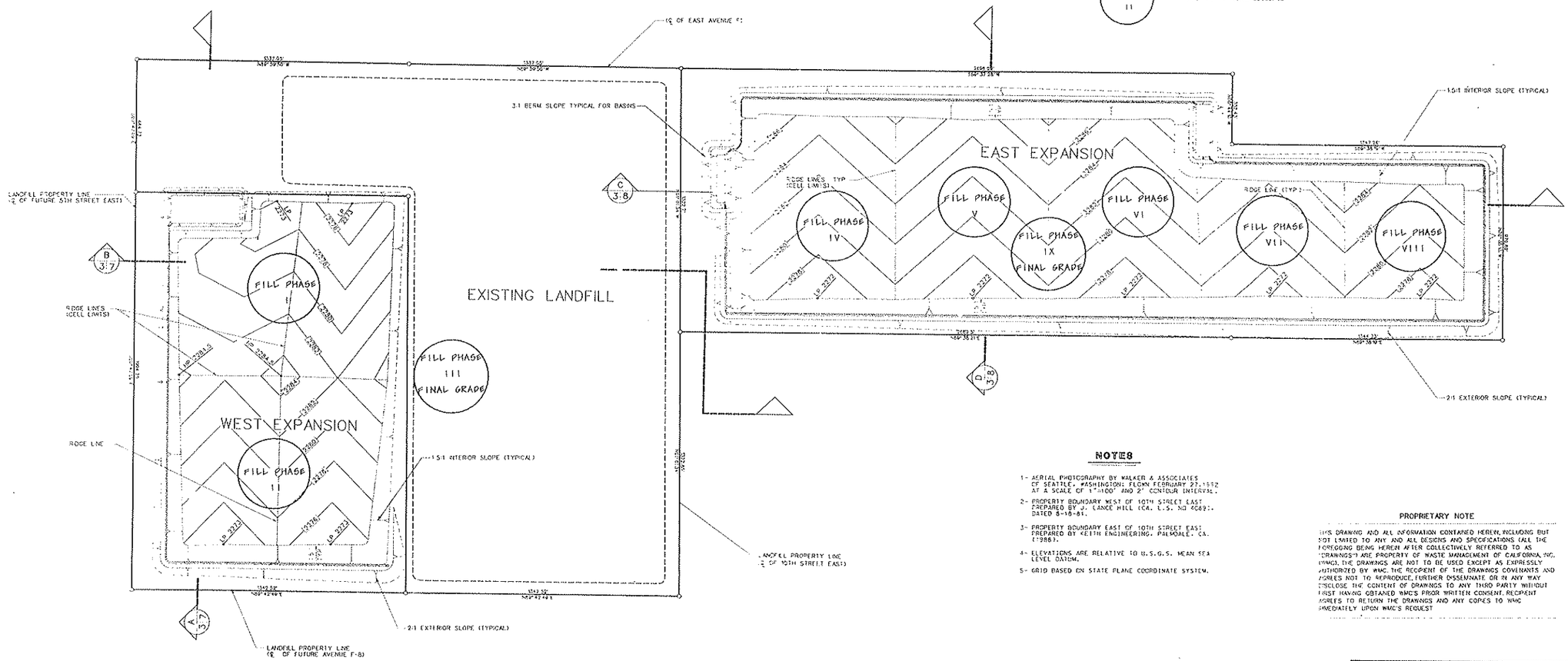
3.6.3 EXCAVATION PLAN

The base excavation plan for the landfill is shown on Figure 3-5. The landfill expansion fill phasing sequence begins with Fill Phases I and II in the WEA. Fill Phase III will be over the top of the Fill Phases I and II and the existing landfill and will bring the entire area up to final grades. Concurrent with Fill Phase III in the WEA, Fill Phase IV in the EEA will be excavated to provide daily and final cover for Fill Phase III. The EEA will be developed from west to east (Fill Phases IV through VIII). Fill Phase IX will be over the top of Phases IV through VIII and will bring the entire EEA to final grade. Earthwork for construction of the landfill will include large-scale excavation of on-site soils for use as daily landfill soil cover, intermediate soil cover, and construction of earth fills (i.e., berms and foundations for access roads and drainage facilities over refuse) and soil liners. Excavated soils will be suitable for

LEGEND

- EXISTING CONTOURS
- SPOT ELEVATION
- PROPERTY BOUNDARY
- 2276 — BASE GRADE
- LIMIT OF EXISTING REFUSE
- HP 2285 — HIGH POINT ELEVATION
- LP 2273 — LOW POINT ELEVATION
- SLOPE TO NATURAL GRADE
- SLOPE TO DESIGN BASE GRADE
- SECTION LETTER
- SHEET NUMBER SECTION IS TAKEN FROM
- SHEET NUMBER SECTION IS SHOWN ON
- FILL PHASE II — REFUSE FILL PHASING SEQUENCE

200 0 200 400
SCALE IN FEET



NOTES

1- AERIAL PHOTOGRAPHY BY WALKER & ASSOCIATES OF SEATTLE, WASHINGTON; FLOWN FEBRUARY 27,1992 AT A SCALE OF 1"=100' AND 2' CONTOUR INTERVAL.

2- PROPERTY BOUNDARY WEST OF 10TH STREET EAST PREPARED BY J. LANCE MIEL (CAL. L.S. NO 4689). DATED 8-16-84.

3- PROPERTY BOUNDARY EAST OF 10TH STREET EAST PREPARED BY KEITH ENGINEERING, PALMDALE, CA. 1988?.

4- ELEVATIONS ARE RELATIVE TO U.S.G.S. MEAN SEA LEVEL DATUM.

5- GRID BASED ON STATE PLANE COORDINATE SYSTEM.

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FIGURE 3-5

BASE EXCAVATION PLAN

Source : Rust Design Report 1994

direct use as daily and intermediate soil cover. Selected earth fills and soils intended for use as final cover or for constructing soil liners will be soils having a permeability to meet Federal Subtitle D requirements sufficiently.

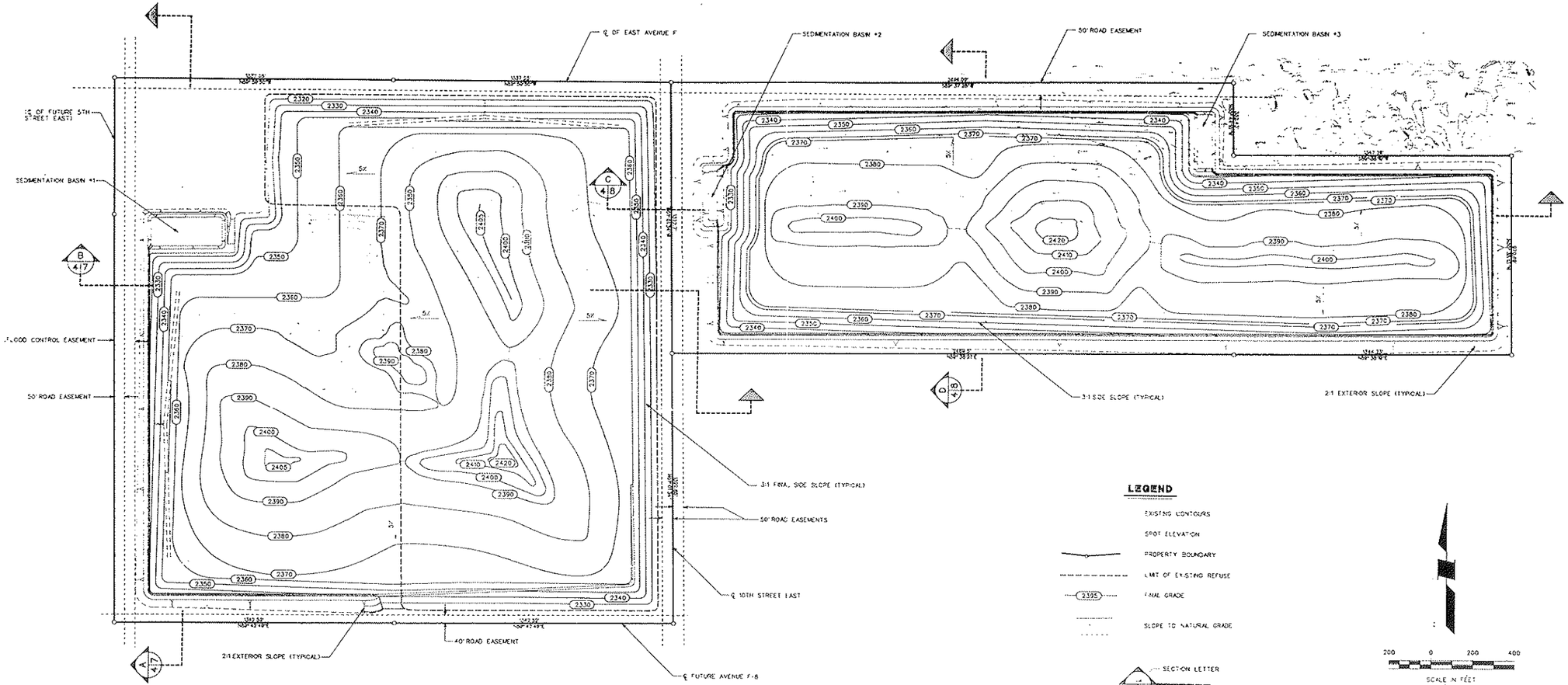
Areas to receive earth fill will be stripped of vegetation and topsoil, scarified, and compacted prior to placing the initial layer of earthfill. Earthfill then will be placed by spreading the specified soil in uniform layers and watering or drying them, as necessary. The layers will be compacted with suitable equipment.

During the excavation and landfill operations, soils needed for construction of both low-permeability soil liners and vegetated final cover will be selectively stockpiled. Soil materials excavated from each landfill phase will be stockpiled in an inactive area within the landfill footprint. This material will be used when appropriate for drainage construction, soil cover, or clay liner.

3.6.3.1 MATERIAL NEEDS

The base excavation plan (Figure 3-5) and final grade configuration (see Figure 3-6) will yield a gross airspace of approximately 23.2 million cubic yards (mcy) gross airspace being the volume between the bottom of excavation and the top of the final closure cover. The net airspace is the gross airspace minus the volume taken by the drainage and protective liner and the final closure cover system. The net airspace is that volume available for solid waste and the associated daily and intermediate cover. The design configurations for this project will yield a net airspace of approximately 21.9 mcy. The total volume of daily and intermediate cover will be 4.4 mcy. The resulting airspace available for waste, therefore, will be 17.5 mcy.

The operation's daily working face for placement of waste was assumed to be 100 feet by 200 feet. Twelve inches of intermediate cover will be placed over the top and side slope of the waste and six inches of daily soil cover, or an approved ADC, will be placed over the working face at the end of each day.



LEGEND

- EXISTING CONTOURS
- SPOT ELEVATION
- PROPERTY BOUNDARY
- LIMIT OF EXISTING REFUSE
- 2395 FINAL GRADE
- SLOPE TO NATURAL GRADE
- SECTION LETTER
- SHEET NUMBER SECTION IS TAKEN FROM
- SHEET NUMBER SECTION IS SHOWN ON

200 0 200 400

SCALE IN FEET

NOTES

1- AERIAL PHOTOGRAPHY BY WALKER & ASSOCIATES OF SEATTLE, WASHINGTON; FLOWN FEBRUARY 27, 1992 AT A SCALE OF 1"=100' AND 2' INTERVAL CONTOUR.

2- PROPERTY BOUNDARY WEST OF 10TH STREET EAST PREPARED BY J. LANCE HILL (CA. L.S. NO 42891, DATED 8-18-81.

3- PROPERTY BOUNDARY EAST OF 10TH STREET EAST PREPARED BY KEITH ENGINEERING, PALMDALE, CA. (1988)

4- ELEVATIONS ARE RELATIVE TO U.S.G.S. MEAN SEA LEVEL DATUM.

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FIGURE 3 - 6

FINAL GRADES

Source: Rust Environment & Infrastructure

A summary of the total material needs follows:

Closure Cover	1.0 mcy
Leachate/Liner System	0.3 mcy
Daily and Intermediate Cover	4.4 mcy
Construction Material	0.8 mcy
Total Materials Needed	**6.5 mcy**

On-site drainage materials have not yet been identified. If on-site drainage materials will not meet the specifications, 0.3 mcy of this material will be imported from the nearest available commercial quarry operation. Total excavation, or "embankment excavation", will be 6.5 mcy. In order to obtain the on-site materials, WMC proposes to excavate to a maximum depth of approximately 45 feet within the landfill footprint. The depth of excavation will be limited to four to nine feet above the depth to ground water. Refuse will be placed at a minimum of two feet above the maximum excavation over a leachate drainage system and composite liner system.

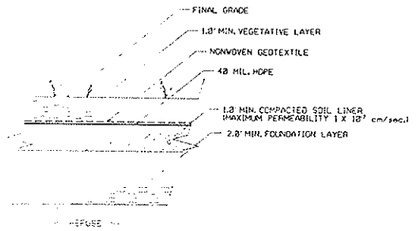
3.6.3.2 MATERIAL AVAILABILITY

All of the material needs for construction of the west and east expansion landfill areas will be excavated within the landfill footprints with the possible exception of drainage materials as previously noted. However, additional excavation of the EEA will be required to supplement daily and final cover needed on the WEA. The design of the excavation plan balances material needs with the excavation volumes.

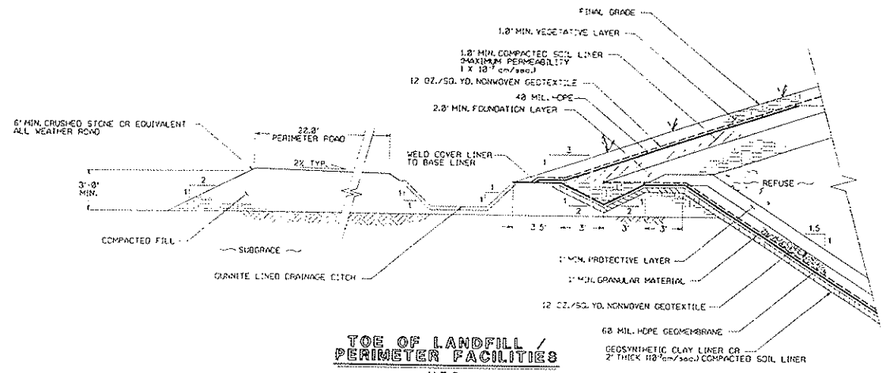
3.6.4 LINER DESIGN

The purpose of the base liner is to contain leachate within the landfill so that it can be channeled, collected and properly disposed. Both the base and sideslope liners will be constructed of a layer of high-density polyethylene (HDPE) (60 mil) over a geosynthetic clay mat (Base Liner Option A) or a minimum two-foot layer of compacted clay (Base Liner Option B). Both of these options are depicted graphically on Figure 3-7. Both options will have permeability ratings of 10^{-7} centimeters per second or less.

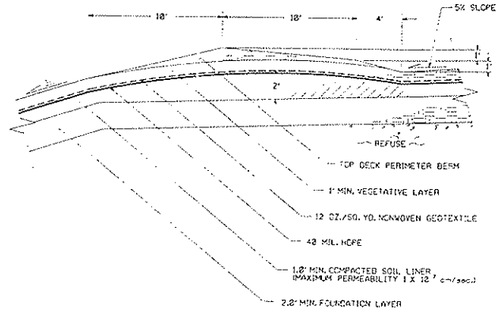
A one foot layer of clean, coarse granular material will be placed over the synthetic liner before refuse is placed. The granular material placed over the liner will protect



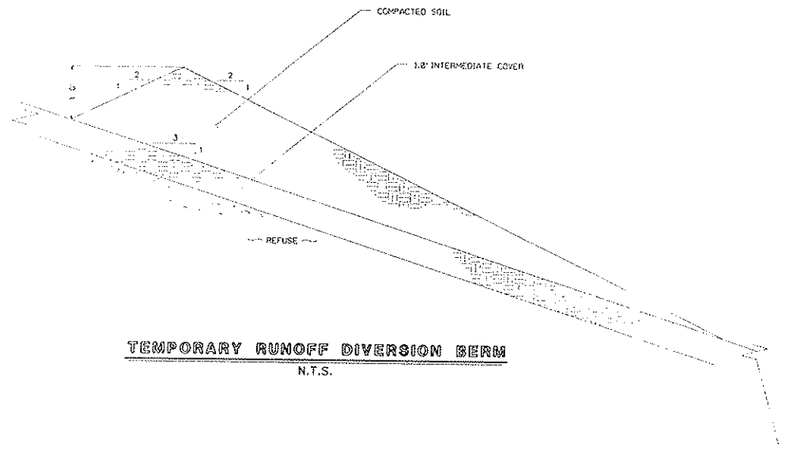
FINAL COVER
N.T.S.



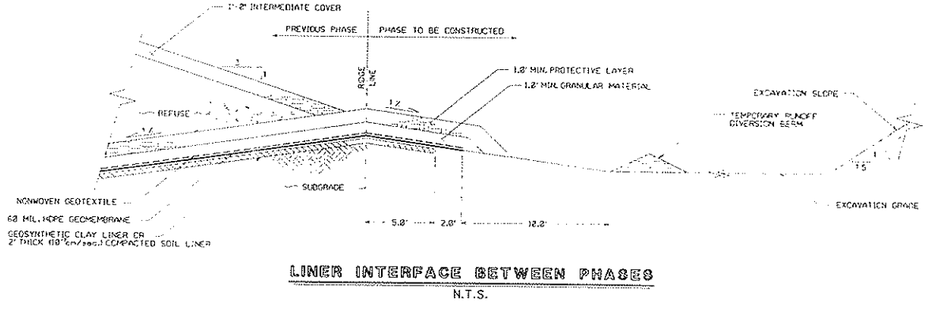
TOE OF LANDFILL / PERIMETER FACILITIES
N.T.S.



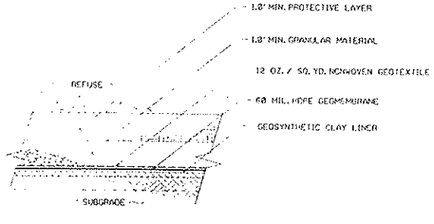
TOP OF LANDFILL / PERIMETER DRAINAGE BERM
N.T.S.



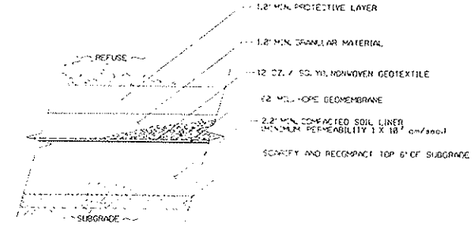
TEMPORARY RUNOFF DIVERSION BERM
N.T.S.



LINER INTERFACE BETWEEN PHASES
N.T.S.



BASE LINER OPTION A
N.T.S.



BASE LINER OPTION B
N.T.S.

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FIGURE 3-7

BASE LINER and FINAL COVER DETAIL

Source : Rust Design Report 1994

the liner from accidental damage by landfill equipment. This protective layer will also act as a drainage layer to facilitate leachate movement toward the collection sumps, thus reducing the potential head build-up on the liner.

Special care and precaution will be taken when placing and compacting the first cell of refuse over the bottom protective layer, the sidewall liner and collection sumps. The first cell to be placed over the liner areas will consist only of select solid waste, devoid of materials that could damage or penetrate the liner.

To further reduce the potential for damage to the protective layer, only moderate compaction will be applied to the first cell. In addition, the first waste layer will be relatively thick (at least ten feet), as compared to following layers. Operating equipment will travel on the waste layer only, extending the cell out over the prepared baseliner/sidewall.

3.6.4.1 LANDFILL STABILITY

A preliminary static and seismic stability analysis was completed for the proposed project. Because the landfill expansion will be a Class III, it must be designed for the maximum probable earthquake (MPE). The stability analyses considered both the natural deposits and the proposed landfill materials.

The results of the stability analysis are represented by a ratio called the Factor of Safety (FS). The FS is the ratio of the resisting forces (those forces maintaining stability) to the driving forces (those inducing instability). Thus, a FS equal or greater than one implies stability, whereas a FS less than one implies instability. The static FS is computed under normal static loads, whereas the pseudo-static seismic FS includes an additional driving force to simulate the horizontal acceleration induced by an earthquake. In general, a minimum static FS, of 1.25 during landfill operation and a long-term pseudo-static FS of 1.4 after closure is considered appropriate for landfills.

A hypothetical seismic event along the San Andreas fault, located 11 miles southwest of the site, was used to estimate the stability of the slopes in the event of an earthquake. Assuming a lateral acceleration equal to 16 percent of the pull of gravity (0.16g), the pseudo-static seismic FS was found to be 1.5. The slopes, thus, are stable as designed under the modeled conditions. The assumed lateral acceleration of 0.16

was based on a normalized estimate of peak ground acceleration at the site from a seismic hazard analysis study conducted for the LLRC by Harding Lawson & Associates, 1991 (see Appendix H). Further investigation and liquefaction identification will be required in the final design.

3.6.5 FINAL COVER DESIGN

Figure 3-7 shows details of the proposed final cover to be placed over the landfill. The cover will consist of a sequence of the following layers:

- A two-foot (minimum) layer of material will be placed as a base for subsequent coverings.
- A one foot layer of low-permeability soil will cover the base layer, and this material will be capped with a 40-mil HDPE liner.
- A drainage geotextile will be placed over the HDPE.
- A one foot layer of topsoil, the vegetative layer, will be placed on the geotextile layer.

The proposed cover design meets all the requirements of the RWQCB, the CIWMB, and EPA Subtitle D.

3.7 ENVIRONMENTAL MONITORING

The applicant proposes to incorporate various environmental monitoring features into the project design to protect human and natural environments from adverse environmental impacts. These will be in addition to CEQA requirements for monitoring of mitigation measures. Elements of the environment to be monitored include: groundwater, surface water, and air. Routine monitoring will assure compliance with regulatory standards and act as an early warning system in the event of a failure of any system.

3.7.1 GROUNDWATER MONITORING

The site currently has ten wells which are used to monitor groundwater elevation and quality as part of the existing Corrective Action Program (CAP). In addition, six

groundwater extraction and four groundwater injection wells are also components of CAP. Water quality is monitored on a quarterly basis, while groundwater elevation data is gathered monthly. Site-specific monitoring requirements and analytical parameters established by the California RWQCB are described in the site's WDR's Monitoring and Reporting Program.

The Monitoring and Reporting Program will be supplemented for the expansion areas and the design will be based on the findings of both past and ongoing geologic and hydrogeologic investigations. The system will consist of a series of monitoring wells installed at strategic locations near the expansion perimeter. The monitoring program will identify the number, locations, and completion depth of the proposed groundwater monitoring wells. Well construction details will be included in the program. The monitoring program will monitor the effectiveness of the landfill's environmental control features. Monitoring locations will be chosen so that they will measure the shallowest of groundwater to quickly identify any impacts.

Detailed records of all monitoring results will be maintained on site. Monitoring records will also be forwarded to the RWQCB at intervals specified in the WDRs. If monitoring reveals adverse changes in groundwater quality, assessment and corrective actions will be taken after consultation with the RWQCB.

3.7.2 LEACHATE MONITORING

The leachate collection and removal system (LCRS) sump collecting leachate from the LCRS system provides the means for monitoring leachate generation and accumulation. The system will, therefore, be capable of both monitoring and controlling any leachate generated within the landfill. A riser pipe extending up from the base of the sump will be monitored regularly for indications of leachate buildup. Additionally, the riser also provides access for removing any accumulated leachate. Any leachate collected will be disposed in accordance with all applicable laws and regulations. *Permits for disposal will be obtained from the appropriate regulatory agencies.*

3.7.3 SURFACE WATER MONITORING

The LLRC monitors storm water runoff in accordance with a Storm Water Pollution Prevention Plan (SWPPP) prepared for the landfill in accordance with the requirements of their *National Pollution Discharge and Elimination System* General Storm Water

Permit *issued by the State Wate Resources Control Board.* A copy of the most recent (June 24, 1994) Annual Report for Storm Water Discharges is included in Appendix I of this report.

3.7.4 AIR AND GAS MONITORING

Eighteen nested permanent gas monitoring probes are in operation around the perimeter of the existing landfill footprint. These probes are part of the landfill gas monitoring program required by the site's SWFP No. 19-AA-0050.

A monitoring program complying with SCAQMD Rule 1150.1 has been developed and approved by SCAQMD for the site. The program consists of integrated surface sweeps with an organic vapor analyzer (OVA) to detect landfill gas on a monthly basis. Currently, monthly instantaneous surface sweeps are being performed at the landfill. In addition, all landfill structures are equipped with continuous combustible gas detectors.

The expansion areas will supplement the existing monitoring system. Proposed probe locations and frequency of monitoring will be coordinated with SCAQMD at intervals specified in the permit and will be required to meet CCR, Title 14 *and Los Angeles County Building Code requirements, as appropriate.* Upon completion of fill operations, the results of the monitoring programs will be reviewed, and future monitoring schedules will be determined for closure and post-closure.

3.7.5 NUISANCE AND HAZARD MONITORING

3.7.5.1 DUST

The applicant proposes to control unsightliness, dust and odor by continuing to implement the following control measures: 1) watering haul roads; 2) applying a fine water spray on wastes and soil cover over work areas when conditions cause the formation of fugitive dust; 3) placing daily, intermediate, and final soil cover (or approved alternate material) over the refuse fill; 4) applying water, pallatives or planting temporary vegetative cover on intermediate soil cover and stockpiles when conditions might cause excessive fugitive dust; and 5) planting and maintaining a vegetative cover on completed fill slopes and excavation surfaces.

3.7.5.2 ODOR

Low-permeability clay soils to be used in the final landfill cover and daily cover will be the primary control measure for odor at the landfill. Operation of the landfill gas control system will also minimize odors.

3.7.5.3 LITTER

Litter will be controlled by placing temporary fencing and/or portable litter fences downwind from the working face. The fencing, operational area, and the project site in general will be routinely policed to direct the pick up of any accumulated litter. *The operator requires that all loads delivered to the site be covered by a tarp or other effective means to prevent release of litter to the roadways. In the event of accidental releases of litter on the adjacent roadways, litter crews will be dispatched for litter removal.*

3.7.5.4 FIRE PROTECTION

Fire protection of landfill equipment and vehicles will be provided by removing debris and dust from undercarriages and engine compartments, checking for and repairing oil leaks, and maintaining portable fire extinguishers. All equipment and support vehicles have fire extinguishers, and all personnel receive training. The gatehouse, maintenance building, administrative building, and landfill equipment building will be equipped with suitable fire extinguishers for minor fires and for personnel safety. Any fire that occurs on the landfill will be extinguished by landfill personnel using water and soil cover stockpiles.

3.7.5.5 VECTOR CONTROL

Site personnel will routinely inspect the site for signs of rodent activity or fly breeding. If such vector activity is observed, a pest control specialist will be consulted to mitigate the vector nuisance.

3.7.5.6 VEHICLE TRAFFIC CONTROL

Most accidents/injury/illness at a landfill are caused by one of the following:

- ❑ Inattentiveness
- ❑ Horseplay
- ❑ Walking behind trucks
- ❑ Improper hand signals/backing of trucks
- ❑ Heavy equipment movement
- ❑ Non-essential vehicles parking in the staging area
- ❑ Scavenging
- ❑ Excessive Speeds

The LLRC utilizes employees designated as Landfill Spotters to control the active disposal area traffic and to minimize the occurrence of the above activities. The main function of the Landfill Spotter is to direct traffic into and out of the active unloading area, to ensure safe and orderly working conditions and check loads for household hazardous waste or other unacceptable waste streams. This is accomplished by performing many different tasks. These include:

- ❑ Interacting with drivers and equipment operations.
- ❑ Directing trucks to an open unloading area.
- ❑ Being familiar with different types of trucks.
- ❑ Keeping the active face free of obstruction
- ❑ Directing small vehicles out of the active area and to hand unloading area.
- ❑ Notifying Supervisor/Safety Coordinator/Scalehouse of unusual occurrences.
- ❑ Maintaining radio communications with supervisor, as needed.
- ❑ Notifying Supervisor of any suspected hazardous or unacceptable waste.

By utilizing a spotter at all times to control the active disposal area will minimize the likelihood of accident occurrences at the LLRC.

3.8 LANDFILL CLOSURE

The closure procedure for the LLRC will begin in the northeast corner of the current landfill area and proceed towards the southwest corner of the WEA. This final closure operation for the western site is labeled as Phase III on Figure 3-5. Phase III final closure operations will begin when refuse filling of Phase IV of the EEA is underway. Perimeter slopes will be closed first and vegetated where practical in areas which have already reached final grades prior to the completion of top deck refuse

placement. Excess excavation material from Phases IV and V will be used as final cover material for Phase III.

Phase IX closure will proceed from the northwest corner of Phase IV and proceed in a southeasterly direction. The final closure of the EEA is labeled as Phase IX on Figure 3-5. Phase IX will begin while Phases VII and VIII are active. Phase IX will eventually be completed over the southeastern corner of Phase VIII after the refuse limits are reached. Final cover material for Phase IX will be provided by excess excavation material from Phases VI, VII, and VIII.

Final landfill slopes will be constructed no steeper than 3:1 and no flatter than five percent as shown on Figure 3-6. This design will minimize erosion potential and will allow for a sufficient post-settlement landfill slope to encourage surface water sheet-flow drainage. Final cover, in accordance with current regulations, will be applied to final refuse slopes within six months following final refuse grade elevations. The details of the final cover system are shown on Figure 3-7.

In order to verify that the low-permeability soil barrier layer has been properly placed during final cover construction, field tests will be conducted periodically as part of the final cover quality assurance/quality control procedures. Results of all field, construction, and laboratory tests conducted to document compliance with regulatory requirements will be maintained at the facility for future reference.

Revegetation of the site will occur upon placement of final cover to provide open space compatible with the surrounding sparse land use. *Vegetation suited to the climate of the area will be utilized including drought tolerant species.* All closure measures will be implemented to ensure compliance with 14 CCR, Chapter 3, Article 7.8, and Federal Subtitle D standards.

3.9 LANDFILL POST-CLOSURE

A post-closure maintenance program will be conducted at the landfill so that containment and monitoring facilities retain their integrity. Surface drainage control facilities, vegetated soil cover areas, all monitoring facilities, and access roads will be routinely inspected and repaired as necessary. A post-closure maintenance program will be prepared as part of final closure approvals and will be followed in order to preclude problems associated with: leachate generation due to infiltration of surface water into the landfill, gas venting through

safety. According to the CoSWMP, the existing LLRC was found to be in compliance with RCRA criteria.

4.5.2 COUNTY INTEGRATED WASTE MANAGEMENT PLAN

In 1989, the State of California passed the California State Integrated Waste Management Act of 1989 (Assembly Bill 939), as amended by Assembly Bill 2707 (1990), which requires every city and county in the State to prepare and submit a CIWMP to the CIWMB. The CIWMP places primary emphasis on implementation of all feasible source reduction, recycling and composting programs while identifying the amount of landfill transformation capacity that will be needed for solid waste which cannot be reduced at the source, recycled or composted. *The CIWMP will consist of all Cities'/County's Source Reduction and Recycling Elements, Household Hazardous Waste Elements, Non-Disposal Facility Elements, the Countywide Siting Element, and the Summary Plan. A preliminary draft of the plan, dated January, 1996, has been prepared.*

The Countywide Siting Element (CSE) must address the solid waste disposal need of the County for a 15-year planning period. This must include the management of the residual solid waste that cannot be reduced, reused, recycled, or composted. A preliminary draft siting element, dated January, 1996, has been prepared and was released to the cities in the County for their review and approval *in March, 1996. The review period ended on October 17, 1996. The County is now preparing the final draft which is to be presented to the County Board of Supervisors in Feburary, 1997 and released to the Cities of the County for review in March, 1997.* The LLRC expansion is listed in the siting element as a potential expansion site.

The LLRC currently has a Hazardous Waste Exclusion Program in place which will be applied to the expansion operations as well. The Hazardous Waste Exclusion Program implemented at the LLRC includes a special waste implementation plan,

The existing groundwater remediation program began in February 1994 and is expected to continue for the next three to ten years. The program will be terminated when the groundwater contamination has been cleaned-up to the satisfaction of the regulatory agencies.

5.5.1.2 SURFACE WATER

Surface water in the surrounding area is allowed to flow freely into Rosamond Lake. Within the landfill, however, run-on from the outside is diverted along a peripheral channel, and runoff from precipitation falling within the footprint is diverted into a detention basin, where it is allowed to infiltrate and evaporate.

The quality of surface water at the landfill is monitored in accordance with a SWPPP prepared in accordance with the requirements of the site 's General Storm Water Permit. Surface water entering the footprint of the landfill is monitored after two major rainstorms each rainy season at one upgradient location, and that of the surface water leaving the footprint is monitored at two downgradient locations. Data collected over the last five years has not disclosed contamination of surface waters by landfill activities.

5.5.2 THRESHOLDS OF SIGNIFICANCE

Any of the following impacts related to water quality would be considered a potentially significant project impact:

- ❑ Substantially degrade water quality.
- ❑ Contaminate a public water supply.
- ❑ Substantially degrade or deplete groundwater resources.
- ❑ Interfere substantially with groundwater recharge.
- ❑ Discharge into surface waters, or result in any alteration of surface water quality, including but not limited to temperature, dissolved oxygen or turbidity.

* The LCRS will consist of HDPE collection pipes embedded in a drainage layer gravel. The pipes will be placed in a trapezoidal ditch and enveloped in drain gravel. The LCRS pipes will slope approximately one percent toward a collection sump. The WEA will have four collection sumps, and the EEA will have five collection sumps. A collection riser will be connected to each pipe which will provide a pathway to the leachate lines for maintenance. A 12-ounce geotextile will be installed over the drain gravel to prevent plugging of the drain material. A one foot minimum drainage layer will be placed over the geotextile. The drainage layer will be covered by a one foot minimum protective soil layer. The one-foot of soil, often called the "working layer", protects the underlying LCRS and geotextile from damage during initial stages of refuse placement. A cross-section of the system and schematics of the leachate collection sump and side slope cleanout riser are shown on Figure 5.5-3, Leachate Collection System Details.

Quality of Surface Water

* The quality of surface water leaving the footprint of the landfill will be preserved by continuing the proactive monitoring system currently in place *in accordance with the SWPPP prepared for the landfill in accordance with the requirements of their General Storm Water Permit.* Specifically, water quality will be monitored after two major rainfalls per rainy season at one upgradient station, and at stations placed downgradient of the collection areas of the refuse prisms. Evidence of contamination will trigger improvement of the appropriate surface water collection systems.

Implementation of these mitigation measures (e.g., surface water collection improvements) will reduce potential water quality impacts to a less than significant level.

* Measures required per current Federal, State and Local landfill regulations pertaining to operations.

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (818) 458-5100

HARRY W. STONE, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

DATE March 11, 1997

IN REPLY PLEASE REFER TO FILE. P-2

Mr. Frank Meneses
Section Head, Impact Analysis Section
Department of Regional Planning
County of Los Angeles
320 West Temple Street
Los Angeles, CA 90012-3828

Attention Mr. Kerwin Chih

Dear Mr. Meneses:

RESPONSE TO REVIEW OF ENVIRONMENTAL DOCUMENTS

Enclosed are comments from the following Divisions within this Department regarding Lancaster Landfill and Recycling Center Expansion Screencheck: Draft EIR, SCH NO. 93101036 Response to Comments and Traffic Impact Study

- ☐ Land Development - Drainage and Grading
- ☐ Materials Engineering - Geology and Soils
- ☒ Traffic and Lighting
- ☐ Waterworks and Sewer Maintenance
- ☒ Environmental Programs
- ☐ Other _____

If you have any questions regarding the comments, please contact the person listed on the enclosed comments. For additional information, please contact ~~Mr./Mrs.~~/Ms. Sarah D. Scott at (818) 458-4360.

Very truly yours,

HARRY W. STONE
Director of Public Works

Terri Grant

TERRI M. GRANT
Planning Division
Environmental/Special Studies Section

FORM.36/km

Enc.

cc Bryan A Stirrat & Associates (Arbogast)
DKS Associates

9/96

MAR 1 1 1997

March 5, 1997

TO: David Yamahara
Planning Division

Attention Terri Grant

FROM: David M. Smith DMS.
Environmental Programs

SCREENCHECK DRAFT ENVIRONMENTAL IMPACT REPORT (DEIR)
LANCASTER LANDFILL AND RECYCLING FACILITY EXPANSION
RESPONSE TO COMMENTS

We have reviewed the subject document dated January 31, 1997. The following is provided:

1. Section 3.7.4, Air and Gas Monitoring, third paragraph

   Replace "Los Angeles County Building Code Requirements" with "Los Angeles County Department of Public Works."

2. Section 4.5.2, County Integrated Waste Management Plan, second paragraph

   The Final Draft Los Angeles County Countywide Siting Element (CSE) is currently being prepared. The Final Draft CSE must be approved by a majority of the cities containing a majority of the incorporated population and by the County. After obtaining these approvals, the CSE will be submitted to the California Integrated Waste Management Board (CIWMB) for approval. Upon approval by the CIWMB, the CSE will become effective.

If you have any questions regarding these comments, please contact me at Extension 3561.

P:\FARZAN\LANCAST5.EIR

# of pages ➤ 2	
To Ms. Virginia Vecerra	From Suen Fei LAU
Co. Bryan Stirrat	Co. LACDPW - Traff & Ltg Div
Dept	Phone (818) 458-5909 x3725
Fax (909) 860-8017	Fax # (818) 458-5936

March 10, 1997

TO: David Yamahara
Planning Division

FROM: K. E. Wea
Traffic and Lighting Division

TRAFFIC IMPACT STUDY (DECEMBER 1996)
LANCASTER LANDFILL AND RECYCLING CENTER
LANCASTER AREA

We have reviewed the Lancaster Landfill and Recycling Center Traffic Impact Study prepared and submitted by DKS Associates, the Traffic Consultant for the subject project. The proposed project is for the expansion of the existing landfill operation area. The project will be located in the southwest and southeast quadrants of Avenue F and 10th Street East.

The proposed project consists of the expansion of the existing 102 acres to 276 acres by expanding 62 acres west of the existing site designated as the western expansion area and another 112 acres to the east of the existing site designated as the eastern expansion area. The proposed expansion will increase the current daily refuse disposal operation from 650 tons per day (tpd) to 1,700 tpd at its ultimate capacity in the Year 2010. The proposed expansion is estimated to generate approximately 400 additional passenger car equivalent trips per day.

The study is based on two transportation system scenarios with and without the extension of Avenue F west of Division Street. The extension of Avenue F west of Division Street is included in the City of Lancaster's long range circulation plan. We agree with the study that the project will not have a significant impact on any of the 23 intersections/roadways analyzed whether or not Avenue F is extended.

We also agree with the study that the additional truck traffic that the project will generate <u>will</u> have a significant impact on the existing pavement structure for the following roadway segments. The project should be solely responsible for upgrading the pavement section for these roadway segments to provide for a 20-year traffic index of 8.5.

- Avenue F between Division Street and 10th Street East
- 10th Street East between Avenue F and Avenue G

In addition, the developer should dedicate adequate road right of way and construct project frontage street improvements along Avenue F and 10th Street East satisfactory to this Department. Detailed striping plans for these roadway improvements should be submitted to this Department for review and approval.

We recommend the State of California Department of Transportation and the City of Lancaster review this project for impacts/mitigations within their jurisdictions.

If you have any questions, please contact Suen Fei Lau of our Traffic Investigations and Studies Section at Extension 5909.

SFL:lg
T-2/LANCLAND

cc: Ronald J. Ornee
Materials Engineering (Lancaster)

COUNTY OF LOS ANGELES
DEPARTMENT OF HEALTH SERVICES
ENVIRONMENTAL HEALTH
SOLID WASTE MANAGEMENT PROGRAM

COUNTY OF LOS ANGELES - DEPARTMENT OF HEALTH SERVICES
ENVIRONMENTAL HEALTH
SOLID WASTE MANAGEMENT PROGRAM
2525 Corporate Place, Room 150, Monterey Park, CA 91754 • (213) 881-4161

DHS

3:14
PLANNING

September 6, 1996

Kerwin Chih
Assistant Section Head, Impact Analysis Section
Los Angeles County Department of Regional Planning
320 West Temple Street
Los Angeles, CA 90012

SUBJECT: Screencheck EIR, SCH No. 93101036, Lancaster Landfill and Recycling Facility

Dear Mr Chih:

The Los Angeles County Environmental Health Services Solid Waste Management Program (SWMP) as the Local Enforcement Agency will be responsible for issuance of the Solid Waste Facility Permit for this project. We have reviewed the subject document and submit the following comments:

1) Figure 4-3, USGS Topographic map shows the actual location of residences and other structures in proximity to the site. Two comments regarding this map:

   a. How current is this map?

   b. It would be helpful to see ½ and one mile radii.

   On page 5.6-22, section 2.1 alludes to a land use map designated Figure 5.6-3. This figure was apparently omitted from the document.. If this figure is essentially the same as 4-3, then the above comments apply to it as well.

2) Litter abatement procedures are outlined in the NOP, and should also be addressed in the EIR.

3) The operation of the wood grinder should be considered in the noise analysis, section 5.4

4) Odor from composting operations should be addressed in section 5.6.2

5) Page 3-20: In the discussion of disposal of asbestos, the following statements is made:

   > If the wastes are not properly containerized, and the landfill operator accepts the load, the operator will thoroughly soak the asbestos with a water spray prior to unloading, rinse out the truck, and immediately cover the wastes with non-waste containing material ..."

   Please explain, what is meant by "rinse out the trucks" and "non-waste containing material"

6) How will any radioactive waste that may be delivered to the site be disposed of?

Sep-26-96 16:25 waste management 805 945 2269 p.02

Thank you for the opportunity to review and comment on this document. The SWMP looks forward to receiving a copy of the Draft EIR.

Sincerely,

Don Stockenberg

Don Stockenberg
REHS

Sep-26-96 16:25 waste management 805 945 2269 P.03

BRYAN A. STIRRAT & ASSOCIATES
CIVIL AND ENVIRONMENTAL ENGINEERS

January 31, 1997

JN: 9267

Mr. Don Stockenberg
County of Los Angeles
Department of Health Services
Environmental Health
2525 Corporate Place, Room 150
Monterey Park, California 91754

RE: LANCASTER LANDFILL AND RECYCLING CENTER EXPANSION SCREENCHECK DRAFT EIR, SCH NO. 93101036 RESPONSE TO COMMENTS

Dear Mr. Stockenberg:

Included herein for your review are responses to your agency's comments on the above referenced document submitted to the Los Angeles County Department of Regional Planning (DRP) in a letter dated September 6, 1996. Each of your comments is listed below with a response following.

Comment 1: Figure 4-3, USGS Topographic map shows the actual location of residences and other structures in proximity to the site. Two comments regarding this map:

a. How current is this map?
b. It would be helpful to see half and one mile radii.

On page 5.6-22, Section 5.6.2.1 alludes to a land use map designated Figure 5.6-3. This figure was apparently omitted from the document. If this figure is essentially the same as 4-3, then the above comments apply to it as well.

Response: The USGS map is dated 1974 which has been indicated on the figure. Half mile and one mile radii have been placed on the map. Figure 5.6-3 was inadvertently left out of the document and is being transmitted herein.

Comment 2: Litter abatement procedures are outlined in the NOP, and should also be addressed in the DEIR.

Response: Litter abatement procedures are discussed in Section 3.7.5.3, page 3-41 of the DEIR.

1360 Valley Vista Drive • Diamond Bar, CA 91765 • (909) 860-7777 • FAX (909) 860-8017

Comment 3: The operation of the wood grinder should be considered in the noise analysis, Section 5.4.

Response: The wood chipping operation is not considered in the noise study due to the infrequent nature of the operation and the fact that it is a contracted operation which is not a part of the permanent site disposal operations. Section 3.4.4.1.6, page 3-21 has been revised to indicate this information.

Comment 4: Odor from the composting operations should be addressed in Section 5.6.2.

Response: Odor from the composting operation was considered in the odor monitoring performed at the site and is mentioned in Appendix O of the DEIR. Section 5.6.2, page 5.6-23 has been revised to also discuss the composting area that was sampled as part of the odor study.

Comment 5: Page 3-20: In the discussion of disposal of asbestos, the following statement is made:

> "If the wastes are not properly containerized, and the landfill operator accepts the load, the operator will thoroughly soak the asbestos with a water spray prior to unloading, rinse out the truck, and immediately cover the wastes with non-waste containing material..."

Please explain, what is meant by "rinse out the trucks" and "non-waste containing material."

Response: The "rinse out the trucks" procedure has been deleted from this process in order to minimize leachate generation and the discussion on page 3-19 has been revised accordingly. "Non-waste containing material" refers to cover dirt or other approved alternative daily cover material. This information has been included in the text of the DEIR on page 3-19.

Comment 6: How will radioactive waste that may be delivered to the site be disposed of?

Response: Section 3.4.4.2.2 of the DEIR has been revised to discuss the procedures for detection of radioactive waste and the disposal of radioactive waste that is delivered to the site undetected at the scalehouse. Currently, a qualified outside contractor disposes of any unacceptable waste.

We hope our responses to the above comments are to your satisfaction. We have enclosed revised pages which correspond to those revisions discussed above for your review. Revised text is italicized for your ease in reviewing. It is necessary that the DRP receive a letter of approval of these responses from your agency so that this document may be submitted for public review. Your expedience in approving these responses/revisions would be greatly appreciated.

Should you have any questions please call me or Ms. Virginia Becerra at (909) 860-7777.

Very truly yours,

Christine M. Arbogast

Christine M. Arbogast, P.E.
Division Manager
Solid Waste Management Division

VB/CMA

Attachments

c: Doug Corcoran - WML
Rod Collins - WML
Kerwin Chih - DRP

OR

CAUTION

CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
MAY CAUSE SERIOUS BODILY HARM

OR

DANGER

CONTAINS ASBESTOS FIBERS
AVOID CREATING DUST
CANCER AND LUNG DISEASE HAZARD

Disposal of Asbestos Waste

The transporter of the asbestos waste shall notify the landfill operator that the load contains asbestos. The landfill operator will inspect the asbestos waste loads to verify that the asbestos is properly contained in leak-tight containers and labeled appropriately. If the wastes are not properly containerized, and the landfill operator accepts the load, the operator will thoroughly soak the asbestos with a water spray prior to *unloading and immediately cover the wastes with non-waste containing material (i.e., cover soil or other approved alternative daily cover material) which prevents fiber release prior to compacting the waste in the landfill.*

Waste Deposition and Covering

The operator will prepare a trench within a refuse cell to receive only asbestos wastes. The dimensions of the trench will depend on the amount of asbestos to be disposed. The location, depth, and dimensions of asbestos disposed trenches will be recorded and maintained on-site. The trench shall be as narrow as possible while complying with all applicable trenching regulations. The trench will be designed perpendicular to the prevailing winds. Asbestos containers will be placed into the trench with sufficient care to avoid breaking the containers. The containerized waste will be covered within 18 hours with a minimum of six inches of non-waste. Improperly containerized asbestos containing material will be completely covered with six inches of non-waste

permit guidelines. Special handling of soils is necessary when the materials originate from a volatile organic compound (VOC) contaminated site as defined by District Rule 1166.

3.4.4.1.4 Street Sweeping and Catchbasin Debris

These wastes, derived from governmental institutions, are only accepted at the site if determined to be non-hazardous and low in liquids content. The restriction on liquids is necessary because a common method of cleaning catchbasins is to flush them with water and vacuum pump the debris into storage tanks.

3.4.4.1.5 Tires

Shredded tires are accepted at the site.

3.4.4.1.6 Woodwaste

Woodwaste recovery is a part of the operations at the site. Woodwaste loads are screened for acceptability, then stockpiled for approximately two to three weeks before being chipped on-site. *The wood chipping is accomplished periodically with a tub grinder which is a contracted operation and is not a part of the permanent site operations.* The chipped wood is then transported to end users, which include electric generating plants or local landscape services.

3.4.4.1.7 Bulky Materials

These wastes (also known as "white goods") include large, hard-to-handle items such as appliances and furniture. The landfill allows self-haulers to dispose of bulky items at the landfill.

3.4.4.1.8 Agricultural Waste

The site accepts agricultural waste as described in the 1985 Los Angeles County Solid Waste Management Plan (LACoSWMP). This waste includes the residues resulting from diverse agricultural activities such as the planting and harvesting of row, field, tree and vine crops, the production of milk, and the raising of animals for slaughter. Agricultural waste produced in field and orchards is comprised of plant residues, such

as stems, stalks, straw, leaves, prunings, and abandoned produce. Waste produced in dairies and feedlots consists of manure, straw, etc.

3.4.4.2 Hazardous Waste

The site does not accept hazardous waste. WMC has established a hazardous waste exclusion program, which includes visual load inspections, a detailed training program pertaining to hazardous wastes, and an emergency response training program. A sign is posted at the facility entrance which clearly indicates that no hazardous wastes are accepted at the landfill.

In addition, WMC has developed a set of corporate policies and procedures which govern the identification and handling of Title 22 special wastes at all of its existing and proposed landfills and transfer stations. These policies and procedures are designed to provide compliance with federal, state, and local regulatory requirements. As implemented, the procedures address definition of special wastes, identification of those wastes within the overall wastestream, exclusion procedures, and documentation. These policies and procedures, which are already in force at the existing landfill, will be implemented for the proposed expansion to eliminate potentially hazardous wastes from entering the landfill.

3.4.4.2.1 Household Hazardous Waste

The project applicant's hazardous waste exclusion program will limit the intake of all hazardous wastes, including those from households. WMC will encourage educational means to help reduce the illegal disposal of household hazardous wastes. WMC will also support the County's household hazardous waste programs identified in the Household Hazardous Waste Element of the Los Angeles County Hazardous Waste Management Plan.

3.4.4.2.2 Radioactive Waste

Radioactive waste is typically detected by the scalehouse radiation detector. Loads containing radioactive waste are not accepted. Radioactive waste that avoids detection at the scalehouse and is then discovered to be in the working face will be disposed of by a qualified outside contractor. The operator currently contracts with

Advanced Environmental Technical Services (AETS) to manage unacceptable waste according to applicable local, State, and Federal requirements.

3.5 SITE OPERATIONAL FEATURES

3.5.1 OPERATING HOURS

The proposed new site operating hours would be Monday through Saturday from 5:00 a.m. to 8:00 p.m. Current operating hours are Monday through Saturday from 6:00 a.m. to 5:00 p.m. The landfill will be closed Sundays and holidays. Site operations may extend beyond the gate hours to allow for site preparation and daily covering; however, no additional refuse will be accepted at the scalehouse beyond gate hours except on special occasions and during emergencies.

3.5.2 EMPLOYEES

Development of the landfill will require a varying number of both permanent and short-term employees. Short-term employees will be required during construction of major project elements (e.g., liners, leachate collection and recovery system, and support facilities). The initial construction period will be approximately four months from initiation of excavation to acceptance of the first waste transfer trucks. During construction, approximately six additional people will be employed.

Landfill operations (excluding collection operations) are supported by 13 permanent employees which include:

Classification	Number of Personnel
Landfill Manager	1
Operations Supervisor	1
Equipment Operators	3
Gate Attendants	2
Mechanics	1
Laborers	3
Site Engineer	1
Secretary	1
Total	**13**

3.7.5.2 ODOR

Low-permeability clay soils to be used in the final landfill cover and daily cover will be the primary control measure for odor at the landfill. Operation of the landfill gas control system will also minimize odors.

3.7.5.3 LITTER

Litter will be controlled by placing temporary fencing and/or portable litter fences downwind from the working face. The fencing, operational area, and the project site in general will be routinely policed to direct the pick up of any accumulated litter. *The operator requires that all loads delivered to the site be covered by a tarp or other effective means to prevent release of litter to the roadways. In the event of accidental releases of litter on the adjacent roadways, litter crews will be dispatched for litter removal.*

3.7.5.4 FIRE PROTECTION

Fire protection of landfill equipment and vehicles will be provided by removing debris and dust from undercarriages and engine compartments, checking for and repairing oil leaks, and maintaining portable fire extinguishers. All equipment and support vehicles have fire extinguishers, and all personnel receive training. The gatehouse, maintenance building, administrative building, and landfill equipment building will be equipped with suitable fire extinguishers for minor fires and for personnel safety. Any fire that occurs on the landfill will be extinguished by landfill personnel using water and soil cover stockpiles.

3.7.5.5 VECTOR CONTROL

Site personnel will routinely inspect the site for signs of rodent activity or fly breeding. If such vector activity is observed, a pest control specialist will be consulted to mitigate the vector nuisance.

3.7.5.6 VEHICLE TRAFFIC CONTROL

Most accidents/injury/illness at a landfill are caused by one of the following:

MAP SCALE : 1 INCH = 2,000 FEET

LANCASTER LANDFILL

1 MILE

1/2 MILE

N

LEGEND

EXPANSION AREA

EXISTING LANDFILL

LANCASTER LANDFILL AND RECYCLING CENTER
FIGURE 4-3

USGS TOPOGRAPHIC MAP

SOURCE : BASE MAP FROM" USGS MAPS OF LANCASTER, EAST & WEST AND ROSAMOND QUADRANGLES, CALIFORNIA, 1974

of sufficiently high methane concentration is generated. In addition, the working face of the landfill is covered daily with a fabric tarp to control odors from the fresh refuse at the working face.

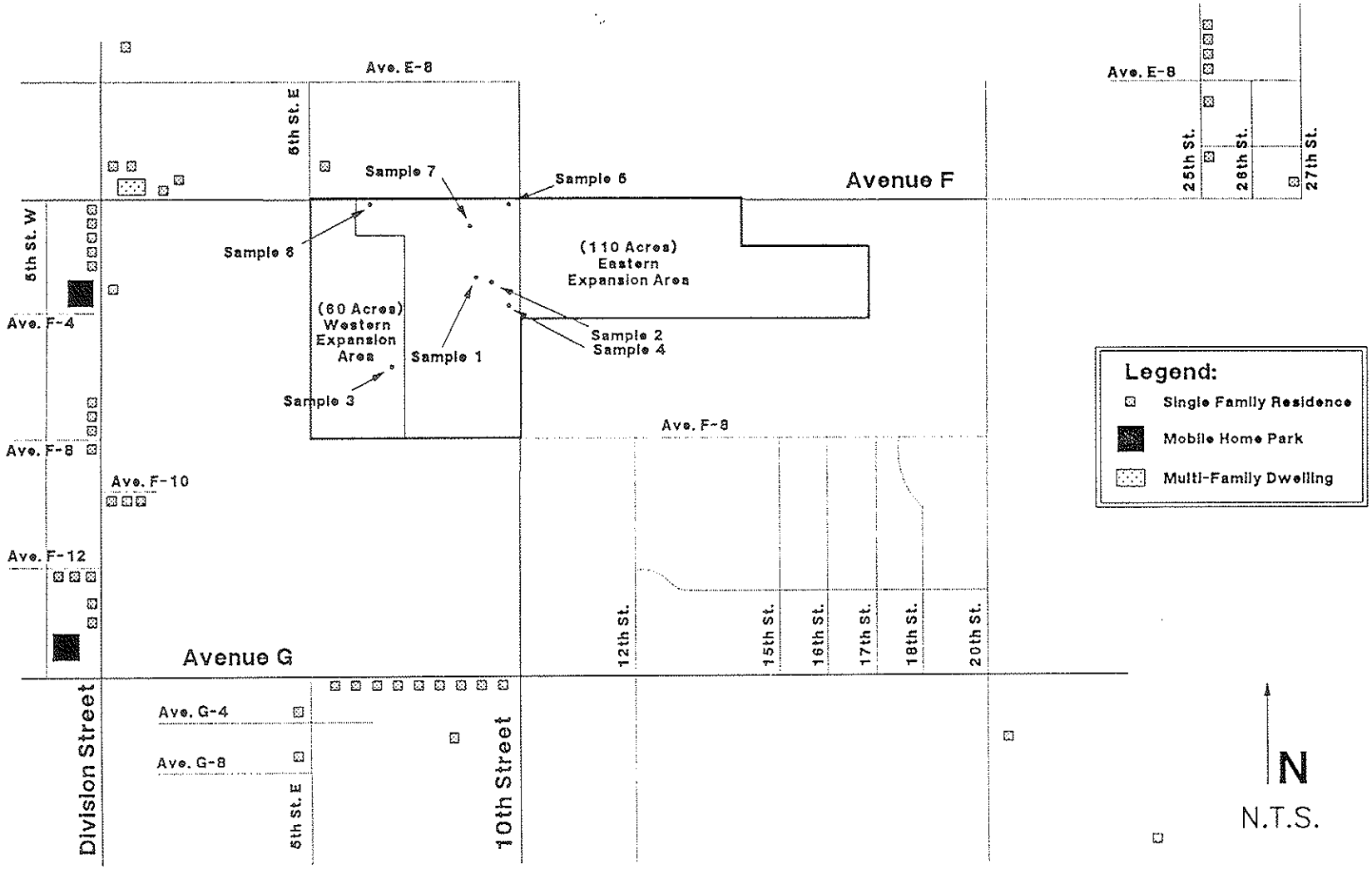
Odor Monitoring

In order to quantitatively assess the presence of odors due to the existing operations, a one time odor monitoring event was conducted on July 8, 1996 by Parsons Engineering Science (ES), Inc. The odor monitoring program consisted of collecting samples of ambient air at various locations in and around the site during normal landfill operations and subsequently evaluating samples for odor using an odor panel evaluation conducted at the Parsons ES facility. *Samples were taken from the following locations as shown on Figure 5.6-3.*

Location No.	***Description***
1	*Working Face*
2	*East of the working face*
3	*Upwind of the landfill*
4	*East of the landfill at 10th Street*
5	*Northeast corner of landfill*
6	*Entrance to the landfill*
7	*Downwind of composting area*

The samples were evaluated 24 hours after sample collection. A detailed description of the methodology used is presented in a report by Parsons ES dated July 23, 1996 which is included in Appendix O.

The odor levels recorded by each panelist are calculated following a statistical procedure which results in a averaged panel value termed the "ED_{50}". This term denotes the Effective Dosage at the 50 percent level, i.e., the dilution at which 50



SOURCE: PARSONS ENGINEERING SCIENCE, INC. ODOR MONITORING REPORT 1996

LANCASTER LANDFILL AND RECYCLING CENTER

FIGURE 5.6-3

LOCATION OF SAMPLING SITES FOR ODOR MONITORING STUDIES

COUNTY OF LOS ANGELES - DEPARTMENT OF HEALTH SERVICES
ENVIRONMENTAL HEALTH
SOLID WASTE MANAGEMENT PROGRAM
2525 Corporate Place, Monterey Park, California 91754 (213) 881-4151

DHS

February 5, 1997

Kerwin Chih
Assistant Section Head, Impact Analysis Section
Los Angeles County Department of Regional Planning
320 West Temple Street
Los Angeles, CA 90012

SUBJECT: Screencheck DEIR, SCH No. 93101036, Lancaster Landfill and Recycling Facility

Dear Mr Chih:

The Los Angeles County Environmental Health Services Solid Waste Management Program (SWMP) has reviewed the responses on our comments to the Screencheck DEIR forwarded to us by Bryan A. Stirrat & Associates. We find the responses adequately address the issues raised in our comment letter to you dated September 6, 1996.

Thank you for the opportunity to review and comment on this document. The SWMP looks forward to receiving a copy of the Draft and/or Final EIR.

I can be reached at either (562) 438-6788 or (213) 881-4151 should you have any questions.

Sincerely,

Don Stockenberg

Don Stockenberg, REHS

c: Bryan A. Stirrat & Associates

LEA Files

c: Fred Collins

FEB - 7 1997

APPENDIX C

GEOLOGY REPORT

GeoLogic Associates
Geologists, Hydrogeologists and Engineers

GEOLOGY

LANCASTER LANDFILL
EXPANSION PROJECT
LOS ANGELES COUNTY, CALIFORNIA

PREPARED BY:

GeoLogic Associates

PREPARED FOR:

Bryan A. Stirrat & Associates

June, 1994

1360 Valley Vista Dr., Suite 100, Diamond Bar, CA 91765 Phone: (909) 860-3448 FAX: (909) 860-2024

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1. INTRODUCTION

This report presents the results of our recent evaluation of the impact that expansion of the Lancaster Landfill would have on geologic conditions and processes. Included are an assessment of geotechnical feasibility given natural conditions, a summary of existing geologic conditions and processes, and an assessment of the magnitude and importance of expected environmental impacts. This work was completed in general accordance with the format recommended by the U.S. Geological Survey (Leopold et al., 1971) for evaluating the environmental impact of a major land development project.

2. SCOPE OF WORK

As stated in the original work proposal, GLA reviewed available geologic reports to summarize:

- General geologic setting
- Stratigraphy and paleontology
- Structural geology
- Site seismicity
- Potential geologic hazards
- Site hydrogeology

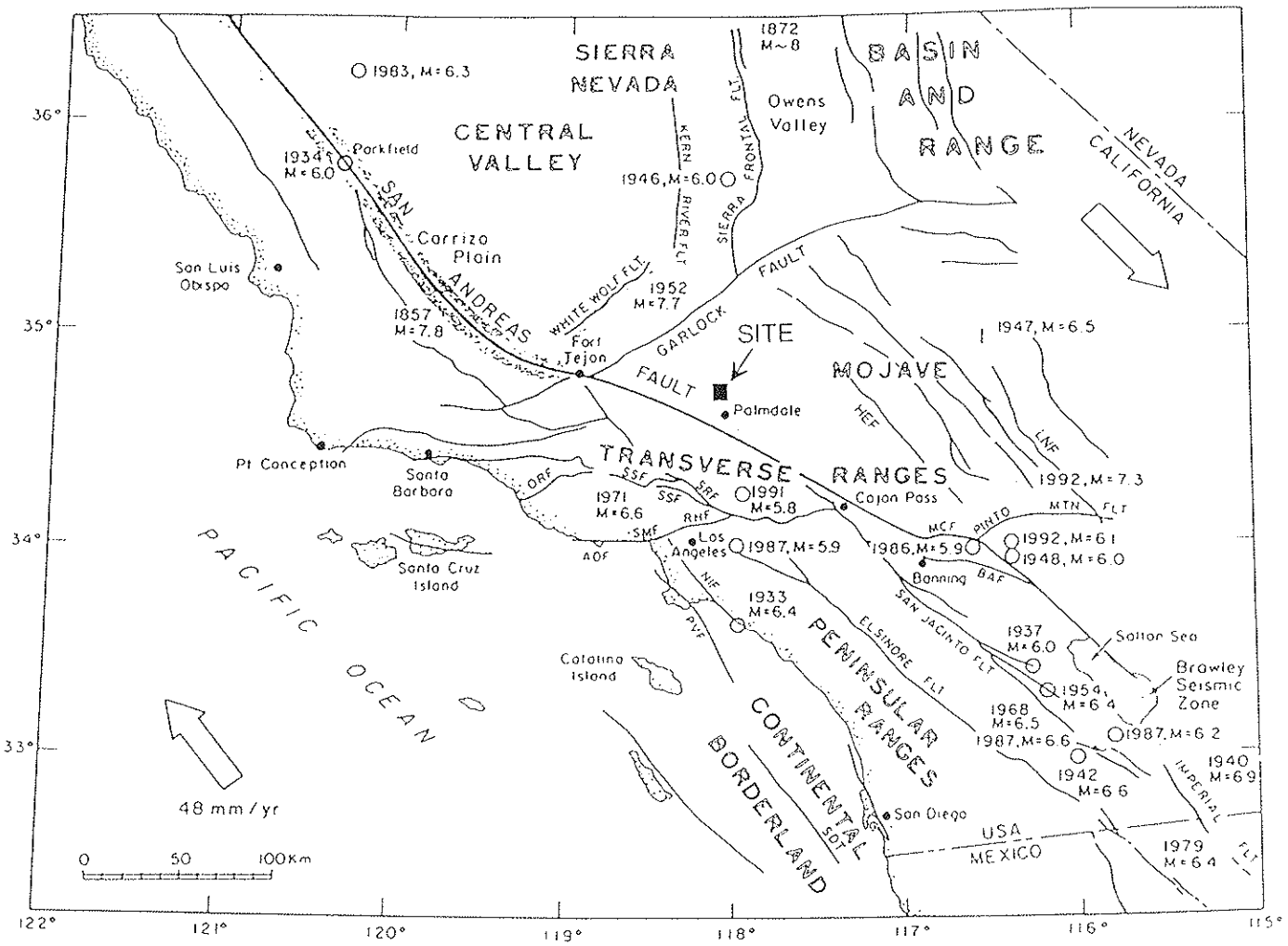
3. GEOLOGIC SETTING

GENERAL

The Lancaster landfill is located in the Mojave Desert of southern California (Figures 1 and 2). The wedge-shaped Mojave Desert is bound by the San Gabriel and San Bernardino Mountains to the south, the San Andreas fault to the southwest, the Garlock fault to the north, and the southern extension of the California Basin and Ranges to the east. As a geologic province, it is characterized by a complex stratigraphic record, active faulting, and internal drainage. General discussions about the geology of the Mojave Desert have been presented by Hewett (1954), Basett and Kupfer (1964), and Dibblee (1967).

Stratigraphy

The oldest rocks of the Mojave Desert are Proterozoic schists and gneisses that are unconformably overlain by Paleozoic platform carbonates (the nomenclature and duration of the subdivisions of geologic time are summarized in Table 1). During the Mesozoic, continental sandstones and volcanic rocks accumulated in a back-arc graben in the eastern Mojave, while felsic and mafic plutons intruded the rocks of the western Mojave. The Mojave block was exposed to erosion during the Paleogene, and little deposition took place. Toward the late Paleogene/early Neogene, uplift of the block accelerated and enormous thicknesses of early



ADF = Anacapa Dume fault
BAF = Banning fault
CF = Cucamonga fault
HEF = Helendale fault
LNF = Landers fault
MCF = Mission Creek fault
ORF = Oak Ridge fault
PVF = Palos Verdes fault
RHF = Raymond Hill fault
SDT = San Diego Trough fault
SFF = San Fernando fault
SMF = Santa Monica fault
SRF = Sierra Madre fault
SSF = Santa Susana fault

Source: Jones and Hauksson (1994)

FIGURE 1

GENERALIZED FAULT PATTERN
OF SOUTHERN CALIFORNIA

LANCASTER LANDFILL
EXPANSION PROJECT
LOS ANGELES COUNTY, CALIFORNIA

GeoLogic Associates

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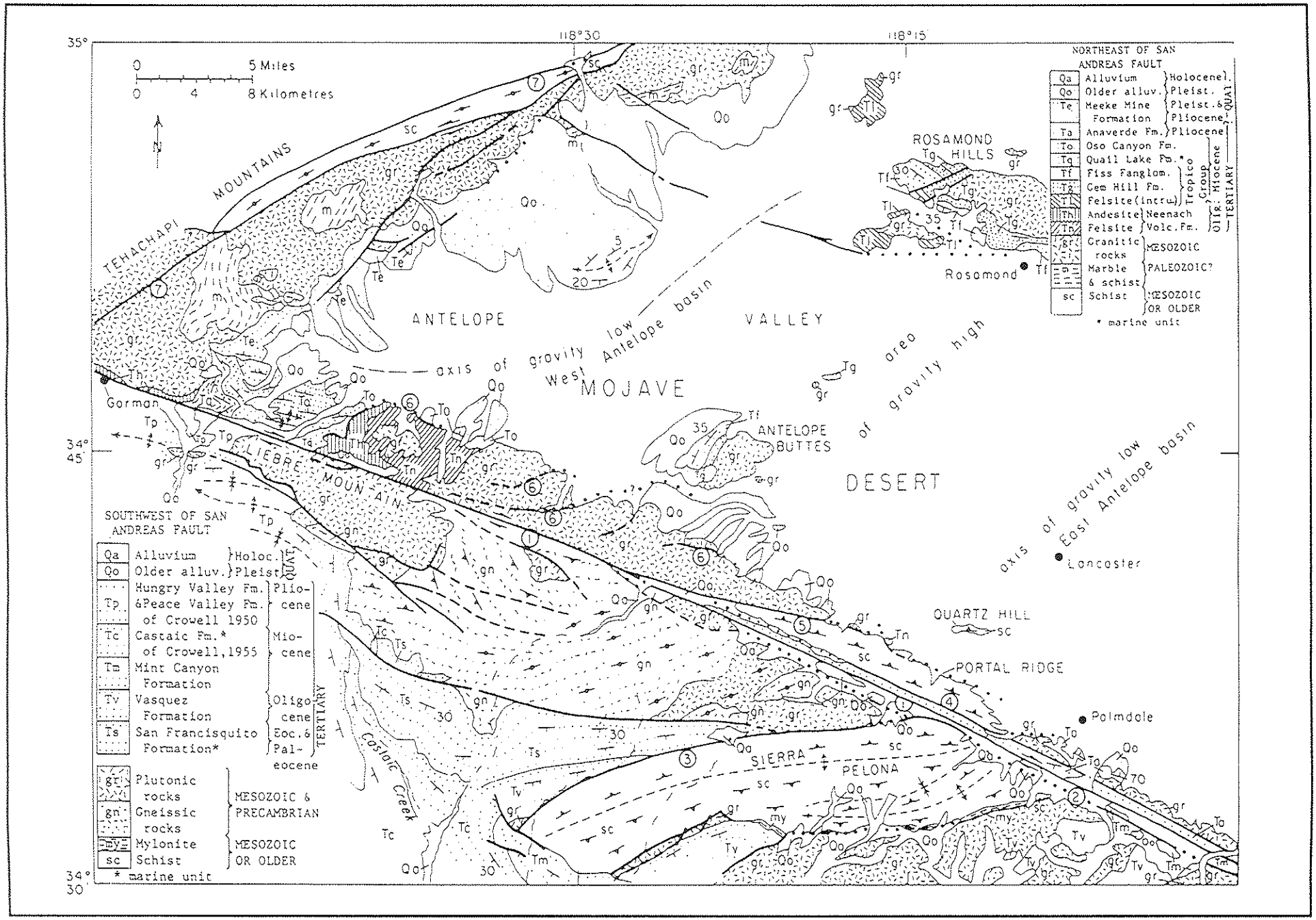

Figure 2. Geologic map of the western Mojave Desert (Dibblee, 1975). Faults: 1-San Andreas, 2-Nadeau, 3-San Francisquito, 4-unnamed, 5-Hitchbrook, 6-unnamed thrust faults, 7-Garlock.

EON	ERA	PERIOD		EPOCH	MILLION YEARS
PHANEROZOIC	CENOZOIC	QUATERNARY	NEOGENE	HOLOCENE PLEISTOCENE	0.01 1.6
		TERTIARY	NEOGENE	PLIOCENE MIOCENE	25
			PALEOGENE	OLIGOCENE EOCENE PALEOCENE	65
	MESOZOIC	CRETACEOUS JURASSIC TRIASSIC			245
	PALEOZOIC	PERMIAN CARBONIFEROUS DEVONIAN SILURIAN ORDOVICIAN CAMBRIAN			570
PROTEROZOIC					2,500
ARCHEAN					4,500

TABLE 1

GEOLOGIC TIME SCALE

LANCASTER LANDFILL
EXPANSION PROJECT
LOS ANGELES COUNTY, CALIFORNIA

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Miocene sediments derived from the Mojave were accumulated in what are now the Transverse Ranges (including the Los Angeles and Ventura sedimentary basins). By mid-Miocene, when strike-slip faulting became the dominant regional influence, uplift of the Mojave block had stopped, and the Mojave became an internally draining basin. Since the mid-Miocene, the Mojave basin has received thick sequences of lacustrine, fluvial, and alluvial deposits. Summary overviews of the stratigraphy of the Mojave have been presented by Dibblee (1980a, 1980b).

The Lancaster landfill is located in the western Mojave Desert, in the region known as Antelope Valley. At the local scale of the Antelope Valley, the deeply eroded surface of the granitic batholith is overlain by the Tropico Group, a sequence of volcanic and terrestrial sedimentary rocks of middle and late Tertiary age (Dibblee, 1958; 1975). The Tropico Group is moderately deformed (with increasing intensity near the San Andreas fault to the south) and has a maximum exposed thickness of about 2,800 feet. In general, the lower part of the group is composed mainly of tuffaceous strata of rhyolitic compositions, and the upper part is made up of a combination of coarse stream-laid and fine lacustrine sediments. Mafic lava flows are commonly present in the middle part of the group. Abrupt lateral changes of facies are prevalent so that correlation of isolated exposures is difficult if not impossible. The Tropico Group is commonly covered by Quaternary alluvial deposits, which in most parts lap unconformably over this sequence and onto the granitic bedrock exposed along the elevated perimeter of the basin. The Quaternary alluvial sediments were derived primarily from the mountains across south of the San Andreas fault and were deposited as a northward-sloping alluvial apron.

Geologic structure

From the structural standpoint (Dibblee, 1980c; Cummings, 1980), the Mojave area underwent thrusting during the Paleozoic Antler and Sonoma orogenies, back-arc extension and pluton emplacement during the Jurassic Nevadan orogeny, and thrusting during the Cretaceous Sevier orogeny. During the late Paleogene, isostatic uplift and basin-and-range extension gave rise to numerous normal faults, which in some instances served as pathways for the extrusion of volcanic products. The style of deformation changed during the early Neogene, when strike-slip tectonics became dominant in southern California. The most prominent faults created by this style of tectonism are the right-lateral San Andreas fault, and the left-lateral Garlock fault. The movement of these large, vertical faults has given rise to at least three other fault sets (Figure 1): (1) The steep reverse faults of the Transverse Ranges (e.g., the San Fernando fault of the San Gabriel Mountains, or the Oak Ridge fault of the Santa Susana Mountains), which seem to have originated by compression along the sigmoidal bend that the San Andreas fault makes in this area. (2) A set of oblique-slip faults distributed throughout the central Mojave (e.g., the Helendale and Landers faults). These faults are subparallel to the San Andreas, and seem to have formed by oblique slip between blocks that are being "squeezed" out of the Mojave to the east, by the combined movement of the Garlock and San Andreas faults. (3) Short, oblique-slip faults with a north-northeast trend (not represented in Figure 1). This set is the conjugated complement to the second one, and presumably formed by the same "squeezing" of the Mojave block. Seismic shaking due to movement along any of these three types of faults (strike-slip, reverse, and oblique-slip) could be a source of geotechnical concern to the project.

North of the San Andreas fault the desert plain contains low-density sedimentary and volcanic rocks to estimated depths of about 10,000 ft, separated by areas of relatively high-density basement rocks at or near the surface (Mabey, 1960; Dibblee, 1967). These basins are elongated northeastward or eastward, parallel to the Garlock fault, and at least two of them extend as far as the San Andreas fault (Figure 2). These include: (1) The West Antelope basin, which underlies the West Antelope Valley and parallels the Tehachapi Mountains to the northwest; and, (2) the East Antelope basin which extends northeastward from Lancaster. The Tertiary rocks of the East Antelope basin are not exposed at the ground surface.

Geomorphology

During the Neogene, uplift of the Transverse Ranges blocked the exterior drainage of the Mojave. This combined with the formation of structural depressions by oblique-slip faulting to lead to the development of complex interior drainages. By Pleistocene time the drainage network consisted of a series of large lakes that overflowed into each other during pluvial periods. With the onset of the drier conditions of the Holocene the lakes began to shrink, until they eventually became the saline playas that are now a characteristic feature of the Mojave landscape. Since the Pleistocene lakes that preceded the modern playas were much more extensive, the current surface of the Mojave basin is in many instances underlain by old lacustrine deposits (the ares of the Lancaster landfill site is a good example of this condition). The presence of lacustrine deposits can be of economic significance, since they are sources of useful chemical compounds and industrial clays. They can also be of geotechnical significance since they can liquefy during earthquakes, or be subject to hydroconsolidation or subsidence.

FAULTING

The Lancaster landfill is located 12.5 miles northeast of the San Andreas fault zone, and 20 miles southeast of the Garlock fault zone (Figures 1 and 2). Farther to the northeast are the swarm of oblique-slip faults of the central Mojave (Figure 1), one of which is the Landers fault, which on June 28, 1992, ruptured over a distance of at least 48 miles and generated an earthquake of momentum magnitude 7.3. The San Fernando fault zone runs 30 miles to the south-southwest of the site, and in 1971 generated an earthquake of magnitude 6.6. The Oak Ridge fault, which on January 17, 1994, generated a magnitude 6.6 earthquake, runs 42 miles south-southwest of the site.

The San Andreas fault. In 1857, movement along the right-lateral, strike-slip San Andreas fault generated an earthquake with an estimated momentum magnitude larger than 8.0 in the Fort Tejon area. It is here assumed that a similar earthquake could be generated in the future, as close as 12.5 miles southwest of the site. Based on the large number of historic earthquakes generated along the San Andreas fault, Wallace (1970) estimated that in any given year there is a 0.2 probability that an earthquake of magnitude 6 would occur somewhere along the 600 miles of the San Andreas fault, and that there is a 0.01 probability that a magnitude 8 earthquake would be generated in any given year. Locally, the trenching and geochronometric studies of Sieh (1978) in Pallett Creek (20 miles southeast of the site) suggest annual probabilities of 0.005 to

0.003 for magnitude 8 earthquakes.

The Garlock fault. From its intersection with the San Andreas fault, near Tejon Pass, the near vertical Garlock fault can be traced eastward for approximately 160 miles. Through the Tehachapi Mountains (20 miles northwest of the site) it follows a linear topographic depression where fault scarps have been subdued by erosion, whereas farther to the east distinct scarps are present, suggesting recent surface rupture (Dibblee, 1967). Offset dike swarms and matching sequences of metasedimentary rocks suggest a minimum left lateral displacement of 65 km since the late Tertiary (Davis and Burchfield, 1973). The Garlock fault has not been the locus of historical earthquakes, but based on tectonic setting Greensfelder (1972) calculated a magnitude of 7.7 for the maximum credible earthquake.

The Helendale fault. The Helendale fault has a northwest trend and extends over a distance of 55 miles, from the central San Bernardino Mountains to the city of Helendale, 35 miles east of the site. Manson (1986) reported that Pleistocene units have been offset by right-lateral strike-slip displacement as much as 10 miles, and that the latest Pleistocene to Holocene alluvium has been locally offset. The Helendale fault has not generated a large earthquake in historic time, but, by analogy with the Landers fault, it is assumed to be capable of generating earthquakes of magnitude larger than 7.

The San Fernando fault. The San Fernando fault zone runs in a general east-west direction 30 miles south-southwest of the site. According to Ziony and Yerkes (1985), this range-front fault zone is formed by five *en echelon* north-dipping reverse faults. The fault zone is active, as demonstrated by the 1971 San Fernando earthquake, which had a momentum magnitude of 6.6 (USGS, 1971; Oakeshott, 1975).

SEISMIC RISK

The potential effects on the site of credible seismic events generated along these faults was calculated using the algorithm and database of Blake (1985). As expected, the worst-case scenario is an earthquake of momentum magnitude 8 along the San Andreas fault, for which a Modified Mercalli intensity of IX would be expected at the site (Davis et al., 1982).

At a Mercalli intensity of IX, seismic vibration causes considerable damage, even in specially designed structures. Well designed frame structures might be thrown out of plumb, and substandard buildings might experience partial collapse and be shifted off their foundations. According to Algermissen et al. (1978), reinforced-concrete buildings can be expected to suffer losses of up to 30 percent of their total value, steel-frame buildings might suffer losses of up to 20 percent, and unreinforced masonry buildings might suffer losses of 35 percent. Furthermore, the ground would be expected to crack at and near the fault, and underground pipes are likely to break. In alluviated areas with shallow water tables and fine sand and silt deposits liquefaction could occur.

Peak horizontal accelerations, as a fraction of the acceleration of gravity, can be estimated from the regression curves of Campbell (1981) and Joyner and Boore (1981) as follows:

Scenario	0.5 probability	0.15 probability
Scenario 1 8.0 earthquake 12.5 miles from the site	0.3g to 0.4g	0.5g to 0.8g
Scenario 2 7.5 earthquake 12.5 miles from the site	0.2g to 0.3g	0.4g to 0.6g
Scenario 3 8.0 earthquake 20 miles from the site	0.2g to 0.3g	0.4g to 0.5g
Scenario 4 7.5 earthquake 20 miles from the site	0.1g to 0.2g	0.3g to 0.4g

On the basis of the available information, it is concluded that the area of the Lancaster landfill expansion has a high probability of experiencing seismic shaking with Mercalli intensities of V to VI (probability larger than 0.05 in any given year, as determined from the historical compilation of Yerkes, 1985), and has a small probability (between 0.01 and 0.001 in any given year) of suffering seismic shaking of Mercalli intensity up to IX. In the case of a major earthquake, the area is likely to experience short-period peak horizontal accelerations between 0.1g and 0.5g (with a probability of 0.5), and has a small chance of experiencing short-period peak horizontal accelerations as high as 0.9g (probability of 0.15). Long-period horizontal accelerations are unlikely to be more than 40% of the peak horizontal accelerations.

Harding Lawson (1991) conducted a separate analysis of peak ground acceleration at the site, and concluded that the ground acceleration associated with the maximum probable earthquake (100-year recurrence interval) was 0.16g. RUST E&I (1994) estimated the peak horizontal acceleration from a 7.5 event located 11 miles (17.7 km) from the site at 0.35g.

GEOTECHNICAL SUITABILITY OF THE SOILS

For the purposes of the EIR, the principal issues with respect to the geotechnical suitability of the soils include: (1) The potential response of the soils to static loading; and (2) the potential response of the soils to dynamic loading.

Potential response of the soils to static loading. Without detailed testing of the materials underlying the site, it is not possible to accurately predict the magnitude of land subsidence that might result from consolidation of the underlying soils. One can, however, set extreme values to

estimate maximum potential subsidence. For example, to develop a worst-case scenario it has been assumed that the refuse prisms are placed over a substrate formed by alternating 10-foot layers of sand interbedded with 5-foot layers of compressible clay; soil density increases with depth at a rate of 0.5 pcf/foot from an initial value at the surface of 90 pcf; that the sand has a compression index (C_c) of 0.03 and void ratio (e) of 0.5; that the clay has a C_c of 0.2 and void ratio of 1.2 (i.e., extremely compressible); and the vertical loading stress distribution can be estimated with the 60° approximation (McCarthy, 1988, p.173). To calculate the loading stress, it has been assumed that the west refuse prism will have an average thickness of 90 feet; a footprint of 1250 by 1900 feet; and an average density of 65 pcf. For the east refuse prism we have assumed an average thickness of 100 feet, a footprint of 1100 by 3250 feet, and an average density of 65 pcf. Under these conditions the loading stress is calculated to be less than 5% of the overburden stress at a depth of 500 feet, at which point consolidation would be minimal. The potential subsidence of the subsurface can be calculated as the sum total of the consolidation of the individual 10-foot and 5-foot layers down to a depth of 500 feet, and was calculated as follows (McCarthy, 1988, p.188-193):

$$\Delta H = \frac{H_o}{1+e} C_c(\log\sigma_T - \log\sigma_o)$$

where σ_T is the total stress (i.e., average overburden stress plus loading stress), σ_o is the average overburden stress, and H_o is the thickness of the layer in inches.

Using the assumptions described above, the maximum potential subsidence of the substrate is estimated at 35 inches beneath the west refuse prism, and 40 inches beneath the east refuse prism.

Potential response of the soils to dynamic loading. For cohesionless soils (e.g., sands, silty sands, coarse silts), a major geotechnical concern is their potential for liquefaction when subjected to shaking. Liquefaction is a sudden decrease of the shearing strength of water-saturated sediment due to seismic vibration, which causes the soil to flow like a liquid. The likelihood for liquefaction seems to be a function of the intensity and duration of seismic vibration, and of the compaction, sorting, and average grain size of the sediment. Because the alluvial soils are not saturated to an average depth of 60 feet, it is inferred that the potential for liquefaction at the site is negligible.

The susceptibility to liquefaction has been related to corrected Standard Penetration Test values and a critical liquefaction SPT value by McCarthy (1988) as follows:

$$N_{critical} = K[1 + 0.125(Z_S - 3) - 0.05(Z_W-2) - 0.07(CF)]$$

Where K is a constant that changes as a function of the seismic intensity (recommended values of K are 6 for an earthquake of intensity VII, 10 for an earthquake of intensity VIII, and 16 for an earthquake of intensity IX); the depth parameters Z_S refers to the depth in meters to the layer under consideration; Z_W refers to the depth in meters from the surface to the water table; the CF

or "clay fraction" parameter refers to the weight fraction of material smaller than 0.002 mm. If the N value (the number of blows per foot in a standard SPT test) for a given soil horizon is less than $N_{critical}$, then that horizon is considered susceptible to liquefaction.

For purposes of illustration we have tabulated the following two scenarios. The first one is a worst-case scenario in which it is assumed that groundwater has risen to within 25 feet of the surface. The second one assumes that groundwater has risen to within 45 feet of the surface, just slightly above its current average value of about 50 feet. For both scenarios it is assumed that the soils have a typical clay fraction of 0.25 (i.e., 25% by weight), which is reasonable for the site:

Depth in feet to the layer	Depth in feet to the water table	$N_{critical}$ for I = VII	$N_{critical}$ for I = VIII	$N_{critical}$ for I = IX
10	25	Not applicable	Not applicable	Not applicable
20	25	Not applicable	Not applicable	Not applicable
30	25	9	15	24
40	25	11	19	30
50	25	13	22	36
60	25	16	26	42
10	45	Not applicable	Not applicable	Not applicable
20	45	Not applicable	Not applicable	Not applicable
30	45	Not applicable	Not applicable	Not applicable
40	45	Not applicable	Not applicable	Not applicable
50	45	15	20	32
60	45	17	24	38

For the soils of the landfill site, Geraghty & Miller (1991) reported blows per foot, N, between 23 and 129, in general larger than $N_{critical}$ for seismic intensities up to VIII, from which it can be inferred that the susceptibility of these soils to liquefy under these conditions is, in fact, low. For a seismic intensity of IX, the lower reported field values slightly overlap the $N_{critical}$ threshold. The overlap is small, which would suggest a low probability for deep seated liquefaction, but warrants monitoring of the position of the water table to identify potentially hazardous rises on elevation.

LARGE GROUND CRACKS

The playas of the Mojave Desert are well known for having very large ground cracks or fissures. Fife (1980) described these peculiar features, and concluded the following: Ground cracks in playas can form as a result of faulting, subsidence, or massive desiccation (massive desiccation means extensive loss of moisture from clayey sediments or evaporites, either through evaporation or groundwater pumping). Large ground cracks often form polygonal sets, in which the polygons can be up to 1,500 feet across. Individual cracks may be up to 1 foot wide, 30 to 300 feet deep, and up to 1.5 miles in extent. During wet periods these cracks tend to heal, but upon new desiccation they tend to reopen along pre-existing polygons. Some cracks have been observed to widen considerably shortly after heavy rainfall (e.g., Knott, 1992; Molinari et al., 1992), probably due to piping (i.e., erosion of the walls of a previously existing crack by downward seepage of water). Ground cracks seem to be most common around farms where active pumping is underway, and in these areas it can be assumed that lowering of the water table, rather than evaporation, is the main process responsible for cracking. Finally, seismic forces can trigger the initial opening of a ground crack (such as the fissure that developed after an earthquake of magnitude 5 that shook Erickson Playa in 1977).

Swift (1991) described a swarm of fissures along the broad valley of Amargosa Creek, about 2.5 miles west of the landfill site (Figure 3). According to Swift (1991), the valley floor in this area is underlain by late Pleistocene lake bed deposits, probably related to ancient Lake Thompson (Dibblee, 1960; 1967), that consist predominantly of silt and clay. The fissures found in this area range in width from one inch to slightly over one foot, generally exhibit a gently arcuate aspect, and have no appreciable vertical displacement. The longest continuous fissures were on the order of 600 to 700 feet in length, although most are covered by wind-blown sand and as a result can only be traced for up to 50 to 200 feet. Whereas the predominant trend of individual fissures appeared to be nearly east-west, the overall trend of the swarm was northeast-southwest, parallel to the inferred elongation of Lake Thompson. At several locations, sink holes (collapsed portions of subterranean cavities) were also noted in association with the fissures. Although most of the sink holes were less than four feet in diameter, one, located six miles southwest of the landfill site, measured 20 by 15 feet, with vertical displacements from one foot to as much as five feet. Swift (1991) concluded that the observed fissuring was due to tensional forces created by regional subsidence in excess of 5 feet, which may be related to groundwater withdrawl.

Molinari et al. (1992) reported the results of a trenching study of fissures in a small area located 5 miles west-southwest of the landfill site. The fissures in this area ranged in length between 3 and 125 feet, and were expressed as aligned, discontinuous shallow surface depressions and holes. At the surface these features were typically 2 to 6 inches wide, and trenching demonstrated that they extended several feet into the underlying clay and sandy soil layers, albeit most were filled with soil within five feet of the surface. The field investigation demonstrated that playa deposits of medium stiff, slightly sandy to clayey silts were present to depths of 5 to 8 feet, and were underlain by medium dense to dense, silty sands with interbeds of medium stiff to hard sandy and silty clays.

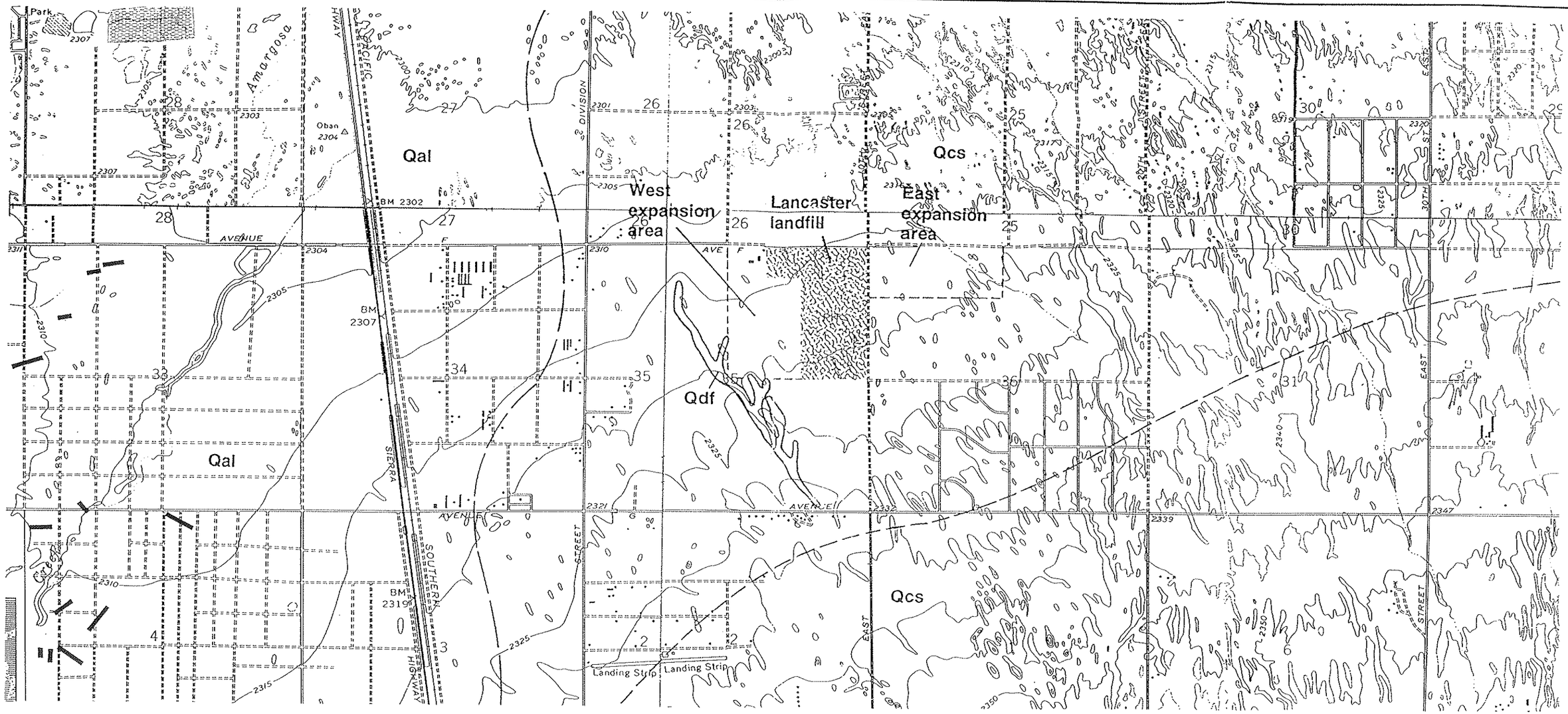

FIGURE 3

LEGEND

Qcs - Thin, irregular veneer of wind-blown sand over lacustrine and alluvial sediments
Qdf - Debrisflow deposits of gravelly sand
Qal - Alluvial deposits of silty sand and clay

——— Geologic contact
– – – – Inferred high shoreline of Lake Thompson at the end of the Pleistocene (Dibblee, 1960)
▬ Large ground cracks (GeoLabs, 1991)

5000 feet

GEOLOGIC MAP
Modified from Dibblee (1960, 1963)

LANCASTER LANDFILL
EXPANSION PROJECT
LOS ANGELES COUNTY, CALIFORNIA

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To estimate the potential for the existence of ground cracks at the Lancaster landfill site, GLA compiled available information about the soils that underlie the site, reviewed aerial photographs, and performed a field inspection.

Figure 4 is an interpretative fence diagram of the stratigraphy of the south portion of the site. As can be seen from this figure, there are some thick silt and clay units that could be susceptible to cracking in response to desiccation. As a general pattern, the proportion of silt and clay units seems to increase to the northwest and west, and to decrease toward the south and southeast. Based on stratigraphy alone, the west and northwest portions of the site would appear to be more susceptible to ground cracking, though no evidence of the phenomenon has been noted in the literature.

In addition to evaluating susceptibility, three sets of historical aerial photographs of the area archived at the Fairchild Aerial Photography Collection of Whittier College, and a recent set acquired by WAC Corporation were reviewed. The frames reviewed were:

Flight	Date	Scale	Frames
C-300	1928	1"=1700'	C-339, C-340
C-6500	1940	1"=1650'	1-27, 1-28, 1-64, 1-65
C-8304	1943	1"=4000'	196, 197, 198
WAC-1993	1993	1"=2640'	16-113, 16-114, 16-115

Very few linear or curved features were identified in the photographs, and none of them had the subparallel or polygonal patterns characteristic of regional ground cracks. Ten suspect features were located on a map (Figure 5), and were inspected by a professional geologist during a field reconnaissance of the site. Three of these features turned out to be man-made (an abandoned trench and two eroded blind roads), four proved to be shallow ravines with small-scale dendritic patterns, and three were edges of small levees formed by a debrisflow. Small, discontinuous cracks were observed on the dry bottoms of some depressions, but their vertical extent was restricted to less than one inch.

CONCLUSIONS

With respect to the geotechnical feasibility of the project it is concluded that:

- The area of the Landcaster landfill has a high probability of experiencing seismic shaking with Mercalli intensities of V to VI (probability larger than 0.05 in any given year), and has a small probability (between 0.01 and 0.001 in any given year) of suffering seismic shaking of Mercalli intensity up to IX. In the case of a major earthquake, the area is likely to experience short-period lateral accelerations between 0.1g and 0.5g (with a probability of 0.5), and has a small chance of experiencing short-period peak horizontal

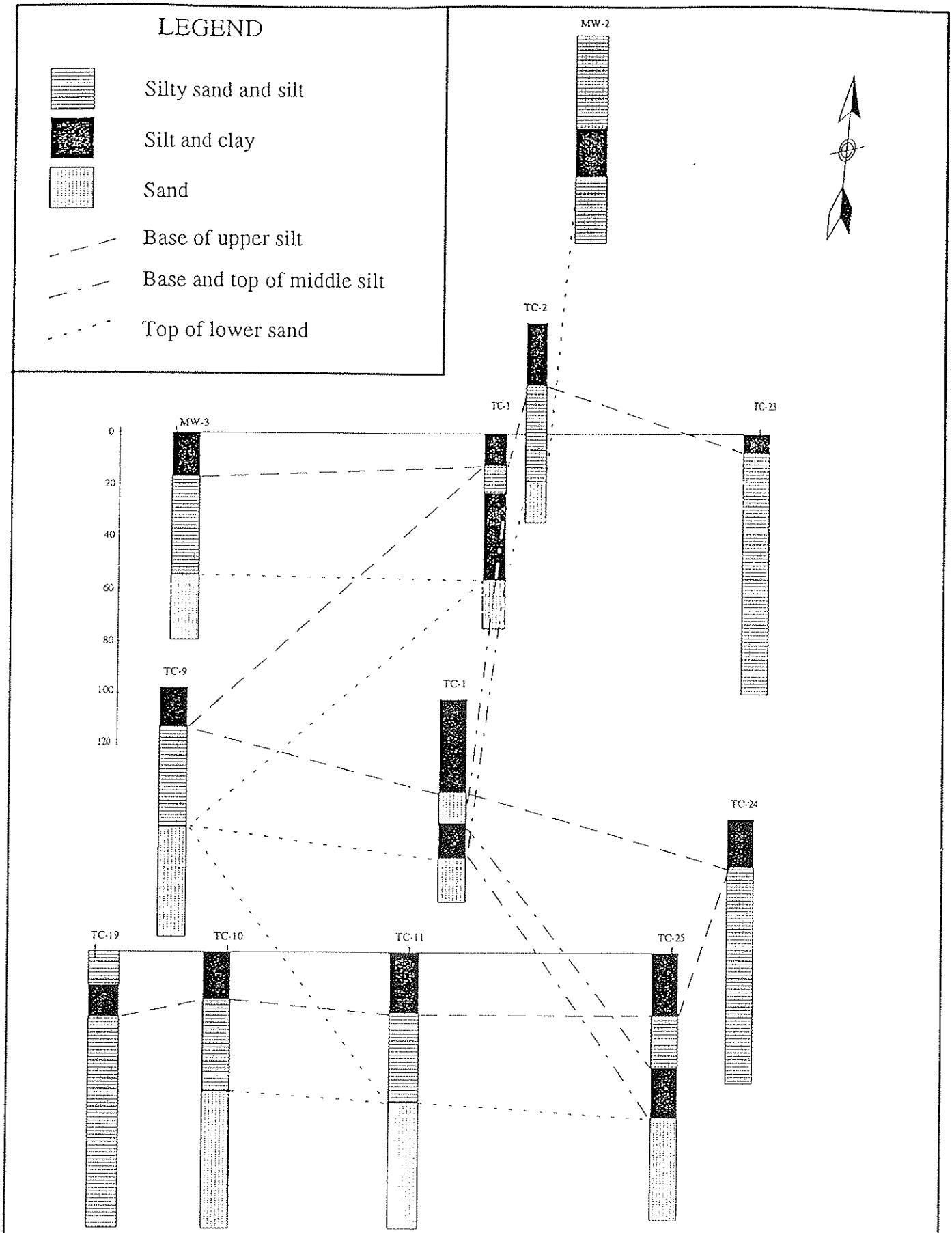

Figure 4. Limited correlation between boreholes in the southeast portion of the site. To the northwest, a lowermost clay is found at depths greater than 85 feet.

accelerations as high as 0.9g (probability of 0.15). Long-period horizontal accelerations are unlikely to exceed 40% of the short-period values.

- Assuming that the refuse prisms are placed over a substrate formed by interbedded sand and clay at a ratio of 2 to 1, the maximum potential subsidence is estimated at 35 inches beneath the west refuse prism, and 40 inches beneath the east refuse prism.

- The liquefaction potential of cohesionless soils, as estimated from SPT values and observed groundwater data, suggest that for seismic intensities up to VIII the susceptibility of the soils to liquefy is low. The susceptibility increases slightly for a seismic intensity of IX, and warrants monitoring of the position of the water table to identify potentially hazardous rises on elevation.

- The absence of linear or curved features with the surface characteristics of large ground fissures, and the paucity of small-scale ground cracking, suggest that the soils of the site have a low susceptibility to develop large ground cracks.

In summary, the review of available information has not disclosed unmitigable geotechnical impacts for the project.

4. GEOLOGY

GEOMORPHOLOGY

The project is located where the lacustrine deposits of Lake Thompson (the Pleistocene predecessor of Rosamond Lake) interdigitate with the distal fringe of the bajada formed off the San Gabriel Mountains (a bajada is a sloping surface formed by the coalescence of alluvial fans) (Figure 3). The average slope throughout the site is about 0.1% to the northwest, toward the broad valley of the intermittent Amargosa Creek.

The surface of the west portion of the site has been partly modified by the existing landfill, but in general is characterized by a hummocky morphology, caused by segmentation of an original network of creeks by eolian blowouts and debrisflow levees. In the east portion, the channels of the creeks are continuous and better preserved, and slope toward the northwest (i.e., toward Rosamond Lake). The fluvial channels have low sinuosity and are through-going, indicating recurrent flow events. The sediment found in the dry creek beds is very fine grained (fine sand, silt, and clay), as would be expected given the distal position of the site with respect to the bajada.

Eolian processes are also active in the Lancaster landfill area, as demonstrated by incipient blowouts (i.e., shallow basins scooped by wind out of soft, unconsolidated deposits). Since the supply of fine sand is limited, however, aggradational structures such as sand dunes are rare.

Landslides are unlikely to affect the site given its low slope angles and relief, and its distal

position with respect to the steep northern slopes of the San Gabriel Mountains. During flood events, however, the site might be impacted by debrisflows, as suggested by the levee of debris identified at the southwest corner of the site.

STRATIGRAPHY

The site is located at the boundary of two depositional environments (lacustrine and distal bajada), so its stratigraphy is characterized by rapid facies changes, and limited lateral continuity between its units. Figure 4 presents a schematic illustration of the main stratigraphic horizons on site. As can be seen, there is a general fining of the units from southeast to northwest. For example, boreholes TC-23 and TC-24, located near the southeast corner of the site, encountered a sequence that included 90% silty sand, and 10% silt and clay (Table 2, and Figures 4 and 5). In contrast, the sequence cut by boreholes TC-16 and TC-17, located near the northwest corner of the site, consisted of approximately 50% sand and 50% silt and clay. Detailed descriptions of the sequence cut by each borehole are given in the reports of EMCON (1986) and Geraghty & Miller (1991).

Drainage suitability of the topsoil. The topsoil in the project area has been mapped by the Soil Conservation Service of the U.S. Department of Agriculture (Woodruff et al., 1970) as the Tray sandy loam and the Tray fine sand. Soils of the Tray series form in granitic alluvium on the basin rim, under slopes of less than 2%. They support a sparse vegetation of fourwing saltbush, rabbitbush, and a thin understory of saltgrass. In general, Tray soils have low fertility and are poorly suited to support farming.

The Tray sandy loam is characterized by light yellowish brown A horizons (0 to 8 inches in thickness), light brownish gray B horizons (30 to 50") with medium salinity and alkalinity, and very pale brown C horizons (80 to 120") with abundant calcite. The permeabilities of these soils are moderate, and their water holding capacity ranges between 5.5 and 6.5 inches, and the shrink-swell potential of this soil is low. Runoff is very slow, and the potential hazard of water erosion is very low. Eolian erosion, however, can be significant.

The Tray fine sand consists of light brownish gray fine sand that has been piled by wind into hummocks. The hummocks typically are 18 to 36 inches high, and in some places coalesce to form low sand dunes. Subsurface horizons are yellowish brown, strongly calcareous sandy loams. The water holding capacity is 4.5 to 5.5 inches and the permeability is moderate to high. Eolian erosion can be significant in these materials.

EROSIONAL PROCESSES

Fluvial erosional processes appear to be major contributors to the transport of sediment across the east expansion area of the project, as indicated by incised gullies and through-going channels. In addition, wind erosion can be of local significance, as demonstrated by the presence of incipient blowouts on those portions of the site that have not been disturbed by landfill activities. Lanphier (1993) has estimated the mass of local soil loss due to wind erosion at 8 tons/acre per

Table 2. Summary of the stratigraphic column of selected boreholes

Boring	SB-1	SB-2	TC-1	TC-2	TC-3	TC-4	TC-5
Soil Profile	0-2 ML 2-42 RF 42-55 SM-ML 55-57 SW	0-2 ML 2-41 RF 41-55 SP-ML	0-35 ML 35-47 SP-SW 47-60 ML-CL 60-77 SW	0-24 ML 24-61 SM-ML 61-77 SM-SW	0-13 ML 13-23 SM 23-56 ML 56-75 SP-SW	0-58 ML 58-75 SP	0-9 ML 9-33 SP-SM 33-53 ML 53-76 SP-SW

Boring	TC-6	TC-7	TC-8	TC-9	TC-10	TC-11	TC-12
Soil Profile	0-6 ML 6-17 SP 17-37 ML 37-80 SW-SM	0-7 ML 7-18 RF 18-67 SM-SP	0-6 ML 6-18 RF 18-28 SP 28-38 ML 38-66.5 SP	0-15 ML 15-53 ML-SM 53-95 SP	0-18 ML 18-53 SM-ML 53-105 SM-SP	0-23 ML 23-57 SM-ML 57-75 SP-SW 75-105 SP	0-33 ML-SP 33-65 SM-ML 65-110 SM

Boring	TC-13	TC-14	TC-15	TC-16	TC-17	TC-18	TC-19
Soil Profile	0-53 ML 53-68 SP-SM 68-108 SP	0-16 ML 16-43 SP-SM 43-65 ML 65-100 SP	0-13 SP 13-37 ML 37-70 SP	0-18 SM 18-53 ML-SM 53-85 SP 85-100 CL	0-18 ML 18-53 SP-ML 53-82 SP 82-85 CL	0-7 SP 7-25 ML 25-51 SP-ML 51-85 ML	0-13 SM 13-24 ML-SP 24-105 SM

Boring	TC-20	TC-21	TC-22	TC-23	TC-24	TC-25	GM-HP27
Soil Profile	0-8 ML 8-29 SP-ML 29-57 SM 57-70 SP 70-105 SM	0-3 SM 3-13 ML 13-47 SP-SM 47-85 SP	0-12 ML 12-44 SP-ML 44-90 SP	0-7 ML 7-100 SM-SP	0-18 ML 18-100 SM-SP	0-23 ML 23-43 SM-SP 43-61 ML 61-100 SP-SM	1-17 SM-SC 17-30 ML 30-45 SM-SP 45-63 ML 63-73 SM-SP 73-80 ML

Boring	GM-HP28	GM-HP29	GM-HP30	MW-1	MW-2	MW-3	MW-4
Soil Profile	0-16 SM-SC 16-79 ML	0-60 SM-SC 60-80 ML	0-10 SM-SC 10-71 ML 71-80 SP-SM	0-17 SM-ML 17-43 SP-CL 43-70 SM-ML	0-36 SM-ML 36-54 ML-CL 54-80 SM-ML	0-33 SP-CL 33-54 SM-SW 54-80 SW	0-24 SP-CL 24-53 SM-SP 53-80 SW

Interbedded sands and silts

Major Divisions			Group Symbols	Typical Names
COARSE GRAINED SOILS (More than 50% of material is LARGER than the No. 200 sieve size)	GRAVELS (More than 50% of coarse fraction is LARGER than the No. 4 sieve size)	CLEAN GRAVELS (Little or no fines)	GW	Well graded gravels, gravel–sand mixtures, little or no fines.
			GP	Poorly graded gravels or gravel–sand mixtures, little or no fines.
		GRAVELS WITH FINES (Appreciable amounts of fines)	GM	Silty gravels, gravel–sand–silt mixtures.
			GC	Clayey gravels, gravel–sand–clay mixtures
	SANDS (More than 50% of coarse fraction is SMALLER than the No. 4 sieve size)	CLEAN SANDS (Little or no fines)	SW	Well graded sands, gravelly sands, little or no fines.
			SP	Poorly graded sands or gravelly sands, little or no fines.
		SANDS WITH FINES (Appreciable amounts of fines)	SM	Silty sands, sand–silt mixtures.
			SC	Clayey sands, sand–clay mixtures.
FINE GRAINED SOILS (More than 50% of material is SMALLER than the No. 200 sieve size)	SILT AND CLAYS (Liquid limit LESS than 50)		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
			OL	Organic silts and organic silty clays of low plasticity.
	SILT AND CLAYS (Liquid limit GREATER than 50)		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.
			CH	Inorganic clays of high plasticity, fat clays.
			OH	Organic clays of medium to high plasticity, organic silts.
HIGHLY ORGANIC SOILS			PI	Peat and other highly organic soils.

UNIFIED SOIL CLASSIFICATION SYSTEM

LANCASTER LANDFILL EXPANSION PROJECT

LOS ANGELES COUNTY, CALIFORNIA

GeoLogic Associates

Geologists, Hydrogeologists, and Engineers

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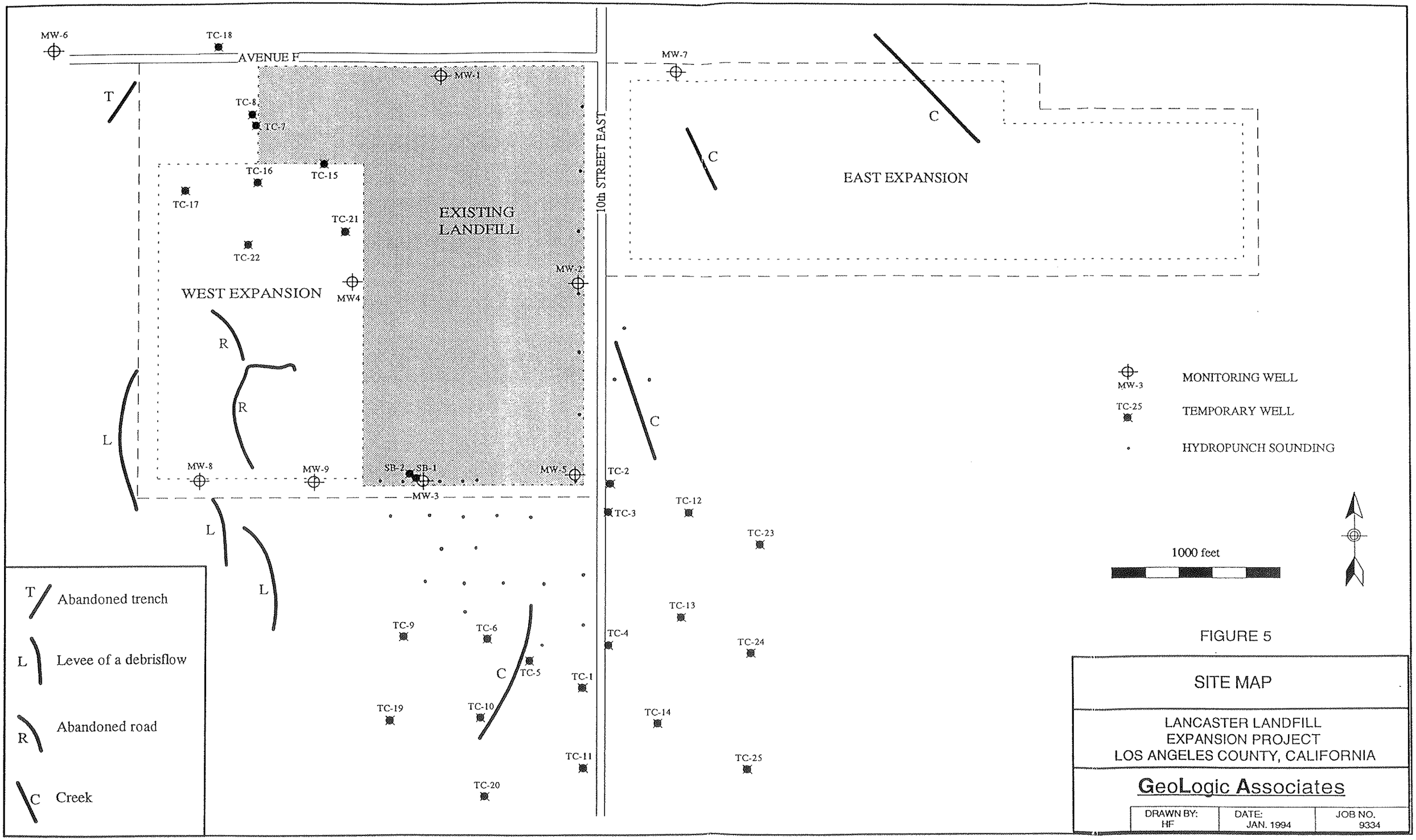

FIGURE 5

SITE MAP

LANCASTER LANDFILL
EXPANSION PROJECT
LOS ANGELES COUNTY, CALIFORNIA

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year for disturbed and unvegetated ground, and less than 1 ton/acre per year for undisturbed ground.

DEPOSITIONAL PROCESSES

As stated in the previous paragraph, erosional fluvial processes are probably dominant on the area of the proposed east expansion. On the west portion of the site, however, debris levees and deranged fluvial channels suggest predominance of deposition over erosion. As is common in desert environments, most of the deposition seems to take place during rare events of voluminous flow, in which the load of sediment is so large that the creeks turn into debrisflows. The disruption of the drainage pattern of the west portion of the site seems to have been caused, to a large extent, by repeated debrisflow events. Unconsolidated and poorly sorted gravelly sand deposits of the most recent event form the levee-like ridges that are identifiable along the south edge and southwest corner of the west expansion area (Figure 3). Based on a review of available historical aerial photographs, it appears that these debrisflow levees were formed during a period of unusually heavy rainfall between 1928 and 1940.

The mass of sediment deposited by eolian processes cannot be estimated with the information available, but is probably in long-term balance with the mass eroded. This is suggested by (1) the paucity and incipient nature of blowout structures; and (2) the paucity of aggradational structures such as dunes.

PRECIPITATION AND SURFACE WATER

According to Woodruff et al. (1970), total annual precipitation in the Lancaster area averages 5 inches per year. Short term precipitation, however, can vary over wide ranges, and NOAA (1988) suggests that short term precipitation during any given year might reach the following values:

Probability	Duration of rain in hours	Precipitation in inches
0.5	6	0.7
0.2	6	1.0
0.1	6	1.2
0.01	6	1.8
0.5	24	1.0
0.2	24	1.6
0.1	24	1.8
0.01	24	3.0

As stated previously, the undisturbed ground of the east expansion area is crossed by shallow fluvial channels, which would rapidly transmit surface runoff across the site northerly to Rosamond Lake, the ultimate low point in the area. In contrast, the deranged drainage of the west expansion area does not promote surface runoff, but rather results in significant depression storage on site until infiltration or evaporation occurs.

ENDOGENOUS PROCESSES

As described in Section 3, the southern Mojave Desert is an area of active faulting and folding. Nearby faults have been described in Section 3, and additional discussion is not considered necessary. The nearest area of active folding seems to be located 12 miles southwest of the site, where the Pliocene Anaverde Formation has been tightly folded by the shear of the San Andreas fault (Dibblee, 1975).

The are no manifestations of Holocene volcanism within a 50-mile radius from the site.

NATURAL RESOURCES

The Lancaster landfill site may be underlain by lacustrine clays that could be potential sources of industrial clays (bentonite), firing clays, or borates. Our observations cannot prove or disprove the presence of these deposits, but we note that based on the regional data of Durbin (1978), it would be expected for the Pleistocene clays to be about 300 feet thick in the area of the Lancaster landfill, and to extend between depths of 200 and 500 feet (Figure 6).

SUMMARY

The site is located where the lacustrine deposits of Lake Thompson (the Pleistocene predecessor of Rosamond Lake) interdigitate with the distal fringe of the bajada formed off the San Gabriel Mountains (Figure 3). The average slope throughout the property is of 0.1% toward the northwest.

Total annual precipitation in the Lancaster area averages 5 inches per year, but uncommon events of short term precipitation can vary over wide ranges (0.7 to 1.8 inches for a 6-hour rain event). The surface of the west portion of the site has been partially modified by landfill activities, but is characterized by deranged drainage that does not promote surface runoff. Rather, depression storage retains precipitation water on site until it infiltrates or evaporates. The undisturbed ground of the east expansion area is crossed by shallow fluvial channels, which should rapidly transmit surface runoff across the site. The ultimate sink of surface runoff is Rosamond Lake, to the north of the site. During flood events, the site could be impacted by debrisflows.

The site is located at the boundary of two depositional environments (lacustrine and distal bajada), so its stratigraphy is characterized by rapid facies changes, and limited lateral continuity between its units. In general terms, the site is underlain by horizontal sediments that become finer-grained from southeast to northwest.

Fluvial erosional processes appear to be major contributors to the transport of sediment across the site, as indicated by incised gullies and through-going channels on the area of the proposed east expansion. On the west portion of the site, however, debris levees and deranged fluvial channels suggest predominance of deposition over erosion.

Wind erosion can be of local significance, but the mass eroded appears to be in general balance with the mass of sediment deposited. This is suggested by: (1) The paucity and incipient nature of blowout structures; and (2) the paucity of aggradational structures such as dunes.

The southern Mojave Desert is an area of active faulting and folding. Nearby active faults include the San Andreas fault zone (12.5 miles to the southwest), the Garlock fault zone (20 miles to the northwest), and the Helendale fault (30 miles to the east). The nearest area of active folding seems to be located 12 miles southwest of the site, where the Pliocene Anaverde Formation has been tightly folded by the shear of the San Andreas fault.

The are no manifestations of Holocene volcanism within a 50-mile radius from the site.

The Lancaster landfill site may be underlain by lacustrine clays that could be potential sources of industrial clays (bentonite), firing clays, or borates. Our observations cannot prove or disprove the presence of these deposits, but we note that based on the regional data of Durbin (1978), it would be expected for the Pleistocene clays to be about 300 feet thick in the area of the Lancaster landfill, and to extend between depths of 200 and 500 feet (Figure 6).

5. GROUNDWATER

REGIONAL HYDROLOGY

The site is located in the Antelope Valley, a name given to the extreme western end of the Mojave Desert on account of the numerous herds of antelopes that once roamed the area. The lowest parts of the valley are the Rosamond and Rogers playa lakes, into which all the valley drains.

According to Troxell (1957), some grain agriculture was attempted in this desert basin in about 1890. At that time, nearly 2,000 acres of almonds and prunes were planted along the north "toe" of the San Gabriel Mountains, in the area of comparatively higher precipitation. At the turn of the century artesian conditions were discovered in the vicinity of Lancaster, and by 1908 there were more than 300 wells tapping the groundwater aquifer. Between 1912 and 1949 the irrigated acreage increased from 4,500 to 55,000 acres, and the increased groundwater pumping caused the elevation of the water table to drop by nearly 120 feet in wells near Lancaster.

Up to 1950 residential and industrial consumption of water had been trivial compared with irrigation. Since 1950, however, urbanization has proceeded at a rapid rate, and heavy demands have been placed in the regional aquifer. As a result, the elevation of the water table continues to decline. One consequence of the historical overdraft of the aquifer has been regional

subsidence, caused by decrease of the volume of the aquifer upon dewatering. According to Blodgett and Galloway (1991), the Lancaster area has experienced more than 5.5 feet of land subsidence since 1926.

The Antelope Valley is underlain by the Antelope Valley groundwater basin, a name given to two large alluvial aquifers, that are separated by thick Pleistocene lacustrine clays in the central part of the Lancaster sub-basin (Figure 6). Based on the regional data of Durbin (1978), the Pleistocene clays are expected to be about 300 feet thick in the area of the Lancaster landfill, and to extend between depths of 200 and 500 feet (Figure 6). Below these clays is the lower, confined "deep" aquifer, in which artesian wells were developed earlier in the century. Above the clay is the upper, unconfined "principal" aquifer, whose water table is at an average depth of 60 feet in the area of the landfill.

The main source of groundwater recharge to the Lancaster sub-basin is runoff from the San Gabriel Mountains. The two principal streams which drain this mountain area are Rock Creek and Little Rock Creek, which together have a mean annual runoff of 40,000 acre-feet. A secondary component of recharge is direct precipitation on the basin floor, where the average annual precipitation ranges from about 10 inches along the toe of the San Gabriel Mountains to less that 5 inches at Rogers playa lake. Because of the meager precipitation, any recharge that may occur on the basin floor is confined to infrequent "wet" years when rainfall exceeds 15 inches throughout the valley (Troxell, 1957).

Groundwater quality in both the "principal" and "deep" aquifers in the Lancaster area is generally suitable for domestic, irrigation, and most industrial purposes. However, water quality decreases toward the north, as the groundwater migrates through playa and lacustrine deposits which contribute dissolved solids, hardness, and alkalinity. Groundwater throughout most of the area has total dissolved solids (TDS) concentrations of approximately 200 to 800 parts per million (ppm), though TDS concentrations can be as high as 28,000 ppm toward the northernmost portions of the sub-basin (Bloyd, 1967).

Prior to extensive agricultural development in the Lancaster sub-basin, groundwater movement in both the "principal" and "deep" aquifers was to the north, from the highlands toward Rosamond Lake, where it was discharged primarily through springs and surface evaporation (Dutcher and Worts, 1963). Heavy agricultural pumpage since the 1950's, however, has resulted in the artificial diversion of the groundwater movement (in both the "principal" and "deep" aquifers) toward several localized pumping depressions (Figure 7). In the Lancaster landfill area, the water table of the "principal" aquifer presently slopes to the southeast, toward a cluster of irrigation wells developed on the alluvial fan of Little Rock Creek, as documented by water level measurements in monitoring wells recently installed at the site.

SITE HYDROLOGY

The initial groundwater monitoring program at the Lancaster landfill consisted of four monitoring wells, MW-1 through MW-4, that were installed 1986. Three additional monitoring wells (MW-5

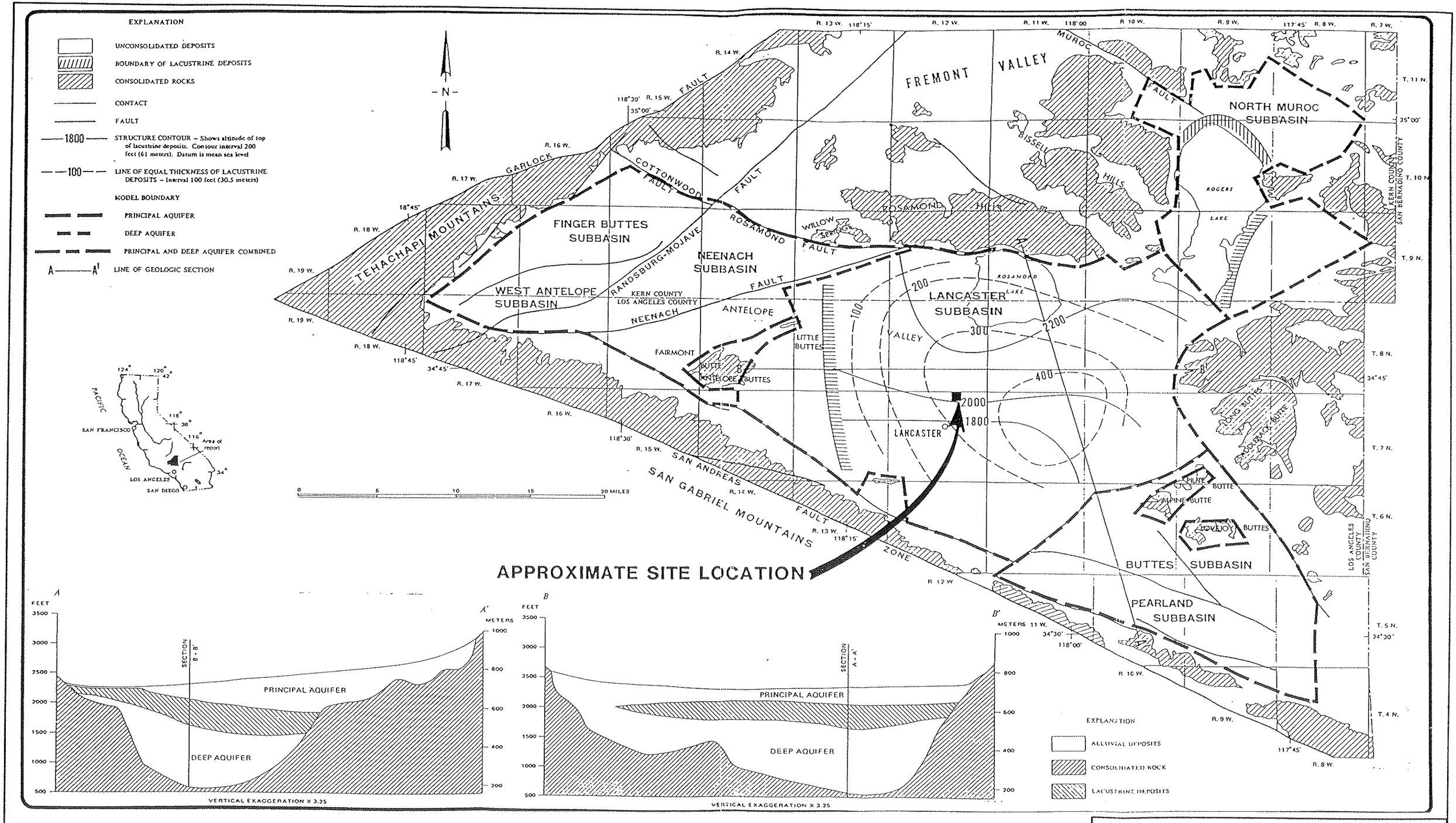

Figure 6. Hydrogeologic map of Antelope Valley (Durbin, 1978).

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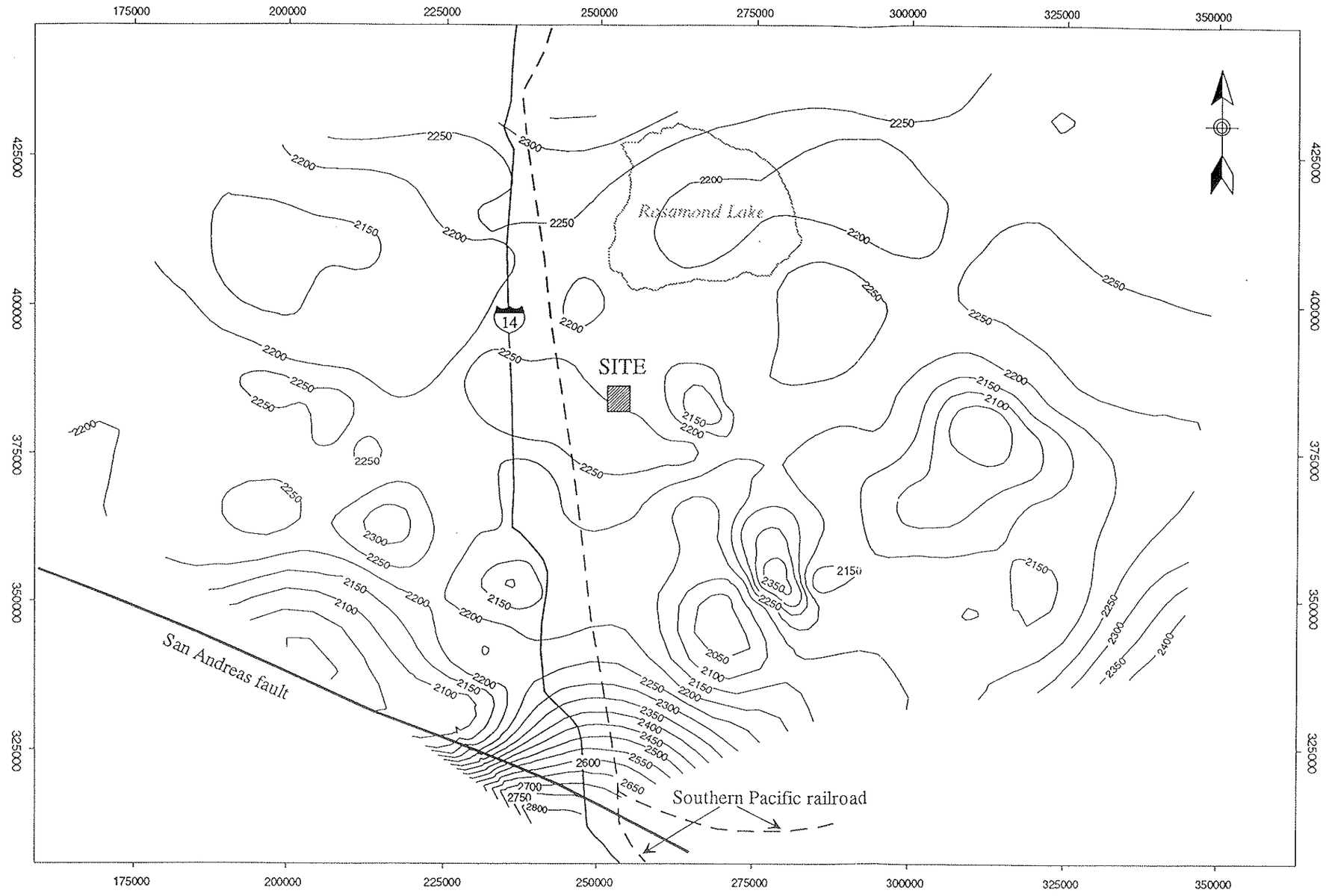

0 5000
FEET

CONTOUR INTERVAL 50 FEET

FIGURE 7

1975 ELEVATION OF THE WATER TABLE IN THE ANTELOPE VALLEY

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through MW-7) were installed by EMCON in 1988, and two more wells (MW-8 and MW-9) were installed by Geraghty & Miller in 1988. As measured in these wells on September 19, 1990, the local elevation of the groundwater table of the "principal" unconfined aquifer ranged from 2,259 feet above mean sea level in the northwest portion of the site to 2,257 feet in the southeast portion.

Based on aquifer pumping tests performed in monitoring well MW-3, EMCON (1988) estimated the transmissivity of the unconfined aquifer at 7,400 gallons per day per foot, as calculated from simultaneous water level observations at MW-1. The hydraulic conductivity, using the saturated screen length of 14 feet, was estimated at 70 feet per day (ft/day). Based on a hydraulic conductivity of 70 ft/day, a hydraulic gradient of 0.0008, and an effective porosity of 0.2, EMCON (1988) calculated the groundwater flow velocity at the site at 106 feet per year toward the southeast.

Groundwater samples from monitoring wells MW-1 through MW-7 are currently collected on a quarterly basis by the landfill operator. Wells MW-8 and MW-9 were sampled only once in November, 1988. Volatile organic compounds (VOCs) have not been detected in groundwater samples collected from MW-6 through MW-9, but have been detected in groundwater from wells MW-2 through MW-5. Prior to 1990, groundwater samples from MW-2, MW-4, and MW-5 contained PCE, whereas groundwater samples from MW-3 did not. PCE was detected in groundwater samples from MW-3, for the first time, in the second quarter of 1990 and again in the third quarter. Historically, toluene and vinyl chloride have been detected only in MW-3, which has also had higher concentrations of inorganic chemicals than the other wells.

In order to define the extent of identified VOC-contamination, Geraghty & Miller installed 25 temporary monitoring wells (TC-1 through TC-25) in 1990. Based on a review of the data available, Geraghty & Miller (1991) identified two primary areas of impacted groundwater in the unconfined aquifer (Figure 8 and Table 3). The lateral limits of the north and south plumes indicated in Figure 8 enclose wells in which the concentrations of volatile organic compounds is higher than regulatory action levels. According to the landfill operator, the source of the northerly plume may be the former truck washing area located south of the maintenance yard. The source of the southerly plume appears to be located in the landfill northwest of MW-3 and MW-5. The presence of detectable VOCs in the deeper groundwater samples from TC-10, TC-12, TC-13, TC-14, TC-15, TC-16 and TC-21 indicates that the vertical extent of contamination may not be fully defined.

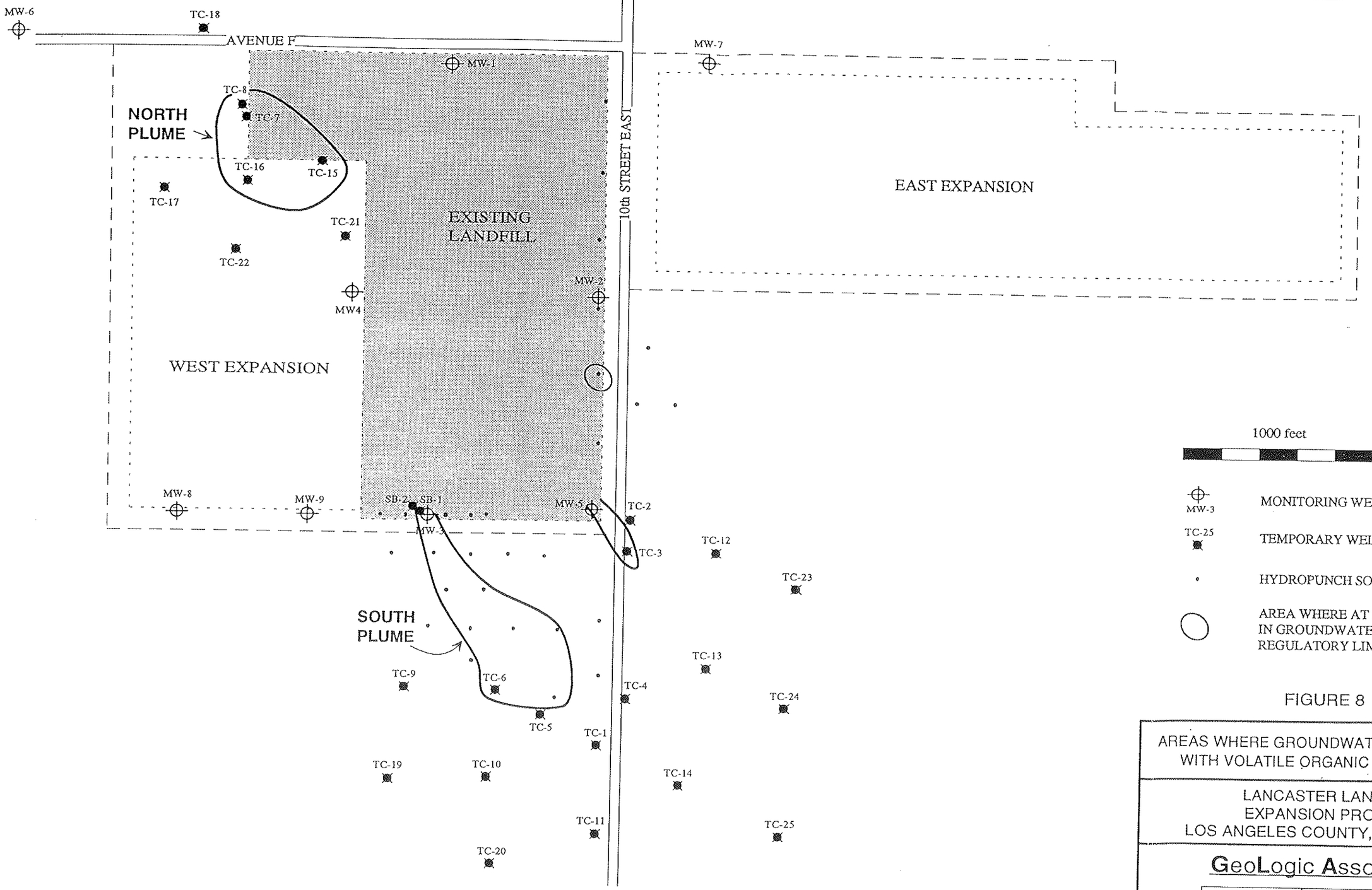

FIGURE 8

AREAS WHERE GROUNDWATER IS IMPACTED
WITH VOLATILE ORGANIC COMPOUNDS

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Table 3. Volatile organic compounds in groundwater samples

ANALYTE	Method detection limit	Primary MCL	TC-1	TC-2	TC-3	TC-4	TC-5	TC-6	TC-7	TC-8	TC-9	TC-10	TC-11	TC-12	TC-13	TC-14	TC-15	TC-16	TC-17	TC-18	TC-19	TC-20	TC-21	TC-22	TC-23	TC-24	TC-25
PCE	0.5	5	1.7	2	6.2	ND	1	2.5	0.83	3.2	0.79	ND	ND	4	ND	ND	16	5.6	ND	ND	ND	ND	0.5	ND	ND	ND	ND
TCE	0.5	5	ND	0.86	ND	ND	ND	0.8	1.1	1.7	ND	ND	ND	ND	ND	ND	ND	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-dichloroethene	0.5	10	ND	ND	ND	ND	ND	0.8	0.78	0.72	ND	ND	ND	ND	ND	ND	0.97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-dichloroethene	0.5	6	0.94	ND	ND	ND	3.3	39	90	70	ND	ND	ND	ND	ND	ND	140	2.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	0.5	0.5	ND	ND	ND	ND	ND	3.4	5.4	3.8	ND	ND	ND	ND	ND	ND	30	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-dichloroethane	0.5	5	ND	ND	0.64	ND	0.68	5.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.4	ND
1,1,1-trichloroethane		200																									
Benzene	0.5	1	ND	ND	ND	ND	ND	0.56	1.8	0.6	ND	ND	ND	ND	ND	ND	1.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphtalene	0.5	NV	ND	ND	ND	ND	0.57	0.5	0.75	1.5	0.54	ND	ND	1.9	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	0.5	NV	ND	ND	ND	ND	ND	ND	0.12	ND																	
1,4-dichlorobenzene	0.5	5	ND	ND	ND	ND	ND	0.55	4.3	1.4	ND	ND	ND	ND	ND	ND	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-dichlorobenzene	0.5	130	ND	ND	ND	ND	ND	ND	1.5	0.64																	
p-isopropyltoluene	0.5	NV	ND	ND	ND	ND	ND	ND	ND	0.65																	
sec-butylbenzene	0.5	NV	ND	ND	ND	ND	ND	ND	0.55	ND																	
n-butylbenzene	0.5	NV	ND	ND	ND	ND	ND	ND	ND	0.55																	
Dichlorodifluoromethane		NV									ND	ND	ND	ND	ND	ND	7	ND	ND	ND	ND	ND	2.6	ND	ND	ND	ND
Trichlorofluoromethane	0.5	150	ND	0.55	0.87	ND	ND	ND	1.9	ND																	
Toluene	0.5	100	ND	ND	ND	0.67	ND	ND	ND	ND																	
1,2,4-trichlorobenzene	0.5	NV	ND	ND	ND	ND	ND	0.8	ND	ND																	
1,2-dichloropropane		NV									ND	ND	ND	ND	ND	ND	0.69	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total xylenes		1750									ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.69	ND

All values in micrograms/liter (ppb)
MCL - Maximum Contaminat Level (Title 26, CCR, Section 64444.5)
NV - No value established
ND - Not detected given the method detection limit
Wells TC-1 through TC-8 sampled in April, 1990
Wells TC-9 through TC-25 sampled in July and August, 1990

6. IMPACT ON GEOLOGIC PROCESSES

EROSIONAL PROCESSES

Because the west expansion area is characterized by a deranged drainage, the construction of the west expansion is not likely to interfere with fluvial erosion processes. The east expansion area, in contrast, has well defined drainages that would be blocked by the east refuse prism. The impact of this blockage should be alleviated through construction of peripheral diversion channels, suitably designed to accommodate unusual flow events that might turn into debrisflows.

Lanphier (1993) has estimated the mass of local soil loss due to wind erosion at 8 tons/acre per year for disturbed and unvegetated ground, and less than 1 ton/acre per year for undisturbed ground. At the maximum erosion rate, the development of the 62 acres of the west expansion area and the 112 acres of the east expansion area could result in a total eroded mass of 1,392 tons per year. The actual mass eroded would probably be less than this figure, however, on account of the dust-control measurements included in the design of the operation, and the development in phases.

DEPOSITIONAL PROCESSES

Based on geomorphologic evidence, including low-relief landforms, deranged drainage patterns on the west portion of the site, and through-going but not incised drainages on the east portion, the project site appears to be in long-range equilibrium with respect to fluvial erosion and deposition. The same is true for eolian processes, as suggested by the paucity and incipient nature of blowout structures, and the paucity of aggradational structures such as dunes. If these assumptions were correct, then it would be expected for deposition to slightly exceed erosion once the area becomes stabilized by development.

PRECIPITATION AND SURFACE WATER

Given its small size, the project is not likely to change the local climate of the region or to alter precipitation patterns.

The rates of infiltration of pluvial water might change slightly with respect to existing conditions, though the very small precipitation rates characteristic of the Mojave make it hard to estimate the magnitude of change. Qualitatively we can foresee two different conditions. First, when rain is of low intensity, under "existing conditions" the water infiltrates quickly and very little runoff occurs. The high evaporation rates of the desert are expected to remove this water from the soils through evaporation prior to its migration to the deep zone of groundwater saturation. In the "development scenario" water that falls on the landfill would be incorporated into the refuse cells. The second condition would result from high intensity rain. Under "existing conditions" some of this water might flow away from the site by channel flow (particularly on the east expansion area), but most of it will remain in depression storage, and will infiltrate through cracks to depths of a few inches. Under the "development scenario" most of this water would move away from

the site through peripheral diversion drains, and eventually become stored at Rosamond Lake.

Based on the data presented in Section 4, a credible, worst-case scenario would be a 24-hour rain that delivers 3.0 inches of rain. Given the area of the site and assuming perfect efficiency, this precipitation rate would contribute a total of 43.5 acre-feet of additional water to the inflow of Rosamond Lake. A more normal event might be a 6-hour rain delivering 1.0 inches of rain, which would contribute a total of 14.5 acre-feet of additional water to the inflow to Rosamond Lake. Given that Rosamond Lake has a surface area of approximately 16,000 acres, the additional inflow would increase the stage of the lake by only fractions of an inch.

GROUNDWATER

As stated in Section 5, the main source of groundwater recharge to the Lancaster sub-basin is runoff from the San Gabriel Mountains. Reduced infiltration over the footprint of the landfill is thus unlikely to result in a significant change in the configuration of the water table.

With respect to groundwater quality, the expansion of the landfill could have a significant effect, as the potential for contaminant releases would increase. This condition can be alleviated, as detailed in the proposed development plan, by construction of a low-permeability liner under the expansion areas and proactive monitoring and remediation programs.

ENDOGENOUS PROCESSES

Given its small size, the project is not likely to change the rate of endogenetic processes in the region.

7. IMPACT ON ACCESS TO NATURAL RESOURCES

MINERAL RESOURCES

In Section 4 it was concluded that the area of the project may be underlain by lacustrine clays that could be potential sources of industrial clays (bentonite), firing clays, or borates. The available data cannot prove or disprove the presence of these deposits, but based on the regional data of Durbin (1978), it would be expected for the Pleistocene clays to be about 300 feet thick in the area of the Lancaster landfill, and to extend between depths of 200 and 500 feet (Figure 6). The development of the project would effectively limit the access to these potential resources, though we consider that this limitation is of little importance since similar deposits are abundant throughout the Mojave Desert.

GROUNDWATER

The development of the project would not limit access to groundwater resources.

UNIQUE GEOLOGIC FEATURES

The area of the project does not have unique geologic features, so the development of the project would not limit recreational access to a unique geologic feature.

8. SIGNIFICANCE OF IMPACTS

The development of the project is likely to modify the rates of the geologic processes of erosion, deposition, and surface outflow to Rosamond Lake. The project could also have a significant impact on groundwater quality. Given its small size, however, the project is not likely to affect the climatic conditions of the area, or the rate of endogenetic processes. Following is our assessment of the potential significance of these modifications, using a simple scale of low (no mitigation measures required), intermediate (some mitigation measures recommended), and high (strict mitigation measures required) significance.

- With respect to the rate of erosion, we conclude that the rate of eolian erosion might increase during the active life of the landfill. This increase is of intermediate significance, and some mitigation measures would be needed (e.g., frequent water sprinkling of the areas under construction). In contrast, the rate of fluvial erosion will decrease, both due to engineered filling and peripheral diversion of surface runoff, and no mitigation of this condition is recommended.

- In the long term, the rate of erosion should be lower for the "development scenario" than for "existing conditions". If the area were a major source of sediment for a "downstream" area this could be of intermediate significance. Given its small size, however, the decrease in sediment input is considered to be of low significance.

- The site currently appears to be in long-range equilibrium with respect to erosion and deposition, so it would be expected for deposition to exceed erosion once development stabilizes the area. Again, given the small size of the area involved, we conclude that the change in the rate of deposition is of low significance.

- The rates of infiltration of pluvial water might change with respect to existing conditions, though the very small precipitation rates characteristic of the Mojave make it hard to estimate the magnitude of this change. Qualitatively we foresee that water delivered by high intensity rain would move away from the site through peripheral diversion drains, instead of partially infiltrating. This water would then flow away from the site and eventually become stored at Rosamond Lake, potentially introducing a slight change in the existing hydrology of the lake. A worst-case scenario would be a 24-hour rain that delivers 3.0 inches of rain, which could contribute a total of 43.5 acre-feet to the inflow of Rosamond Lake. Given that the surface area of the playa is in excess of 16,000 acres, such inflow would likely result in only a rise of fractions of an inch to the lake, and as a result, it is concluded that the change in the rates of infiltration of pluvial water is of low significance.

- The main source of groundwater recharge to the Lancaster sub-basin is runoff from the San Gabriel Mountains. Reduced infiltration over the footprint of the landfill is thus unlikely to result in a significant change in the configuration of the water table, and is thus of low significance.

- With respect to groundwater quality, the expansion of the landfill could have a significant effect, as the potential for contaminant release would increase. This condition is of potentially high significance and should be alleviated (as detailed in the proposed development plan) by construction of a low-permeability composite liner under the expansion areas and proactive monitoring and remediation programs.

CLOSURE

This report is based on the Project Description for the Lancaster Landfill and Recycling Center Expansion, developed by Bryan A. Stirrat & Associates, on hydrogeologic data provided by Waste Management of California, Inc., and a brief field reconnaissance. **GLA** has conducted this work for the purpose of identifying potential issues of concern to the project, and to help both the developer and the authorities to plan further assessment work. This work is not intended as a complete geotechnical study, however, and it should not be considered as such by either the developer or the governing agencies. Our firm should be notified of any pertinent changes in the project plans, or if conditions are found that differ from those described in this report, since this may require a re-evaluation of the conclusions and recommendations. This report has not been prepared for use by parties and projects other than those named or described above. It may not contain sufficient information for other parties or other purposes.

This report has been prepared in accordance with generally accepted geotechnical practices and makes no other warranties, either expressed or implied, as to the professional advice or data included in it.

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APPENDIX D

NOISE ASSESSMENT

NOISE ASSESSMENT FOR THE LANCASTER LANDFILL EXPANSION

COUNTY OF LOS ANGELES

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Report #94-82B
Revised March 25, 1997

NOISE ASSESSMENT FOR THE LANCASTER LANDFILL EXPANSION

COUNTY OF LOS ANGELES

1.0 PROJECT DESCRIPTION

The proposed project calls for the expansion of the existing Lancaster Landfill and Recycling Center located in an unincorporated County of Los Angeles, approximately two miles northeast of the City of Lancaster. The landfill expansion comprises approximately 62 acres adjoining the west side the existing landfill. This is called the Western Expansion Area. The expansion also consists of the additional 112 acres located to the east of 10th Street East. This is called the Eastern Expansion Area.

The existing facility currently accepts approximately 650 tons of refuse per day. It is anticipated that the proposed expansion will result in an increase in daily tonnage of 6.6% annually, until the year 2010 when the daily intake will be increased by approximately 1,700 tons of refuse per day. The general life of the landfill expansion is projected to be at least 50 years.

Access roads are planned for the landfill, as well as new entrances, parking and maintenance facilities. Additionally, new landfill gas recovery and treatment (flaring) facilities are proposed for implementation for the Eastern Expansion Area and the Western Expansion Area.

The existing noise environment in the vicinity of the Lancaster Landfill site is determined primarily by haul truck traffic on adjacent roadways, and by noise generated by landfill operations. Haul truck traffic and earth moving equipment (e.g.; dozers, scrapers, and compactors) are the most significant noise sources associated with the landfill operations.

There are a number of the existing residential areas surrounding the project site. The potential noise impacts due to the proposed landfill expansion project will be determined at these nearest residential areas. Currently the areas surrounding the landfill have fairly quiet existing ambient noise environments.

1.1 Community Noise Scales

Community noise levels are measured in terms of the "A-weighted decibel," abbreviated dBA. A-weighting is a frequency correction that correlates overall sound pressure levels with the frequency response of the human ear. Exhibit 1 provides examples of various noises and their typical A-weighted noise level.

The "equivalent noise level," or Leq is the average noise level on an energy basis for any specified time period. The Leq for one hour is the energy average noise level during the hour, specifically, the average noise based on the energy content (acoustic energy) of the sound. It can be thought of as the level of a continuous noise which has the same energy content as the fluctuating noise level. The equivalent noise level has the units of dBA.

SOUND LEVELS AND LOUDNESS OF ILLUSTRATIVE NOISES IN INDOOR AND OUTDOOR ENVIRONMENTS

(A-Scale Weighted Sound Levels)

dB(A)	OVER-ALL LEVEL Sound Pressure Level Approx. 0.0002 Microbar	COMMUNITY (Outdoor)	HOME OR INDUSTRY	LOUDNESS Human Judgement of Different Sound Levels
130	UNCOMFORTABLY	Mil. Jet Aircraft Take-Off w/ After-burner From Aircraft Carrier @ 50 Ft. (130)	Oxygen Torch (121)	120 dB(A) 32 Times as Loud
120 110	LOUD	Turbo-Fan Aircraft @ Take Off Power @ 200 Ft. (90)	Riveling Machine (110) Rock-N-Roll Band (108-114)	110 dB(A) 16 Times as Loud
100	VERY	Jet Flyover @ 1000 Ft. (103) Boeing 707, DC-8 @ 6080 Ft. Before Landing (106) Bell J-2A Helicopter @ 100 Ft. (100)		100 dB(A) 8 Times as Loud
90	LOUD	Power Mower (96) Boeing 737, DC-9 @ 6080 Ft. Before Landing (97) Motorcycle @25 Ft. (90)	Newspaper Press (97)	90 dB(A) 4 Times as Loud
80		Car Wash @ 20 Ft. (89) Prop. Airplane Flyover @ 1000 Ft. (88) Diesel Truck, 40 MPH @ 50 Ft. (84) Diesel Train, 45 MPH @ 100 Ft. (83)	Food Blender (88) Milling Machine (85) Garbage Disposal (80)	80 dB(A) 2 Times as Loud
70	MODERATELY LOUD	High Urban Ambient Sound (80) Passenger Car, 65 MPH @ 25 Ft. (77) Freeway @ 50 Ft. From Pavement Edge, 10:00 AM (76 +or- 6)	Living Room Music (76) TV-Audio, Vacuum Cleaner	70 dB(A)
60		Air Conditioning Unit @ 100 Ft. (60)	Cash Register @ 10 Ft. (65-70) Electric Typewriter @ 10 Ft. (64) Dishwasher (Rinse) @ 10 Ft. (60) Conversation (60)	60 dB(A) 1/2 as Loud
50	QUIET	Large Transformers @ 100 Ft. (50)		50 dB(A) 1/4 as Loud
40		Bird Calls (44) Lower Limit Urban Ambient Sound (40)		40 dB(A) 1/8 as Loud
	JUST AUDIBLE	(dB[A] Scale Interrupted)		
10	THRESHOLD OF HEARING			

SOURCE: Reproduced from Melville C. Branch and R. Dale Beland, Outdoor Noise in the Metropolitan Environment, Published by the City of Los Angeles, 1970, p.2.

Exhibit 1

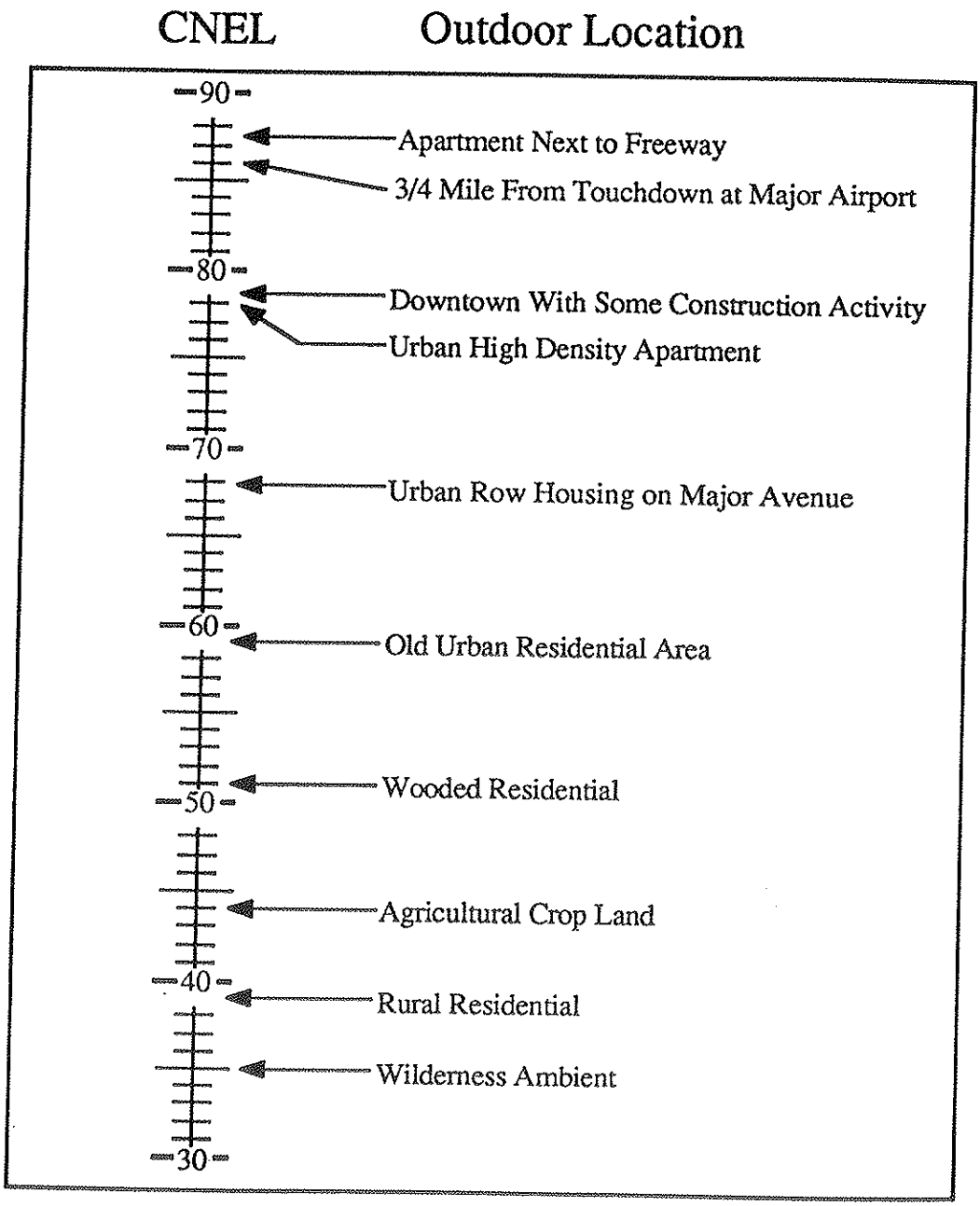
Examples of Typical Sound Levels

Several rating scales have been developed for measurement of community noise. These account for: (1) the parameters of noise that have been shown to contribute to the effects of noise on man, (2) the variety of noises found in the environment, (3) the variations in noise levels that occur as a person moves through the environment, and (4) the variations associated with the time of day. The predominant rating scale now in use in California for land use compatibility assessment is the Community Noise Equivalent Level (CNEL). The CNEL scale represents a time weighted 24 hour average noise level based on the A-weighted decibel. Time weighted refers to the fact that the noise levels during certain hours are adjusted for increased sensitivity of hearing during these hours, by adding 5 dB to each of the evening hour readings (7 p.m. to 10 p.m.) and 10 dB to each reading during the nighttime hours (10 p.m. to 7 a.m.). These time periods and penalties were selected to reflect people's increased sensitivity to noise during these time periods. The day-night or Ldn scale is similar to the CNEL scale except that evening hour readings are not adjusted. A CNEL noise level may be reported as a "CNEL of 60 dBA," "60 dBA CNEL," or simply "60 CNEL." Typical noise levels in terms of the CNEL scale for different types of communities are presented in Exhibit 2.

1.2 Community Noise Ordinances

Community noise levels are measured in terms of the "A-weighted decibel," abbreviated dBA. Intermittent or occasional noises such as those associated with certain types of mining operations are not of sufficient volume to exceed community noise standards that are based on a time averaged scale such as the CNEL scale. A common method of characterizing these noise levels is with the "percent noise level" or L%. The percent noise level describes the noise level which is exceeded during a certain percentage of the measurement period. For example, L50 is the noise level exceeded 50 percent of the time and represents the average noise level. Similarly, L1 is the noise level exceeded 1 percent of the time and represents the peak noise level, and L90 is the noise level exceeded 90 percent of the time and represents the background noise level.

The County of Los Angeles noise ordinance is designed to protect noise sensitive areas such as residential areas from non-transportation related noise sources. Table 1 presents the exterior noise standards contained in the County of Los Angeles Noise Ordinance. The noise ordinance requirements can not be applied to mobile noise sources such as heavy trucks when traveling on public roadways. Control of the mobile noise sources on public roads is pre-empted by federal and State laws. The noise ordinance does not apply to motor vehicles on private property.



MESTRE GREVE ASSOCIATES

Exhibit 2
Typical Outdoor Noise Levels

Table 1
LOS ANGELES COUNTY
NOISE ORDINANCE EXTERIOR NOISE STANDARDS

MAXIMUM TIME OF EXPOSURE	NOISE METRIC	NOISE LEVEL NOT TO BE EXCEEDED 7 a.m. to 10 p.m. (daytime)	10 p.m. to 7 a.m. (nighttime)
RESIDENTIAL AREAS			
30 Minutes/Hour	*L50*	50 dBA	45 dBA
15 Minutes/Hour	*L25*	55 dBA	50 dBA
5 Minutes/Hour	*L8.3*	60 dBA	55 dBA
1 Minute/Hour	*L1.7*	65 dBA	60 dBA
Any period of time	*Lmax*	70 dBA	65 dBA

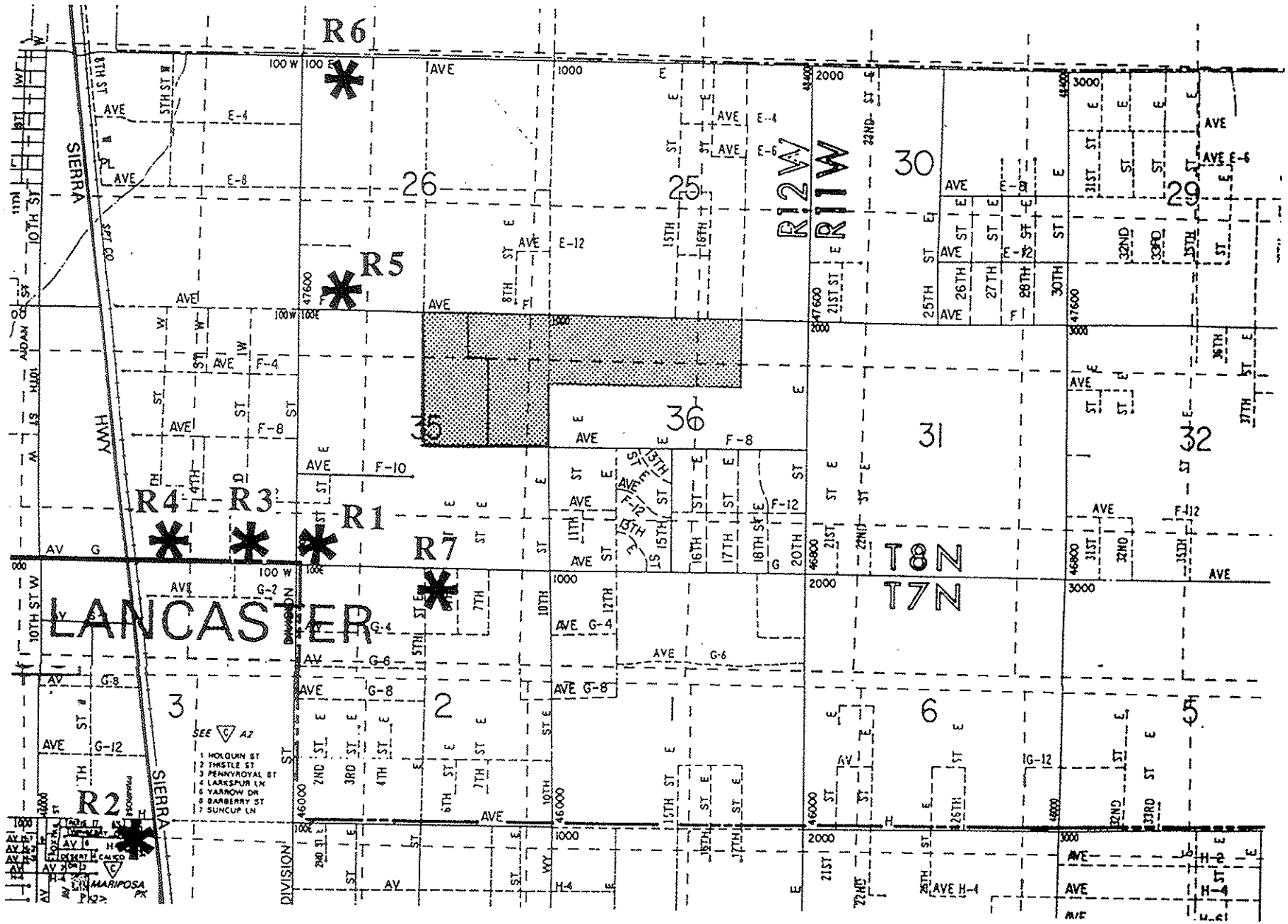
The County of Los Angeles Noise Ordinance is important because it provides noise levels which are deemed to be acceptable in residential areas. By comparing the noise levels generated by the landfill activities to the Noise Ordinance, the acceptabilities of the noise levels can be determined. The Noise Ordinance is designed to control unnecessary, excessive and annoying sounds generated from a stationary source impacting an adjacent property. The proposed project operations hours are between 5 a.m. and 6 p.m., and therefore, will need to comply with the L50 daytime ordinance standards of 50 dBA, and 45 dBA for the nighttime; and Lmax noise standards of 75 dBA for the daytime and 70 dBA for the nighttime.

Additionally, the County of Los Angeles and most cities in the area have adopted noise standards for new residential developments impacted by transportation noise sources (e.g., roadways). The standards are 65 CNEL (or 65 LDN) for private outdoor living areas (e.g., rear yards), and 45 CNEL (or 45 LDN) for indoor areas. While these standards do no apply directly to this project, they are used as a guideline for assessing off-site landfill traffic impacts.

2.0 EXISTING SETTINGS

2.1 Ambient Noise Measurements

Noise measurements were made at 7 locations in the existing residential areas surrounding the Lancaster Landfill. The measurement locations are depicted in Exhibit 3. Measurements of the traffic noise levels were made during and after the operation hours. The measurements were made during the daytime hours (between 10 a.m. and 6 p.m.) and evening hours (between 7 p.m. and 8 p.m.) on January 13, 1994. (The current operation hours are between 6 a.m and 4:45 p.m. Monday through Friday). The wind speed during the time of measurements was light (0 to 5 miles per hour).



MESTRE GREVE ASSOCIATES

Exhibit 3

Noise Measurement Locations

The measurements were made with a Bruel & Kjaer Type 2231 Sound Level Meter, and calibrated before and after each measurement series. At least two 15 minute measurement periods were made on each of the measurement locations. The noise measurement results presented in Table 2. The results are presented in terms of the equivalent noise levels (Leq), maximum noise levels, minimum noise levels and percentile noise levels (L%). The L50 percentile level for example, represents the noise levels exceeded 50 percent of the time. The L90 levels represent the most quiet noise levels experienced, or the background noise levels. The L50 noise levels are comparable with the ambient noise levels. These noise levels were usually due to traffic as well as other urban noise sources.

Table 2
AMBIENT NOISE MEASUREMENT RESULTS (DBA)

SITE #	Leq	Lmax	PERCENTILE NOISE LEVELS (DBA) Lmin	L1.7	L8.3	L25	L50	L90
RESIDENTIAL AREAS								
(Daytime hours between 10 a.m. to 7 p.m.)								
1 N.W. Division/G Street	53.8	70.3	34.5	66.0	56.5	48.0	42.5	37.0
	50.7	66.9	32.8	60.5	55.5	47.0	43.0	37.5
2 S.W. Sierra Hwy/H Street	53.2	68.3	38.7	61.5	56.5	53.5	50.0	43.5
3 G Street-West of Division	53.8	65.9	36.9	65.8	58.5	48.0	44.5	40.0
	51.8	66.8	42.6	54.6	62.0	55.0	47.5	44.5
4 G Street-East of Sierra Hwy	60.0	79.4	36.1	71.0	60.0	53.5	47.0	39.0
	59.2	73.3	39.6	69.0	64.0	58.0	52.5	44.5
5 F Street-East of Division	69.7	93.9	33.4	74.0	63.5	57.0	50.0	36.5
	55.2	73.8	33.4	66.5	57.5	48.5	42.5	37.0
6 S.E. Division/E Street	35.5	44.0	30.9	39.5	38.0	36.5	64.5	33.0
	42.2	48.6	36.0	47.5	45.5	43.5	41.0	38.0
7 G Street-between 10th & Division	61.7	76.8	39.2	72.5	67.5	57.5	48.0	40.5
	62.9	79.0	40.6	73.0	68.0	59.0	51.0	43.0
(Evening hours between 7 p.m. to 8 p.m.)								
2 S.W. Sierra Hwy/H Street	51.2	69.7	35.2	60.9	55.4	52.0	48.1	41.0
5 F Street-East of Division	51.0	66.0	32.0	62.1	54.2	47.0	41.3	35.3

The data in Table 2 represent the existing ambient noise levels in the residential areas surrounding the Lancaster Landfill. The noise environment in the existing residential areas are mainly due to the traffic noise from the nearby roadways. Additionally, existing landfill haul

trucks also contribute to the noise environment. Designated landfill haul truck routes are along Challenger Way, Avenue E, Avenue F, Avenue G, Division Street and Antelope Valley Freeway (SR-14). Therefore, all the measurement sites are being affect by noise levels from the existing landfill haul trucks. According to the measurements, the existing average ambient noise levels are generally in the range of low 40 dBA to low 50 dBA. For most daytime cases, trucks from the nearest roadways were the cause of Lmax noise levels. (The Lmax of 93.9 dBA from Site 5 and 79.4 dBA from Site 4, however, were due to a police siren and a truck horn). For all measurement sites, the landfill activities was audible only at Site 5 and faintly audible at Site 6. The distant landfill noise depict the background noise levels at these two sites. Other urban noise sources in the area include distant traffic, aircraft, helicopter, people, and dog barking.

2.2 Existing Traffic Noise Levels

An estimate of highway noise levels in terms of CNEL were computed for the roadways leading directly to the landfill, and most affected by landfill traffic. The Highway Noise Model published by the Federal Highway Administration ("FHWA Highway Traffic Noise Prediction Model," FHWA-RD-77-108, December, 1978) was utilized. The model was used in conjunction with the roadway measurements. The FHWA Model uses traffic volume, vehicle mix, vehicle speed, and roadway geometry to compute the "equivalent noise level." A computer code has been written which computes equivalent noise levels for each of the time periods used in the calculation of CNEL. Weighting these noise levels and summing them results in the CNEL for the traffic projections used. CNEL contours are found by iterating over many distances until the distances to the 60, 65, and 70 CNEL contours are found.

Estimates of traffic volumes, estimated speeds, and truck volumes were used with the FHWA Model to estimate noise levels in terms of CNEL. The existing traffic volumes and truck distribution were obtained from the Traffic Impact Study for Lancaster Landfill and Recycling Center, prepared by DKS Associates, December 23, 1996. The existing noise projections include the existing landfill haul trucks. As a worst case scenario, it is assumed that most of the landfill haul trucks, other than employee vehicles, are heavy trucks.

The distances to the 60, 65 and 70 CNEL contours for the roadways in the vicinity of the project site are given in Table 3. These represent the distance from the centerline of the road to the contour value shown. Note that the values given in Table 4 represent existing noise levels and these do not take into account the effect of any noise barriers or topography that may affect ambient noise levels.

Table 4
EXISTING NOISE LEVELS (DBA)

Roadway Link	Distance to CNEL Contour from Centerline of Roadway (Feet) 70 CNEL	65 CNEL	60 CNEL
AVENUE F			
East of SR-14 NB Ramps	RW	RW	59
East of Division Street	RW	RW	RW
AVENUE G			
East of SR-14 NB Ramps	RW	RW	72
East of Sierra Highway	RW	RW	77
East of Division Street	RW	RW	53
AVENUE H			
East of SR-14 NB Ramps	RW	RW	69
East of Division Street	RW	RW	RW
SIERRA HIGHWAY			
North of Avenue G	RW	54	117
South of Avenue G	RW	54	116
DIVISION STREET			
North of Avenue G	RW	RW	71
South of Avenue G	RW	RW	69
10TH STREET			
North of Avenue F	RW	RW	48
South of Avenue F	RW	RW	59

RW - Noise contour falls inside the roadway right-of-way.

The data in Table 3 indicate that areas in the immediate vicinity of Sierra Highway experience unmitigated noise levels in excess of 65 CNEL. Areas adjacent to Avenue F, Avenue G, Avenue H, Division Street and 10th Street also experience noise levels of 60 CNEL or greater.

The local roadways which are being used as regular haul truck routes for the existing Lancaster Landfill are: along Avenue G from Challenger Way to 90th Street East and from Division Street to 50th Street West; along Division Street from Avenue J to Avenue E; along Challenger Way from Lancaster Landfill to Avenue M; along Avenue F from Lancaster Landfill to Division Street; along Avenue E from Division Street to 120th Street East; along Antelope Valley Freeway.

2.3 Noise Levels Generated by Landfill Operations

Noise measurement were made at the existing Lancaster Landfill in the morning (8 a.m.) and

afternoon hours (between 2 p.m. and 5 p.m.) of January 13, 1994. The measurements were made with a B & K Model 2231 Sound Level Meter, and calibrated before and after each measurement series. The maximum noise level, minimum noise level, equivalent noise level and percentile levels for the measurement periods are presented.

TABLE 4
NOISE MEASUREMENT RESULTS

LOCATION	Leq	Lmax	PERCENTILE NOISE LEVELS (DBA) Lmin	L1.7	L8.3	L25	L50	L90
LANCASTER LANDFILL								
1 200 feet from dozer and compactor	70.4	77.6	58.0	75.5	74.0	72.0	69.5	63.5
2 200 feet from compactor	64.5	67.3	55.2	67.0	66.5	66.0	65.0	59.0
3 170-230 feet from dozer	68.0	74.3	60.1	73.0	70.5	69.0	67.5	64.0
HAUL TRUCK SINGLE PASS-BY								
4 10 feet from G Street	87.9	84.8	--	--	--	--	--	--
5 100 feet from G Street	76.5	71.0	--	--	--	--	--	--

According to the EIR project description, the existing Lancaster Landfill currently maintains a number of equipment on-site. These equipment are 1 trash compactor, 1 loader, 2 bulldozers, 2 scrapers, 1 motorgrader, and 2 water trucks. Most of these equipment are not in use and are there as backup equipment to replace an equipment needing repair. According to the landfill operator, typically 1 dozer and 1 compactor will be operating in any one area at a time. Occasionally, if other equipment are in operation, they will be in another area of the landfill.

According to Table 4, noise measurements were made at the existing Lancaster Landfill at approximately 170, 200 and 230 feet from the landfill activities. During the measurements, Location 1 had both operating dozer and compactor. Location 2 had only a compactor in operation and Location 3 had only a dozer in operation. The results indicate that Location 1 has the highest noise levels of approximately 70.4 dBA for an Leq noise level, and 77.6 dBA for an Lmax noise level. Noise levels at Location 1 represent a typical scenario. During the noise measurements, it appeared that the landfill was at normal landfill activities.

Measurements for Locations 4 and 5 was made along G Street which is an existing landfill haul truck route. Measurements were made at 10 feet and 100 feet from single haul truck pass-bys. The data in Table 4 shows that the noise levels due to the haul trucks can be as loud as 76.5 dBA Leq at 100 feet. As a result, the haul trucks associated with the Lancaster Landfill are significant sources of noise in the existing residential areas.

3.0 POTENTIAL NOISE IMPACTS

Potential noise impacts are commonly divided into two groups; temporary and long term. Temporary impacts are usually associated with noise generated by construction activities. Long term impacts are further divided into impacts on surrounding land uses generated by the project and those impacts which occur at the project site.

The proposed landfill operating hours will be from 5 a.m. to 6 p.m. Monday through Saturday. The landfill will be closed Sunday and holidays. Site operation may extend beyond the gate hours to allow site preparation and daily covering, however, no additional refuse will be disposed.

3.1 Construction Noise

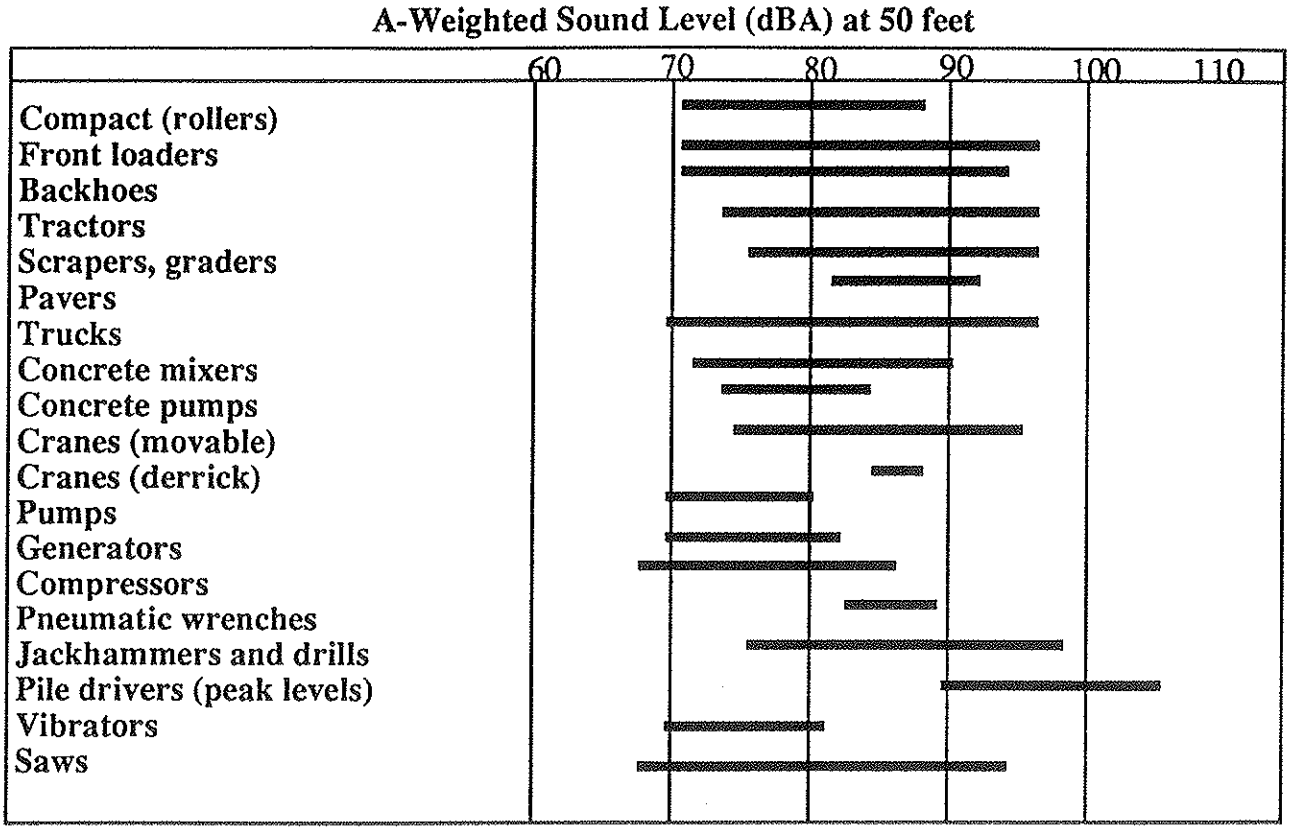
Although construction noise represents a short-term impact on ambient noise levels, construction equipment and construction activities can generate high noise levels. Construction equipment noise comes under the control of the Environmental Protection Agency's Noise Control Program (Part 204 of Title 40, Code of Federal Regulations).

The construction activities for the Lancaster Landfill are divided into nine separate construction phases. Phases I, II and III will be developed at the Western Expansion Area. Phases IV through IX will be developed at the Eastern Expansion Areas. According to the phasing schedule, near closure of one phase will coincide with the construction of the next phase. In general, each of the construction/excavation activities may last 3 weeks up to 4 months depending on the nature of the activities. The forecast year is 2010 and beyond. The phasing schedule was obtained from the Lancaster Landfill and Recycling Center Construction Development Equipment Utilization prepared by Rust Environment & Infrastructure, Inc., March 1994.

The site preparation and mass excavation will be the first construction activities and the noisiest. Worst case examples of construction noise at 50 feet are presented in Exhibit 4. The equipment directly involved in the excavation of the site could produce high noise levels. According to the information presented in Exhibit 4, the peak noise level for most of the equipment that will be used during the construction is 70 to 95 dBA at a distance of 50 feet. Construction noise typically has a drop off rate of 6 dB per doubling of distance. Therefore, at 100 feet the peak construction noise is approximately 64 to 89 dBA. At 200 feet the peak construction noise is approximately 58 to 83 dBA. Note that these noise levels are based upon worst case conditions. Typically noise levels on the site will be less.

The closest existing residential area was estimated to be approximately 1,500 feet from the potential construction site. The unmitigated peak noise levels due to the construction at the nearest existing residences are estimated to range between 41 and 66 dBA. Again, it is important to note that these noise levels are based upon worst case conditions. Noise could be more subdued at the construction site. Also note that this noise level does not take into consideration any mitigation at all, including any natural mitigation that might occur as a result of the area's topography. The peak noise impacts from construction activities will slightly be

Construction Equipment Noise



Source: "Handbook of Noise Control," by Cyril Harris, 1979.

Exhibit 4
Construction Noise Levels

audible at the nearest residences and would represent short term noise impact.

The most effective method of controlling construction noise is through local control of construction hours. When construction occurs near existing residential development the hours of construction should be limited to 7 a.m. to 7 p.m. on Monday through Friday. Construction should not be permitted for these circumstances on weekends or federal holidays.

3.2 Impacts on Surrounding Land Uses

The proposed expansion of the Lancaster Landfill will generate additional traffic. According to the traffic study, the landfill site is used by refuse trucks, commercial carriers, light utility vehicles and trailers pulled by passengers. It is anticipated that the expansion project for year 2010 will generate an additional 364 daily haul truck trips and 35 employee passenger car trips. For the worst case scenario, most of the vehicle trips to the landfill other than employee trips are assumed to be heavy truck trips. Therefore, the noise projections include the truck mixes associated with these haul truck trips

Currently, there is one access driveway into the Lancaster Landfill located on Avenue F, west of 10th Street East along the north boundary of the property. In the future, two new access points will be provided to the eastern expansion landfill operation, one on the east side of 10th Street East, south of Avenue F, and one on the south side of avenue F just east of 10th Street East. Additionally, a separate access way will be provided for the gas recovery area off 10th Street East.

The proposed expansion project will generate some additional traffic, and as a result may alter noise levels in the surrounding areas. To assess the impact of the proposed project on land uses adjacent to streets that will serve the project, the change in roadway noise along these roadways was determined. Due to other planned development in the area which has already been approved there will be an increase in traffic in the surrounding area with or without the Lancaster Landfill expansion project. The change in noise levels generated by the additional traffic due to the landfill expansion was calculated for these roadways and are shown below in Table 5. Column 1 shows the change in future noise levels with project over future noise levels without the project. This column represents the increase in noise solely attributable to the additional traffic generated by proposed expansion project. Column 2 shows the change in the future noise levels over existing noise levels. The future noise levels are noise levels generated from existing traffic and cumulative development in the surrounding area including the project. The change in noise levels in Column 2 represent the ultimate noise increase due to the cumulative development in the area.

Table 5
NOISE INCREASE LEVELS (DBA)

Road Link	Noise Increase due to Project	Noise Increase Over Existing
AVENUE F		
East of SR-14 NB Ramps	*0.0*	*0.2*
East of Division Street	*4.9*	*5.9*
AVENUE G		
East of SR-14 NB Ramps	*0.6*	*1.7*
East of Sierra Highway	*0.5*	*1.9*
East of Division Street	*0.0*	*0.2*
AVENUE H		
East of SR-14 NB Ramps	*0.3*	*1.4*
East of Division Street	*0.0*	*1.1*
SIERRA HIGHWAY		
North of Avenue G	*0.0*	*1.1*
South of Avenue G	*0.0*	*1.1*
DIVISION STREET		
North of Avenue G	*1.1*	*2.3*
South of Avenue G	*0.6*	*1.8*
10TH STREET		
North of Avenue F	*0.3*	*1.3*
South of Avenue F	*1.5*	*2.6*

In community noise assessment changes in noise levels greater than 3 dBA are often identified as significant, while changes less than 1 dBA will not be discernible to local residents. In the range of 1 to 3 dBA residents who are very sensitive to noise may perceive a slight change. No scientific evidence is available to support the use of 3 dBA as the significance threshold. In laboratory testing situations humans are able to detect noise level changes of slightly less than 1 dBA. However, in community noise situation the noise exposure is over a long time period, and changes in noise levels occur over years, rather than the immediate comparison made in a laboratory situation. Therefore, the level at which changes in community noise levels become discernible is likely to be some value greater than 1 dBA, and 3 dBA appears to be appropriate for most people.

The future noise increases due solely to the additional traffic generated by the proposed project are identified in Column 1 of Table 5. The data shows that the noise increases will range between 0.3 and 4.9 dBA. All of the noise increases are less than the 3 dBA threshold of significance, with the exception of one location. A maximum noise increase of 4.9 dBA is projected to occur along Avenue F, east of Division Street. This is due to an increase in haul trucks (an increase of almost 20%) utilizing Avenue F. However, the noise projections for

Avenue F show that the future noise levels will be less than 65 CNEL, and therefore, the noise increases due solely to the project are not considered to be significant. No adverse impacts are anticipated due to the proposed project.

The data in Column 2 indicate that the future noise levels will increase for some roadways over existing noise levels in the vicinity of the project. This is due to the relatively low amount of traffic currently in the area. The future noise increases over existing are projected to range between 0.2 and 5.9 dBA, and are all less than the 3 dBA threshold with the exception of one location. A noise increase of 5.9 dBA is projected to occur on Avenue F. However, the future traffic noise is projected to be less than 65 CNEL, and therefore, the future noise increases over existing are not projected to be significant. The future noise levels are likely to increase slowly over the years rather than immediately due also to other developments throughout the area.

Traffic volumes reported in the traffic study were used with the FHWA Highway Traffic Noise Model to project future unmitigated noise levels for all of the roadways. The modeling results are reported in Table 6 in the form of distances to the 60, 65, and 70 CNEL contours. These projections do not take into account any barriers or topography that may reduce noise levels. Table 6 presents the ultimate future noise levels.

Table 6
FUTURE NOISE LEVELS (DBA)

Roadway Link	Distance to CNEL Contour from Centerline of Roadway (Feet) 70 CNEL	65 CNEL	60 CNEL
AVENUE F			
East of SR-14 NB Ramps	RW	RW	73
East of Division Street	RW	RW	53
AVENUE G			
East of SR-14 NB Ramps	RW	RW	86
East of Sierra Highway	RW	41	92
East of Division Street	RW	RW	56
AVENUE H			
East of SR-14 NB Ramps	RW	RW	83
East of Division Street	RW	RW	RW
SIERRA HIGHWAY			
North of Avenue G	RW	67	144
South of Avenue G	RW	66	142
DIVISION STREET			
North of Avenue G	RW	RW	92
South of Avenue G	RW	RW	87
10TH STREET			
North of Avenue F	RW	RW	57
South of Avenue F	RW	RW	85

RW - Noise contour falls inside the roadway right-of-way.

The data in Table 6 indicates that noise levels of greater than 65 CNEL are projected to occur along Sierra Highway and a portion of Avenue G. Areas adjacent to Avenue F, most of Avenue G, Avenue H, Division Street and 10th Street will be in excess of 60 CNEL.

3.4 Landfill Operations

Using the noise measurement data at the existing Lancaster Landfill operation activities (Table 4), projections were made for the proposed landfill expansion. The existing landfill equipment currently maintained on-site a minimum of 1 trash compactor, 1 loader, 2 bulldozers, 2 scrapers, 1 motor grader and 2 water trucks. It is anticipated that similar landfill equipment will be used for the landfill expansion areas.

Noise projections for the landfill operations, which are stationary noise sources, will be based on the measurement data shown previously in Table 4. According to Table 4, base noise levels of

69.5 dBA (L50) and 77.6 dBA (Lmax) at 200 feet will be used to interpolate the potential noise levels at the landfill expansion project. The landfill expansion is anticipated to increase from 650 TPD to 1,700 TPD by the year 2010. This is a maximum increase of 2.5 times the existing landfill operations, or a 3.5 dBA noise increase. Therefore, the new base noise level for 1,700 TPD is 73 dBA (L50) at 200 feet. The stationary noise sources typically have a decrease rate of 6 dB per doubling of distance. For example, a noise level of 73 dBA at a distance of 200 feet will be reduced to 67 dBA at 400 feet. Table 7 presents the Leq, Lmax and L50 noise metric, and their corresponding 45, 50, 55, 60, 65 and 70 dBA noise levels in terms of distances in feet.

These distances do not take into account the natural shielding effect due to the existing topography. The areas in the vicinity of the project site is relatively flat. However, as the landfill reaches it's vertical capacity the final elevation will be higher than much of the surrounding area and the natural shielding effect will be eliminated. Therefore, the noise projections presented below should be considered as a worst case. Noise levels will increase to these "worst case projections" as the landfill elevation increases.

Table 7
POTENTIAL NOISE LEVELS FOR THE LANCASTER LANDFILL EXPANSION (DBA)

Noise Level (dBA)	Distance from Source to Noise Level (Feet)		
	Leq	L50	Lmax
70	313	283	480
65	557	502	853
60	991	893	1,517
55	1,762	1,589	2,698
50	3,134	2,825	4,798
45	5,572	5,024	8,532

The landfills would accept waste beginning at 5 a.m. from transfer vehicles. Therefore, the most stringent noise standards contained in the County of Los Angeles Noise Ordinance and applicable to the project are the nighttime L50 standards of 45 dBA for residential areas. Base upon the data in Table 7, the L50 noise levels will be greater than 45 dBA for any distances less than approximately 5,024 feet. Therefore, any residential areas within approximately 5,024 feet from the landfill expansion will be exposed to noise levels in excess of the nighttime noise standard.

The nearest existing residential areas surrounding the Lancaster Landfill expansion project are: residential areas along Avenue F, east and west of Division; residential areas along Division south of Avenue F; residential areas along Avenue G between Division and East 10th Street, as

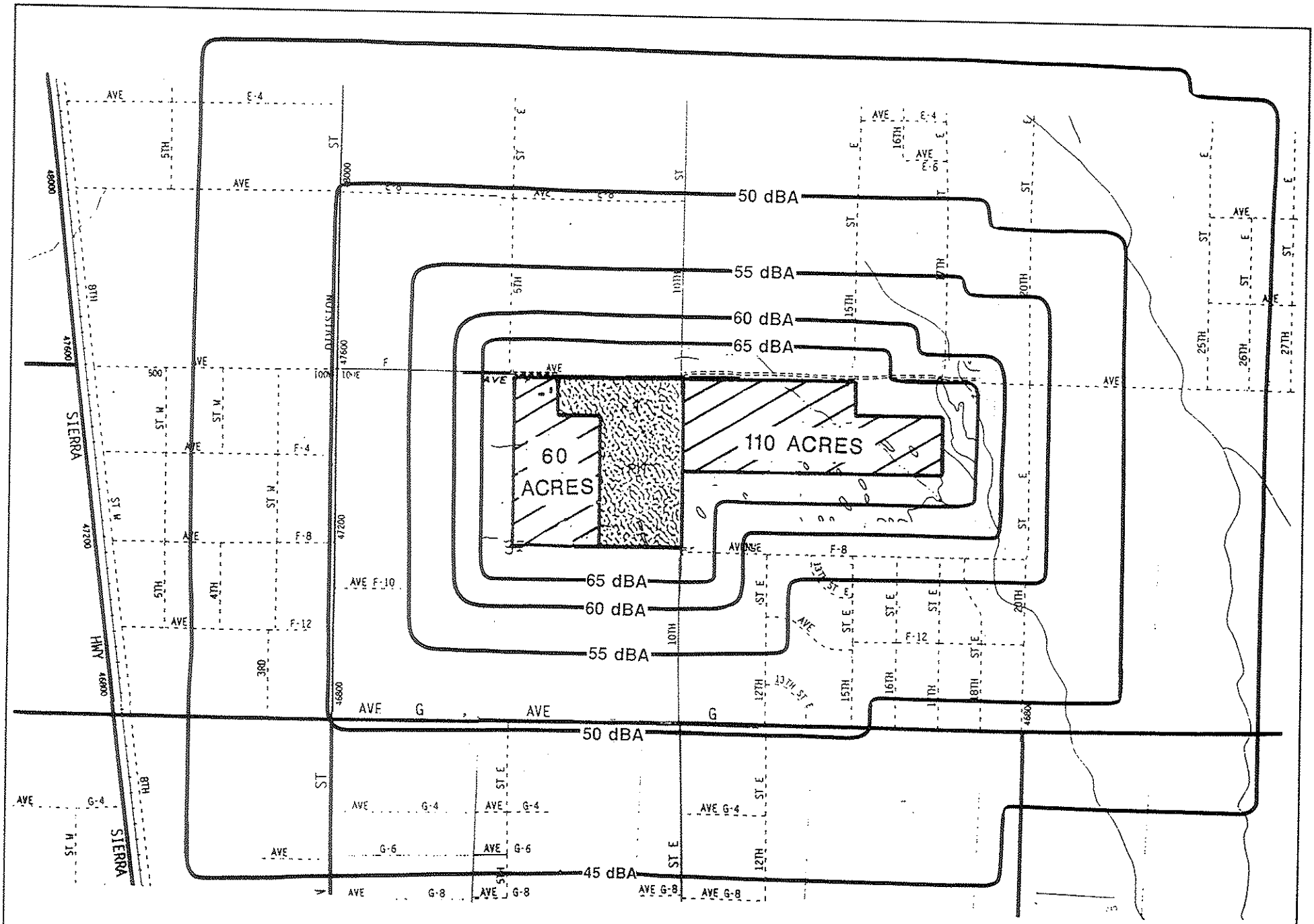
well as between Division and Sierra Highway; residential areas on the southeast corner of Avenue E and Division; a single residence along Avenue E between east 10th Street and east 15th Street; and residential areas along east 30th Street north of Avenue F. These existing residential areas will be located at distance ranging between approximately 1,500 and 6,600 feet from the proposed Lancaster Landfill expansion. Based on these distances, the analysis indicates that the potential landfill noise levels may range between 43 and 55 dBA (L50) at these residential areas. Table 8 summarizes the potential noise levels at the nearest existing residential areas.

Table 8
POTENTIAL LANDFILL EXPANSION NOISE LEVELS AT THE NEAREST RESIDENTIAL AREAS

Site#	Location	*Distance (feet)*	L50 (dBA)	Lmax (dBA)
R1	Avenue F-east and west of Division	*1,500*	55.4	60.0
R2	Avenue G-between Division and 10th Street	*2,200*	52.0	56.6
R3	Division-south of Avenue F	*2,720*	50.2	54.8
R4	Avenue G-between Division and Sierra Hwy	*3,200*	48.8	53.4
R5	Southeast corner of Avenue E and Division	*5,000*	44.9	49.5
R6	Avenue E-between 10th Street and 15th Street	*5,400*	44.2	48.8
R7	30th Street-north of Avenue F	*6,600*	42.5	47.1

The data in Table 8 indicates that the potential landfill expansion noise levels are projected to exceed the nighttime L50 standard of 45 dBA at some of the residential sites. Specifically, residential areas R1 through R5 may be exposed to potential landfill noise levels ranging between 45 and 55 dBA as the worst case unmitigated noise levels. The potential landfill noise levels at these residential areas will be audible during the nighttime (before 7 a.m.) as a steady noise source. Additionally, sites R1, R2 and R3 may also be exposed to future landfill noise levels above the daytime standard of 50 dBA. Nevertheless, traffic will continue to be the predominant noise sources. Residential areas R6 and R7, however, will be located far enough so they will not be exposed to significant landfill noise levels. The potential landfill noise levels at these sites range between approximately 43 and 44 dBA, and therefore, are projected to be below the nighttime L50 standard of 45 dBA. The landfill noise levels at residential areas R6 and R7 will mostly be masked by nearby traffic noise levels. Occasionally, landfill noise levels may be discernible at more quiet times, such as during off-peak traffic hours, but these landfill noise levels will be far from significant and should usually blend in with other background urban noise sources.

The L50 noise contour generated by landfill operations is shown graphically in Exhibit 5. Please note that the location of the noise source was placed at the visible area boundary on all sides of the site. Since the landfill operation will be moved to different locations, the noise contour



MESTRE GREVE ASSOCIATES

Exhibit 5

Future CNEL Noise Contours

represents a worst case condition assuming simultaneous landfill operations at the boundary on all sides. Since the future L50 noise levels may potential impact the nearest residential areas, mitigation measures are recommended and are shown in Section 4.0.

In addition, the potential peak Lmax noise levels from the landfill expansion are estimated to range approximately between 47 and 60 dBA, and are projected to comply with the daytime Lmax noise ordinance standard of 70 dBA. The peak Lmax noise levels may occasionally be audible, however, they are not projected to be a source of annoyance at the nearest residential areas. The traffic on the nearby roadways will often be the predominant noise sources.

3.5 Gas Recovery Facilities

A gas collection system and a flare station have been installed at the existing landfill. The gas collection system is design to collect and separate landfill gas. At the flare station, the gas will be combusted to destroy any trace of toxin. The noise levels generated by the flare station, however, will be minor when compare to other noise sources within the landfill sites.

The proposed landfill gas recovery facilities will be located in the western side of the Eastern Expansion Area, and the north side of the Western Expansion Area. The proposed gas recovery facilities at the expansion areas will be a similar design as the existing facility. Therefore, no new noise sources are anticipated. It is estimated that the new gas recovery/flare facilities will have similar noise levels as the existing facility. Noise levels generated by a flare station are usually considerably quieter than a gas recovery facility. Since the gas recovery facility will be operating continuously at a constant rate, the effective design criteria will be not to exceed the County of Los Angeles nighttime L50 standard of 45 dBA at the residential areas.

In summary it is anticipated that the gas recovery/flare facilities will be designed and constructed so that the County of Los Angeles Noise Ordinance will not be violated and acceptable noise levels will result. A noise study should be conducted as part of the design process for the gas recovery/flare facilities to insure compliance with the noise ordinance at the nearest residential areas.

3.6 Recycling Center

The Lancaster Landfill recycling center has been implemented to collect mixed recyclables from local residents, as well as cardboard and office paper from local businesses. Woodwastes recovery is also expected to be a part of the future operations.

Refuse/recyclables are hauled by collection vehicles as well as front-end loader trucks to be stored and sorted on-site. The refuse/recyclable collection vehicles will weigh-in at the landfill gate, proceed to the working face to dump refuse, return to the landfill gate to weight-out, and finally proceed to the transport roll-offs to dump the mixed recyclables. In the future, an on-site sort line and balers may be added to increase efficiency and local control of recyclable tracking.

The sorting areas usually consist of a conveyer belt which transports the incoming waste to

elevated platforms where plant personnel sort the material and extract the recyclable materials. The recyclables are then dropped into separate bins that lie below the platform. Very little mechanized devices are utilized in the sorting operations and very little potential for increased noise levels is evident in these activities.

Noise measurement levels were previously monitored at the Sunset Environmental Material Recovery Facility which has similar activities as the proposed recycling center. An average (L50) noise level of approximately 65 dBA were measured at a distance of 30 feet. This noise level will be used as a base noise level to project the potential noise levels at the proposed recycling center. At the present time, it is unsure as to the level of activities that will take place at the proposed recycling center. It is likely that the proposed recycling center will be smaller than the Sunset Recovery Facility, and therefore, the base noise level utilized can be considered worst case. Table 9 summarizes the potential noise levels at the nearest existing residential areas.

Table 9
POTENTIAL RECYCLING CENTER NOISE LEVELS AT THE NEAREST RESIDENTIAL AREAS

Site #	Location	Distance (feet)	L50 (dBA)
R1	Avenue F-east and west of Division	*1,500*	31.0
R2	Avenue G-between Division and 10th Street	*1,100*	33.7
R3	Division-south of Avenue F	*2,720*	25.9
R4	Avenue G-between Division and Sierra Highway	*5,200*	20.2
R5	Southeast corner of Avenue E and Division	*6,200*	18.7
R6	Avenue E-between 10th Street and 15th Street	*5,400*	19.9
R7	30th Street-north of Avenue F	*10,800*	13.9

In comparison with other landfill activities, the sorting operations are relatively quiet. The landfill equipment such as dozers, graders, scrapers and compactors will be the dominant noise sources. It is projected that the noise generated from the recycling center will not be discernible at the nearest residential area. Therefore, no significant noise impacts from the recycling center are expected.

3.7 Total Combined Landfill Operation Noise Levels

The total combined landfill operation noise levels are shown in Table 10. The combined landfill operations are due to the landfill equipment plus the recycling center. The combined landfill operation noise levels are shown for the average L50 noise levels. It should be noted that the landfill equipment will be the predominant noise source, and the recycling center a minor noise source. The results from Table 10 also indicate that the recycling center may only be audible at

R2 which is the nearest residential area to the recycling site.

Table 10
POTENTIAL COMBINED LANDFILL EQUIPMENT AND RECYCLING CENTER NOISE LEVELS AT THE NEAREST RESIDENTIAL AREAS

Site #	Location	Total L50 (dBA)
R1	Avenue F-east and west of Division	55.4
R2	Avenue G-between Division and 10th Street	52.1
R3	Division-south of Avenue F	50.2
R4	Avenue G-between Division and Sierra Highway	48.8
R5	Southeast corner of Avenue E and Division	44.9
R6	Avenue E-between 10th Street and 15th Street	44.2
R7	30th Street-north of Avenue F	42.5

4.0 MITIGATION MEASURES

4.1 Construction Noise Impacts

Construction adjacent to existing residential development should be limited to the hours of 7 a.m. to 7 p.m. on Monday through Friday. Construction should not be allowed on weekends or federal holidays.

4.2 Off-Site Traffic Noise Impacts

The proposed landfill traffic will contribute slightly, but insignificantly, to the ultimate future noise levels in the landfill vicinity. Noise increases due solely to the project are not considered to be substantial. Therefore, no off-site impacts are identified for the proposed landfill project.

4.3 Off-Site Noise Impacts Due To Landfill Operations

Intrusive noise levels may result from the landfill operations at nearby residential developments. It is the responsibility of the landfill operator to ensure that landfill operations comply with the County of Los Angeles Noise Ordinance. Noise monitoring of the new landfill activities should be performed when the project comes into operation. The noise study should also provide mitigation measures, if necessary, to reduce operation noise down to levels consistent with the County Noise Ordinance. Mitigation measures may include equipment or operations being modified or noise barriers constructed in such a way that would result acceptable noise levels in the adjacent noise sensitive land uses. The noise ordinance specifies that the landfill noise should not exceed an L50 level of 50 dBA from 7 a.m. to 10 p.m. (daytime). And should not exceed an L50 level of 45 dBA from 10 p.m. to 7 a.m. (nighttime). These levels are to be measured at

nearby residential or other noise sensitive land uses (i.e., school or hospitals).

Mitigation measures that may be considered include: (1) measures to quiet the earth moving equipment, (2) reduction in number and size of equipment, and (3) construction of berms around the project site or around the equipment areas. Potential measures that are available for this project are discussed in the following paragraphs.

The following measures are presented for consideration by the operator could be implemented at the time of operations to reduce noise levels.

- Noise generated by earth moving equipment comes from a variety of sources including exhaust noise, mechanical or engine noise, and contact with the ground. The most significant of these sources is usually the exhaust system. Several grades of mufflers are available for earth moving equipment. The mufflers are commonly ranked as stock, residential, or hospital; with hospital mufflers resulting in the most quieting. Manufacturers representatives were contacted to determine the amount of quieting that could be expected by upgrading the muffler systems on the earth moving equipment. Estimates of performance improvement were in the range of 5 to 10 dB.

- Reducing the number and size of the equipment can result in lower noise levels. Generally, the smaller the equipment the less noise generated. A smaller dozer, for example, may be employed to reduce noise. Since in this case, the dirt would be moved at a slower rate, the time the operations near the residences would be longer. However, this type of change would result in lower noise levels. Tuning the engines may also lower the noise levels generated.

- Temporary noise barriers have been employed around landfill operations. Usually these barriers are earthen berms. The barrier height, location and local topography will determine the effectiveness of a noise barrier. The berms need to be high enough to break the direct line of sight between the equipment and the residence. This will shield these homes from direct noise exposure from the operations. The height of the barriers is crucial in terms of effectiveness, the higher the barrier the more the noise reduction. The potential noise levels may be reduced from 5 dBA to 10 dBA.

APPENDIX

Data Utilized for Calculating Noise Levels

Road	Link	Speed	***** ADT (in thousands) ***** Existing	Project	2010 No Project	2010 With Project
AVENUE F						
	East of SR-14 NB Ramps	*55*	1.7	.00	2.2	2.2
	East of Division Street	*55*	0.3	.20	0.4	0.6
AVENUE G						
	East of SR-14 NB Ramps	*55*	2.0	.08	2.6	2.6
	East of Sierra Highway	*55*	2.2	.08	2.9	3.0
	East of Division Street	*55*	1.1	.00	1.5	1.5
AVENUE H						
	East of SR-14 NB Ramps	*45*	2.1	.04	2.6	2.7
	East of Division Street	*45*	0.7	.00	0.9	0.9
SIERRA HIGHWAY						
	North of Avenue G	*55*	4.7	.00	6.0	6.0
	South of Avenue G	*55*	4.7	.00	6.0	6.0
DIVISION STREET						
	South of Avenue G	*55*	2.0	.16	2.5	2.7
	North of Avenue G	*55*	2.0	.08	2.6	2.7
10TH STREET						
	North of Avenue F	*55*	1.2	.02	1.5	1.5
	South of Avenue F	*55*	1.6	.18	2.0	2.2

APPENDIX E

BIOLOGICAL STUDY

VEGETATION AND WILDLIFE

I. BACKGROUND

This report discusses biological resources occurring near the City of Lancaster in north central Los Angeles County which could be affected by the proposed landfill expansion project and evaluates the probable effects of that project on those resources. The report contains two subsections: Background and Setting.

The **Background** subsection 1) identifies and defines specific **study areas** in and around the proposed project sites which were subjects of this analysis, and 2) presents the **methods** used for literature and field surveys.

The **Setting** subsection discusses the 1) site description; 2) **plant communities and wildlife habitats** that could be affected by project activities; 3) **regulatory framework** used to assess impacts to sensitive habitats, plants, and animals; 4) known and potentially occurring **sensitive habitats**, **plants**, and **animals** within the project region; and 5) results of special **studies of selected wildlife species**.

1. Study Areas

For the purposes of distinguishing the various areas of study discussed in this section the following definitions will apply:

- Expansion Areas -- either of two specifically identified project locations, "Eastern" or "Western" Expansion Area, described below in the Project Description. All proposed landfill expansion activities are intended to occur entirely within developed and undeveloped portions of these properties identified graphically on Figures 1 and 2.

- Vicinity -- includes all developed and undeveloped areas immediately outside identified property boundaries. In most cases these areas either abut a property boundary or occur within less than 0.5 miles of it.

- Region -- includes all areas within a radius of 3 to 5 miles around a proposed Expansion Area. This larger area is usually referred to in discussions of the probabilities for the occurrence of sensitive plants and migratory wildlife species on Expansion Areas or in their vicinity.

2. Methods

Several inventories of biological resources, assembled by the preparer of this report and others in the vicinity of the proposed projects, were consulted prior to the initiation of this project.[1,2,3,4] Prior to field surveys, a list of sensitive plants, plant communities, and animals was obtained from the California Natural Diversity Data Base.[5] This list was supplemented with information on sensitive plants from the California Native Plant Society Inventory.[6] The list of sensitive animals was expanded to include species of special concern to the State of California, the Audubon Society and other local organizations or agencies, using geographic distribution and habitat information obtained from a variety of sources.[7,8,9,10] This annotated list is provided in Appendix A.

Spring field surveys were conducted by a qualified biologist from April 18 through 22, 1994. Weather conditions were ideal during that period for the observation of wildlife and collection and identification of botanical specimens. Temperatures

ranged from the mid-50s to mid-90s ° Fahrenheit. Strong westerly winds, gusting at times to 35 mph began about midday, each day, becoming strongest by late afternoon on most days. During these surveys, proposed project sites in the Eastern and Western Expansion Areas were searched on foot for habitats that might be potentially useful to, or that were probably occupied by, wildlife species. Through the use of a topographically detailed, site plan map prepared from high-resolution aerial photographs (flown on February 27, 1992), at a scale if 1"= 200'and 2' contour intervals and walking of transects as a method of ground-truthing, Generalized Vegetation and Wildlife Habitat Maps were prepared (Figures 1 and 2).

Particular attention was given to any wetlands features and areas of natural vegetation communities that might be affected by the proposed project. Ponded areas and drainage canals were searched and seined for amphibians or their larvae.

Inventories of small mammals were obtained through the use of Sherman-type live traps operated for three consecutive nights in areas of suspected activity on each of the proposed expansion sites. Traps, baited with a mixture of oats, seeds and crushed walnuts, were set along runways and near burrow systems to maximize catch. Traps were checked each morning. Captives were identified, sexed, aged and released immediately at the site of capture. The locations of trapped areas in each expansion area are shown on Figures 1 and 2.

Additional special survey techniques, involving the deployment of infrared sensing, remotely triggered, 35 millimeter camera units, to photograph use of project sites by large nocturnal animals. Details of these special efforts are provided in Specific Target Species Surveys sections below. The location of remote camera units in each expansion area are shown on Figures 1 and 2.

All wildlife observed or identified through artifacts such as tracks, scats, burrows, or other definitive signs were recorded. Plants were identified to species, when blooms or other identifying characters were present. A list of all plant and animal species identified during field surveys, is provided in Appendix B. Included in this list are all animal species which could be reasonably expected to occur in the project region and the scientific names of most species referred to in the text of this report.[11,12,13]

II. SETTING

1. Site Description.

The Lancaster Landfill is located on the southwest corner of the intersection of 10th Street East and F Street approximately two miles northeast of the desert community of Lancaster, Los Angeles County, California. The specific location is designated as: Township 8 North, Range 12 West, SW 1/4 Section 25, and SE 1/4 Section 26 of the U.S.G.S. Rosamond Lake quadrangle (Figures 1 and 2). Zoning of the site and adjacent properties is Desert/Mountain 2 acres minimum (D-2-1).

Current land use within one mile of the existing landfill is open space. Some mobile homes and other small structures are located within a one mile radius of the site. No structures are located within 1,000 feet of the landfill boundary. The nearest is a small radio station approximately one-quarter mile to the west.

As presently proposed, the project involves expansion of the existing Lancaster Landfill, owned by Waste Management of California Inc. and operated by Waste Management of Lancaster, Inc., into two parcels of land located immediately east and west of the existing solid waste disposal facility. Covered refuse would eventually fill both expansion areas, excluding a 100 foot setback from property lines and easements which would be used for access roads and the placement of future monitoring wells.

The Western Expansion Area (WEA), about 62 acres in size, is located immediately west of the current disposal site within a fenced area which delimits its property boundary (Figure 1. The northern and eastern portions of the WEA, location of the existing disposal site and associated support buildings and facilities, are further disturbed by excavation from the daily cover borrow pit and storage of large dumpsters. The southwestern portion of the site is relatively undisturbed except for an access roadway, approximately 20 feet in width, which has been graded along the inside of the perimeter, chain-linked fence. Disturbed areas which are not cleared to bare soil, such as occurs in around the borrow areas, show early successional

growths of ruderal, weedy grasslands vegetation. The relatively undisturbed southwestern portion of the site is covered by a mixture of Shadscale Scrub with a few scattered Joshua Trees.

The 112 acre, Eastern Expansion Area (EEA) is located immediately east of the current disposal site. The EEA is generally undisturbed with the exception of a paved, model airplane landing field and access road, located in the southwestern portion of the site, and an access road and recently constructed ground water discharge system located along the south western project boundary (Figure 2). This linear pipeline and five associated wells returns to the underground aquifer approximately 140 gallons per minute of ground water collected from a treatment facility located near the existing landfill. Where undisturbed, the site is covered by a mixture of Shadescale and Joshua Tree dominated habitats which become more richly populated and of greater wildlife value toward the eastern, less disturbed half of the site.

Macro-topography of both parcels is generally level. Micro-topography consists of numerous hummocks, one to three fee t in height, interlaced in many areas with hardpan clay depressions and shallow washes between the hummocks. The EEA slopes slightly from 2312 feet in the northwest corner to 2325 feet in the southeast corner. Excluding the borrow pit, the WEA slopes only slightly from 2310 feet in the northwestern corner to 2319 feet in the southeastern corner.

The Antelope Valley is typically an environment where evaporation exceeds precipitation. High temperatures are common in summer, with the thermometer often reading up to 110-118o F. Average high temperature for the whole Mojave Desert area in July is generally 97° F.[14] A thirty-one year temperature record for the Palmdale station shows a temperature average extreme of 112° F. with a minimum reaching 3° F. Annual precipitation for the same period averaged 8.73 inches of rainfall. Low rainfall together with high temperatures means excessive evaporation potential. Special adaptations are required for animals and plants in order for them to survive under these xeric conditions.

2. Plant Communities and Wildlife Habitats.

The development of the Wildlife-Habitat Relationships System has provided resource managers and others with a system that defines communities more broadly than have other systems.[15] Another useful system is that of Holland and Keil, which provides useful community names at mid-hierarchy levels.[16]

The habitat type descriptions provided in this section are based primarily on the Wildlife-Habitat Relationships System and are also used in the discussion of wildlife. Community names are primarily those used in the Wildlife-Habitat Relationships System, but communities recognized by the California Natural Diversity Data Base (Holland, 1986) and Holland and Keil (1989) are given when necessary.[17,18] What follows is a brief discussion of the plant communities and wildlife habitats that could be affected by the proposed project. More detail is given where necessary in site-specific analysis sections.

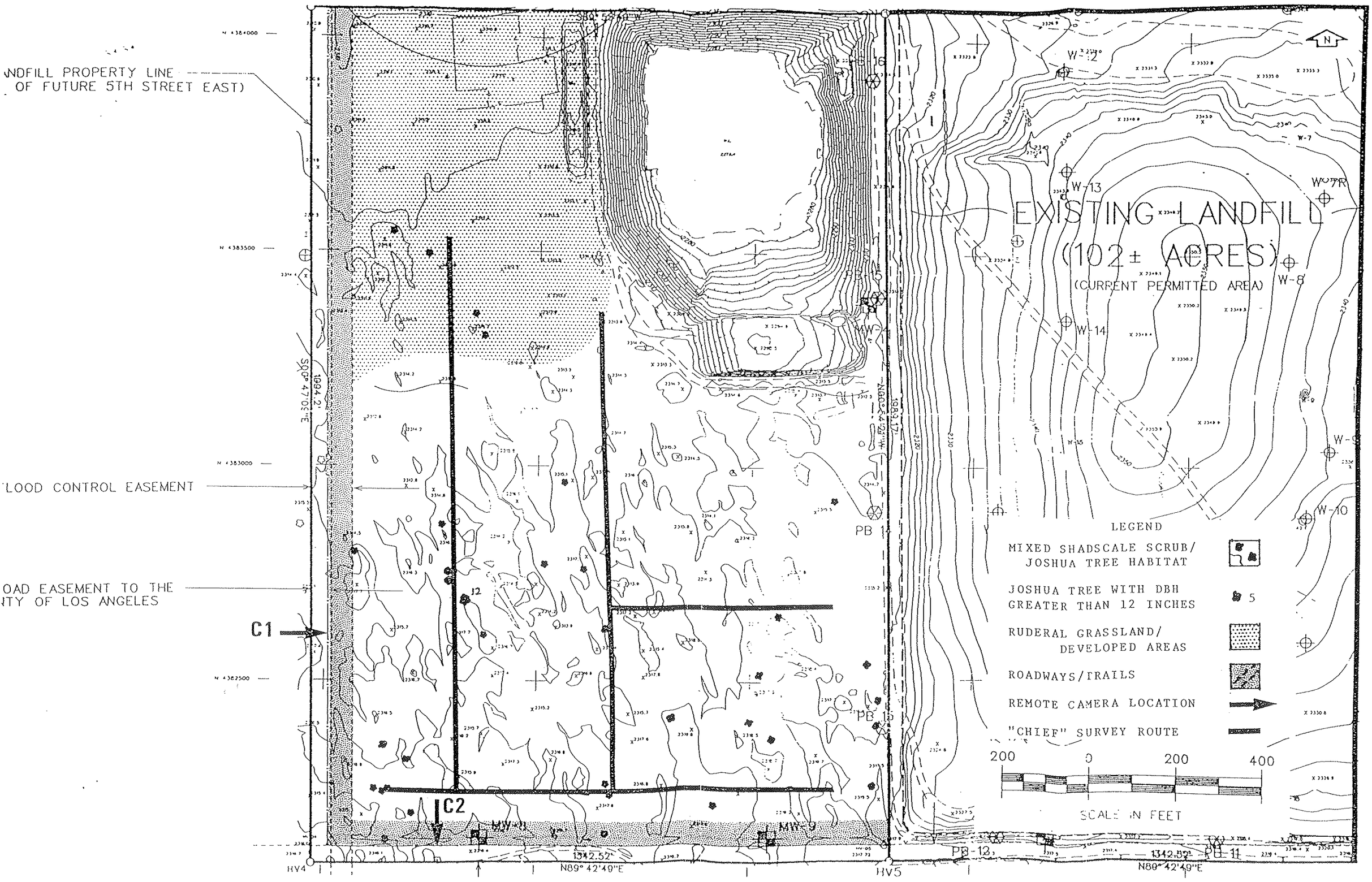
By using the Holland and Keil system, four habitat types or their remnants can be identified in the proposed expansion areas and their vicinity. The following are very brief descriptions of each habitat type and their general location and extent in and near the proposed project sites (Figures 1 and 2). They are arranged here in the order of their coverage with the greatest coverage listed first.

a. Upland Communities.

Shadscale Scrub

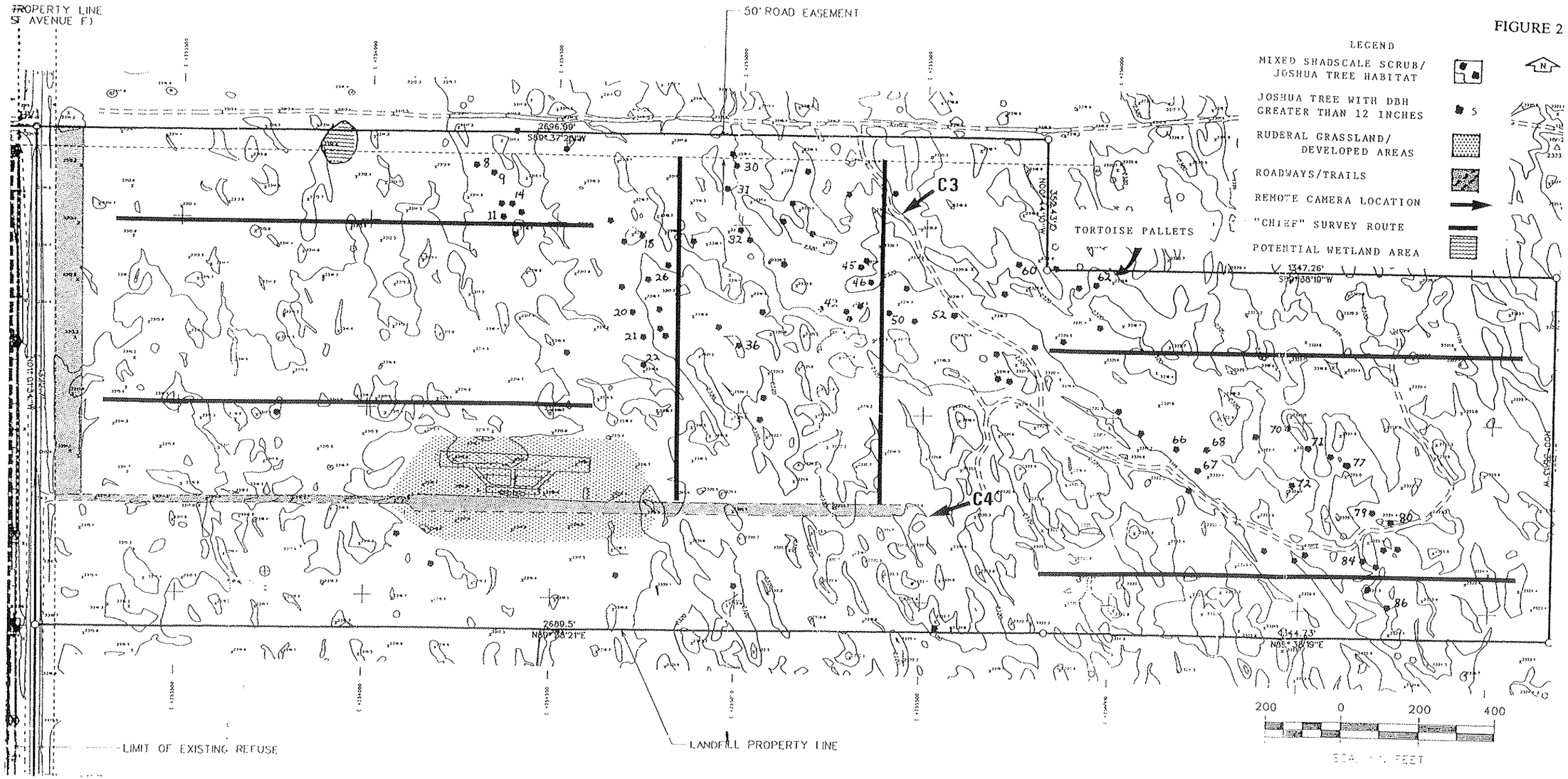
The dominant plant community on the project sites and in their vicinity is Shadscale Scrub that is interspersed with other plant communities such as Joshua Tree Woodland. This brushy vegetation type is dominated by Shadscale and Bud Sage in association with a wide variety of other shrubs, grasses and forbs which occur at higher elevations in the Mojave Desert. These low, intricately branched, often spiny shrubs are usually well-spaced with bare ground between dominant shrub species, on poorly-drained flats with heavy, somewhat alkaline soils.

FIGURE 1



NDFILL PROPERTY LINE
OF FUTURE 5TH STREET EAST)
LOOD CONTROL EASEMENT
OAD EASEMENT TO THE
NTY OF LOS ANGELES
C1
C2
EXISTING LANDFILL
(102± ACRES)
(CURRENT PERMITTED AREA)
W-12
W-13
W-14
W-8
W-10
W-7
W-7R
PB 14
PB 15
PB-12
PB-11
MW-8
MW-9
HV4
HV5
N89° 42'49"E
1342.52'
1994.2'
LEGEND
MIXED SHADSCALE SCRUB/
JOSHUA TREE HABITAT
JOSHUA TREE WITH DBH
GREATER THAN 12 INCHES
RUDERAL GRASSLAND/
DEVELOPED AREAS
ROADWAYS/TRAILS
REMOTE CAMERA LOCATION
"CHIEF" SURVEY ROUTE
200
0
200
400
SCALE IN FEET

FIGURE 2



PROPERTY LINE
ST AVENUE F)
50' ROAD EASEMENT
LEGEND
MIXED SHADSCALE SCRUB/ JOSHUA TREE HABITAT
JOSHUA TREE WITH DBH GREATER THAN 12 INCHES
RUDERAL GRASSLAND/ DEVELOPED AREAS
ROADWAYS/TRAILS
REMOTE CAMERA LOCATION
"CHIEF" SURVEY ROUTE
POTENTIAL WETLAND AREA
TORTOISE PALLETS
C3
C4
2696.00'
S89°37'20"W
1347.26'
S89°38'10"W
2689.5'
N89°38'21"E
1344.73'
N89°38'19"E
LIMIT OF EXISTING REFUSE
LANDFILL PROPERTY LINE
200
0
200
400

Because of the foraging, nesting and concealment values provided by this diverse plant community, wild use is great. Reptiles such as the California Whiptail, Sideblotched Lizard and Speckled Rattlesnake forage for insects and other small prey among its shrubs. A wide variety of small mammals, often specially adapted to the harsh, arid conditions, associated with this Mojave shrub community such as Antelope Ground Squirrels, Pacific and Merriam's Kangaroo Rats, Desert Cottontail Rabbits and Black-tailed Jackrabbits are common. Sage Sparrows, Loggerhead Shrikes and Common Ravens are a few of the birds encountered in this habitat.

Joshua Tree Woodland

The conspicuous Joshua Tree lends this plant community its "woodland" name, however, this tree is not usually dominant in a vegetative sense. Big Galleta Grass, for example, may be more important in terms of frequency, density, and biomass, with a wide variety shrub species crossing into the woodland from adjacent habitats. Joshua Trees occur in a variety of well-defined desert plant communities and, therefore, it should not be assumed that the community is a Joshua Tree woodland based on the presence of this plant.

This community typically occurs on sandy, loamy, or well-drained, gentle, alluvial slopes at elevations between 2,500 and 5,000 feet. The Joshua Tree is usually the only arborescent species present in these communities, however, in most areas, the shrub understory species actually make up a greater percentage of the cover. Associated species characteristically include Creosote Bush, Burro Bush, and Boxthorn.

Joshua Trees often offer the most suitable and at times, only, nesting and perching sites for desert wildlife species. As such they are very important as wildlife habitat components. Nests of Mourning Doves, Loggerhead Shrikes, and Common Ravens were found in both the EEA and WEA in these trees. Red-tailed Hawks and Common Barn Owls were also observed to use them a perches from which to hunt or digest their prey.

Developed Habitats

Developed habitats are usually landscaped areas created and maintained by man. Eucalyptus trees and ornamental shrubs have been planted along roadways and around buildings within the developed areas of the WEA. Many cleared areas are either paved or graveled to prevent vegetation growth and erosion.

Unpaved areas, which have been cleared of vegetation, are dominated by introduced grasses and other herbaceous plants that are considered characteristic of the "weedy" ruderal vegetation of heavily disturbed areas in the California urban environment. In more mesic locals, these areas might be classified as non-native grasslands. However, in this area, where the growing season is extremely short, the scattered condition of these exotic species do not always permit the proper use of this definition. Average square foot densities of plant cover in these "grassland" areas on the project sites was usually less than 35 per cent, as measured during casual visual measurements.

Areas in both the EEA and WEA, which have been cleared of native vegetation and permitted to revegetate, contain a species mix dominated by non-native annual grasses and forbs including Tansey Mustard, Russian Thistle, Downey Chess, Six-weeks Fescue and Wild Barley.

Ruderal grassland provides little in the way of wildlife shelter except for ground-dwelling animals. Nonetheless, small mammals such as mice, gophers, and ground squirrels do occur and they, in turn, provide prey for foxes, snakes, and birds-of-prey such as the Red-tailed Hawk and American Kestrel. Grasses and thistles provide food for many seed-eating birds. In this area Kit Foxes, Coyotes and other large mammals are known to use the wildlife habitat provided in disturbed areas.

b. Wetlands Communities

Alkali Meadow

Wetlands of this type occur in low-lying desert areas on fine-textured, more or less permanently moist, alkaline soils, where seasonal ponding of runoff occurs. This habitat is found to intergrade with Great Basin Sagebrush, Shadscale Scrub, Great Basin Grassland or, on drier, more alkaline soils with Desert Chenopod Scrub habitats. Excellent examples of this habitat type occur at a number of locations in the Lancaster area.

Wildlife commonly utilizing these desert meadow habitats include year-round resident birds such as Mallards, American Coots and Killdeers. These are joined during the winter by large numbers of migratory waterfowl and shorebirds traversing the Pacific flyway including the Long-billed Dowitcher, Black-necked Stilt, and Least Sandpiper as common visitors.

3. Regulatory Framework

a. Regulations Involving Sensitive Habitats

Sensitive habitats are those that are becoming more restricted in California because of their conversion and disturbance, usually for agriculture and urban development. Typically, these habitats include wetlands, riparian zones, native bunchgrass grasslands, and some woodlands and forests. Sensitive habitats may also include those habitats that could support State- or federally-listed plant or animal species. Regional and local regulations and ordinances may also define sensitive habitats, and may include tree or creek protection ordinances that have been adopted by many cities and counties.

Wetlands

Section 404 of the federal Clean Water Act requires that a permit from the U.S. Army Corps of Engineers be issued in order to discharge fill into "waters of the United States" or jurisdictional wetlands. Jurisdictional wetlands are wetlands that are regulated by the U.S. Army Corps of Engineers. The U.S. Environmental Protection Agency also has authority over wetlands and may veto a Corps of Engineers permit. Projects that would fill more than 10 acres require an individual permit and would be subject to a complete environmental review. Projects that would fill 10 acres or less may be eligible for a Nationwide Permit and would not require the same level of review as an individual permit.

The California Department of Fish and Game also exercises some control over wetlands through Sections 1601 to 1603 of the California Fish and Game Code. These sections authorize the Fish and Game Department to put conditions on any project that would significantly alter natural stream flow or that would alter the bed or bank of a stream. Under this authority, the Department enters into a Streambed Alteration Agreement with the landowner. Conditions of such agreements often function as mitigation measures in environmental documents.

Joshua Tree Woodland

The loss of this habitat type, and especially large Joshua Trees, is considered by many desert communities to be of sufficient importance that local protective legislation has been enacted in the form of ordinances to regulate development which could remove them. High density stands of Joshua Tree Woodland and stands with particularly large specimens have been designated as unusual plant assemblages by the U.S. Bureau of Land Management.

b. Regulations Involving Sensitive Plants and Animals.

For the purposes of this report, a plant or animal is considered a sensitive species if it fits into one or more of the following categories:

- It is listed as Endangered (E) or Threatened (T), according to the provisions of Section 4 of the Federal Endangered Species Act.[19] The U.S. Fish and Wildlife Service (USFWS) administers the act.
- It is listed as Endangered (E), Threatened (T), or Rare (R) according, to the California Endangered Species Act.[20] The California Department of Fish and Game (CDFG) administers the State act.
- It is a candidate for federal listing (C2) or State listing (C). While not protected by either Federal Endangered Species Act or California Endangered Species Act, some State and federal agencies manage candidate species to prevent them from becoming listed.
- It is considered by the California Department of Fish and Game to be a California Species of Special Concern.[21] The California Department of Fish and Game often requests that these animal species be considered in the impact section of environmental documents.

- It is a plant species that occurs in the California Native Plant Society Inventory.[22] Some State and federal agencies request that California Native Plant Society List 1 and List 2 plants be considered in the impact section. For instance, California Department of Fish and Game often asks that California Native Plant Society List 1B species be included in rare plant surveys. Less frequently, an agency may request the inclusion of plants on the California Native Plant Society List 3 and List 4.

- It is considered Rare, Threatened, or Endangered under Section 15380(d) of the California Environmental Quality Act Guidelines.[23] This section states, "A species not included in any listing identified in subsection (c) shall nevertheless be considered to be rare or endangered if the species can be shown to meet the criteria in subsection (b)." Thus, according to the California Environmental Quality Act, a species may be considered endangered if its survival is in jeopardy due to loss or change of habitat (California Environmental Quality Act Guidelines Section 15380(b)(1)).

Many federal candidate (C1 and C2) plant species are also included on the California Native Plant Society List 1B, and most State and federal resource agencies have policies that extend some protection to these species. In considering impacts to biological resources, it is important to include impacts and potential impacts to species on the other California Native Plant Society lists because some of these species may be protected under the California Environmental Quality Act, as described above.

By defining sensitive species in this manner, confusion over the term *rare and endangered* is avoided because, for the purposes of this EIR, the terms *Rare*, *Threatened*, and *Endangered* apply only to species listed as such by the Federal or California Endangered Species Acts. Sensitive species can be protected under provisions of the Federal or California Endangered Species Acts, California Environmental Quality Act, or through policies issued by other State or federal agencies.

Loss of a sensitive species or its habitat is known as *take*, which means to harass, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. "Taking" of a federally or State-listed species is always considered significant, while take of other sensitive species may be considered significant depending on the relative sensitivity of the species or its habitat, or the magnitude of the "take." Permits to collect, remove, or destroy listed species are known as incidental take permits and are issued under strict guidelines by the U.S. Fish and Wildlife Service or the California Department of Fish and Game as authorized by either Federal or California Endangered Species Acts. "Taking" of federal or State candidate species or other sensitive species may also be considered significant under California Environmental Quality Act Section 15380(d).

If project activities require permits from a federal agency, and federally-listed species are likely to be affected, a consultation between that agency and the U.S. Fish and Wildlife Service is required by Section 7 of the Federal Endangered Species Act. Section 2090 of the California Fish and Game Code requires that State lead agencies consult with California Department of Fish and Game if the project is likely to jeopardize the continued existence of State-listed Endangered or Threatened species. Section 2095 of the Fish and Game Code encourages the Fish and Game and U.S. Fish and Wildlife Service to work together to develop a coordinated biological opinion regarding sensitive species.

4. Sensitive Habitats, Plants and Animals

a. Sensitive Habitats in the Project Vicinity

Joshua Tree Woodland

Both proposed expansion areas contain stands of young and mature (DBH greater than 12 inches) Joshua Trees. A few very large specimens, more than 20 feet in height, are scattered throughout the northeastern portion of the EEA. The approximate locations of all Joshua Trees are indicated on Figures 1 and 2. Tables 1 and 2 list the approximate height, diameter at breast height (DBH), and general vigor or health of each Joshua Tree in each expansion area. Trees with DBH in excess of 12 inches are indicated by number on Tables 1 and 2.

Wetlands

Wetland habitats, which may be under the jurisdiction of the U.S. Army Corps of Engineers, have been described within project boundaries. A small, ponded area was described along the northern boundary of the EEA, about 750 feet east of Challenger Way, during the preparation of a Section 404 Wetland Delineation for the proposed expansion areas in 1993.[24] An aerial photograph taken on January 19, 1992 was used to determine the extent of inundation and wetland hydrology of this feature. The presence low matrix chroma soils and scattered occurrences of hydrophytic vegetative species provided some indications of the jurisdiction nature of the feature. However, due to the difficulty in establishing the exact extent of hydrophytic vegetation and hydric soil, the entire area inundated in the January 19, 1992 aerial photograph was assumed to be a jurisdictional wetland. This area was about 0.4 acres in size.

This low-lying feature, however, is a very marginal, barely discernable example of Desert Meadow habitat. Only two hydrophytic plant species, Desert Saltgrass, a Facultative Wet [FACW] and Alkali Sacaton, a Facultative Plus [FAC+], were found in association with this seasonally ponded feature and they were not distributed in such a way that the shape and/or extent of the feature could be accurately discerned.[25]

b. Plant Species Of Special Concern

A search of the California Natural Diversity Data Base for the Lancaster East, Lancaster West, Rosamond, and Rosamond Lake USGS 7.5 minute quadrangles produced a list of two species that are ranked as federal candidate species. Both species, Parish's Alkali Grass, a federal Candidate for listing (C1), taxa for which sufficient biological information is available to support a proposal to list it as federally Threatened or Endangered, and Alkali Mariposa Lily, (C2), a taxon which may warrant listing, but for which substantial biological information to support listing is currently lacking, are reported to occur in alkali meadow habitat in the project vicinity. Neither is known to be present within proposed project site boundaries and none were recorded during botanical surveys for this report.

Only on small, poorly defined area of marginal habitat of the type required by this species occurs near the northern property boundary of the EEA. None of these species were recorded by botanists during spring-time surveys to determine the extent of wetlands features at that location in 1993.[26] None of these species was identified during surveys for this report. Summaries of the status, habitat requirements and local occurrences of all sensitive plant species are provided in Appendix B.

c. Wildlife Species Of Special Concern

No Threatened or Endangered wildlife species are known to reside on the project site and none were observed during the wildlife surveys for this report. However, a search of the California Natural Diversity Data Base for sensitive wildlife species lists one federally Threatened species, the Desert Tortoise, which is reported to occur in project region.

Indications of the occasional use of the area by this species, the presence at to locations of shallow burrows or "pallets" of the type characteristically used by this reptile for shelter from mid-day sun, were found at two locations within the northeastern portion of the EEA (Figure 2). These pallets, excavated under shrubs, were old and appeared to have been constructed during previous seasons. No fresh sign, such as tracks or scat, was found while walking parallel transects through both proposed project sites to complete a Cumulative Human Impact Analysis recommended by the CDFG for studies involving potential impacts to various desert biota. Evaluation Forms prepared for this work are included as Appendix C.

The project sites are also within the known range of the Mohave Ground Squirrel, a State Threatened and federal Candidate 2 species. This diurnal ground squirrel is active above ground in the spring and early summer with emergence dates from March to June, depending on elevation, and would have been expected to be seen at some time during the 5 days of surveys for this report if it was present within project boundaries.
Creosote Bush, a species with which the Mohave Ground Squirrel is most often associated, is rare within project boundaries. Desert scrub habitats available, however, appear to provide most of the requirements for this species, although the density of the shrubs is greater than is typically found in their preferred habitat.

Table 1. Measurements and Vigor of Joshua Trees (*Yucca brevifolia*) in the Western Expansion Area.

No.	HT'	DBH"	CODE	NO.	HT'	DBH"	CODE	NO.	HT'	DBH"	CODE
1	10	10	A	13	8	10	C	25	5	5	A
2	12	11	B	14	5	6	A	26	4	4+4	A
3	7	10	A	15	11	9	D	27	7	8	A
4	4	6	A	16	15	10	A	28	7	8	A
5	3	5	A	17	6	6	A	29	12	11	A
6	9	5	A	18	20	12	B*	30	6	10	A
7	4	5	A	19	9	8	A	31	5	9	A
8	14	10	A	20	4	5	A	32	9	10	A
9	10	9	A	21	4	4	A	33	7	9	B
10	3	5	C	22	20	10	B	34	4	7	A
11	15	10	A	23	15	10	B	35	4	6	A
12	15	11	B	24	4	4	A	36	4	7	A

HT = Approximate Height in feet
DBH = Diameter at Breast Height in inches
CODE = Health of tree
- A = Vigorous growth, no dead portions
- B = Less than 50% dead or dying portions
- C = More than 50% dead or dying portions
- D = Completely dead tree

* = Specimen exceeding local ordinance protection limit of 12" DBH

Table 2. Measurements and Vigor of Joshua Trees (*Yucca brevifolia*) in the Eastern Expansion Area.

No.	HT'	DBH"	CODE	NO.	HT'	DBH"	CODE	NO.	HT'	DBH"	CODE
1	5	6	A	31	6	18	B*	61	-	9	D
2	4	6	A	32	6	15	A*	62	18	14	B*
3	7	8	B	33	3	10	A	63	8	10	A
4	4	7	A	34	3	10	A	64	8	9	A
5	4	7	A	35	3	9	B	65	8	10	A
6	4	7	A	36	3	14	A*	66	20	13	A*
7	12	10	D	37	3	10	A	67	20	12	C*
8	18	12	A*	38	2	9	A	68	20	12	B*
9	25	18+15	A*	39	3	8	A	69	8.	12	A
10	10	10	B	40	2	8	A	70	12	13	B*
11	20	17+12	A*	41	3	8	B	71	15	13	B*
12	5	8	A	42	8	15	C*	72	8+8	11+12	A*
13	8	10	A	43	2	15	D	73	8	9	A
14	12	13	A*	44	3	10	A	74	10	9	A
15	10	9	A	45	5	12	B*	75	9	8	A
16	8	10	A	46	2	13	C*	76	10	9	A
17	4	10	A	47	2	10	A	77	12	10	A*
18	9	13	A*	48	5	9	A	78	9	10	B
19	18	11	B	49	6	10	D	79	8	12	A*
20	19	12	A*	50	4	12	C*	80	10	12	A*
21	18	17	A*	51	2	6	D	81	8	9	B
22	10	15	A*	52	6	20	B*	82	10	10	A
23	22	10	A	53	3	11	C	83	14	10	A
24	5	10	A	54	3	11	A	84	8	14	A*
25	5	8	A	55	6	9	A	85	10	11	A
26	8	12	A*	56	2	10	B	86	12	14	A*
27	12	10	A	57	2	10	A				
28	11	10	A	58	4	11	A				
29	10	11	A	59	2	11	A				
30	25	20	B*	60	4	13	A*				

HT = Approximate Height in feet
DBH = Diameter at Breast Height in inches
CODE = Health of tree
A = Vigorous growth, no dead portions
B = Less than 50% dead or dying portions
C = More than 50% dead or dying portions
D = Completely dead tree
* = Specimen exceeding local ordinance protection limit of 12" DBH

White-tailed Antelope Squirrels were observed on many occasions throughout both the EEA, where they were common, and the WEA. Mohave Ground Squirrels occur sympatrically with White-tailed Antelope Squirrels, and while they are competitively superior, they lack adaptations which allow the Antelope Ground Squirrel to continue activity at higher temperatures and are, therefore, much less common where the two species occur together.

Three to five Antelope Ground Squirrels were observed per hour of observation time in the Eastern Expansion Area between 8 am and 10 am and 4 pm to 7 pm during timely, springtime surveys conducted from April 18 through 22. Less frequent encounters with this species occurred during midday hours. No Mohave Ground Squirrels were observed during these surveys.

The negative findings of these five days of 1994 springtime surveys corroborate the negative findings obtained during two, 500-trap-day, live-trapping efforts conducted on the WEA in April and May of 1990.[27] There were no captures or observations of Mohave Ground Squirrels. Based on the results of these efforts and visual surveys over a ten day period, the 1990 report concluded that the WEA does not appear to be occupied by Mohave Ground Squirrels.

The data base also records the occurrence in the project region of two additional federal C2 Candidate species for federal listing, the Tricolored Blackbird and San Diego Horned Lizard. Habitats available within project boundaries could support the horned lizard. Careful searches and the walking of transects during 5 days of timely, spring-time surveys failed to record this reptile. No habitat of the type required by Tricolored Blackbirds is available anywhere within or in the vicinity of the proposed project sites.

Two additional data base species, regarded by the California Department of Fish and Game as Species of Special Concern, Short-eared and Burrowing Owls have reported occurrences in the project region. Marginal habitats are available for these birds within project boundaries but none were recorded during surveys for this report.
Several wildlife species included in various federal or State categories of sensitivity or of special concern to the CDFG and/or to the Audubon Society were encountered within project boundaries. These include California Gull, Common Barn Owl, Loggerhead Shrike, and Horned Lark all recorded at several locations on both EEA and WEA sites. A summary of the status, habitat requirements, and natural history of all sensitive wildlife species is provided in Appendix B.

5. Special Studies of Selected Wildlife Species

Surveys which involved inventories of specific wildlife species, requiring the use of specialized field techniques, included intensive searches for Mohave Ground Squirrels and Desert Tortoise, and inventories of Common Ravens and Coyotes. The following are descriptions of the field protocols and results of each of these specially requested surveys.

Mohave Ground Squirrel (*Spermophilus mohavensis*). In addition to daily surveys for this rare squirrel, Cumulative Human Impact Assessments were completed for each of the proposed expansion area parcels. Data for these assessments were compiled on Cumulative Impact Evaluation Forms during surveys walked along routes shown in Figures 1 and 2. Survey techniques and interpretive evaluations of habitat quality and human impacts were those recommended by the California Department of Fish and Game for evaluating potential Mohave Ground Squirrel (MGS) habitat.[28]

The Cumulative Human Impact Evaluation Procedure assesses ten human impacts which can be used to calculate a Cumulative Human Impact Rating for a parcel of land. Human impacts are evaluated through the identification and quantification by trained field biologists of the amount of human disturbance caused by: 1) OHV use; 2) roads; 3) horse and/human foot travel; 4) dog activity; 5) urbanization; 6) garbage dumping; 7) mining activities; 8) utilities; 9) grazing, and; 10 shrub disturbance. Copies of survey tally sheets and habitat evaluation forms are provided in Appendix C.

The Cumulative Impact Rating (CIR) of the undeveloped portion of the WEA, approximately 44 acres, was 22 (Figure 1). This level of disturbance indicates moderate human impacts. Antelope Ground Squirrels were observed during surveys in this area, indicating their ability to adapt to this level of human disturbance. The numbers of these animals, however, was much lower (one to two sightings per day) than were seen in the EEA.

Because of its size (112 acres) and the recommendation in the CDFG protocol that surveyed areas not exceed 40 acres in size, the EEA was divided into three sections, EEA-1 the western most 45 acres, EEA-2 the middle 39 acres, and EEA-3

the eastern most 28 acres (Figure 2). The CIR of these three study areas was 12, 12, and 8 respectively with an overall average CIR for the EEA at 10.7.

This CIR suggests a relatively low level of human impact on the overall area with the greatest affects to the habitat resulting from the development and operation of the small (approximately 2 acre) model airplane field located near the south central portion of EEA-1 and 2. Habitat conditions get progressively better at greater distances from this development, with the least disturbance observed in the eastern portion of the site.

Coyotes (*Canis latrans*) Because of the potential for this common, native canid to forage in the expanded waste disposal facility, potentially exposing some refuse to subsequent foraging by the Common Raven, a special survey effort was undertaken to assess the use of the landfill site by Coyotes. Specially developed, two-piece photographic systems consisting of an Olympus Infinity Twin, high speed 35mm camera, coupled with an infrared transmitter and receiver were set out at locations in both expansion areas indicated in Figures 1 and 2. Interruption of an infrared beam transmitted across a game trail triggers these specially designed cameras. Infrared light is not visible to the mammalian eye so animals are not aware of the "photographic trap" until the flash occurs. This is apparently not a deterrent to use of the area because photographed animals return to the baits and are photographed repeatedly.

The use of these cameras permits the remote, photographic census of all nocturnal animals interrupting the infrared beam. Repeated travel along a game trail can be sequentially recorded up to 1000 incidences per night or until the film supply is exhausted. Information is stored by date and time-to-the-minute on each photograph and is also recoverable as a tape printout from the cameras' computer.

Four remote cameras were deployed at locations shown in Figures 1 and 2. to assess the number and frequency of visits by Coyotes to the landfill site and vicinity. Cameras were in operation from April 19 to May 18 (29 days).

In the EEA, Jackrabbits were photographed 6 times on 5 different nights. Coyotes were photographed twice on two nights (April 27 and May 1) in the northeastern portion of the EEA (Camera 3). This recording station was set to intersect an old roadway where fresh Coyote scat indicated its use as a regular game trail. No other animals were recorded.

In the WEA, Jackrabbits were photographed 17 times on 10 different nights. No other animals were recorded. Cameras in this area were set to intercept animals entering the landfill enclosure via two shallow burrows under the chain-linked fencing. These were the only access routes into the enclosure.

From this photographic survey evidence, Coyotes are shown to be present in the project vicinity but not in unexpectedly high numbers. It does not appear that they enter the WEA under the fencing, though it is possible that they do so with such low frequency that they were not recorded during this 29 day survey period.

Common Raven (*Corvus corax*) Inventories of this species on the working face and in the immediate vicinity of the existing landfill site were obtained from time-constrained counts of all Ravens observed during thirty-minute periods in the morning (0800-0900), at mid-day (1100-1300) and in the evening (1700-1900) each day for 5 days. Counts were made from a fixed position (blind) using hand-held binoculars. Every five minutes, during each half hour census period, the horizon was scanned slowly in a clock-wise direction through a full 360 degrees and all Ravens counted. The results of these efforts are provided in Table 2.

These results indicate that about 20-25 per cent of the total population of Ravens which occur in the project vicinity are present on the active landfill area throughout each day. It is not until the late afternoon or evening hours, following the departure of the work crews, that most of the population convenes to scavenge the dump site. When this occurs, usually between the hours of 4:00-7:00 pm, as many as 160 Ravens were counted in a single survey (Table 3).

These birds find sufficient edible refuse around the margins of the tarp to attract them to the area despite efforts by the work crews at the end of each day to scare them away using explosive devices. Ravens and gulls scatter following the discharge of these devices but Ravens begin returning to the vacated dump site within 5 minutes, and most are again on the site within 10 minutes. Gulls often leave the area at this time of the evening, probably to go to roost at aquatic habitats (e.g., ponds, canals or reservoirs) somewhere in the vicinity.

The location of two active raven nests, in Joshua Trees in the EEA and WEA, are shown in Figures 1 and 2.[29] Birds attending these nests were observed as they returned from the direction of the landfill with items of garbage to feed their nestlings. It is probable that a high concentration of nesting Ravens has developed in the vicinity as a direct result of the easily accessible food source available at the landfill.[30]

It is probable that this unnatural concentration of Ravens would have a depressing effect on local stocks of the normal foraging items selected by this species under natural conditions.[31] Ravens usually glean on the ground to collect a wide variety of plant materials such as nuts, grains and berries as well as carrion. They are also adept at searching for food while in flight and will pursue and take small prey including birds eggs, reptiles (lizards, snakes, and young tortoises) mice and other small mammals as large as rabbits.[32]

Table 3. Ravens recorded during time-constrained counts conducted from a fixed blind.

DATE	TIME		
	MORNING (0800-1000 HRS)	MID-DAY (1100-1300 HRS)	EVENING (1700-1900 HRS)
April 18	-	-	66 (58-73)
April 19	18* (13-28)	16 (5-42**)	98 (81-103)
April 20	21 (10-28)	9 (3-26**)	93 (72-131)
April 21	25 (20-30)	34 (23-41)	143 (124-160)
April 22	14 (8-18)	31 (26-37)	-

* = Average number of ravens counted during six, binocular-aided, horizon sweeps taken at 5-minute intervals for 30 minutes from a fixed blind.

** = Mixed raven and gull flock "wheeling" above the landfill.

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APPENDIX A

APPENDIX A

POTENTIAL AND OBSERVED PLANT AND WILDLIFE SPECIES IN THE LANCASTER REGION LOS ANGELES COUNTY, CALIFORNIA

Common Name		Scientific Name
PLANTS		
ASTERACEAE		
Sand Bur	E	*Ambrosia acanthicarpa*
Bud Sage	E	*Artemesia spinescens*
Big Sagebrush	E	*A. tridentata*
Mojave Rabbit Brush	E,W	*Chrysothamnus nauseosus* ssp. *mohavensis*
Golden Bush	E	*Isocoma acradenia*
Goldfields	E,W	*Lasthenia californica*
Pineapple Weed	E,W	*Matricaria matricoides*
Snake's Head	E	*Malacothrix coulteri*
Cotton-thorn	E	*Tetradymia spinosa*
BORAGINACEAE		
Checkered Fiddleneck	E,W	*Amsinkia tessellata*
Popcorn Flower	E	*Cryptantha* sp.
Pectocarya	E,W	*Pectorya heterocarpa*
Alkali Plagiobothrys	E,W	*Plagiobothrys leptocladus*
BRASSICACEAE		
Tansy Mustard	E	*Descuriana pinnata*
Mustard	E,W	*D. sophia*
Pepper-grass	E,W	*Lepidium flavum*
Veiny Pepper-grass	W	*L. dictyotum*
Pepper-grass	W	*L. perfoliatum*
CHENOPODIACEAE		
Four-winged Saltbush	E	*Atriplex canescens*
Shadscale	E,W	*A. confertifolia*
Spiny Hop-sage	E,W	*Grayia spinosa*
California Summer-cypress	E,W	*Kochia californica*
Russian Thistle	E,W	*Salsola tragus*
EPHREDRACEAE		
Nevada Joint Fir	E	*Ephedra nevadensis*
FABACEAE		
Locoweed	E	*Astragalus* sp.

Common Name		Scientific Name
GERANIACEAE		
Heron's Bill Filaree	E,W	*Erodium cicutarium*
Large-flowered Stork's Bill	E	*E. taxanum*
HYDROPHYLLACEAE		
Yellow Throats	E,W	*Phacelia freemontii*
LILIACEAE		
Joshua Tree	E,W	*Yucca brevifolia*
ONAGRACEAE		
Mojave Sun Cup	E	*Camissonis campestris*
Sun Cup	E	*C. claviformis*
POACEAE		
Downy Chess	E,W	*Bromus tectorum*
Desert Saltgrass	E	*Distichlis spicata* var. *stricta*
Big Galleta	E	*Hilaria rigida*
Wild Barley	E,W	*Hordeum murinum*
Alkali Bluegrass	E,W	*Poa secunda*
Schismus	E,W	*Schismus arabicus*
Alkali Sacaton	E,W	*Sporobolus airoides*
Six-weeks Fescue	E,W	*Festuca octoflora*
POLEMONIACEAE		
Gilia	E	*Gilia hutchinsifolia*
Tricolored Gilia	E	*G. tricolor*
SCROPHULARIACEAE		
Desert Paintbrush	E	*Castilleja angustifolia*
SOLANACEAE		
Anderson Thornbush	E,W	*Lycium andersonii*
TOTAL	43	
ANIMALS		
MAMMALS		
Desert Shrew		*Notiosorex crawfordi*
Fringed Myotis		*Myotis thysanodes*
California Myotis		*M. californicus*
Western Pipistrelle		*Pipistrellus hesperus*
Big Brown Bat		*Eptesicus fuscus*
Spotted Bat		*Euderma maculatum*
Townsend's Big-eared Bat		*Plecotus townsendii*
Pallid Bat		*Antrozoas pallidus*
Brazilian Free-tailed Bat		*Tadarida braziliensis*
Feral House Cat	W	*Felis domesticus*
Bobcat		*Lynx rufus*
Kit Fox	E	*Vulpes macrotis*
Gray Fox		*Urocyon cinereoargenteus*
Coyote	E	*Canis latrans*

Common Name		Scientific Name
Domestic Dog	E,W	*C. domesticus*
Badger		*Taxidea taxus*
Western Spotted Skunk		*Spilogale gracilis*
Panamint Chipmunk		*Tamias panimintinus*
White-tailed Antelope Squirrel	E,W	*Ammospermophilus leucurus*
Mojave Ground Squirrel		*Spermophilus mohavensis*
California Ground Squirrel	E	*S. beecheyi*
Botta's Pocket Gopher	E,W	*Thomomys bottae*
Little Pocket Mouse		*Perognathus longimembris*
San Joaquin Pocket Mouse		*P. inornatus*
Long-tailed Pocket Mouse		*P. formosus*
Desert Pocket Mouse		*P. penicillatus*
Chisel-toothed Kangaroo Rat		*Dipodomys microps*
Pacific Kangaroo Rat	E	*D. agilis*
Panamint Kangaroo Rat		*D. panamintinus*
Desert Kangaroo Rat		*D. deserti*
Merriam's Kangaroo Rat	E	*D. merriami*
Western Harvest Mouse		*Reithrodontomys megalotis*
Cactus Mouse		*Peromyscus eremicus*
Deer Mouse	E,W	*P. maniculatus*
Canyon Mouse		*P. crinitus*
Brush Mouse		*P. boylii*
Pinon Mouse		*P. truei*
Southern Grasshopper Mouse		*Onychomys torridus*
Desert Woodrat		*Neotoma lepida*
Dusky-footed Woodrat		*N. fuscipes*
California Vole	W	*Microtus californicus*
House Mouse	W	*Mus musculus*
Desert Cottontail	E,W	*Sylvilagus audubonii*
Black-tailed Jackrabbit	E,W	*Lepus californicus*
TOTAL	14	
AMPHIBIANS		
Western Toad	W	*Bufo boreas*
Pacific Tree Frog	W	*Hyla regilla*
Bullfrog		*Rana catesbeiana*
TOTAL	2	
REPTILES		
Desert Tortoise	E	*Gopherus agassizi*
Banded Gecko		*Coleonyx variegatus*
Desert Iguana		*Dispsosaurus dorsalis*
Chuckwalla		*Sauromalus obesus*
Zebra-tailed Lizard		*Callisaurus draconoides*
Desert Horned Lizard		*Phrynosoma platyrhinos*
Mojave Black-collared Lizard		*Crotaphytus bicinctores*
Long-nosed Leopard Lizard		*Gambelia wislizenii*
Desert Spiny Lizard	E,W	*Sceloporus magister*
Western Fence Lizard		*S. occidentalis*
Side-blotched Lizard	E,W	*Uta stansburiana*

Common Name		Scientific Name
Long-tailed Brush Lizard		*Urosaurus graciosus*
Desert Night Lizard		*Xantusia vigilis*
Western Whiptail	E,W	*Cnemidophorus tigris*
California Legless Lizard		*Anniella pulchra*
Western Blind Snake		*Leptotyphlops humilis*
Rosy Boa		*Lichanura trivirgata*
Spotted Leaf-nosed Snake		*Phyllorhynchus decurtatus*
Coachwhip		*Masticophis flagellum*
Western Patch-nosed Snake		*Salvadora hexalepsis*
Glossy Snake		*Arizona elegans*
Pacific Gopher Snake		*Pituophis melanoleucus*
Common Kingsnake		*Lampropeltis getulus*
Long-nosed Snake		*Rhinocheilus lecontei*
Western Shovel-nosed Snake		*Chionactis occipitalis*
Southwestern Black-headed Snake		*Tantilla hobartsmithi*
Lyre Snake		*Trimorphodon biscutatus*
Night Snake		*Hypsiglena torquata*
Speckled Rattlesnake	W	*Crotalus mitchelli*
Sidewinder		*C. cerastes*
Mojave Rattlesnake		*C. scutulatus*
TOTAL	5	
BIRDS		
Turkey Vulture (s)		*Cathartes aura*
Cooper's Hawk (w)		*Accipiter cooperi*
Sharp-shinned Hawk (w)		*A. striatus*
Northern Harrier (w)		*Circus cyaneus*
Red-tailed Hawk	E,W	*Buteo jamaicensis*
Golden Eagle		*Aquila chrysaetos*
Prairie Falcon		*Falco mexicanus*
American Kestrel	E,W	*F. sparverius*
Gambel's Quail		*Callipepla gambelii*
California Quail		*C. californica*
Chukar		*Alectoris chukar*
Mourning Dove (s)	E,W	*Zenaidura macroura*
Killdeer	W	*Charadrius vociferus*
Western Gull	W	*Larus occidentalis*
Herring Gull	W	*L. argentatus*
California Gull	W	*L. californicus*
Greater Roadrunner		*Geococcyx californianus*
Western Screech Owl		*Otus asio*
Great Horned Owl		*Bubo virginianus*
Barn Owl	E	*Tyto alba*
Burrowing Owl		*Athene cunicularia*
Common Poorwill		*Phalaenoptilus nuttallii*
Lesser Nighthawk (s)		*Chordeiles acutipennis*
White-throated Swift	E	*Aeronautes saxatalis*
Costa's Hummingbird		*Calypte costae*
Broad-tailed Hummingbird (s)		*Salasphorus platycercus*
Northern (Gilded) Flicker (w)		*Colaptes auratus*
Yellow-bellied Sapsucker (w)		*Sphyrapicus varius*

Common Name		Scientific Name
Ladder-backed Woodpecker		*Piciodes scalaris*
Western Kingbird (s)	W	*Tyrannus verticalus*
Cassin's Kingbird (s)		*T. vociferans*
Ash-throated Flycatcher (s)		*Myiarchus cinerascens*
Say's Phoebe		*Sayornis saya*
Dusky Flycatcher (s)		*Empidonax oberholseri*
Horned Lark	E,W	*Eremphila alpestris*
Violet-green Swallow (w)		*Tachycineta thalassina*
Barn Swallow (s)	W	*Hirundo rustica*
Cliff Swallow (s)	W	*Petrochelidon pyrrhonota*
Scrub Jay		*Aphelocoma coerulescens*
Pinyon Jay		*Gymnorhinus cyanocephalus*
Common Raven	E,W	*Corvus corax*
Common Bushtit		*Psaltriparus minimus*
Mountain Chickadee		*Parus gambeli*
Plain Titmouse		*P. inornatus*
Verdin		*Auriparus flaviceps*
Bewick's Wren		*Thryomanes bewickii*
Cactus Wren		*Campylorhynchus brunneicapillus*
Canyon Wren		*Catherpes mexicanus*
Rock Wren		*Salpinctes obsoletus*
Northern Mockingbird	W	*Minus polyglottos*
Bendire's Thrasher (s)		*Toxostoma bendirei*
Le Conte's Thrasher		*T. lecontei*
Crissal Thrasher		*T. dorsale*
American Robin (w)		*Turdus migratorius*
Western Bluebird (s)		*Sialia mexicana*
Blue-gray Gnatcatcher (s)		*Polioptila caerulea*
Black-tailed Gnatcatcher		*P. melanura*
Ruby-crowned Kinglet (w)		*Regulus calendula*
Golden-crowned Kinglet (w)		*R. satrapa*
American Pipit (w)		*Anthus spinoletta*
Phainopepla		*Phainopepla nitens*
Loggerhead Shrike	E,W	*Lanius ludovicianus*
European Starling	E,W	*Sturnus vulgaris*
Yellow-rumped Warbler (s)		*D. coronata*
House Sparrow	W	*Passer Domesticus*
Red-winged Blackbird		*Agelaius phoeniceus*
Brewer's Blackbird	W	*Euphagus cyanocephalus*
Brown-headed Cowbird (s)		*Molothrus ater*
Northern Oriole (s)		*Icterus galbula*
Hooded Oriole (s)		*I. cucullatus*
Scott's Oriole (s)		*I. parisorum*
Western Meadowlark	E,W	*Sturnella neglecta*
Black-headed Grossbeak (s)		*Pheucticus melanocephalus*
House Finch	W	*Carpodacus mexicanus*
American Goldfinch (w)		*Carduelis tristis*
Lesser Goldfinch (s)		*C. psaltria*
Rufous-sided Towhee (s)		*Pipilo erythrophthalmus*
Savannah Sparrow (w)	W	*Passerculus sandwichensis*
Rufous-crowned Sparrow		*Aimophila ruficeps*
Black-throated Sparrow		*Amphispiza bilineata*
Sage Sparrow (w)	E	*A. belli*

Common Name		Scientific Name
Dark-eyed Junco (w)		*Junco hyemalis*
Chipping Sparrow (w)		*Spizella passerina*
Brewer's Sparrow (s)		*S. breweri*
Black-chinned Sparrow (s)		*S. atrogularis*
White-crowned Sparrow (w)	W	*Zonotrichia leucophrys*
TOTAL	24	

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[1] = Species which could occur in the project vicinity according to CDFG California Wildlife and Fish Habitat Relationships System Range Maps.

E/W = Wildlife species observed on or in the vicinity of the Eastern and or Western Project Sites during field surveys conducted April 18 through 22, 1994. All listed plant species identified within project boundaries.

(w) = Winter range only
(s) = Summer range only

Sources:

California Department of Fish and Game, 1983. *California Wildlife/Habitat Relationships Program. The Distribution of California Mammals, Reptiles and Amphibians.*

Grenfell, W.E., Jr. and W.F. Laudenslayer, Jr., eds., 1983. *The Distribution of California Birds.* California Wildlife/Habitat Relationships Program. Publ. #4. California Department of Fish & Game, Sacramento, and USDA Forest Service, San Francisco, California.

Jameson, E.W. Jr. and H.J. Peeters, 1988. *Mammals of California,* University of California Press, Berkeley, California.

McMinn, H.E., 1939. *An Illustrated Manual of California Shrubs.*

Munz, P.A. and D.D. Keck, 1973. *A California Flora.* University of California Press, Berkeley, California.

Peterson, R.T., 1969. *A field Guide to Western Birds*, Houghton Mifflin Company, Boston.

Stebbins, R.C., 1985. *A Field Guide to Western Reptiles and Amphibians,* Houghton Mifflin Company, Boston.

APPENDIX B

APPENDIX B

ENDANGERED, THREATENED OR CANDIDATE PLANT AND WILDLIFE SPECIES REPORTED TO OCCUR IN THE PROJECT REGION[1]

PLANTS

Calochortus striatus
Alkali Mariposa Lily

STATUS: C2/-/List 1B
HABITAT: Occurs in alkaline meadows, springy sites and around the margins of ephemeral washes and ponded areas in Chenopod Scrub and Creosote Scrub habitats from 2500 to 4500 foot elevations.
BLOOM TIME: April-June
HABIT: Perennial
NOTES: The nearest reported occurrence of this plant was approximately 1 mile northwest of the Eastern Expansion Area and 2 miles northeast of the the Western Expansion Area on the southeastern corner of Avenue E and the Sierra Highway in 1988. Plants at this location were in a dry meadow with some grasses, sedges and bare ground. Specimens of this plant were identified by the preparer of this report just south of the Mira Loma Detention Center west of Lancaster between 50th and 60th Streets along Avenue J in 1988. These plants were in very alkalin soils around the margins of large ephemeral ponds in Shadscale Scrub habitat. Associated plants include *Atriplex confertifolia, Ephedra, Lycium,* and *Chorizanthe spinosa*. Most of the plants which flowered at this location were growing inside the canopy of various shrubs where they were protected from grazing by rabbits. Alkalin ponds, similar to those encounter at this 1988 sight, are replaced on the project site by claypan washes and better drained soils. None of this plant was observed anywhere within proposed project boundaries during timely, springtime surveys for this report.

Puccinellia parishii
Parish's Alkali Grass

STATUS: C1/-/List 1B
HABITAT: Occurs in alkaline seeps and desert meadows in Joshua Tree Woodland and Desert Scrub habitats to 2900 foot elevations.
BLOOM TIME: April-May
HABIT: Perennial
NOTES: The nearest and most recent record of this species was from a site east of Rosamond Dry Lakebed in 1992. Plants were found within halophytic phase saltbush scrub habitat which contained *Suaeda, Atriplex canescens, A. torreyi, A. spinifera,* and *A. confertifolia*. *Calochortus striatus* was also found in this same habitat. Similar alkalin habitats are not present within project boundaries. None of this species was identified during surveys for this report.

ANIMALS

MAMMALS

Spermophilus mohavensis
Mohave Ground Squirrel

STATUS: C2/T/-

HABITAT: Range restricted to the Mohave Desert in San Bernardino, Los Angeles, Kern and Inyo Counties. Rare throughout its range. Optimal habitats include open desert scrub, alkali scrub and Joshua Tree. Prefers sandy to gravelly soils. Avoids rocky sites. Digs burrows at the base of shrubs, often associated with Creosote Bush. Nests in burrows. Feeds on a wide variety of green vegetation, seeds and fruits.

NOTES: This diurnal ground squirrel is active above ground in the spring and early summer. Emergence dates vary from March to June, depending on elevation, and estivation begins in July or August. This species occurs sympatrically with the White-tailed Antelope Squirrel, and while it is competitively superior, it lacks adaptations which allow the Antelope Ground Squirrel to continue its activity at higher temperatures.

Creosote Bush, a species with which the Mohave Ground Squirrel is most often associated, is not present within project boundaries. Desert scrub habitats available, however, appear to provide most of the requirements for this species, although the density of the shrubs is greater than is typically found in their preferred habitat.

Three to five Antelope Ground Squirrels were observed per hour of observation time in the Eastern Expansion Area between 8 am and 10 am and 4 pm to 7 pm during timely, springtime surveys for this species conducted from April 18 through 22. Less frequent encounters with this species occurred during the midday hours during these surveys. No Mohave Ground Squirrels were observed during these surveys.

BIRDS

Tyto alba[2]
Common Barn Owl

STATUS: -/-/BL 1972-81, CS 1982-86

HABITAT: Open grassland, chapparal, deciduous riparian and wet meadows.
Occurs throughout the state from sea level to 5,500 feet. Avoids dense forest and open deserts habitats except in the vicinity of human communities.

NOTES: Roosting sites in large Joshua trees were found in both Eastern and Western Expansion Areas. Roosts used for consuming and digesting prey. No suitable nesting sites anywhere on or in the immediate vicinity of the project sites. The rich diversity of rodent prey species on the project sites provide excellent foraging habitat for this species. Collections of owl pellets were examined at several locations on the site which included several prey items such as Kangaroo Rats (*Dipodomys* sp.) and Deer Mice (*Peromyscus maniculatus*).

Asio flammeus
Short-eared Owl

STATUS: -/-/CSC, BL 1976-1986 (breeding)

HABITAT: Found in swamp lands, both fresh and salt; lowland meadows; irrigated alfalfa fields. Tule patches and tall grass needed for nesting and daytime seclusion. Nests on dry ground in depression concealed in vegetation. A diurnally active owl.

NOTES: The nearest and most recent recorded occurrence was 9 miles northeast of Lancaster in 1932. Habitats of the type preferred by this species are not available anywhere within project boundaries. None of this species observed during timely, springtime surveys for this report.

Athene cunicularia
Burrowing Owl

STATUS: -/-/CSC, BL 1972-1981, SC 1982, 1986 (burrow sites)
HABITAT: Open, dry, nearly or quite level grassland; prairie and desert floors. Occurrence in the desert regions is usually in association with agricultural development where short-cut crops such as alfalfa provide the low vegetation required for foraging by this species. Subterranean nester dependent on large burrowing mammals, most notably the California ground squirrel, for nest sites.

NOTES: The nearest and most recent recorded occurrence was on the east side of 50th Street West, 0.5 miles south of West Avenue B, 5 miles southwest of Rosamond in 1993. Habitats of the type preferred by this species are not available anywhere within project boundaries. None of this species observed during timely, springtime surveys for this report.

Larus californicus
California Gull

STATUS: -/-/CSC
HABITAT: Winter visitant to coastal and interior lowlands during the nonbreeding season. Omnivorous. Adults roost in large concentrations along shorelines, in landfills, pastures and on islands.
NOTES: Observed on the working face of the dump site during field surveys for this report. This species must utilize freshwater habitats in the vicinity of the project site for roosting. No nesting sites are available anywhere within or in the vicinity of project boundaries.

Eremophila alpestris actia[2]
California Horned Lark

STATUS: C2/-/CSC
HABITAT: Found from grass habitats along the coast and desert habitats near sea level sto alpine dwarf shrub habitats above treeline. Low sparse vegetation typifies habitat. Diet mostly inseacts with some seeds and other vegetable matter. Nest is grass-lined cup on the ground in the open.
NOTES: Open habitat of the type required by this species is available within and in the vicinity of the proposed project. This species was observed throughout proposed eastern and western expansion areas during timely, springtime surveys for this report.

Lanius ludovicianus[2]
Loggerhead Shrike

STATUS: C2/-/CSC, ABL 1972-86
HABITAT: Year-round residents of lowlands and foothills throughout much of California. Prefers open habitats with scattered shrubs, trees, fences, or other lookout posts. Highest densities occur in open-canopied, valley-foothill hardwood, hardwood-conifer and riparian habitats. Feeds on insects, small birds, mammals and reptiles but amphibians, fish, carrion and various invertebrates are also taken.
NOTES: Open habitat of the type required by this species is available within and in the vicinity of the proposed project. This species was observed throughout proposed eastern and western expansion areas during timely, springtime surveys for this report. Suitable nesting sites are available throughout the project area and its vicinity.

Agelaius tricolor.
Tricolored Blackbird

STATUS: C2/-/CSC

HABITAT: Year-round residents throughout the Central Valley and coastal districts of California. They breed near fresh water, preferably in fresh emergent wetland with dense, tall cattails or tules, but also in thickets of willows, blackberry, wild rose and tall herbs. Forages on cultivated land, edges of water grown to dense emergent vegetation.

NOTES: The nearest recorded breeding colony was recorded in Piute Marsh, a freshwater marsh surrounded by semi-desert habitat, located on the southwestern edge of Rosamond Lake bed in Edwards Airforce Base in 1992. Habitats of the type preferred by this species are not available anywhere within project boundaries. None of this species observed during timely, springtime surveys for this report.

REPTILES

Xerobates agassizii
Desert Tortoise

STATUS: T,FSS/T/-

HABITAT: Widely distributed throughout the Mojave from below sea level to 4,130 foot elevations. Occurs in almost every desert habitat including scrub, washes and Joshua Tree woodlands. Most common in habitats dominated by Creosote Bush where extensive annual wildflower blooms occur. Requires friable soils for construction of burrows and nests.

NOTES: Habitats of the type required by this species are available in the Eastern Expansion Area. Evidence of the past use of the Eastern Expansion Area was noted at two sites where pallets and shallow, abandoned and collapsed burrows were found during transect surveys. No evidence of recent activity (tracks, scat, foraging sites) was noted anywhere within or in the vicinity of project boundaries. Tortoises which might occur in this area would represent the western extremes of the range of the largest of four primary populations in California which extends westward from the the vicinity of Adelanto and Highway 14 and eastward to the Calico Mountains.

Phrynosoma coronatum blainvillei
San Diego Horned Lizard

STATUS: C2/-/CSC

HABITAT: Uncommon to common in suitable habitats. Occurs in coastal sage and chapparal habitats in arid and semi-arid areas. Prefers friable, rocky or shallow sandy soils. Forages on the ground in open areas, between shrubs and often near ant nests.

NOTES: The nearest and most recent recorded occurrence was a Los Angeley County Museum specimen collected from the Little Rock Station area in 1936. Habitats of the type preferred by this species are available within project boundaries. None of this species observed during timely, springtime surveys for this report.

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[1] = Sources:

California Natural Diversity Data Base (CNDDB), 1994. Current computer printout for four surrounding 7.5 minute USGS quadrangle maps (Lancaster East, Lancaster West, Rosamond, Rosamond Lake) in Los Angeles County, Search date April 12.

California Department of Fish and Game, 1978. *Bird Species of Special Concern in California*, No. 78-1 (June). Table 9-3 (Continued)

_____, 1986. *Mammalian Species of Special Concern in California*, Report 86-1. June.

_____, 1991. *Special Animals List*. August.

The Audubon Society, 1986. *Blue List and the List of Species of Special Concern*, American Birds, vol. 40(2):227-236. Summer.

2 = Habitat and/or resources required for reproduction/maintenance present within project boundaries.

STATUS = Federal/State/Other

Federal Status Codes

E	=	Listed as endangered
T	=	Listed as threatened
FPE	=	Proposed as Endangered by the Federal U.S. Fish and Wildlife Service
FPT	=	Proposed as Threatened by the Federal U.S. Fish and Wildlife Service
C1	=	Candidate for listing and enough data is on file to support federal listing
C2	=	Candidate for listing but threat or distribution data is insufficient to support listing at this time
C3a	=	Extinct
C3b	=	Taxonomically invalid
C3c	=	Too widespread or not threatened

State of California Status Codes

E	=	Endangered
T	=	Threatened
R	=	Rare
C	=	Candidate for listing

Other Status Codes

Plants: California Native Plant Society Inventory Lists

List 1A	=	Presumed extinct
List 1B	=	Plants rare in California and elsewhere
List 2	=	Plants rare in California but more common elsewhere
List 3	=	Plants about which more information is needed - a review list
List 4	=	Plants with limited distributions - a watch list

Plants: California Native Plant Society R-E-D codes

Rarity

1 - Rare, but potential for extinction is low
2 - Confined to several populations, or one extended population
3 - Limited to a few highly restricted populations or present in very small numbers

Endangerment
1 - Not endangered
2 - Endangered in a portion of its range
3 - Endangered throughout its range

Distribution
1 - More or less widespread outside California
2 - Rare outside California
3 - Endemic to California

Animals and Misc:

CSC = California Department of Fish and Game "Species of Special Concern"
CSE = California Candidate for listing as Endangered
* = Taxa listed with an asterisk fall into one or more of the following categories:

- Taxa considered endangered or rare under Section 15380(d) of CEQA guidelines.
- Taxa that are biologically rare, very restricted in distribution, or declining throughout their range.
- Population(s) in California that may be peripheral to the major portion of a taxon's range, but which are threatened with extirpation in California.
- Taxa closely associated with habitat that is declining in California (e.g. wetlands, riparian, old growth forest, desert aquatic systems, native grasslands.)

FSS = Bureau of Land Management and U.S. Forest "Sensitive Species"
BL = Audubon Society Blue List of birds of special concern

APPENDIX C

CUMULATIVE HUMAN IMPACT EVALUATION FORM

PART I

PROJECT ID# BAS 9267-452 DATE: April 20, 1994

EVALUATION CONDUCTED BY: David A. Mullen, Ph.D.

PHONE NUMBER: (510) 548-3805 TRAINED BY: _____

LOCATION: T 8 S (N) R 12 E (W) SE 1/4 SEC 26 SITE: Western Expansion

QUAD MAP/SERIES: Rosamond Lake 7.5" ✓ 15" _____

ACREAGE OF PROJECT: 62 TOTAL ACREAGE SURVEYED: 44

CIR OF PROJECT AREA: 22 CIR OF TOTAL ACREAGE: 22

Acreage of non-compensable habitat (if any): 0

Acreage of agriculture field (if present on parcel): 0

PART II LAND USE IMPACTS (0 = none, 4 = heavily impacted)

	COMMENTS	RATING
1. OHV use		0
2. Roads through area		2
3. Horse or foot traffic		0
4. Dog activity		0
5. Urbanization		0
6. Garbage Dumping		2
7. Mining activity		4
8. Utilities		0
9. Grazing		0
10. Shrub disturbance		3

Add the five highest rated disturbances and multiply by 2. Enter in Part I.

COMMENTS: The Longe "borrow pit" was regarded as a sand mine and its area disregarded from other forms of survey consideration.

PART III GENERAL HABITAT DESCRIPTION

1. Shrub coverage estimate, (including sub-shrubs):
   A. acres of dense shrub coverage: 10
   average height of creosote: NA ft., other shrubs: 2 ft.

   B. acres of moderate shrub coverage: 22
   average height of creosote: NA ft., other shrubs: 2 ft.

   C. acres of sparse shrub coverage: 12
   average height of creosote: NA ft., other shrubs: 1 ft.

2. Shrub species diversity: # dominate; 3, sub-dominate 3.

3. Presence of annuals: A ✓; B_____; C_____.
   Percent of native annuals: 30, non-native: 70.

4. Presence of perennial grasses: A_____; B_____; C ✓.

5. Percent coverage of desert pavement 0 varnish 0

6. Soils description: Thin clay pan layer overlain by loose, sandy soil

7. Percent rocks and boulders present: (describe) 0

8. Presence of washes: 0 Periodic flooding: 0

9. Slope/Aspect: Approx 2319' near SE corner to 2310' near NW corner

10. Elevation: Approx 2314' near center

PART IV OTHER FACTORS OF CONSIDERATION

1. Type and name of grazing allotment:

perennial Not Grazed ephemeral_____

Scat Class (1 - 4): NA

2. Proximity to known MGS populations: (be specific; list Data Base records. Should be discussed within text of report.)

No nearby records:_____, Records in vicinity (see text): ✓

3. Landowner: Waste Management of California, Inc.

4. Type of County Zoning: D-2-1 Proposed Changes to Zoning? NO

Desert/Mountain - 2 acres minimum

CUMULATIVE HUMAN IMPACT EVALUATION FORM

PART I

PROJECT ID# BAS 9267-452 DATE: April 21, 1994

EVALUATION CONDUCTED BY: David A. Mullen, Ph.D.

PHONE NUMBER: (510) 548-3805 TRAINED BY: _____

LOCATION: T 8 S(N) R 12 E(W) SW 1/4 SEC 25 SITE: Eastern Expansion -1

QUAD MAP/SERIES: Rosemond Lake 7.5" ✓ 15" _____

ACREAGE OF PROJECT: 12 TOTAL ACREAGE SURVEYED: 45

CIR OF PROJECT AREA: 10.7 CIR OF TOTAL ACREAGE: 12

Acreage of non-compensable habitat (if any): Approx. 1 acre

Acreage of agriculture field (if present on parcel): NA

PART II LAND USE IMPACTS (0 = none, 4 = heavily impacted)

	COMMENTS	RATING
1. OHV use		2
2. Roads through area		1
3. Horse or foot traffic		1
4. Dog activity		1
5. Urbanization		1
6. Garbage Dumping		1
7. Mining activity		0
8. Utilities		0
9. Grazing		0
10. Shrub disturbance		1

Add the five highest rated disturbances and multiply by 2. Enter in Part I.

COMMENTS:

PART III **GENERAL HABITAT DESCRIPTION**

1. Shrub coverage estimate, (including sub-shrubs):
   A. acres of dense shrub coverage: <10
   average height of creosote: NA ft., other shrubs: 1.5 ft.

   B. acres of moderate shrub coverage: 20
   average height of creosote: NA ft., other shrubs: 1 ft.

   C. acres of sparse shrub coverage: 10
   average height of creosote: NA ft., other shrubs: 1 ft.

2. Shrub species diversity: # dominate; 2, sub-dominate 2.

3. Presence of annuals: A ✓; B_____; C_____.
   Percent of native annuals: 50, non-native: 50.

4. Presence of perennial grasses: A_____; B_____; C ✓.

5. Percent coverage of desert pavement 0 varnish 0

6. Soils description: Hard clay pan overlain by loose, sandy soil to about 1' in depth.

7. Percent rocks and boulders present: (describe) 0

8. Presence of washes: 0 Periodic flooding: Evidence of poorly defined, periodically flooded "wetland" area along northwestern property boundary

9. Slope/Aspect: ~~Approx.~~ 2317' near SE corner to 2312' near NW corner

10. Elevation: ~~Approx~~ 2315 near center of survey area

PART IV **OTHER FACTORS OF CONSIDERATION**

1. Type and name of grazing allotment:

perennial Not Grazed ephemeral_____

Scat Class (1 - 4): NA

2. Proximity to known MGS populations: (be specific; list Data Base records. Should be discussed within text of report.)

No nearby records:_____, Records in vicinity (see text): ✓

3. Landowner: Waste Management of California, Inc.

4. Type of County Zoning: D-2-1 Proposed Changes to Zoning? NO

Desert/mountain - 2 acres minimum

CUMULATIVE HUMAN IMPACT EVALUATION FORM

PART I

PROJECT ID# BAS 9267-452 DATE: April 21, 1994

EVALUATION CONDUCTED BY: David A. Mullen, Ph.D.

PHONE NUMBER: (510) 548-3805 TRAINED BY: _____

LOCATION: T 8 S/(N) R 12 E/(W) SW 1/4 SEC 25 SITE: Eastern Expansion - 2

QUAD MAP/SERIES: Rosamond Lake 7.5" ✓ 15" _____

ACREAGE OF PROJECT: 112 TOTAL ACREAGE SURVEYED: 39

CIR OF PROJECT AREA: 10.7 CIR OF TOTAL ACREAGE: 12

Acreage of non-compensable habitat (if any): 0

Acreage of agriculture field (if present on parcel): 0

PART II LAND USE IMPACTS (0 = none, 4 = heavily impacted)

	COMMENTS	RATING
1. OHV use		1
2. Roads through area		2
3. Horse or foot traffic		1
4. Dog activity		1
5. Urbanization		0
6. Garbage Dumping		0
7. Mining activity		0
8. Utilities		0
9. Grazing		0
10. Shrub disturbance		1

Add the five highest rated disturbances and multiply by 2. Enter in Part I.

COMMENTS:

PART III **GENERAL HABITAT DESCRIPTION**

1. Shrub coverage estimate, (including sub-shrubs):
   A. acres of dense shrub coverage: 25
   average height of creosote: NA ft., other shrubs: 1.5 ft.

   B. acres of moderate shrub coverage: 10
   average height of creosote: NA ft., other shrubs: 1 ft.

   C. acres of sparse shrub coverage: <5
   average height of creosote: NA ft., other shrubs: 1 ft.

2. Shrub species diversity: # dominate; 4, sub-dominate 2.

3. Presence of annuals: A ✓; B_____; C_____.
   Percent of native annuals: 60, non-native: 40.

4. Presence of perennial grasses: A_____; B ✓; C_____.

5. Percent coverage of desert pavement_____varnish_____

6. Soils description: Hard clay pan overlain by sandy-loam to 2" in depth

7. Percent rocks and boulders present: (describe) 0

8. Presence of washes: 0 Periodic flooding: 0
Interlaced clay pan drainages drain area in a NW direction

9. Slope/Aspect: ~~APPROX.~~ 2322' near SE corner & 2317 at NW corner

10. Elevation: ~~APPROX.~~ 2317' near center of study area.

PART IV **OTHER FACTORS OF CONSIDERATION**

1. Type and name of grazing allotment:

perennial Not Grazed ephemeral_____

Scat Class (1 - 4): NA.

2. Proximity to known MGS populations: (be specific; list Data Base records. Should be discussed within text of report.)

No nearby records:_____, Records in vicinity (see text): ✓

3. Landowner: Waste Management of California, Inc.

4. Type of County Zoning: D-2-1 Proposed Changes to Zoning? No
Desert/mountain - 2 acres minimum

CUMULATIVE HUMAN IMPACT EVALUATION FORM

PART I

PROJECT ID# BAS 9267-452 DATE: April 22, 1994

EVALUATION CONDUCTED BY: David A. Mullen, Ph.D.

PHONE NUMBER: (510) 548-3805 TRAINED BY: _____

LOCATION: T 8 S/(N) R 12 E/(W): SW 1/4 SEC 25 SITE: ~~Eastern Expansion~~ -3

QUAD MAP/SERIES: Rosamond Lake 7.5" ✓ 15" _____

ACREAGE OF PROJECT: 112 TOTAL ACREAGE SURVEYED: 28

CIR OF PROJECT AREA: 10.7 CIR OF TOTAL ACREAGE: 8

Acreage of non-compensable habitat (if any): 0

Acreage of agriculture field (if present on parcel): 0

PART II LAND USE IMPACTS (0 = none, 4 = heavily impacted)

	COMMENTS	RATING
1. OHV use		1
2. Roads through area		1
3. Horse or foot traffic		0
4. Dog activity		1
5. Urbanization		1
6. Garbage Dumping		0
7. Mining activity		0
8. Utilities		0
9. Grazing		0
10. Shrub disturbance		0

Add the five highest rated disturbances and multiply by 2. Enter in Part I.

COMMENTS: Dogs observed in this section of the survey during survey transects.

PART III **GENERAL HABITAT DESCRIPTION**

1. Shrub coverage estimate, (including sub-shrubs):
   A. acres of dense shrub coverage: Approx. 30
   average height of creosote: NA ft., other shrubs: 2 ft.

   B. acres of moderate shrub coverage: <5
   average height of creosote: NA ft., other shrubs: 2 ft.

   C. acres of sparse shrub coverage: 0
   average height of creosote: NA ft., other shrubs: NA ft.

2. Shrub species diversity: # dominate: 4, sub-dominate 5.

3. Presence of annuals: A ✓; B_____; C_____.
   Percent of native annuals: 70, non-native: 30.

4. Presence of perennial grasses: A_____; B ✓; C_____.

5. Percent coverage of desert pavement 0 varnish 0

6. Soils description: Hard clay pan overlain by sandy soil some loam to a depth of 3' in some places

7. Percent rocks and boulders present: (describe) 0

8. Presence of washes: 0 Periodic flooding: 0

9. Slope/Aspect: Approx. 2322' near SE corner to 2320' near NW corner

10. Elevation: Approx. 2323' near center of study area

PART IV **OTHER FACTORS OF CONSIDERATION**

1. Type and name of grazing allotment:

perennial Not Grazed ephemeral_____

Scat Class (1 - 4): NA

2. Proximity to known MGS populations: (be specific; list Data Base records. Should be discussed within text of report.)

No nearby records:_____, Records in vicinity (see text): ✓

3. Landowner: Waste Management of California, Inc.

4. Type of County Zoning: D-2-1 Proposed Changes to Zoning? No
Desert/mountain - 2 acres minimum

APPENDIX I

ODOR MONITORING AT THE LANCASTER LANDFILL AND RECYCLING CENTER

APPENDIX K

REFERENCES

APPENDIX K

REFERENCES

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