

Appendix D: Hazards/Hazardous Materials



Michael Brandman Associates

ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

December 5, 2006

Sares Regis Group
Attention: Peter M. Rooney
18802 Bardeen Avenue
Irvine, CA 92612-1521

Subject: Peer Review of Hazardous Gas Assessment for the Site of the Proposed Sares Regis Warehouse/Distribution Facility, Ontario, CA

Dear Mr. Rooney:

This letter constitutes a third party peer review of the "Hazardous Gas Assessment, Milliken Sanitary Landfill (Adjacent Northern Property), Sares Regis Group, Ontario CA (Methane Gas Study)" conducted by Geoscience Analytical Inc., dated April 19, 2006; and a letter from Geoscience Analytical Inc. dated October 9, 2006 updating information on the Hazardous Gas Assessment. The analysis was reviewed for adequacy to evaluate all the criteria in the California Environmental Quality Act (CEQA) for potential impacts and the protocol/criteria prescribed by the regulatory authorities. This review does not include independent verification of onsite sampling.

The proposed project site is located within a methane zone due to its proximity (approximately 50 feet) to the closed Milliken Sanitary Landfill site. The purpose of the Methane Gas Study was to determine the hazardous gas potential of methane percolating up through the soil and impacting the proposed warehouse/distribution center on the site.

The investigation included sampling from one hundred and twenty-two probes penetrating four feet below the existing grade and distributed evenly across the entire site. This investigation followed the methodologies and EPA protocols for methane gas sampling. The methane concentrations identified within the soil probes ranged from 0.6 to 33.2 ppm. Methane at these concentrations are significantly below the Lower Explosive Limit (LEL) of 50,000 ppm for methane gas.

One concern is that although current onsite atmospheric concentrations of methane are well below the LEL and exposure of methane at levels ranging between 0.6 and 33.2 ppm are not considered harmful, once the site is developed, methane gas escaping from the soil could be trapped within the proposed buildings or under the paved areas and concentrations of the gas steadily increase in these trapped conditions until they reach high enough concentrations to cause problems.

The Methane Gas Study states that the County of San Bernardino will provide "substantial improvements to the currently existing gas extraction system [at the Milliken Sanitary Landfill] prior to any construction on the subject property" and this would substantially lower methane gas seepage on the Sares Regis site.

Given the currently low concentrations of methane gas onsite and the fact that the County of San Bernardino will upgrade the existing gas extraction system at the Milliken Sanitary Landfill prior to development of the Sares Regis site, minimal mitigation routinely required of sites within a methane zone is needed to reduce potential impacts to a less than significant level.

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www.brandman.com

mba@brandman.com

Mr. Rooney
December 5, 2006
Page 2

The Methane Gas Study recommends the following mitigation measures provided the upgrades are made to the existing gas extraction system at the Milliken Sanitary Landfill prior to development of the Sares Regis site:

- 1) Trench dams and conduit seals are provided within 200 feet of the landfill boundary.
- 2) Passive subhardscape parking lot venting is provided in parking lots within 100 feet of the landfill boundary.
- 3) Passive interior ventilation within all occupied structures; or passive subslab ventilation and gas impervious membranes under all portions of occupied structures within 200 feet of the landfill boundary.

A letter from Geoscience Analytical Inc. dated October 9, 2006 provides information on possible mitigation to incorporate into the proposed project if the upgrades to the Milliken Sanitary Landfill are not completed prior to implementation of this project. If the upgrades to the Milliken Sanitary Landfill are not completed prior to implementation of this project, then the following mitigation is needed:

- 1) Trench dams and conduit seals are provided within 200 feet of the landfill boundary.
- 2) Passive subhardscape parking lot venting is provided in parking lots within 100 feet of the landfill boundary. Gas detection devices shall be installed in all the passive vent risers.
- 3) Active on demand subslab ventilation system and gas impervious membranes shall be installed under all portions of occupied structures within 200 feet of the landfill boundary.

The engineering and design of these mitigation measures shall be conducted by a California registered professional engineer specializing in hazardous gas mitigation systems will be required.

If you have any questions or concerns regarding this letter, please call me at 909.884.2255.

Sincerely,



Michael Hendrix, Senior Project Manager
Michael Brandman Associates
621 E. Carnegie Drive, Suite 100
San Bernardino, CA 92408

Attachments: Appendix A, *Hazardous Gas Assessment, Milliken Sanitary Landfill Adjacent Northern Property* (Geoscience Analytical, Inc., April 19, 2006)
Appendix B, *Partial Hazardous Gas Assessment, Milliken Sanitary Landfill Adjacent Northern Property* (Geoscience Analytical Inc., October 9, 2006)

MKH:sep

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**Appendix A:
Hazardous Gas Assessment,
Milliken Sanitary Landfill Adjacent Northern Property
(Geoscience Analytical Inc., April 2006)**

**HAZARDOUS GAS ASSESSMENT
MILLIKEN SANITARY LANDFILL
(ADJACENT NORTHERN PROPERTY)
SARES REGIS GROUP
ONTARIO, CA**

Prepared for:

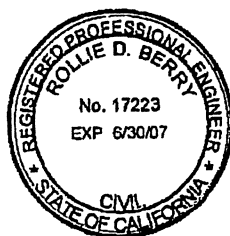
Sares Regis Group
18802 Bardeen Avenue
Irvine, CA 92612-1521

Attn.: Peter M. Rooney

April 19, 2006

Project No. 3299

Louis J. Pandolfi
President



Prepared by

GEOSCIENCE ANALYTICAL, INC.
Geochemical, Environmental & Litigation Consultants
Established March 1981



GeoScience Analytical, Inc.

"established March 1981"

608 HAILEY COURT SIMI VALLEY, CA 93065 (805) 526-6532 FAX 526-3570 EMAIL GEOSCI10@AOL.COM

21 April 2006

Sares Regis Group
18802 Bardeen Avenue
Irvine, CA 92612-1521

Attn.: Mr. Peter M. Rooney

RE: Partial Hazardous Gas Assessment – Milliken Sanitary Landfill Adjacent
Northern Property

Dear Mr. Rooney:

We have reviewed two reports concerned with landfill gas migration onto the above referenced property: *Landfill Gas Impacts on the Adjacent Northern Property* dated November 2005 prepared by Bryan A. Stirrat & Associates; *Report of Preliminary Evaluation – Landfill Gas Impacts on Property Adjacent to Milliken Landfill* dated October 8, 1991 prepared by Converse Environmental West. Results and recommendations from those reports, including proposed landfill gas extraction system modifications, have been incorporated into the subject investigation.

We have conducted a partial surficial hazardous gas assessment (methane) on the above referenced site. The subject investigation has been limited to that property known as the Adjacent Northern Property located north of the Milliken Sanitary Landfill, east of Haven Avenue and west of Milliken Avenue in the City of Ontario, County of San Bernardino, CA. The Milliken Sanitary Landfill is an inactive municipal solid waste disposal facility owned and operated by the County of San Bernardino. The landfill is closed and includes a landfill gas extraction system that is scheduled to be upgraded prior to development of the subject property. A site plan is attached (Figure 1). The property is slated for development of an industrial park.

Under the current investigation, one hundred twenty-two (122) soil probes have been advanced to depths of 4.0' below existing grade between April 18 and 19, 2006 for

purposes of establishing surficial concentrations of light hydrocarbons (Figure 1). Soil probe locations were established to provide adequate coverage of the property. Soil probes were sampled on April 19.

The methane concentrations identified within the soil probes ranged from 0.6 to 33.2 ppm (v/v) (Table 1).

The subject site contains methane significantly below the Lower Explosive Limit (50,000 ppm v/v). No elevated methane concentrations significantly above background levels have been identified. Furthermore, the County of San Bernardino will significantly further reduce the potential for migration of landfill gas with substantial improvements to the currently existing gas extraction system prior to any construction on the subject property. Based on all available data, no mitigation is recommended beyond minimal required levels for sites within a methane zone (landfill proximity) as defined by the County of San Bernardino, recommendations of 3rd party consultants and that ordinary mitigation routinely made a part of an industrial project under similar circumstances.

Mitigation shall include the following:

- Trench dams and conduit seals within 200' of the landfill boundary
- Passive subhardscape parking lot venting within 100' of the landfill boundary
- Passive interior ventilation for all occupied structures within 200' of the landfill boundary
- In lieu of interior ventilation, passive subslab ventilation and gas impervious membrane for all occupied structures within 200' of the landfill boundary.

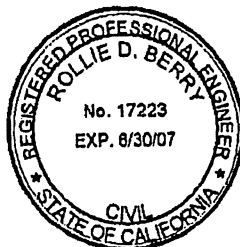
The subject parcel is located within a methane zone due to its proximity to a closed sanitary landfill. In accordance with the proximity of the subject site to the landfill, the applicant has conducted a methane soil gas site survey for the building site. The purpose of the building site survey is to determine, to the satisfaction of the County of San Bernardino Department of Building and Safety, the applicability of methane prevention and monitoring systems requirements in connection with the construction of buildings on the site. The intent of the current investigation was therefore to determine the hazardous gas potential of the subject property utilizing sufficient shallow probes to provide statistically significant baseline geochemical data necessary and sufficient to provide site classification as to the required level of mitigation. Based on all available analytical data, the site does not contain appreciably elevated concentrations of methane or other light hydrocarbons and therefore mitigation shall be limited to that minimal mitigation described hereinabove for sites containing methane at concentrations <5,000 ppmv.

Mitigation shall be designed by a California registered professional civil engineer specializing in hazardous gas mitigation systems.

Sincerely yours,

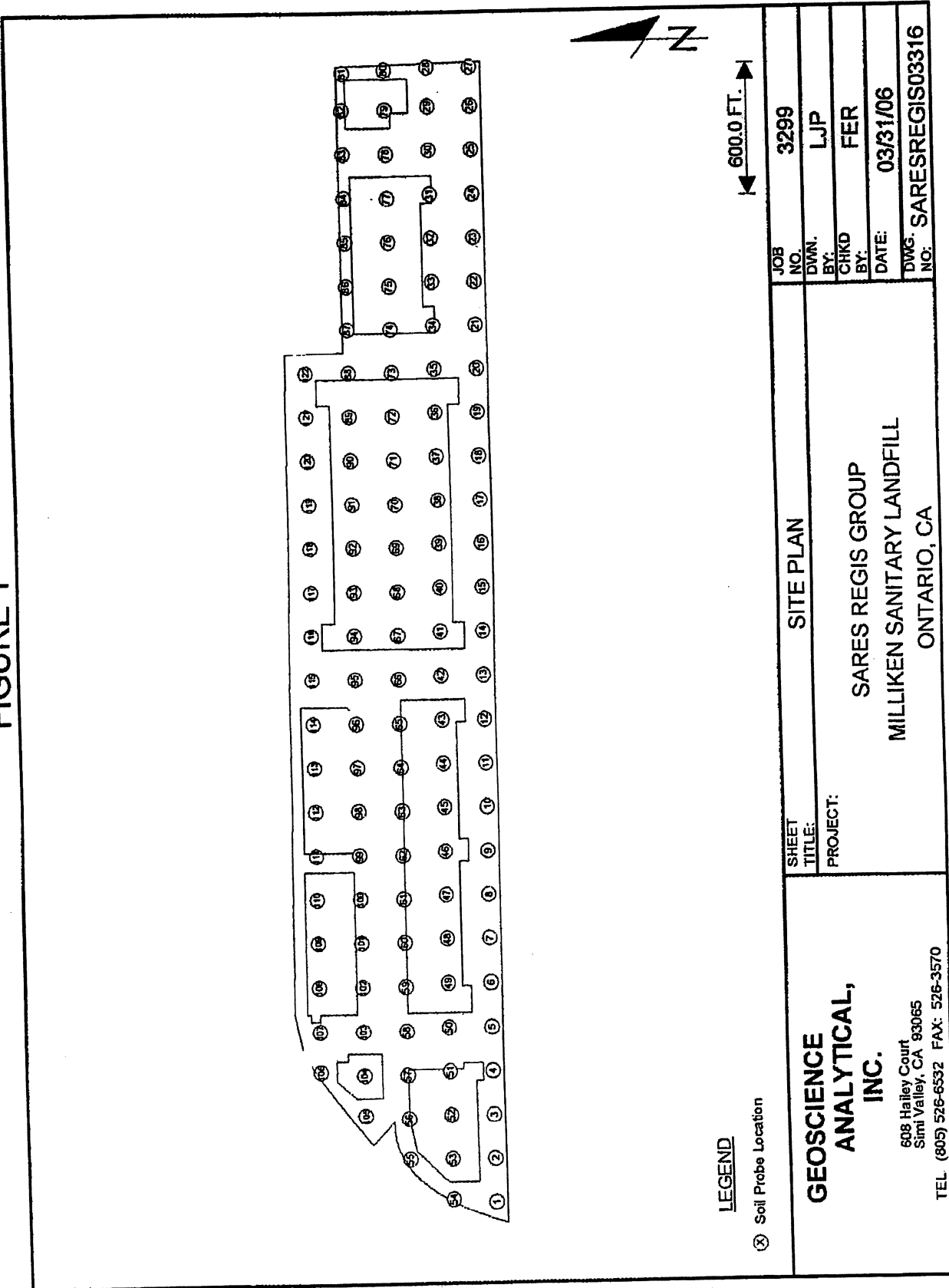
Louis J. Pandolfi
President

Rollie D. Berry
Registered Engineer (Civil)
CA No. 17223



ReSARES REGIS GROUP, MILLIKEN LANDFILL ONTARIO 04196

FIGURE 1



FORM 1 CERTIFICATE OF COMPLIANCE FOR METHANE TEST DATA

Part 1: Certification Sheet

Description of Gas Analysis Instrument(s):

Instrument Name and Model: Varian FID GC

Date	Time	Probe Set #	Methane	Ethane	Ethylene	Pressure (inches water column)	Sensor depth (feet)	Description/ Sensor Location
			Concentration (ppmv)					
4/19/06	0712	P-1	4.2	0.3	<0.2	N/A	4.0	See Figure 1
	0715	P-2	4.3	0.2	<0.2		4.0	
	0719	P-3	4.0	<0.2	<0.2		4.0	
	0725	P-4	5.1	0.3	<0.2		4.0	
	0731	P-5	4.2	0.3	<0.2		4.0	
	0735	P-6	3.9	0.2	<0.2		4.0	
	0739	P-7	5.2	<0.2	<0.2		4.0	
	0744	P-8	2.9	<0.2	<0.2		4.0	
	0750	P-9	4.4	0.2	<0.2		4.0	
	0754	P-10	4.5	0.3	<0.2		4.0	
	0759	P-11	8.0	0.5	<0.2		4.0	
	0804	P-12	4.1	<0.2	<0.2		4.0	
	0809	P-13	8.7	0.6	<0.2		4.0	
	0813	P-14	5.8	0.4	<0.2		4.0	
	0817	P-15	7.3	<0.2	<0.2		4.0	
	0823	P-16	4.9	<0.2	<0.2		4.0	
	0829	P-17	9.4	0.6	0.5		4.0	
	0833	P-18	3.7	<0.2	<0.2		4.0	
	0838	P-19	5.5	0.4	<0.2		4.0	
	0844	P-20	3.9	<0.2	<0.2		4.0	
	0850	P-21	3.2	<0.2	<0.2		4.0	
▼	0856	P-22	3.6	0.2	<0.2	▼	4.0	▼
4/19/06	0902	P-23	3.4	<0.2	<0.2	N/A	4.0	See Figure 1

FORM 1 CERTIFICATE OF COMPLIANCE FOR METHANE TEST DATA (CONTINUED)

Part 1: Certification Sheet

Description of Gas Analysis Instrument(s):

Instrument Name and Model: Varian FID GC

Date	Time	Probe Set #	Methane	Ethane	Ethylene	Pressure (inches water column)	Sensor depth (feet)	Description/ Sensor Location
			Concentration (ppmv)					
4/19/06	0907	P-24	3.6	0.3	<0.2	N/A	4.0	See Figure 1
	0913	P-25	2.7	<0.2	<0.2		4.0	
	0919	P-26	3.8	<0.2	<0.2		4.0	
	0928	P-27	4.2	<0.2	<0.2		4.0	
	0931	P-28	2.9	<0.2	<0.2		4.0	
	0936	P-29	0.7	<0.2	<0.2		4.0	
	0942	P-30	1.7	<0.2	<0.2		4.0	
	0948	P-31	0.7	<0.2	<0.2		4.0	
	0955	P-32	2.8	<0.2	<0.2		4.0	
	1002	P-33	1.6	<0.2	<0.2		4.0	
	1007	P-34	3.3	<0.2	<0.2		4.0	
	1013	P-35	1.6	<0.2	<0.2		4.0	
	1017	P-36	4.0	<0.2	<0.2		4.0	
	1023	P-37	1.0	<0.2	<0.2		4.0	
	1028	P-38	2.9	<0.2	<0.2		4.0	
	1033	P-39	1.2	<0.2	<0.2		4.0	
	1037	P-40	3.6	<0.2	<0.2		4.0	
	1044	P-41	1.2	<0.2	<0.2		4.0	
	1049	P-42	3.8	<0.2	<0.2		4.0	
	1055	P-43	1.9	<0.2	<0.2		4.0	
	1101	P-44	2.5	<0.2	<0.2		4.0	
▼	1103	P-45	6.5	0.5	0.6	▼	4.0	▼
4/19/06	1109	P-46	4.3	<0.2	<0.2	N/A	4.0	See Figure 1

FORM 1 CERTIFICATE OF COMPLIANCE FOR METHANE TEST DATA (CONTINUED)

Part 1: Certification Sheet

Description of Gas Analysis Instrument(s):

Instrument Name and Model: Varian FID GC

Date	Time	Probe Set #	Methane	Ethane	Ethylene	Pressure (inches water) column)	Sensor depth (feet)	Description/ Sensor Location
			Concentration (ppmv)					
4/19/06	1113	P-47	1.2	<0.2	<0.2	N/A	4.0	See Figure 1
	1119	P-48	2.3	<0.2	<0.2		4.0	
	1124	P-49	1.3	<0.2	<0.2		4.0	
	1129	P-50	1.7	<0.2	<0.2		4.0	
	1136	P-51	1.5	<0.2	<0.2		4.0	
	1142	P-52	1.6	<0.2	<0.2		4.0	
	1147	P-53	1.2	<0.2	<0.2		4.0	
	1153	P-54	2.0	<0.2	<0.2		4.0	
	1158	P-55	8.2	<0.2	<0.2		4.0	
	1238	P-56	33.2	<0.2	<0.2		4.0	
	1145	P-57	2.4	<0.2	<0.2		4.0	
	1252	P-58	1.9	<0.2	<0.2		4.0	
	1259	P-59	2.5	<0.2	<0.2		4.0	
	1310	P-60	2.9	<0.2	<0.2		4.0	
	1318	P-61	3.8	<0.2	<0.2		4.0	
	1325	P-62	3.7	0.5	0.5		4.0	
	1332	P-63	4.2	<0.2	<0.2		4.0	
	1339	P-64	3.6	<0.2	<0.2		4.0	
	1348	P-65	4.6	<0.2	<0.2		4.0	
	1356	P-66	1.4	<0.2	<0.2		4.0	
	1410	P-67	5.1	<0.2	<0.2		4.0	
▼	1418	P-68	1.2	<0.2	<0.2	▼	4.0	▼
4/19/06	1426	P-69	1.9	<0.2	<0.2	N/A	4.0	See Figure 1

FORM 1 CERTIFICATE OF COMPLIANCE FOR METHANE TEST DATA (CONTINUED)

Part 1: Certification Sheet

Description of Gas Analysis Instrument(s):

Instrument Name and Model: Varian FID GC

Date	Time	Probe Set #	Methane	Ethane	Ethylene	Pressure (inches water column)	Sensor depth (feet)	Description/ Sensor Location
			Concentration (ppmv)					
4/19/06	1437	P-70	1.4	<0.2	<0.2	N/A	4.0	See Figure 1
	1445	P-71	1.8	<0.2	<0.2		4.0	
	1453	P-72	0.7	<0.2	<0.2		4.0	
	1502	P-73	0.9	<0.2	<0.2		4.0	
	1510	P-74	1.2	<0.2	<0.2		4.0	
	1519	P-75	2.6	<0.2	<0.2		4.0	
	1528	P-76	3.6	<0.2	<0.2		4.0	
	1536	P-77	4.2	<0.2	<0.2		4.0	
	1545	P-78	1.0	<0.2	<0.2		4.0	
	1552	P-79	1.3	<0.2	<0.2		4.0	
	1610	P-80	1.7	<0.2	<0.2		4.0	
	1618	P-81	1.0	<0.2	<0.2		4.0	
	1628	P-82	0.9	<0.2	<0.2		4.0	
	1635	P-83	0.6	<0.2	<0.2		4.0	
	1647	P-84	1.7	<0.2	<0.2		4.0	
	1655	P-85	1.2	<0.2	<0.2		4.0	
	1703	P-86	1.8	<0.2	<0.2		4.0	
	1710	P-87	2.0	<0.2	<0.2		4.0	
	1722	P-88	1.8	<0.2	<0.2		4.0	
	1730	P-89	2.3	<0.2	<0.2		4.0	
	1738	P-90	3.1	<0.2	<0.2		4.0	
▼	1745	P-91	1.5	<0.2	<0.2	▼	4.0	▼
4/19/06	1756	P-92	2.4	<0.2	<0.2	N/A	4.0	See Figure 1

FORM 1 CERTIFICATE OF COMPLIANCE FOR METHANE TEST DATA (CONTINUED)

Part 1: Certification Sheet

Description of Gas Analysis Instrument(s):

Instrument Name and Model: Varian FID GC

Date	Time	Probe Set #	Methane	Ethane	Ethylene	Pressure (inches water) column)	Sensor depth (feet)	Description/ Sensor Location
			Concentration (ppmv)					
4/19/06	1807	P-93	1.9	<0.2	<0.2	N/A	4.0	See Figure 1
	1813	P-94	1.5	<0.2	<0.2		4.0	
	1822	P-95	2.0	<0.2	<0.2		4.0	
	1829	P-96	2.4	<0.2	<0.2		4.0	
	1835	P-97	1.6	<0.2	<0.2		4.0	
	1844	P-98	1.9	<0.2	<0.2		4.0	
	1849	P-99	3.1	<0.2	<0.2		4.0	
	1857	P-100	1.9	<0.2	<0.2		4.0	
	1905	P-101	2.7	<0.2	<0.2		4.0	
	1910	P-102	18.2	0.6	<0.2		4.0	
	1925	P-103	4.5	<0.2	<0.2		4.0	
	1928	P-104	2.3	<0.2	<0.2		4.0	
	1935	P-105	3.0	<0.2	<0.2		4.0	
	1942	P-106	1.9	<0.2	<0.2		4.0	
	1948	P-107	2.8	<0.2	<0.2		4.0	
	1955	P-108	4.3	<0.2	<0.2		4.0	
	2002	P-109	11.0	0.7	<0.2		4.0	
	2019	P-110	5.5	<0.2	<0.2		4.0	
	2025	P-111	1.7	<0.2	<0.2		4.0	
	2032	P-112	6.1	<0.2	<0.2		4.0	
	2037	P-113	3.5	<0.2	<0.2		4.0	
▼	2042	P-114	3.1	<0.2	<0.2	▼	4.0	▼
4/19/06	2047	P-115	2.1	<0.2	<0.2	N/A	4.0	See Figure 1

APPENDIX I

SAMPLE COLLECTION METHODOLOGY

Soil gas samples were collected from the monitoring wells using a gas tight pump affixed to a 1/8" diameter nylon tube. The tube was transfixed to the sampling interval and a gaseous sample withdrawn. A 20cc sample of soil gas was collected and stored by water displacement in a silicone rubber stoppered glass vacutainer.

All samples were transported under Chain-of-custody to the laboratory. Sample collection was carried out by a California Registered Environmental Assessor with over twenty (23) years experience in completing combustible gas assessments throughout Southern California under the supervision of a Registered Professional Civil Engineer with approximately twenty (20) years experience in the design of soil gas mitigation and site assessment. Sample collection took place over a period of one (1) day.

APPENDIX II

ANALYTICAL PROTOCOL

The analytical protocol for analysis of C1-C7 hydrocarbon speciation was method ASTM D1945(mod). The gas chromatographic column was a 1/8" x 8' stainless steel packed with 100 – 120 mesh activated alumina. The carrier gas was chromatographic grade nitrogen at a flow rate of 30 cc/min. Detection was by means of flame ionization. The output signal is quantified and recorded with an HP3390A electronic integrator. Standards were manufactured by Scott Specialty Gases with an accuracy of $\pm 2.0\%$.



Gray Davis, Governor
Winston H. Hickox, Agency Secretary
California Environmental Protection Agency



Department of Toxic Substances Control

Edwin F. Lowry, Director
1011 N. Grandview Avenue
Glendale, California 91201
Phone (818) 551-2800
FAX (818) 551-2832
www.dtsc.ca.gov

California Regional Water Quality Control Board
Los Angeles Region

320 W. 4th Street, Suite 200
Los Angeles, California 90013
Phone (213) 576-6600
FAX (213) 576-6640
www.swrcb.ca.gov/rwqcb4

January 28, 2003

To: Interested Parties

ADVISORY – ACTIVE SOIL GAS INVESTIGATIONS

In a coordinated effort, the Department of Toxic Substances Control (DTSC) and the California Regional Water Quality Control Board – Los Angeles Region (LARWQCB) have jointly developed the "Advisory – Active Soil Gas Investigations" (see the attached). This document is to ensure that consistent methodologies are applied during active soil gas investigations to produce high quality data for regulatory decision-making. The document has been reviewed by other government organizations and by the soil gas consulting community. Their comments have been considered and, where appropriate, incorporated in the document. This is an on-going effort to streamline the characterization of gas phase contaminant sites. As additional knowledge and experience are obtained, this Advisory may be modified as appropriate.

This document is issued by DTSC and LARWQCB as an Advisory subject to review and revision as necessary. The information in this Advisory should not be considered as regulations. Mention of trade names or commercial products does not constitute the Agency's endorsement or recommendation.

If you have any questions regarding this document, please contact the joint-agency project coordinator Mr. Joe Hwong, of DTSC, at (714) 484-5406.

Sincerely,

Edwin F. Lowry
Director
Department of Toxic Substances Control

Dennis A. Dickerson
Executive Officer
California Regional Water Quality Control Board
Los Angeles Region

Enclosure

*The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption.
For a list of simple ways you can reduce demand and cut your energy costs, see our Web-site at www.dtsc.ca.gov.*

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ADVISORY – ACTIVE SOIL GAS INVESTIGATIONS

As a coordinated effort, this document is issued by the California Regional Water Quality Control Board – Los Angeles Region (LARWQCB) and Department of Toxic Substances Control (DTSC) as an Advisory subject to review and revision as necessary. Mention of trade names or commercial products does not constitute the Agency's endorsement or recommendation. The information in this Advisory should not be considered as regulations. In this Advisory, "Agency" should mean LARWQCB and/or DTSC.

1.0 INTRODUCTION

Active soil gas investigations are useful to obtain vapor phase data at sites potentially affected by volatile organic compounds (VOCs), including chlorinated and aromatic hydrocarbons. Active soil gas investigations may also be used to investigate sites potentially affected by methane and hydrogen sulfide, and to measure fixed and biogenic gasses (e.g., oxygen, carbon dioxide, or carbon monoxide). Among other things, the data can be used to identify the source and determine the spatial distribution of VOC contamination at a site, or to estimate indoor air concentrations for risk assessment purposes.

For site characterization, the Agency encourages both soil gas and soil matrix sampling. Typically, soil gas data are more representative of actual site conditions in coarse-grained soil formations while soil matrix data are more representative of actual site conditions in fine-grained soil formations. For evaluating the risk associated with vapor intrusion to indoor air, soil gas data are the preferred contaminant data set, where practicable. Flux chamber and passive sampling methods are not discussed in this Advisory. Any sites where such sampling methods are necessary will be addressed separately.

On February 25, 1997, LARWQCB re-issued the "Interim Guidance for Active Soil Gas Investigation" (ASGI) as guidance for investigating sites with potential VOC contamination. Unless otherwise noted in this Advisory, the active soil gas investigation should be performed in accordance with the most current ASGI.

2.0 SUPPLEMENTAL RECOMMENDATIONS

The following sections supplement the ASGI in an effort to ensure that consistent methodologies are applied during soil gas investigations to produce reliable and defensible data of high quality. All sampling probe installation, sampling, and analytical procedures, whether or not discussed below, are subject to Agency review and approval.

- 2.1 Project Management
- 2.2 Soil Gas Sampling Probe Installation
- 2.3 Purge Volume Test
- 2.4 Leak Test
- 2.5 Purge/Sample Flow Rate
- 2.6 Soil Gas Sampling
- 2.7 Analysis of Soil Gas Samples

2.1 Project Management

2.1.1 Workplan: An appropriate workplan should be prepared and submitted to the Agency for review and approval at least 30 days prior to its implementation. Any variations or deviations from this Advisory should be specified in the workplan. The soil gas workplan can either be incorporated as part of a comprehensive site investigation workplan or as a stand-alone document, depending on site-specific circumstances.

2.1.2 Field Activities

- A. The Agency should be notified 10 working days prior to implementation of field activities. All necessary permits and utility clearance(s) should be obtained prior to conducting any investigations described in this Advisory.
- B. All engineering or geologic work (e.g., logging continuous soil cores, soil description) should be performed or supervised by a California Registered Professional in accordance with the Business and Professions Code, Chapters 7 and 12.5, and the California Code of Regulations, Title 16, Chapters 5 and 29.

In addition, for proposed school sites, all work performed should be under the direction and supervision of a project coordinator experienced in soil gas investigations [e.g., an Environmental Assessor as defined in Education Code Section 17210(b)].

- C. Evaluation of raw data by Agency staff may occur either in the field or in the office.
 - 1. Hard copies of the complete raw laboratory data, including handwritten data and field notes, should be provided to the Agency staff upon request.
 - 2. Adjustments or modifications to the sampling program may be required by Agency staff to accommodate changes mandated by evaluation of the data set or unforeseen site conditions.
- D. Investigation derived wastes (IDWs) should be managed as hazardous waste until proven otherwise or until specifically approved by the Agency as being non-hazardous waste. IDWs should be handled and disposed in accordance with federal, state and local requirements.

E. Field Variations

1. To expedite the completion of field activities and avoid potential project delays, contingencies should be proposed and included in the project workplan (e.g., soil matrix samples will also be collected if clayey soils [as defined in the Unified Soil Classification System (USCS)] are encountered during the proposed soil gas investigation).
2. The Agency field staff should be informed of any problems, unforeseen site conditions, or deviations from the approved workplan. When it becomes necessary to implement modifications to the approved workplan, the Agency should be notified and a verbal approval should be obtained before implementing changes.

F. Soil Matrix Sampling Requirements: Companion soil matrix sampling may be conducted concurrently with a soil gas investigation (in accordance with the ASGI, Section 5.0), except where extremely coarse-grained soils (as defined in USCS) are encountered or when specifically excluded by the Agency.

2.1.3 Soil Gas Investigation Reports: A soil gas investigation report including a discussion of field operations, deviations from the approved workplan, data inconsistencies, and other significant operational details should be prepared. The report may either be a stand-alone document in a format recommended by the Agency or be included within a site-specific assessment report. At a minimum, the report should contain the following:

- A. Site plan map and probe location map at an appropriate scale as specified in the workplan (e.g., scale: one inch = 40 feet);
- B. Final soil gas iso-concentration maps for contaminants of concern at the same scale as the site plan map;
- C. Summary tables for analytical data, in micrograms per liter ($\mu\text{g/L}$), in accordance with the ASGI;
- D. Legible copies of field and laboratory notes or logs;
- E. All analytical results and Quality Assurance/Quality Control (QA/QC) information including tables and explanations of procedures, results, corrective actions and effect on the data, in the format specified by the Agency; and
- F. Upon request, all raw data including chromatograms and calibration data should be submitted to the Agency.

2.2 Soil Gas Sampling Probe Installation

- 2.2.1 **Lithology:** Site soil or lithologic information should be used to select appropriate locations and depths for soil gas probes. If on-site lithologic information is not available prior to conducting the soil gas investigation, at least one (1) continuously cored boring to the proposed greatest depth of the soil gas investigation should be installed at the first sampling location, unless specifically waived or deferred by Agency. Depending on site conditions, additional continuously cored borings may be necessary.
- A. Lithologic logs should be prepared for all borings (e.g., continuously cored borings, soil matrix sampling, geotechnical sampling, etc.). Note: This does not apply to direct-push soil gas probe installations.
 - B. Information gathered from the continuously cored borings may include soil physical parameters, geotechnical data and contaminant data.
 - C. If low-flow or no-flow conditions (e.g., fine-grained soil, clay, soil with vacuum readings that exceed approximately 10 inches of mercury or 136 inches of water) are encountered, soil matrix sampling using EPA Method 5035A should be conducted in these specific areas. Also see Section 4 of LARWQCB's "General Laboratory Testing Requirements for Petroleum Hydrocarbon Impacted Sites" on use of EPA Method 5035A.
 - D. If the bottom five (5) feet of a continuously cored boring is composed of clay or soil with a vacuum exceeding approximately 10 inches of mercury or 136 inches of water, the continuously cored boring should be extended an additional five (5) feet to identify permeable zones. If the extended boring is also composed entirely of clay, the boring may be terminated. Special consideration should always be given to advancing borings and ensuring that a contaminant pathway is not being created through a low permeability zone.
- 2.2.2 **Sample Spacing:** A scaled site plan depicting potential or known areas of concern (e.g., existing or former sumps, trenches, drains, sewer lines, clarifiers, septic systems, piping, underground storage tanks [USTs], chemical or waste management units) should be provided in the project workplan. Sample spacing should be in accordance with the most current ASGI and may be modified based on site-specific conditions with Agency approval. To optimize detecting and delineating VOCs, the grid spacing should be modified to include biased sampling locations.

- 2.2.3 Sample Depth: Sample depths should be chosen to minimize the effects of changes in barometric pressure, temperature, or breakthrough of ambient air from the surface; and to ensure that representative samples are collected. Consideration should be given to the types of chemicals of concern and the lithology encountered.
- A. At each sample location, soil gas probes should be installed at a minimum of one sample depth, generally at five (5) feet below ground surface (bgs), in accordance with the most current ASGI.
 - B. Samples should be collected near lithologic interfaces or based on field instrument readings (e.g., Flame Ionization Detector [FID], Photo Ionization Detector [PID]) from soil cuttings and/or cores to determine the location of maximum analyte concentrations at the top or bottom of the interface depending upon the analyte.
 - C. Multi-depth sampling is appropriate for any of the following locations:
 - 1. Sites identified with subsurface structures (e.g., USTs, sumps, clarifiers, waste or chemical management units), subsurface sources (e.g., oil fields, artificial fill, buried animal waste), changes in lithology, and/or contaminated groundwater. Soil gas probes should be emplaced below the base of any subsurface structures, sources or backfilled materials in the vadose zone. Collection of deeper samples should be done in consultation with Agency staff;
 - 2. Areas with significantly elevated VOC concentrations detected during shallow or previous vapor sampling;
 - 3. Areas where elevated field instrument readings are encountered from soil matrix cuttings, cores or samples; or
 - 4. In the annular space of groundwater monitoring wells during construction, where an assessment of the vertical extent of soil gas contamination is necessary.
 - D. If no lithologic change or contamination is observed, default sampling depths may be selected for multi-depth sampling. For example, soil gas samples may be collected at 5, 15, 25, 40 feet bgs, etc., until either the groundwater is encountered or VOCs are not detected, whichever comes first.
 - 1. Additional samples may be necessary based on site conditions.
 - 2. For Preliminary Endangerment Assessments: When 40 feet bgs is reached, collection of deeper samples may be waived.

However, assessment and/or characterization of the deeper vadose zone may be required in the future to protect groundwater resources.

2.2.4 Sampling Tubes: Sampling tubes should be of a small diameter (1/8 to 1/4 inch) and made of material (e.g., nylon, polyethylene, copper or stainless steel) which will not react or interact with site contaminants. For example, metal tubes should not be used for collection of hydrogen sulfide samples.

- A. Clean, dry tubing should be utilized at all times. If moisture, water, or an unknown material is present in the probe prior to insertion, the tubing should be decontaminated or replaced.
- B. After use at each location:
 - 1. Non-reusable (e.g., nylon or polyethylene) sampling tubes should be discarded; or
 - 2. Reusable sampling tubes should be properly decontaminated as specified in Section 2.2.7.
- C. A drawing of the proposed probe tip design and construction should be included in the project workplan.

2.2.5 Soil Gas Probe Emplacement Methods

- A. Permanent or Semi-permanent Soil Gas Probe Methods: Permanent or semi-permanent soil gas probes may be installed, using a variety of drilling methods. Please note that the mud rotary drilling method is not acceptable for soil gas probe emplacement. Other drilling methods such as air rotary and roto sonic can adversely affect soil gas data during and after drilling and will require extensive equilibration times. Therefore, they are not recommended. Other soil gas probe designs and construction (e.g., soil gas wells or nested wells) may be appropriate and should be discussed with Agency staff prior to emplacement. When additional sampling is not anticipated per consultation with the Agency, such probes may be properly removed or decommissioned after completion of the soil gas investigation.
 - 1. The probe tip should be emplaced midway within a minimum of one (1) foot of sand pack. The sand pack should be appropriately sized (e.g., no smaller than the adjacent formation) and installed to minimize disruption of airflow to the sampling tip. See Figure 1 for more information.
 - 2. At least one (1) foot of dry granular bentonite should be emplaced on top of each sand pack to preclude the infiltration

of hydrated bentonite grout. The borehole should be grouted to the surface with hydrated bentonite. With respect to deep probe construction with multiple probe depths, the borehole should be grouted between probes. One (1) foot of dry granular bentonite should be emplaced between the filter pack and the grout at each probe location. See Figure 2 for more information.

3. The use of a downhole probe support may be required for deep probe construction (e.g., 40 feet bgs for direct push probes).
 - a. Such probe support may be constructed from a one-inch diameter bentonite/cement grouted PVC pipe or other solid rod, or equivalent, allowing probes to be positioned at measured intervals.
 - b. The support should be properly sealed or solid (internally or externally) to avoid possible cross-contamination or ambient air intrusion.
 - c. The probes should be properly attached to the exterior of the support prior to placement downhole.
 - d. Alternative probe support designs should be described in the project workplan. If probe support will not be used for deep probes, justification should be included in the project workplan.
4. Tubing should be properly marked at the surface to identify the probe location and depth.
5. As-built diagrams for probes or wells should be submitted with the soil gas investigation report detailing the well identification and corresponding probe depths. A typical probe construction diagram may be submitted for probes with common design and installation.
6. Unless soil gas probes are removed or decommissioned, probes should be properly secured, capped and completed to prevent infiltration of water or ambient air into the subsurface and to prevent accidental damage or vandalism. For surface completions, the following components may be installed:
 - a. Gas-tight valve or fitting for capping the sampling tube;
 - b. Utility vault or meter box with ventilation holes and lock;
 - c. Surface seal; and
 - d. Guard posts.

B. Temporary Soil Gas Probe Emplacement Method: In general, the drive rod is driven to a predetermined depth and then pulled back to expose the inlets of the soil gas probe. After sample collection, both the drive rod and tubing are removed.

1. During installation of the probe, hydrated bentonite should be used to seal around the drive rod at ground surface to prevent ambient air intrusion from occurring.
2. The inner soil gas pathway from probe tip to the surface should be continuously sealed (e.g., a sampling tube attached to a screw adapter fitted with an o-ring and connected to the probe tip) to prevent infiltration.

2.2.6 Equilibration Time: During probe emplacement, subsurface conditions are disturbed. To allow for subsurface conditions to equilibrate, the following equilibration times are recommended:

- A. For probes installed with the direct push method where the drive rod remains in the ground, purge volume test, leak test, and soil gas sampling should not be conducted for at least 20 minutes following probe installation.
- B. For probes installed with the direct push method where the drive rod does not remain in the ground, purge volume test, leak test, and soil gas sampling should not be conducted for at least 30 minutes following probe installation.
- C. For probes installed with hollow stem drilling methods, purge volume test, leak test, and soil gas sampling should not be conducted for at least 48 hours (depending on site lithologic or drilling conditions) after the soil gas probe installation.
- D. Probe installation time should be recorded in the field log book.

2.2.7 Decontamination: After each use, drive rods and other reusable components should be properly decontaminated to prevent cross contamination. These methods include:

- A. 3-stage wash and rinse (e.g., wash equipment with a non-phosphate detergent, rinse with tap water, and finally rinse with distilled water); and/or
- B. Steam cleaning process.

2.3 **Purge Volume Test**

To ensure stagnant or ambient air is removed from the sampling system and to assure samples collected are representative of subsurface conditions, a

purge volume versus contaminant concentration test should be conducted as the first soil gas sampling activity at the selected purge test point. The purge volume test is conducted by collecting and analyzing a sample for target compounds after the removal of appropriate purge volumes.

2.3.1 Purge Test Locations: The purge test location should be selected as near as possible to the anticipated or confirmed contaminant source, and in an area where soil gas concentrations are expected to be greatest based on lithology (e.g., coarse-grained sediments). The first purge test location should be selected through the workplan approval process or as a field decision in conjunction with Agency staff.

2.3.2 Purge Volume: The purge volume or "dead space volume" can be estimated based on a summation of the volume of the sample container (e.g., glass bulbs), internal volume of tubing used, and annular space around the probe tip. Summa™ canisters, syringe, and Tedlar™ bags are not included in the dead space volume calculation. The Agency recommends step purge tests of one (1), three (3), and seven (7) purge volumes be conducted as a means to determine the purge volume to be applied at all sampling points.

- A. The appropriate purge volume should be selected based on the highest concentration for the compound(s) of concern detected during the step purge tests. The purge volume should be optimized for the compound(s) of greatest concern in accordance with Section 2.2 of the ASGI.
- B. If VOCs are not detected in any of the step purge tests, a default of three (3) purge volumes should be extracted prior to sampling.
- C. The step purge tests and purging should be conducted at the same rate soil gas is to be sampled (see Section 2.5).
- D. The purge test data (e.g., calculated purge volume, rate and duration of each purge step) should be included in the report to support the purge volume selection.

2.3.3 Additional Purge Volume Test

- A. Additional purge volume tests should be performed to ensure appropriate purge volumes are extracted if:
 - 1. Widely variable or different site soils are encountered; or
 - 2. The default purge volume is used and a VOC is newly detected.

- B. If a new purge volume is selected after additional step purge tests are conducted, the soil gas investigation should be continued as follows:
1. In areas of the same or similar lithologic conditions:
 - a. Re-sample 20 percent of the previously completed probes. This re-sampling requirement may be reduced or waived in consultation with Agency staff, depending on site conditions. If re-sampling indicates higher detections (e.g., more than 50 percent difference in samples detected at greater than or equal to 10 µg/L), all other previous probes should be re-sampled using the new purge volume.
 - b. Continue the soil gas investigation with the newly selected purge volume in the remaining areas.
 2. In areas of different lithologic conditions: Continue the soil gas investigation with the newly selected purge volume in the remaining areas.

2.4 Leak Test

Leakage during soil gas sampling may dilute samples with ambient air and produce results that underestimate actual site concentrations or contaminate the sample with external contaminants. Leak tests should be conducted to determine whether leakage is present (e.g., the leak check compound is detected and confirmed in the test sample after its application).

2.4.1 Leak tests should be conducted at every soil gas probe.

2.4.2 Leak Check Compounds: Tracer compounds, such as pentane, isopropanol, isobutene, propane, and butane, may be used as leak check compounds, if a detection limit (DL) of 10 µg/L or less can be achieved. These compounds may be contained in common products such as shaving cream.

2.4.3 A leak check compound should be placed at any location where ambient air could enter the sampling system or where cross contamination may occur, immediately before sampling. Locations of potential ambient air intrusion include:

- A. Sample system connections;
- B. Surface bentonite seals (e.g., around rods and tubing); or
- C. Top of the Temporary Soil Gas Probe (see Section 2.2.5.B).

- 2.4.4 The leak test should include an analysis of the leak check compound. If a leak check compound is detected in the sample, the following actions should be followed:
- A. The cause of the leak should be evaluated, determined and corrected through confirmation sampling;
 - B. If the leak check compound is suspected or detected as a site-specific contaminant, a new leak check compound should be used;
 - C. If leakage is confirmed and the problem can not be corrected, the soil gas probe should be properly decommissioned;
 - D. A replacement probe should be installed at least five (5) feet from the original probe decommissioned due to confirmed leakage, or consult with Agency staff; and
 - E. The leak check compound concentration detected in the soil gas sample should be included and discussed in the report.

2.5 Purge/Sample Flow Rate

Sampling and purging flow rates should not enhance compound partitioning during soil gas sampling. Samples should not be collected if field conditions as specified in Section 2.6.4 exist.

- 2.5.1 The purging or sampling flow rate should be attainable in the lithology adjacent to the soil gas probe.
- A. To evaluate lithologic conditions adjacent to the soil gas probe (e.g., where no-flow or low-flow conditions), a vacuum gauge or similar device should be used between the soil gas sample tubing and the soil gas extraction devices (e.g., vacuum pump, Summa™ canister).
 - B. Gas tight syringes may also be used to qualitatively determine if a high vacuum soil condition (e.g., suction is felt while the plunger is being withdrawn) is present.
- 2.5.2 The Agency recommends purging or sampling at rates between 100 to 200 milliliters per minute (ml/min) to limit stripping, prevent ambient air from diluting the soil gas samples, and to reduce the variability of purging rates. The low flow purge rate increases the likelihood that representative samples may be collected. The purge/sample rate may be modified based on conditions encountered in individual soil gas probes. These modified rates should be documented in the soil gas report.

2.6 Soil Gas Sampling

After the soil gas probe is adequately purged, samples should be collected by appropriate methodologies.

- 2.6.1 Sample Container: Samples should be collected in gas-tight, opaque/dark containers (e.g., syringes, glass bulbs wrapped in aluminum foil, Summa™ canisters), so that light-sensitive or halogenated VOCs (e.g., vinyl chloride) will not degrade.
- A. If a syringe is used, it should be leak-checked before each use by closing the exit valve and attempting to force ambient air through the needle.
 - B. If syringe samples are analyzed within five (5) minutes of collection, aluminum foil wrapping may not be necessary.
 - C. EPA Method TO-14A, TO-15, or an equivalent air analysis method, requires samples be collected in Summa™ canisters.
 - D. If a Summa™ canister is used, a flow regulator should be placed between the probe and the Summa™ canister to ensure the Summa™ canister is filled at the flow rate as specified in Section 2.5.2.
 - E. Tedlar™ bags should not be used to collect VOC samples.
 - F. Specific requirements for methane and hydrogen sulfide sample containers are specified in Section 2.7.9.

2.6.2 Sample Collection

- A. Vacuum Pump: When a vacuum pump is used, samples should be collected on the intake side of the vacuum pump to prevent potential contamination from the pump. Vacuum readings or qualitative evidence of a vacuum should be recorded on field data sheets for each sample.
- B. Shallow Samples: Care needs to be observed when collecting shallow soil gas samples to avoid sample breakthrough from the surface. Extensive purging or use of large volume sample containers (e.g., Summa™ canisters) should be avoided for collection of near-surface samples [e.g., shallower than five (5) feet bgs].

2.6.3 Sample Container Cleanliness and Decontamination

- A. Prior to its first use at a site, each sample container should be assured clean by the analytical laboratory as follows:
 - 1. New containers should be determined to be free of contaminants (e.g., lubricants) by either the supplier or the analytical laboratory; and
 - 2. Reused/recycled containers: Method blank(s), as specified in Section 2.7.1.A, should be used to verify sample container cleanliness.
- B. After each use, reusable sample containers should be properly decontaminated.
 - 1. Glass syringes or bulbs should be disassembled and baked at 240° C for a minimum of 15 minutes or at 120° C for a minimum of 30 minutes, or be decontaminated by an equivalent method.
 - 2. Summa™ canisters should be properly decontaminated as specified by appropriate EPA analytical methods.
 - 3. During sampling activities using reused/recycled sampling containers (e.g., glass syringes, glass bulbs), at a minimum one (1) decontaminated sample container per 20 samples or per every 12 hours, whichever is more often, should be used as a method blank (as specified in Section 2.7.1.A) to verify and evaluate the effectiveness of decontamination procedures.
- C. Plastic syringes should be used only once and then properly discarded.

2.6.4 Field Conditions: Field conditions, such as rainfall, irrigation, fine-grained sediments, or drilling conditions may affect the ability to collect soil gas samples.

- A. Wet Conditions: If no-flow or low-flow conditions are caused by wet soils, the soil gas sampling should cease. In addition, the Agency recommends that the soil gas sampling should not be conducted during or immediately after a significant rain event (e.g., 1/2 inch or greater) or onsite watering.
- B. If low flow conditions are determined to be from a specific lithology, a new probe should be installed at a greater depth or a new lateral location should be selected after evaluation of the site lithologic logs (See Section 2.2.1) or in consultation with Agency staff.

- C. If moisture or unknown material is observed in the glass bulb or syringe, soil gas sampling should cease until the cause of the problem is determined and corrected.
- D. If refusal occurs during drilling, soil gas samples should be collected as follows or in consultation with Agency staff.
 - 1. For sample depths less than five feet, collect a soil gas sample following the precautions outlined in Section 2.6.2.B.
 - 2. For sample depths greater than five feet, collect a soil gas sample at the depth of refusal.
 - 3. A replacement probe should be installed within five (5) feet laterally from the original probe decommissioned due to refusal. If refusal still occurs after three tries, the sampling location may be abandoned.

2.6.5 Chain of Custody Records: A chain of custody form should be completed to maintain the custodial integrity of a sample. Probe installation times and sample collection times should be included in the soil gas report.

2.7 Analysis of Soil Gas Samples

2.7.1 Quality Assurance/Quality Control (QA/QC): The soil gas analytical laboratory should comply with the project Quality Assurance Project Plan (QAPP) and follow the QA/QC requirements of the most current ASGI and the employed EPA Method. If there is any inconsistency, the most restrictive and specific requirements should prevail. The analytical data should be consistent with the Data Quality Objectives (DQOs) established for the project. The Agency staff may inspect the field and/or laboratory QA/QC procedures. Copies of the QA/QC plan and laboratory calibration data should be presented to the Agency field staff upon request.

Field QC samples should be collected, stored, transported and analyzed in a manner consistent with site samples. The following QC samples should be collected to support the sampling activity:

A. Sample Blanks

- 1. Method Blanks: Method blanks should be used to verify the effectiveness of decontamination procedures as specified in Section 2.6.3.B.3 and to detect any possible interference from ambient air.
- 2. Trip Blanks for Off-site Shipments: Whenever VOC samples are shipped offsite for analysis, a minimum of one (1) trip blank

per day should be collected and analyzed for the target compounds. Trip blanks, consisting of laboratory grade ultra pure air, are prepared to evaluate if the shipping and handling procedures are introducing contaminants into the samples, and if cross contamination in the form of VOC migration has occurred between the collected VOC samples. Trip blank containers and media should be the same as site samples.

B. Duplicate Samples: At least one (1) duplicate sample per laboratory per day should be field duplicate(s). Duplicate samples should be collected from areas of concern.

1. Duplicate samples should be collected in separate sample containers, at the same location and depth.
2. Duplicate samples should be collected immediately after the original sample.

C. Laboratory Control Samples and Dilution Procedure Duplicates: Laboratory Control Samples (LCS) and Dilution Procedure Duplicates (DPD) should be done in accordance with the most recent ASGI (Sections 3.5.0 and 3.12.4, respectively).

D. Split Samples: The Agency staff may request that split samples be collected and analyzed by a separate laboratory.

2.7.2 Laboratory Certification: Although the California Department of Health Services, Environmental Laboratory Accreditation Program (ELAP) does not currently require certification for soil gas analytical laboratories, the Agency recommends laboratories utilizing EPA Methods 8260B, 8021B, and 8015B for analyses of soil gas samples obtain ELAP certifications for such EPA analytical methods accordingly. The Agency or DTSC's Hazardous Materials Laboratory (HML) staff may inspect the laboratory.

2.7.3 Detection Limits for Target Compounds: Analytical equipment calibration should be in accordance with the most current ASGI. Consideration and determination of appropriate DLs should be based on the DQOs of the investigation.

A. The DL for leak check compounds should be 10 µg/L or less (see Section 2.4.2). The DL for oxygen (O₂) and carbon dioxide (CO₂) should be one (1) percent or less. The DLs for methane and hydrogen sulfide are specified in Section 2.7.9.

B. If the investigation is being conducted to delineate the extent of contamination, a DL of 1 µg/L is appropriate for all targeted VOCs.

- C. If the soil gas data are to be used to support risk assessment activities, a DL of 1 µg/L may be appropriate for the initial screening when evaluating all targeted VOCs. If the data are non-detect for all targeted VOCs, additional sampling with lower DLs is not required. If VOCs are detected, additional sampling, using a DL of 0.1 µg/L, may be required to confirm the non-detection of carcinogenic VOCs [see the Toxicity Criteria Database of the California Environmental Protection Agency, Office of Environmental Health Hazard (OEHHA), or the Integrated Risk Information System (IRIS) Database of the United States Environmental Protection Agency]. A DL of 0.1 µg/L may be proposed and used for all carcinogenic target VOCs from the beginning of the investigation.
- D. Based on site-specific DQO needs, lower DLs may be required. Examples of sites requiring site-specific DQO needs include, but are not limited to, chlorinated solvents sites, former industrial facilities and landfills. Several less common VOCs, not included on the ASGI-targeted compound list, may require lower detection limits [e.g., bis(chloromethyl)ether, DBCP (1,2-dibromo-3-chloropropane), or ethylene dibromide] when they are known or suspected to be present.
- E. If the required DLs cannot be achieved by the proposed analytical method, additional sample analysis by a method achieving these DLs [e.g., EPA Method 8260B with selective ion method (SIM), TO-14A, TO-15] may be required. Use of these methods should comply with the QA/QC requirements as specified in Section 2.7.1.
- F. For results with a high DL reported (e.g., due to matrix interference or dilution), the laboratory should provide a written explanation. Re-sampling and analyses may be required at the appropriate DL for a specific compound.

2.7.4 Sample Handling: Exposure to light, changes in temperature and pressure will accelerate sample degradation. To protect sample integrity:

- A. Soil gas samples should not be chilled;
- B. Soil gas samples should not be subjected to changes in ambient pressure. Shipping of sample containers by air should be avoided; and
- C. If condensation is observed in the sample container, the sample should be discarded and a new sample should be collected.

2.7.5 Holding Time: All soil gas samples (e.g., samples of VOCs, methane, fixed gases, or biogenic gases), with the exception of hydrogen sulfide samples, should be analyzed within 30 minutes by an on-site mobile laboratory. Hydrogen sulfide samples should be analyzed as specified in Section 2.7.9.B.2. Under the following conditions, holding times may be extended and analyses performed off-site:

- A. Soil gas samples collected in glass bulbs with surrogates added within 15 minutes of collection may be analyzed within 4 hours after collection;
- B. Soil gas samples collected in Summa™ canisters may be analyzed within 72 hours after collection; and
- C. Methane samples may be analyzed as specified in Section 2.7.9.A.2.

2.7.6 Analytical Methods

- A. VOC Samples: All VOC samples should be analyzed using only a Gas Chromatograph/Mass Spectrometer (GC/MS) method (e.g., EPA Method 8260B, used for analysis of soil gas samples, EPA Method TO-14A or TO-15, or equivalent), except at well-characterized sites (e.g., VOCs are known to be present and confirmed based on previous GC/MS analyses). A non-GC/MS method (e.g., EPA Method 8021B, used for analysis of soil gas samples) may be used only for routine monitoring of VOC contamination at well-characterized sites.

If during routine monitoring, new VOC(s) were detected by a non-GC/MS method, then at least 10 percent of the samples with each newly identified VOC should be confirmed by a GC/MS method. Thereafter, routine monitoring can resume with the non-GC/MS method, including the new analyte(s).

- B. Methane and Hydrogen Sulfide Samples: These gas samples should be analyzed using methods specified in Section 2.7.9.

2.7.7 Auto samplers may be used if:

- A. One (1) sample is introduced at a time;
- B. The sample vials are gas-tight and never opened after the sample is added;
- C. Proper holding times are maintained (see Section 2.7.5); and
- D. All samples are secured and under proper custody.

2.7.8 Target Compounds

A. VOCs

1. ASGI-Targeted Compounds: The ASGI (dated February 25, 1997) includes 23 primary and four (4) other target VOCs. All quantifiable results should be reported.
2. Others: The estimated results of all Tentatively Identified Compounds [TICs] or non-AGS-targeted compounds detected should be included in the report. If TICs or non-ASGI-targeted compounds are identified, contact the Agency to determine whether additional action is required (e.g., running additional standards to quantify TICs or non-ASGI compounds) and whether the use of these estimated data for risk evaluation is appropriate.

B. Leak Check Compounds: All quantifiable results should be reported as specified in Section 2.4.4.E.

C. Specific Compounds: Based on the site history and conditions, analyses for specific compounds may be required by the Agency staff. Examples include:

1. In areas where USTs or fuel pipelines are identified, soil gas samples should be analyzed for oxygenated compounds [e.g., methyl tertiary butyl ether (MTBE), ethyl tertiary butyl ether (ETBE), di-isopropyl ether (DIPE), tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), and ethanol];
2. At oilfield sites where semi-VOCs or Total Petroleum Hydrocarbons (TPHs) are detected in the soil gas samples, fixed and biogenic gas (O₂, CO₂, and CH₄) data should be obtained using a Thermal-Conductivity Detector (TCD) or a hand-held instrument;
3. At petroleum contaminated sites (including oilfields), dairies, wetlands, landfills or other sites where the presence of methane and/or hydrogen sulfide is suspected, soil gas samples should be analyzed for methane and/or hydrogen sulfide;
4. At sites where use of chlorinated solvents with 1,4-dioxane is suspected or known to exist, soil gas samples may be analyzed for 1,4-dioxane with a detection limit of 1 µg/L; or
5. See Section 2.7.9.A.4 below.

2.7.9 Methane and Hydrogen Sulfide Sampling Programs: If the presence of methane and/or hydrogen sulfide is suspected, they should also be included in the analytical plan. After evaluating the initial soil gas data, the Agency may recommend that testing for methane or hydrogen sulfide cease.

A. Methane Sampling Program: Methane samples may be analyzed by a GC using modified EPA Method 8015B, EPA Method TO-3, or ASTM 3416M (EPA 3C), or by an appropriate hand-held instrument (e.g., Land Tech Gas Analyzer GA-90, Gas Emissions Monitor GEM-500, GEM-2000).

1. Detection Limit: The DL for methane analysis should not exceed 500 parts per million by volume (ppmv).
2. Methane Sample Containers: In addition to the gas-tight sample containers previously specified in Section 2.6.1, Tedlar™ bags may be used for collection of methane samples with a holding time of no more than 24 hours.
3. Methane Screening Level: When methane is detected at 1,000 ppmv or more, additional sampling and/or further investigation is recommended to identify the source(s).
4. At sites where methane is investigated and detected at a level of 5,000 ppmv or more, fixed and biogenic gas (O₂, CO₂, and CH₄) data should be obtained using a Thermal-Conductivity Detector (TCD) or a hand-held instrument.
5. To determine that the area is pressurized by migration of gases, pressure readings of each sampling tube system should be recorded in the field logs and reported along with the methane concentration.
6. Special GC Requirements: The GC method requires calibration curves for analytes such as methane since it is not a normal target analyte for such an analytical method.
7. Special Hand-Held Instruments Requirements: Hand-held instruments should be calibrated in accordance with the manufacture's instructions. When a hand-held instrument is used to analyze methane samples, the Agency recommends that at least 10 percent of all positive methane samples (e.g., more than 5,000 ppmv), rounded to the nearest whole number, be confirmed by another hand-held instrument (different unit or brand) or by a GC method.

B. Hydrogen Sulfide Sampling Program: Hydrogen sulfide may be analyzed by a GC using the South Coast Air Quality Management District (SCAQMD) Method 307-91 or EPA Method 16, or by an

appropriate hand-held instrument (e.g., LTX-310 calibrated for hydrogen sulfide or Jerome 631-X).

1. Detection Limit: The DL should be equal to or less than 0.5 ppmv or be sensitive enough to allow for a modeled ambient air concentration (at least one microgram per cubic meter) at the soil surface.
2. Holding Time: Hydrogen sulfide samples should be extracted directly into a hand-held analyzer within 30 minutes of collection to minimize the risk of losing the hydrogen sulfide due to reaction with active surfaces. If a hand-held instrument is not used, hydrogen sulfide samples should be analyzed as below:
 - a. Within 30 minutes of collection, using the GC procedures; or
 - b. Within 24 hours of collection, if a surrogate is added to the samples, or 100 percent duplicate samples are collected.
3. Sample Containers: The following sample containers are recommended:
 - a. Minimum one (1) liter black Tedlar™ bag fitted with polypropylene valves or the equivalent;
 - b. 100-ml gas-tight syringe fitted with an inert valve and wrapped in aluminum foil;
 - c. Gas-tight glass bulb wrapped in aluminum foil; or
 - d. Glass-lined or silicon coated Summa™ canister.
4. Precautions
 - a. Since hydrogen sulfide is extremely unstable in the presence of oxygen and moisture, contact of hydrogen sulfide samples with them should be avoided.
 - b. Due to the high reactivity of hydrogen sulfide gas, contact of hydrogen sulfide samples with metallic or other non-passive surfaces should be avoided during sample collection, storage and analysis.
 - c. Care must be taken so that GC components do not react with the sample. Typically glass-lined injection ports and Teflon™ tube packed columns are used to avoid loss of hydrogen sulfide due to reaction with active surfaces.

3.0 SOIL PARAMETERS

If the soil gas data will be used in a health risk assessment, an estimation of the indoor air concentration should be performed using soil gas data with an Agency approved or modified predictable indoor air model. Default values of input parameters may be used in accordance with the approved indoor air modeling guidance and in consultation with Agency staff. If default values are not used, site-specific soil parameters should be obtained as discussed below.

To assess health risk, indoor air quality, the threat of groundwater contamination from VOCs, or to evaluate the effectiveness of a proposed remedial technology, the following soil matrix parameters should be obtained from a minimum of three (3) sample locations (at depths* corresponding to or associated with the detected VOCs) for each soil type in association with the soil gas investigation:

- 3.1 Soil description performed and presented in accordance with the Unified Soil Classification System (USCS);
- 3.2 Density;
- 3.3 Organic carbon content of the soil** (by the Walkee Black Method);
- 3.4 Soil moisture;
- 3.5 Effective permeability***;
- 3.6 Porosity; and
- 3.7 Grain size distribution analysis (curve) and evaluation of fine-grained soil content (by wet sieve analysis and any supplementary methods as necessary) to determine the percent clay, silt and sand. (The grain size distribution analysis will be used to classify the soil in accordance with the U. S. Soil Conservation Service [SCS] soil type, which is the same as the U. S. Department of Agriculture soil type.)

* Samples may be collected from proposed depths at the continuously cored boring.

** This input parameter is required for soil matrix VOC samples only. This parameter sample should not be collected from an impacted area.

*** As an alternative, the measurements of saturated hydraulic conductivity may be used to estimate vapor permeability.

4.0 REFERENCES

Additional information may be found in the following documents:

American Society for Testing and Materials (ASTM), "Standard Guide for Soil Gas Monitoring in the Vadose Zone, ASTM Standard D 5314-92," January 1993; Reapproved 2001; website <http://www.astm.org>

California Regional Water Quality Control Board, Los Angeles Region, "Interim Guidance for Active Soil Gas Investigation," February 25, 1997

California Regional Water Quality Control Board, Los Angeles Region, "General Laboratory Testing Requirements for Petroleum Hydrocarbon Impacted Sites," June 22, 2000

U.S. Environmental Protection Agency, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, EPA Publication SW-846, Third Edition," November 1986, as amended by Updates I (Jul. 1992), II (Sep. 1994), IIA (August 1993), IIB (Jan. 1995), III (Dec. 1996), IIIA (Apr. 1998), IVA (Jan. 1998) and IVB (Nov. 2000); website <http://www.epa.gov/SW-846/main.html>

U.S. Environmental Protection Agency, "U.S. EPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, EPA 540/R-94/012," February 1994; website <http://www.epa.gov/region09/qa/superfundclp.html>

U.S. Environmental Protection Agency, "Soil Gas Sampling, SOP#: 2042, Revision #: 0.0," June 1, 1996; website http://www.ert.org/respns_resrcs/sops.asp

U.S. Environmental Protection Agency, "Summa Canister Cleaning Procedures, SOP #1703, Rev. #: 0.0," 09/01/94; website http://www.ert.org/respns_resrcs/sops.asp

California Environmental Protection Agency (Cal/EPA), Office of Environmental Health Hazard (OEHHA), Toxicity Criteria Database; website <http://www.oehha.ca.gov/risk/ChemicalDB/index.asp>

United States Environmental Protection Agency, Integrated Risk Information System (IRIS) Database; website <http://www.epa.gov/iris/>

ACKNOWLEDGEMENTS

This Advisory was prepared under the direction of Sharon Fair, Branch Chief of DTSC's School Property Evaluation and Cleanup Division. Many Agency project supervisors, engineers, geologists, toxicologists, industrial hygienists, legal advisors, and Hazardous Material Laboratory staff provided support and consultation. In addition, the contents of this Advisory were greatly improved through discussions and comments received from consultants, school districts and numerous soil gas companies.

FOR MORE INFORMATION

Please contact the following person if you need additional information or if you have comments:

Mr. Joe Hwong, RG, CHG
Department of Toxic Substances Control
Schools Unit – Cypress
5796 Corporate Avenue
Cypress, California 90630
(714) 484-5406
jhwong@dtsc.ca.gov

Figures – Soil Gas Probe Emplacement Methods

Figure 1 – Permanent/Semi-permanent Gas Probe Construction Diagram

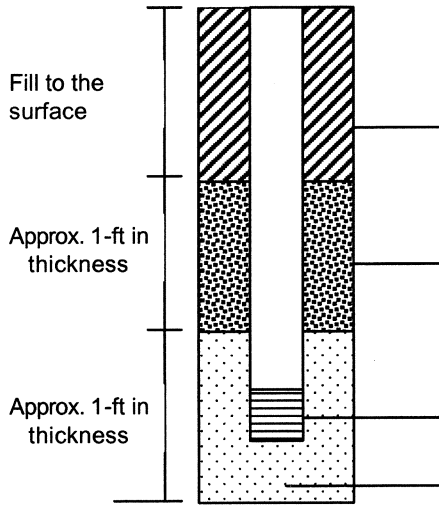
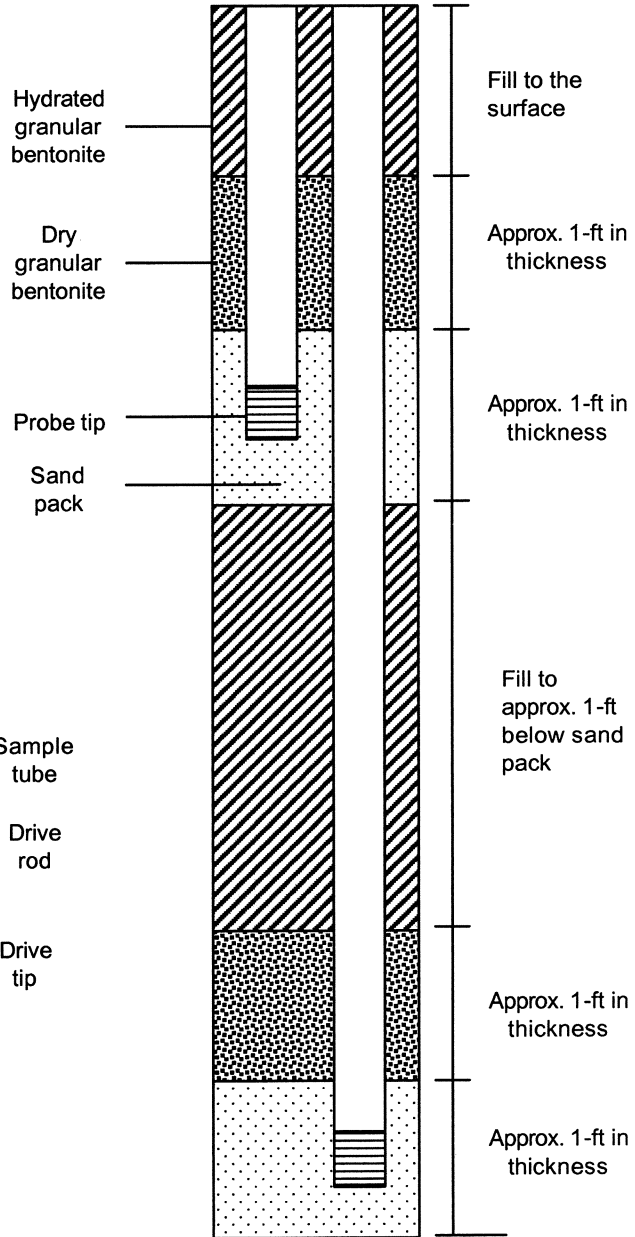
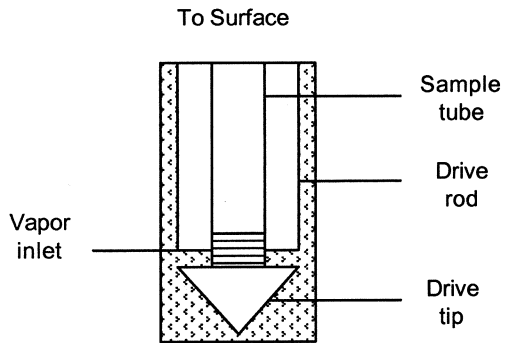


Figure 2 – Multi-depth Gas Probe Construction Diagram



Temporary Gas Probe Method



**Appendix B: Partial Hazardous Gas Assessment,
Milliken Sanitary Landfill Adjacent Northern Property
(Geoscience Analytical Inc., October 2006)**

9 October 2006

Sares Regis Group
18802 Bardeen Avenue
Irvine, CA 92612-1521

Attn.: Mr. Patrick Russell

RE: Partial Hazardous Gas Assessment – Milliken Sanitary Landfill Adjacent
Northern Property

Dear Mr. Russell:

This letter shall add clarification to our previous report dated April 21, 2006 on the above referenced property.

In the event northern boundary landfill improvements are not made prior to development of the subject site, additional mitigation may be required. Mitigation shall include gas detection in the passive vent risers and active ventilation of the slab on demand.

Where landfill improvements are made prior to site development, mitigation shall include the following:

- Trench dams and conduit seals within 200' of the landfill boundary
- Passive subsurface parking lot venting within 100' of the landfill boundary
- Passive interior ventilation (>1.0 air changes per hour) for all occupied structures within 200' of the landfill boundary

- In lieu of interior ventilation, passive subslab ventilation and gas impervious membrane for all occupied space within 200' of the landfill boundary.

Sincerely yours,

Louis J. Pandolfi
President

ReSARES.REGIS.GROUP,MILLIKEN.LANDFILL.ONTARIO.10096



TETRA TECH, INC.

Phase I Environmental Site Assessment
Milliken Surplus Property
SWC of Haven Avenue and Francis Street
APNs 0211-281-04, 21, and 23
Ontario, California 91761
Tetra Tech Project No. T17965

June 8, 2006

Prepared For:
J.P. Morgan Investment Management, Inc.
245 Park Avenue, 2nd Floor
NY1-Q216
New York, NY 10167
Attn: Mr. Peter A. Coccozza

Prepared By:
Tetra Tech, Inc.
17770 Cartwright Road, Suite 500
Irvine, California 92614
Phone: 949-250-6788
Fax: 949-608-5980



TETRA TECH, INC.

17770 Cartwright Road, Suite 500
Irvine, CA 92614
Office (949) 250-6788
Fax (949) 608-5980

June 8, 2006

Mr. Mr. Peter A. Cocozza
J.P. Morgan Investment Management, Inc.
245 Park Avenue, 2nd Floor
NY1-Q216
New York, NY 10167

RE: Phase I Environmental Site Assessment
Milliken Surplus Property
SWC of Haven Avenue and Francis Street
APNs 0211-281-04, 21, and 23
Ontario, California 91761
Tetra Tech Project No. T17965

Dear Mr. Cocozza:

Tetra Tech, Inc. (Tetra Tech) appreciates the opportunity to submit two copies of this Phase I Environmental Site Assessment report for the above-referenced property (the Site).

Tetra Tech found two recognized environmental conditions (RECs) in connection with the Site. However, no further investigation is recommended at this time.

Tetra Tech recognizes that this report is to be used exclusively by J.P. Morgan Investment Management, Inc. and it is a report upon which J.P. Morgan Investment Management, Inc. may rely.

Mr. Peter A. Coccozza
J.P. Morgan Investment Management, Inc.
June 8, 2006

2
Milliken Surplus Property
Ontario, California 91761

Tetra Tech
Phase I ESA
Project No. T17965

We appreciate the opportunity to provide you with these services. Please do not hesitate to contact us at your convenience, should you have any questions or comments regarding this report or our findings. It has been a pleasure working with you on this transaction.

Sincerely,
Tetra Tech, Inc.



STEVEN GROD, REA 07806
Project Manager
Phone: 949.250.6788 ext. 5910



JON R. LOVEGREEN, REA 00032
Manager, Private Practice Group (PPG)
Phone: 949.250.6788 ext. 5934

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- Appendix A: Photographic Documentation
- Appendix B: Regulatory Database Report
- Appendix C: Additional Relevant Documentation
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PHASE I ENVIRONMENTAL SITE ASSESSMENT

Milliken Surplus Property

SWC of Haven Avenue and Francis Street

APNs 0211-281-04, 21, and 23

Ontario, California 91761

Tetra Tech Project No. T17965

1.0 SUMMARY

On April 20, 2006, Tetra Tech, Inc. (Tetra Tech) was provided written authorization by Mr. Peter A. Coccozza of J.P. Morgan Investment Management, Inc. (J.P. Morgan) to conduct a Phase I Environmental Site Assessment (ESA) of the property referenced as Milliken Surplus Property located at the southwest corner of the intersection of Haven Avenue and Francis Street, Ontario, California (the Site). The assessment included a visual reconnaissance of the Site, visual inspection of the surrounding properties from curbside, review of historical ownership and use, visual asbestos and lead-based paint surveys, review of regulatory listings, interviews with persons knowledgeable about the Site, a biological issues evaluation, and a limited Phase II subsurface investigation. This report provides the results of the ESA. The biological issues evaluation and limited Phase II subsurface investigation are presented in separate documents being prepared concurrently with this report. A brief summary of each is presented in this report. The following provides a summary of Tetra Tech's findings, conclusions, and recommendations.

The Site has no address and is comprised of three parcels of land located at the southwest corner of the intersection of Haven Avenue and Francis Street in Ontario, San Bernardino County, California. The Site is approximately 98.77 acres in area and is unimproved land. According to San Bernardino County Assessor's information, the County of San Bernardino is the current owner of the Site. The Site is located in an area of Ontario zoned under a Specific Plan for Rail Industrial uses (industrial properties including corporate manufacturing, research and industrial, and multi-tenant industrial directly serviced by rail). The Site is unimproved land except for a railroad spur that crossing the western portion of the Site from near the southwest corner to near the middle of the northern Site boundary. The west-central portion of the Site previously was used as a borrow area for the Milliken Sanitary Landfill (MSL) resulting in a shallow depression encompassing approximately 6 acres.

According to the sources cited in the body of this ESA, the Site appears to have been vacant or undeveloped land in 1903 and agricultural land (active or fallow since at least 1938). Historic agricultural activities at the Site may have been subject to the application of pesticides and herbicides, which potentially could contain a number of hazardous substances. Initial screening-level near-surface soil sampling was conducted in those sections of the Site that were not part of the former borrow area for the MSL. The results of the initial screening-level soil sampling and analysis had no chlorinated pesticides' or California Code of Regulation metals' concentrations that are indicative of elevated concentrations of agriculturally-related chemicals. The potential for agriculturally-related chemicals to be present at the Site is considered to be a *de minimus* condition. However, in the event of any future construction and/or excavation activities at the Site, dust suppression will be necessary. Additionally, near-surface soils should be sampled and analyzed prior to being removed from the Site for any purpose.

Four monitoring wells were depicted on the Site property on a 2006 ALTA / ACSM Land Title Survey of the Site provided to Tetra Tech by J.P. Morgan: three near the southern Site boundary and one near the northern Site boundary. Tetra Tech observed the three abovegrade monitoring wells housings near the southern Site boundary during the Site reconnaissance. The monitoring wells appeared to be landfill gas sampling points. Tetra Tech was not able to locate the monitoring well near the northern Site boundary depicted on the ALTA / ACSM Land Title Survey. No identifying numbers or letters were observed on

the monitoring well housings. San Bernardino County Solid Waste Management District (SWMD) personnel stated the monitoring wells were old landfill gas sampling points but no sampling results were found in their files. It is recommended that the current property owner be requested to provide information on the monitoring wells including information on their construction. When no longer needed, the monitoring wells should be abandoned in accordance with applicable regulations.

No potential areas of concern (PAOCs) were found at the Site associated with underground storage tanks (USTs), aboveground storage tanks (ASTs), hazardous materials, hazardous waste, polychlorinated biphenyls (PCBs), asbestos-containing materials (ACMs), lead-based paint (LBP), radon, air emissions, wastewater/storm water, lead in drinking water, or surface water/wetlands.

With the exception of the adjacent MSL discussed below, no other off-Site properties are considered to be RECs or PAOCs to the Site at this time.

The MSL is operated by the San Bernardino County SWMD. The MSL is a Class III disposal facility that accepted refuse from the 1950s to 1999. Closure of the MSL took place in three phases. Two phases were closed in 1997 and the remaining phase was closed in 2005.

Several environmental monitoring and control systems are in operation at the MSL property including a groundwater monitoring and treatment system, surface water monitoring, landfill gas monitoring system, landfill gas extraction and flare systems, and landfill gas condensate management system. When the landfill gas control systems have been modified in the past (i.e., alteration, removal and/or installation of wells to the system) the SWMD conducted the work per the requirements of a variance permit issued by the South Coast Air Quality Management District (SCAQMD). The permit required work to be done under a phasing plan to ensure only limited portions of the systems were off-line at any time. If an emergency or failure of the landfill gas monitoring, extraction, and/or flare systems occurs, the SWMD is required under their SCAQMD operating permit conditions to respond / address the issue within 24 hours of detection. The MSL also operates under a post-closure emergency response plan.

According to groundwater depth and flow direction information obtained from previous environmental investigation reports for the Site and adjacent MSL, the depth to groundwater at the MSL is on the order of approximately 250 feet below ground surface and flows to the south to southwest.

Groundwater impacted with elevated concentrations of volatile organic compounds (VOCs) has been encountered in sampled water from some of the groundwater monitoring wells at the MSL. One of these groundwater monitoring wells (M-1) is located adjacent to the southwest part of the Site. There are no known sources of VOCs at the Site. Based on the results of sampling in groundwater monitoring well M-1, in Tetra Tech's judgment, it is likely that groundwater beneath the western side of the Site has been impacted by VOCs. The likely presence of VOC-impacted groundwater beneath the western side of the Site considered a recognized environmental condition (REC). However, there is a responsible party, the MSL owner, groundwater is relatively deep (approximately 250 feet bgs) and there is a groundwater collection systems operating at the MSL. Although the likely presence of VOC-impacted groundwater beneath the western side of the Site is considered a REC, based on the depth to groundwater, the operation of the groundwater collection system at the MSL, and the involvement of a responsible party, no further investigation is recommended at this time.

Historically, elevated concentrations of methane gas have been reported at the Site prior to the startup of the MSL landfill gas collection system. Elevated concentrations of landfill gases have been reported in MSL gas sampling probes adjacent to the southern boundary of the Site. A Hazardous Gas Assessment (soil gas survey) was conducted at the Site in April 2006 by another consultant and included collection of 122 soil gas samples across the Site at a depth of four feet below ground surface (bgs). Laboratory results reported

methane, ethane, and ethylene gas concentrations significantly below their respective Lower Explosive Limits (LELs). There are no known sources of landfill gas at the Site. Based on the MSL landfill gas monitoring results, it is likely in Tetra Tech's judgment, that landfill gases are present beneath at least part of the Site. The potential presence of landfill gases (excluding methane gas) at the Site is considered a REC. However, there is a responsible party, the MSL owner and there is a landfill gas collection system operating at the MSL. Although the likely presence of landfill gases at the Site is considered a REC, no further investigation with respect to landfill gases is recommended at the Site at this time. However, it is recommended, as a part of the Site design process, that results from the April 2006 Hazard Gas Assessment be used to design and install a passive landfill gas mitigation system if and as judged appropriate by a consultant familiar with landfill gas characterization and mitigation.

A biological issues evaluation of selected species was conducted with respect to animals reported to be present at, or potentially present at the Site. The species that were evaluated were the Delhi Sands Flower-Loving Fly (DSFLF), burrowing owl, San Bernardino Kangaroo Rat (SBKR), and San Diego Horned Lizard (SDHL). The DSFLF and SBKR were not found at the Site by prior consultants. The burrowing owl and SDHL were observed at the Site by prior consultants. None of these species is considered to be of significant environmental concern to the Site at this time. However, if the DSFLF were found at the Site in the future, it could have a significant impact on Site development schedule and cost. In addition, a mitigation and monitoring plan (M&MP) will be necessary for the burrowing owl and possibly the SDHL. Depending on which M&MP approach is selected for the burrowing owl, the relocation costs could be potentially significant (\$250,000 to \$300,000). The additional costs for the SDHL M&MP, if needed, are not likely to be significant.

Tables 1.1 and 1.2 on the following pages summarize project information present a summary of the findings.

Table 1.1 Project Information

Client Name:	J.P. Morgan Investment Management, Inc.	Property Visit Date:	April 12, 2006
Client Contact:	Mr. Peter A. Cocozza	Property Contact:	Mr. Larry Lukanish
Professional's Project #:	T17965	Date of Construction:	Not applicable
Professional's Project Manager:	Jon R. Lovegreen	No. Bldgs./Units:	Not applicable
Phone No.:	949.250.6788	No. of Stories:	Not applicable
Email:	jon.lovegreen@tetrattech.com	Bldg. Sq. Footage:	Not applicable
Property Name:	Milliken Surplus Property	Property Acreage:	Approximately 98.77
Property Address:	SWC Haven Avenue and Francis Street; APNs	Basement/Slab on Grade:	Not applicable
Property Town, County, State:	Ontario, San Bernardino County, CA	Property Use:	Unimproved land except for a railroad spur on the western portion of the Site
Property Identification:	Three APNs: 0211-281-04 0211-281-21 0211-281-23	Property History:	Vacant or undeveloped land in 1903 and agricultural land (active or fallow since at least 1938). Currently undeveloped land.
Groundwater:	At adjacent Milliken Sanitary Landfill property the depth is approximately 250 feet bgs with south to southwest flow direction.	Other Improvements:	None

Table 1.2 Table of Summarized Findings

Report Section (Fill In)	Assessment Item	No Further Investigation	HREC	REC	Non-ASTM Risk	Opinion of Probable Cost (as applicable)
6.10.1	Groundwater Contamination (VOCs in groundwater)	X		X (1)		(1)
5.9.3	Soil Contamination (Ag.-related chemicals)	X			X(2)	(2)
5.9.3	Stressed Vegetation	X				
5.9.3	Surficial Disturb./Staining	X				
6.5.1	USTs/LUSTs	X				
6.5.2	ASTs	X				
6.9	PCBs (incl. ballasts)	X				
5.9.3	Petroleum	X				
6.7	Waste Gen./Disp. Issues	X				
3.3	Operational Issues	X				
5.1	Nearby Property Issues	X				
3.5	Adjacent Property Issues (Landfill gasses)	X		X(3)		(3)
5.4.2	Historical Issues	X				
5.4.6	Previous Report Issues	X				
12.6	Regulatory Review Issues	X				
5.8	Chemicals/Haz. Subst.	X				
3.3	Proposed Use Issues	X				
5.9.3	Odors	X				
12.1	ACMs	X				
12.2	Radon	X				
12.3	Lead-Based Paint	X				
12.4	Lead in Drinking Water	X				
12.5	Wetlands	X				
12.6	Regulatory Compliance	N/A				
12.7	Cultural and Historic	N/A				
12.8	Industrial Hygiene	N/A				
12.9	Health and Safety	N/A				
12.10	Ecological Resources	N/A				
12.11	Endangered Species	X			X(4)	(4)
12.12	IAQ/Microbial	N/A				
	High Voltage Power Lines	N/A				
5.9.4	Other (3, possibly 4 on-Site methane gas monitoring wells)				X(5)	(5)

[Note: An “X” is used to identify an item for which “No Further Investigation” is recommended and a numbered notation is used to reference a footnote which summarizes each of the Assessment Items for which a condition exists.

Abbreviations: ACM = asbestos containing material
 UST = underground storage tank
 LUST = leaking underground storage tank
 AST = aboveground storage tank
 PCBs = polychlorinated biphenyls
 N/A = not applicable
 REC = recognized environmental condition
 HREC = historical recognized environmental condition

- (1) The likely presence of elevated VOC concentrations in groundwater beneath the western side of the Site is considered to be a recognized environmental condition (REC). However, there is a responsible party, the Milliken Sanitary Landfill (MSL) owner, the depth to groundwater is deep (250 feet bgs), and there is a groundwater collection system operating at the MSL. Although the likely presence of elevated VOC concentrations in groundwater beneath the western side of the Site is considered a REC, based on the depth to groundwater and the presence of a responsible party, no further investigation is recommended at this time.
- (2) Historic agricultural activities at the Site may have been subject to the application of pesticides and herbicides, which potentially could contain a number of hazardous substances. The results of initial screening-level soil sampling and analysis, summarized in a separate report being prepared concurrently with this report, had no chlorinated pesticides’ or California Code of Regulation metals’ concentrations that are indicative of elevated concentrations of agriculturally-related chemicals. The potential for agriculturally-related chemicals to be present at the Site is considered to be a *de minimus* condition. However, in the event of any future construction and/or excavation activities at the Site, dust suppression will be necessary. Additionally, near-surface soils should be sampled and analyzed prior to being removed from the Site for any purpose. The costs to implement these activities are dependent on the amount of soil that is exported from the Site.
- (3) The likely presence of landfill gases (excluding methane gas) beneath at least part of the Site is considered a REC based on the results of gas monitoring at the MSL and historic gas readings at the Site. No further investigation is recommended at this time. However, as a part of the Site design process, it is recommended that results from the April 2006 Hazard Gas Assessment be used to design and install a passive landfill gas mitigation system if and as judged necessary by a consultant familiar with landfill gas characterization and mitigation. The estimated cost for a methane gas mitigation system is approximately \$2 to \$5 per square foot of building space (in 2006 dollars).
- (4) The species that were evaluated were the Delhi Sands Flower-Loving Fly (DSFLF), burrowing owl, San Bernardino Kangaroo Rat (SBKR), and San Diego Horned Lizard (SDHL). The DSFLF and SBKR were not found at the Site by prior consultants. The burrowing owl and SDHL were observed at the Site by prior consultants. None of these species is considered to be of significant environmental concern to the Site at this time. However, if the DSFLF were found at the Site in the future, it could have a significant impact on Site development schedule and cost. In addition, a mitigation and monitoring plan (M&MP) will be necessary for the burrowing owl and possibly the SDHL. Depending on which M&MP approach is selected for the burrowing owl, the relocation costs could be potentially significant (\$250,000 to \$300,000). The additional costs for the SDHL M&MP, if needed, are not likely to be significant.
- (5) Four monitoring wells were depicted on the Site property on a 2006 ALTA / ACSM Land Title Survey of the Site. Tetra Tech observed the three abovegrade monitoring wells housings near the

southern Site boundary during the Site reconnaissance. The monitoring wells appeared to be landfill gas sampling points. San Bernardino County Solid Waste Management District (SWMD) personnel stated the monitoring wells were old landfill gas sampling points but no sampling results were found in their files. It is recommended that the current property owner be requested to provide additional information on the monitoring wells including information on their construction. When no longer needed, the monitoring wells should be abandoned in accordance with applicable regulations. The cost for monitoring well abandonment is dependent on the depth of the monitoring wells; but it is not considered significant provided the wells are shallow methane gas monitoring wells. If the wells are groundwater monitoring wells, the estimated cost for abandonment is approximately \$50 to \$100 per foot of monitoring well.

Conclusions

In the professional opinion of Tetra Tech an appropriate level of inquiry has been made into the previous ownership and uses of the Site consistent with good commercial and customary practice with the intent to minimize environmental liability. Based on the information cited in this assessment, current regulatory guidelines, and the judgment of Tetra Tech the following conclusions have been drawn:

- No evidence of RECs has been found at the Site except for the likely presence of impacted groundwater beneath the western part of the Site and landfill gases (excluding methane gas).
- The adjacent MSL property adjacent and south of the Site is considered to be to the source of the likely VOC-impacted groundwater and landfill gases at the Site.
- No evidence of HRECs has been found at the Site.
- Current Site use is not a potential area of concern (PAOC).
- Three on-Site apparent landfill gas monitoring wells are present at the Site and a fourth is shown to be present but could not be located. These wells are not of environmental concern but should be abandoned when no longer needed.
- The results of the initial screening-level soil sampling and analysis conducted concurrently with this assessment had no chlorinated pesticides' or California Code of Regulation metals' concentrations that are indicative of elevated concentrations of agriculturally-related chemicals. The potential for agriculturally-related chemicals to be present at the Site is considered to be a *de minimus* condition.
- None of the species that were part of the biological evaluation is considered to be of significant environmental concern to the Site at this time. However, if the Desert Sands Flower-Loving Fly (DSFLF) were found at the Site in the future, it could have a significant impact on Site development schedule and cost. In addition, depending on which mitigation and monitoring approach is selected for the burrowing owl, the relocation costs could be potentially significant (\$250,000 to \$300,000).

Recommendations

Based on the information gathered during the performance of this assessment, current regulatory guidelines, and the judgment of Tetra Tech, the following recommendations are presented for consideration:

- In the event of any future construction and/or excavation activities at the Site, dust suppression may be necessary. Additionally, near-surface soils should be sampled and analyzed prior to being removed from the Site for any purpose.
- No groundwater monitoring is recommended at this time.
- Information on the monitoring wells at the Site, including information on their construction, should be obtained. When no longer needed, the monitoring wells should be abandoned in accordance with applicable regulations.

- Results of the April 2006 Hazardous Gas Assessment (soil gas survey) at the Site should be used to design and install a passive landfill gas mitigation system if and as judged appropriate by a consultant familiar with landfill gas characterization and mitigation.
- A mitigation & monitoring plan (M&MP) should be prepared for the burrowing owl and possibly the San Diego Horned Lizard as a part of the Site development planning and permit preparation. Following agency approval, the M&MP should be implemented.

2.0 INTRODUCTION

On April 20, 2006, Tetra Tech, Inc. (Tetra Tech) was provided written authorization by Mr. Peter A. Coccozza of J.P. Morgan Investment Management, Inc. (J.P. Morgan) to conduct a Phase I Environmental Site Assessment (ESA) of the property referenced as Milliken Surplus Property located at the southwest corner of the intersection of Haven Avenue and Francis Street, Ontario, California (the Site). Work on the ESA was initiated by Tetra Tech on 6 April 2006 prior to completion of the written authorization. This assessment was conducted by Tetra Tech in general accordance with J.P. Morgan service agreement titled "Environmental Site Assessment, Work Order – Exhibit B" dated September 27, 2004, and with the scope and limitations set forth in the American Society for Testing and Materials (ASTM) Standard Practice E 1527-05 document entitled "Standard Practice for Environmental Assessments: Phase I Environmental Site Assessment Process."

2.1 Purpose

The primary purpose of this assessment was to identify *recognized environmental conditions* (RECs) in connection with the subject property. ASTM defines recognized environmental conditions as the presence or likely presence of hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or material threat of a release into structures on the property or into the ground, groundwater, or surface water of the property.

2.2 Scope of Services

The assessment included a visual reconnaissance of the Site, visual inspection of the surrounding properties from curbside, review of historical ownership and use, visual asbestos and lead-based paint surveys, review of regulatory listings, and interviews with persons knowledgeable about the Site. The following provides a more detailed description of the scope of services:

- Visual inspection of the Site building and grounds to evaluate the potential for on-Site oil or hazardous material release(s).
- Visual inspection of the Site to evaluate the likelihood that polychlorinated biphenyls (PCBs) are present, i.e. transformers.
- Visual inspection and categorization of the use of abutting and adjacent properties as potential off-Site sources of environmental concern.
- Review of local records related to historical ownership, usage and Site development. This also included interviewing local environmental authorities to obtain information regarding complaints, violations, citations, or inspections related to the Site.
- Review of published Federal regulatory records related to on-Site activities and to potential off-Site sources of oil or hazardous material impacts. Federal records reviewed include the following:
 - National Priorities List (NPL)
 - Delisted/Proposed NPL
 - Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)
 - CERCLIS NFRAP
 - Corrective Action Report (CORRACTS)

- Resource Conservation and Recovery Information System (RCRIS) including TSD, LQG, and SQG
 - Brownfields
 - Institutional Control/Engineering Control (IC/EC)
 - Emergency Response Notification System (ERNS)
- Review of readily available State regulatory records and publications for environmental activities related to the Site and potential off-Site sources of oil or hazardous material impacts. State records reviewed include the following:
 - Annual Workplan (AWP)/Bond Expenditure Plan (BEP)
 - Cal-Sites
 - California Hazardous Materials Incident Report System (CHMIRS)
 - Cortese
 - Notify 65
 - Toxic Pits
 - Solid Waste Information System (SWIS)
 - Waste Management Unit Database System (WMUDS) and Solid Waste Assessment Test (SWAT)
 - Leaking UST (LUST)
 - Spills, Leaks, Investigations, and Cleanups (SLIC)
 - Voluntary Cleanup Plan (VCP)
 - Underground Storage Tank (UST) databases
 - Deed Restriction Listings (DEED – State Equivalent for IC/EC)
 - Equivalent Tribal Records
 - Review readily available historic Site documents to assess for potential on-Site sources of oil or hazardous material impacts.
 - Review of readily available aerial photos for the Site and Site vicinity to evaluate present and historical development/facilities.
 - Review readily available plans and documents relative to construction materials utilized at the Site and any historical renovation activities.
 - Visual inspection of the interior and exterior of Site structures to evaluate the likelihood that suspect asbestos-containing materials (ACMs) and lead-based paint are present at the Site.
 - Biological issues evaluation of selected species that is presented in a separate report and summarized in this ESA report.
 - Initial screening-level Phase II subsurface investigation of selected agriculturally-related chemicals. The results of the subsurface investigation are presented in a separate report and summarized in this ESA report.
 - Preparation of a Phase I Environmental Site Assessment Report.

2.3 Significant Assumptions

Observed site operations are assumed to be representative of prior operations during the tenure of the existing tenants.

There were no other significant assumptions made during the conduct of this Phase I ESA. It is assumed that the information provided by others to Tetra Tech is accurate and complete. Where provided, Tetra Tech has made reasonable inquiry into the accuracy of such information. Unless such inquiry indicated otherwise, the information was considered to be accurate and complete. It is also assumed that surficial observations are indicative of subsurface conditions. As discussed below in Section 2.4, there are limitations to this assumption.

2.4 Limitations and Exceptions

Tetra Tech did not significantly delete or deviate from the recommended exercises set forth in ASTM Practice E 1527-05 and/or in J.P. Morgan's Guidance Document for Phase I Environmental Site Assessments when completing this Phase I ESA. The scope of work did not include consideration of any potential environmental conditions that are outside the scope of ASTM Practice E 1527-05, except for:

- A limited visual survey of the Site for the presence of asbestos-containing materials (ACMs) and lead-based paint (LBP) that included observations of observed suspect ACMs and LBP in readily and physically accessible areas;
- Review of readily accessible information regarding radon and wetlands.
- An initial screening-level Phase II subsurface investigation of selected agriculturally-related chemicals.
- A biological issues evaluation of selected species.

The following limitations are noted:

- Agency responses have not been received from the Ontario Fire Department (OFD) and San Bernardino County Fire Department (SBCFD).
- The walk through of the Site consisted of a walk around the perimeter of the Site and across the Site at approximate 0.2 mile spacings.

Our professional services have been performed, our findings obtained, and our recommendations prepared in accordance with customary principles and practices in the fields of environmental science and engineering. This warranty is in lieu of all other warranties either expressed or implied. Tetra Tech is not responsible for the independent conclusions, opinions or recommendations made by others based on the records review, Site inspection, field exploration, and laboratory test data presented in this report.

It should be noted that all surficial environmental site assessments are inherently limited in the sense that conclusions are drawn and recommendations developed from information obtained from limited research and Site evaluation. Subsurface conditions were not field investigated as part of this study and may differ from the conditions implied by the surficial observations. Additionally, the passage of time may result in a change in the environmental characteristics at this Site and surrounding properties. This report does not warrant against future operations or conditions, nor does this warrant operations or conditions present of a type or at a location not investigated. This report is not a regulatory compliance audit.

This assessment is not intended to assess if any waste emplacement, or impacts to soil and/or groundwater conditions exists by subsurface sampling through the completion of soil borings and the installation of monitoring wells. The scope of work, determined by the client, did not include these activities.

Tetra Tech reviewed past ownership of the project Site in an attempt to determine past Site usage. Tetra Tech is not a professional title insurance firm and makes no guarantee, explicit or implied, that the past ownership review represented a comprehensive delineation of past Site ownership or tenancy for legal purposes.

Certain information contained in this report may have been rightfully provided to Tetra Tech by third parties or other outside sources. Where provided, Tetra Tech has made reasonable inquiry into the accuracy of such information. However, Tetra Tech does not make any warranties or representations, whether expressed or implied, regarding the accuracy of such information, and shall not be held accountable or responsible in the event that any such inaccuracies are present.

2.5 Special Terms and Conditions

There were no special terms or conditions associated with this Phase I ESA.

2.6 User Reliance

This report is one upon which J.P. Morgan Investment Management, Inc. may rely. Tetra Tech acknowledges that J.P. Morgan Investment Management, Inc. retains the right, at no additional cost, to provide this report (Work Document) to affiliates, successors, assigns, lenders and third parties for use and Tetra Tech agrees that such parties at no additional cost, shall have the right to rely on information provided with the Work Document, subject to the terms of the Master Service Agreement between J.P. Morgan Investment Management, Inc. and Tetra Tech.

Except to the extent provided in this Section, no other party shall have any right to rely on any service provided in connection with this Phase I ESA by Tetra Tech without prior written consent. Any authorized third-party use of this report shall also be subject to the terms and conditions governing the work in the contract between J.P. Morgan and Tetra Tech and shall be limited by the exceptions and limitations in this report, and with the acknowledgment that actual Site conditions may change with time, and that hidden conditions may exist at the property that were not discoverable within the authorized scope of the assessment. Any unauthorized release or misuse of this report shall be without risk or liability to Tetra Tech.

3.0 SITE DESCRIPTION

A Site visit was conducted by Tetra Tech representative Mr. Steven Grod, Project Manager, between 7:00 a.m. and 9:00 p.m. on April 12, 2006. Tetra Tech was unaccompanied during the Site visit. The weather during the Site visit was characterized by clear skies with temperatures ranging between approximately 55 and 65 degrees Fahrenheit. The Site visit consisted of a walk through of the Site, and visual reconnaissance of neighboring properties from curbside later in the day.

In addition to the walk-through, readily available resources such as geologic maps, wetland maps, Site plans, USGS topographic maps, aerial photographs, and regulatory records were reviewed.

3.1 Location and Legal Description

The Site is located at the southwest corner of the intersection of Haven Avenue and Francis Street in Ontario, San Bernardino County, California. The site is approximately 98.77 acres in area and consists of three parcels. According to information obtained from a publicly available database on the San Bernardino County Assessor's office website, the current Assessor Parcel Numbers (APNs) for the Site are 0211-281-04, 21, and 23. A copy of the preliminary title report provided to Tetra Tech by J.P. Morgan and containing the complete legal descriptions is in Appendix C. The Site is located in an area of Ontario zoned under a Specific Plan for Rail Industrial uses (industrial properties including corporate manufacturing, research and industrial, and multi-tenant industrial directly serviced by rail).

The location of the Site is depicted on the Guasti, California Topographic Quadrangle. The topography in the vicinity of the Site slopes gently downward to the south. Please refer to Figure No. 1 – Site Location Map.

3.2 Site and Vicinity General Characteristics

The vicinity of the Site can generally be described as a mixed industrial, commercial, and undeveloped area of Ontario, California. The Milliken Sanitary Landfill (MSL) is located adjacent and south of the Site.

3.3 Current Use of the Property

The Site was unimproved land on the day of the Site visit. No surface stains or other evidence of spills were observed on the Site. No depressions (except for the borrow pit described below), stressed vegetation, or irregular topography indicative of environmental impacts were observed at the Site. Minimal quantities of non-hazardous refuse was observed on the Site including aluminum cans, glass bottles, miscellaneous paper and plastic trash, chain-link fencing, couch cushions, wood doors, concrete rubble, and some automobile tires. Current use of the Site is not considered to be a potential area of concern (PAOC) to the Site.

3.4 Description of Structures, Roads, and Other Site Improvements

No structures were located on the Site at the time of the Site reconnaissance. A railroad spur crossed the western portion of the Site. An east-west oriented dirt road was located along the southern portion of the Site. Two north-south oriented dirt roads were located approximately at Site parcel boundaries. A large depression (former borrow pit used by the MSL) with a maximum depth of approximately 10 feet was observed on the west-central portion of the Site. The depression appeared to be approximately six acres in area. Tetra Tech observed what appeared to be three landfill gas monitoring wells on the southern portion of the Site. No specific information regarding these apparent landfill gas monitoring wells was found during this assessment. The dark substance previously observed at the northern part of the eastern Site parcel by a prior consultant was not observed by Tetra Tech.

Please refer to Figure No. 2 – Site Plan for a layout of the Site, unimproved roads, and other features mentioned above.

3.4.1 Exterior Improvements

No exterior improvements were observed except those described previously in Section 3.4.

3.4.2 Building Description

There were no buildings on the Site at the time of the Site reconnaissance.

3.4.3 Utilities

According to City of Ontario personnel, the following utilities are or will be provided to the Site:

Water: City of Ontario.
Sewer: Chino Basin Municipal Water District / Inland Empire Utilities Agency.
Natural gas: Southern California Gas Company (SCGC).
Electricity: Southern California Edison (SCE).

No information on other on-Site utilities, such as irrigation wells or drinking water wells, was found during this assessment. Tetra Tech requested records from the San Bernardino County Department of Public Health (SB CDPH) regarding septic systems and water wells at the Site. No records were found. No PAOCs associated with current on-Site utilities were found during this assessment.

3.5 Current Uses of Adjoining Properties

The following properties adjoining the Site were observed:

North: Francis Street, followed by (west to east) Dawn Food Products (3505 East Francis Street), International Paper Converting (3551 East Francis Street), SCE Milliken Substation (1600 South Commerce Parkway), Target Corp. Import Warehouse (4061 East Francis Street), and a Nordstroms warehouse / distribution facility (1600 South Milliken Avenue).

East: Milliken Avenue, followed by (north to south) Toyota parts distribution warehouse facility (no address found), Androp Packaging (4400 East Francis Street), and Express Connections (1805 South Milliken Avenue).

South: (east to west) multi-tenant South Milliken Industrial Park (1800 to 1890 South Milliken Avenue) and Milliken Sanitary Landfill (MSL) (2050 South Milliken Avenue). The buildings of the South Milliken Industrial Park appear to have been recently constructed and only three tenants' spaces were occupied: Mandisa (1820 South Milliken Avenue), The Tin Bender (1840 South Milliken Avenue), and Appliance Central (1850 South Milliken Avenue).

West: Haven Avenue, followed by (south to north) Corinthian Colleges (1819 South Excise Avenue – not occupied at the time of Tetra Tech's Site vicinity reconnaissance), two multi-tenant commercial / office buildings (1809 and 1809 South Excise Avenue), and undeveloped land.

The MSL is considered to be the source of two RECs at the Site: the likely presence of VOC-impacted groundwater beneath the western part of the Site and landfill gasses (including methane gas) beneath the Site. Refer to Section 5.4.6 for a discussion of information regarding the MSL obtained from J.P. Morgan

and the Sares*Regis Group, and records reviewed at the California Regional Water Quality Control Board – Santa Ana Region (SARWQCB) and San Bernardino County Solid Waste Management Division (SBCSWMD) offices.

Based on the inspection of the adjoining properties from curbside and information obtained from review of the EDR database report (Section 7.1), the other adjacent properties are not considered to be PAOCs to the Site at this time. Additionally, review of the EDR database report did not reveal other off-Site facilities of environmental concern to the Site.

4.0 USER PROVIDED INFORMATION

4.1 Title Records

A preliminary title report was provided to Tetra Tech by J.P. Morgan. According to the preliminary title report, the Site parcels are owned by the County of San Bernardino. The preliminary Title Report also disclosed several easements across the Site parcel related to utilities and access from adjacent properties or streets. A copy of the preliminary title report provided to Tetra Tech by J.P. Morgan is in Appendix C.

4.2 Environmental Liens or Activity and Use Limitations

No current environmental liens or environmental Site use limitations were found in the preliminary title report. No information was found from other sources that there are environmental liens or Site use limitations.

However, as discussed in Section 9, mitigation measures may need to be designed and implemented for landfill gasses and possibly the San Diego Horned Lizard. A mitigation & monitoring plan will need to be designed and implemented for the burrowing owl as discussed in Section 9.

4.3 Specialized Knowledge

None of the individuals interviewed during the conduct of this Phase I ESA had specialized knowledge with respect to the Site except for PAOCs associated with the adjacent MSL as reported by J.P. Morgan Investment Management, Inc.

4.4 Valuation Reduction for Environmental Issues

Tetra Tech found no information indicative of a valuation reduction for environmental issues. However, Tetra Tech is not an appraisal company and this should not be construed to be part of an appraised valuation of the Site.

4.5 Owner, Property Manager and Occupant Information

According to information contained in the preliminary title report and information obtained from the San Bernardino County Assessor's website, the County of San Bernardino currently owns the Site. The Site is unimproved land and has no manager or occupant.

4.6 Reasons for Phase I ESA Performance

This Phase I ESA has been requested as a part of the due diligence being conducted by J.P. Morgan for a pending transaction involving the Site.

5.0 RECORDS REVIEW

5.1 Standard Environmental Record Sources (EDR)

Tetra Tech procured and reviewed a database report from Environmental Data Resources Inc. (EDR). The EDR report may be referenced in Appendix B. A review of databases and files from Federal, state, and local environmental regulatory agencies was conducted to identify use, generation, storage, treatment or disposal of hazardous materials and chemicals, or release incidents of such materials which may impact the Site. The databases discussed in the following section address ASTM requirements. Additional federal and state databases were reviewed. Please refer to the EDR report for a detailed listing.

Federal records reviewed included: National Priorities List (NPL), Delisted NPL, Proposed NPL, Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS), CERCLIS-NFRAP (No Further Remedial Action Planned), Corrective Action Report (CORRACTS), Resource Conservation and Recovery Information System (RCRIS) including TSD (Treatment Storage and Disposal), LQG (Large Quantity Generator) and SQG (Small Quantity Generator), Brownfields, Institutional Control/Engineering Control (IC/EC) database, and Emergency Response Notification System (ERNS).

State records reviewed include: Annual Workplan (AWP)/Bond Expenditure Plan (BEP); Cal-Sites; California Hazardous Materials Incident Report System (CHMIRS); Cortese; Notify 65; Toxic Pits; Solid Waste Information System (SWIS); Waste Management Unit Database (WMUD) and Solid Waste Assessment Test (SWAT); Leaking UST (LUST); Spills, Leaks, Investigations, and Cleanups (SLIC); Voluntary Cleanup Plan (VCP); Underground Storage Tank (UST) databases; Deed Restriction Listings (DEED – State Equivalent for IC/EC); and equivalent Tribal records.

Included in the EDR report is an orphan summary. This summary lists facilities that are contained on one of the above referenced databases or lists, but for which complete or accurate geographic data was not available. Consequently, EDR was unable to map the facilities in relation to the Site. This list was reviewed during Site reconnaissance to evaluate whether the properties referenced are within ASTM search distances. Properties within ASTM distances were incorporated into Tetra Tech’s review. It should be noted that some of the properties cited in the EDR database report were misplotted on the map provided in the report. Tetra Tech’s discussion includes the correct locations of any the misplotted properties.

The inspection of the adjoining properties from curbside and a review of Federal, State and Local regulatory agency files (discussed in Sections 5.1 and 5.2) did not reveal facilities of environmental concern to the Site.

No information was found during review of the EDR database that nearby (non-adjoining) properties are of environmental concern to the Site.

A summary of the EDR database information is provided in Table 5.1.

Table 5.1 – EDR Database Summary			
Database	Radius	Target Property	Surrounding Facilities
Federal			
National Priorities List (NPL)	1 Mile	No	0
Delisted NPL	1 Mile	No	0
Proposed NPL	1 Mile	No	0
Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)	½ Mile	No	1

Table 5.1 – EDR Database Summary			
Database	Radius	Target Property	Surrounding Facilities
CERCLIS No Further Remedial Action Planned (NFRAP)	½ Mile	No	0
Resource Conservation and Recovery Act (RCRA) Corrective Action Treatment, Storage, and Disposal (TSD) Facilities (CORRACTS)	1 Mile	No	0
RCRA Non-Corrective Action (TSD) Facilities	½ Mile	No	0
RCRA Waste Generators	Site and Adjoining	No	1
Brownfields	½ Mile	No	0
Institutional Control/Engineering Control (IC/EC)	Site	No	-
Emergency Response Notification System (ERNS)	Site and adjacent	No	0
State and Tribal			
Annual Workplan (AWP) – formerly the Bond Expenditure Plan (BEP)	1 Mile	No	0
Cal-Sites	1 Mile	No	0
California Hazardous Materials Incident Report System (CHMIRS)	Site and Adjoining	No	1
Cortese	½ Mile	No	1
Notify 65	1 Mile	No	0
Toxic Pits	1 Mile	No	0
Solid Waste Information System (SWIS)	½ Mile	No	1
Waste Management Unit Database System (WMUD) and Solid Waste Assessment Test (SWAT)	½ Mile	No	0
Leaking UST (LUST)	½ Mile	No	0
Spills, Leaks, Investigations, and Cleanups (SLIC)	½ Mile	No	0
Voluntary Cleanup Plan (VCP)	½ Mile	No	0
Underground Storage Tank (UST) databases	Site and Adjoining	No	1
Deed Restriction Listings (DEED)	Site	No	-
Equivalent Tribal Records	Various	No	0

5.1.1 EDR Federal Regulatory Records

Neither the Site nor any off-Site properties located within ASTM search distances were reported by EDR to be listed on the NPL, Proposed NPL, CERCLIS-NFRAP, CORRACTS, TSD, Brownfields, Institutional Control/Engineering Control (IC/EC), and ERNS databases.

CERCLIS

The USEPA October 24, 2005 CERCLIS database of known, alleged, or potentially hazardous waste sites was reviewed. A facility's presence on the CERCLIS list does not necessarily imply federal activity at that facility, nor does it indicate that hazardous conditions necessarily exist at the facility. The Site was not listed. One property located within a one-half mile radius of the Site was listed.

Milliken Sanitary Landfill (MSL) (Milliken Avenue and Hwy 60) is located adjacent and south (downgradient) of the Site. According to the EDR database report, preliminary assessments were completed

in 1984 and 1988, a property inspection was completed in 1990, and a re-assessment was completed in 2003. The EDR database report indicated a “State-Lead Cleanup” at this facility (likely reference to the SARWQCB). The priority status is listed as “low”. No additional property-specific information was found on the CERCLIS website. This landfill is now closed. The MSL is considered to be the source of two RECs at the Site: the likely presence of VOC-impacted groundwater beneath the western part of the Site and landfill gasses (including methane gas) beneath the Site. Refer to Section 5.4.6 for additional information regarding the MSL.

RCRA Waste Generators

The February 21, 2006 Resource Conservation and Recovery Information System (RCRIS) List of hazardous waste generators was reviewed. The RCRIS list cites facilities that generate, treat, transport, store, and dispose of hazardous waste. A facility's inclusion on this list does not necessarily indicate that hazardous conditions exist at that location. The Site was not listed. No TSD facilities located within a one-half mile radius of the Site were listed. One large quantity generator (LQG) and no small quantity generator (SQG) facilities on adjoining properties were listed.

Milliken Sanitary Landfill (MSL) (Milliken Avenue and Hwy 60) is located adjacent and south (downgradient) of the Site. This property was listed as a LQG with no reported violations. This landfill is now closed. The MSL is considered to be the source of two RECs at the Site: the likely presence of VOC-impacted groundwater beneath the western part of the Site and landfill gasses (including methane gas) beneath the Site. Refer to Section 5.4.6 for additional information regarding the MSL.

5.1.2 EDR State and Tribal Regulatory Records

Neither the Site nor any off-Site properties located within ASTM search distances were reported by EDR to be listed on the AWP, BEP, Cal-Sites, Notify 65, Toxic Pits, WMUD, SWAT, SLIC, LUST, AST, VCP, DEED, and Tribal databases (INDIAN RESERV, INDIAN LUST, and INDIAN UST).

CHMIRS

The December 31, 2004 California Office of Emergency Services Hazardous Material Incident Report database of reported hazardous materials incidents was reviewed. The Site was not listed. One property located adjacent to the Site was listed.

3551 East Francis Street is located adjacent and north (upgradient) beyond Francis Street. According to the EDR database report, 250 gallons of “Tertachloretheline” (presumed to be tetrachloroethylene or PCE) was illegally dumped to a storm drain at this facility in 2000. The Ontario Fire Department reportedly responded to the incident. No other information about this release was contained in the EDR database report. Considering the dumping was to a storm sewer, this incident is not considered a PAOC. However, Tetra Tech has contacted the OFD for additional information regarding the incident. A response is still pending from the OFD. Upon receipt and review of records (if any are found), if changes to our findings are warranted, an addendum letter will be prepared.

Cortese

The April 1, 2001 Cal-EPA Office of Emergency Information list of hazardous waste and substances sites (CORTESE) was reviewed. The Site was not listed. One property located within a one-half mile radius of the Site was listed

Milliken Landfill (MSL) (2050 Milliken) is located adjacent and south (downgradient) of the Site. The EDR database report contained no specific information regarding the Cortese listing. This landfill is now closed. The MSL is considered to be the source of two RECs at the Site: the likely presence of VOC-impacted

groundwater beneath the western part of the Site and landfill gasses (including methane gas) beneath the Site. Refer to Section 5.4.6 for additional information regarding the MSL.

SWIS

The December 8, 2005 California Integrated Waste Management Board's Solid Waste Information System (SWIS) database of solid waste facilities and landfills was reviewed. The Site was not listed. One property located within a one-half mile radius of the Site was listed.

Milliken Sanitary Landfill (MSL) (Milliken Avenue and Hwy 60) is located adjacent and south (downgradient) of the Site. This property was listed as a solid waste disposal facility that accepted agricultural, industrial, and mixed municipal waste. This landfill is now closed. The MSL is considered to be the source of two RECs at the Site: the likely presence of VOC-impacted groundwater beneath the western part of the Site and landfill gasses (including methane gas) beneath the Site. Refer to Section 5.4.6 for additional information regarding the MSL.

UST Databases

The CWRCB October 15, 1990, database of historical UST locations was reviewed. The HIST UST database has not been updated since 1990 and no updates are planned. The Cal-EPA October 31, 1994, database of historical listings of active and inactive UST locations was reviewed. The CA FID UST database has not been updated since 1994 and no updates are planned. The CWRCB June 1, 1994, SWEEPS database of underground tanks was reviewed. The database has not been updated since 1994 and no updates are planned. The CWRCB January 9, 2006, database of active registered USTs was reviewed. The Site was not listed. One facility located on an adjacent property to the Site was listed.

Nordstrom's Dist Center (1600 South Milliken Avenue) is located adjacent and north (upgradient) of the eastern Site parcel. The facility was listed in the UST database. The EDR database report contained no specific information regarding the Cortese listing. The facility was not listed in the LUST database. Based on the regulatory status and depth to groundwater of approximately 250 feet bgs, this UST facility is not considered to be a PAOC to the Site at this time.

Non-ASTM Databases

The Site was not listed in any non-ASTM databases.

Several surrounding properties were listed in non-ASTM databases:

Dawn Food Products (3505 East Francis Street) is located adjacent and north (upgradient) of the Site beyond Francis Street. This facility is listed in the San Bernardino County Fire Department (SBCFD) database as a hazardous materials handler with an active permit. This listing is not considered to be a PAOC to the Site.

Exel, Inc. (3551 East Francis Street, Suite A) is located adjacent and north (upgradient) of the Site beyond Francis Street. This facility is listed in the SBCFD database as a hazardous materials handler with an active permit. This listing is not considered to be a PAOC to the Site.

International Paper, Inc. (3551 East Francis Street, Suite B) is located adjacent and north (upgradient) of the Site beyond Francis Street. This facility is listed in the SBCFD database as a hazardous materials handler and hazardous waste generator with active permits. International Paper, Inc. is also listed HAZNET database as generating the following hazardous waste types: organic solids and unspecified organic liquid mixture. These listing are not considered to be a PAOC to the Site.

SCE – Milliken Substation (1600 Commerce Pkwy) is located adjacent and north (upgradient) of the Site beyond Francis Street. This facility is listed in the SBCFD database as a hazardous materials handler with an active permit. This listing is not considered to be a PAOC to the Site.

Target #0595 (4601 East Francis Street) is located adjacent and north (upgradient) of the Site beyond Francis Street. This facility is listed in the SBCFD database as a hazardous materials handler with an active permit. This listing is not considered to be a PAOC to the Site.

Nordstrom’s Distribution Center (1600 South Milliken Avenue) is located adjacent and north (upgradient) of the Site beyond Francis Street. This facility is listed in the SBCFD database as a special hazardous materials handler and special hazardous waste generator with active permits. Nordstrom’s Distribution Center is also listed HAZNET database as generating the following hazardous waste types: unspecified oil-containing waste; alkaline solution without metals (pH > 12.5); waste oil and mixed oil; and off-specification, aged or surplus organics. These listings are not considered to be a PAOC to the Site.

Androp Packaging, Inc. (4400 East Francis Street) is located adjacent and east (crossgradient) beyond Milliken Avenue. This facility is listed in the SBCFD database as a hazardous materials handler and hazardous waste generator with active permits. Androp Packaging, Inc. was also listed in the CAWDS as a facility that generates industrial wastewater under discharge requirements from the SARWQCB. These listings are not considered to be a PAOC to the Site.

Milliken Sanitary Landfill (MSL) (2050 Milliken Avenue) is located adjacent and south (downgradient) of the Site. MSL is listed in the CAWDS as a facility that generates industrial wastewater (“contaminated” groundwater cleanup) under discharge requirements from the SARWQCB. This facility is also listed in the HAZNET database as generating several hazardous waste types, and in the EMI database as having emissions reporting to the SCAQMD. This landfill is now closed. The MSL is considered to be the source of two RECs at the Site: the likely presence of VOC-impacted groundwater beneath the western part of the Site and landfill gasses (including methane gas) beneath the Site. Refer to Section 5.4.6 for additional information regarding the MSL.

5.2 Additional Environmental Record Sources

Tetra Tech requested and/or reviewed additional environmental record sources for the Site.

California EPA, Department of Toxic Substances Control (Cal-EPA DTSC)

Tetra Tech requested records for the Site maintained by the Cal-EPA DTSC. No records were found for the Site.

California Division of Oil, Gas, and Geothermal Resources (CADOGGR)

Tetra Tech reviewed CADOGGR Regional Wildcat Map W1-7 (Orange, Riverside, and San Bernardino Counties). No oil or gas wells were depicted on the Site or within on-half mile of the Site.

California State Fire Marshal (CSFM)

Tetra Tech requested records for underground oil and refined product pipelines at or adjacent to the Site. According to CSFM information provided to Tetra Tech, CSFM records indicate two active pipelines in the area of the Site: an 8-inch and 12-inch air pipeline both operated by Pacific Terminals LLC. Specific locations or additional information was not provided. Given the nature of the pipelines these are not considered to be a PAOC to the Site.

California Regional Water Quality Control Board – Santa Ana Region (SARWQCB)

Tetra Tech requested records for the Site maintained by the SARWQCB. The SARWQCB maintains records by Site address only. As no current or historical street address was found associated with the Site, the SARWQCB did not find any records for the Site.

Tetra Tech reviewed SARWQCB records for the adjacent MSL related to groundwater monitoring and treatment activities. Information from review of these records is included in the discussion in Section 5.4.6.

Ontario Building Department (OBD)

Tetra Tech requested records for the Site maintained by the OBD. No records were found for the Site.

Ontario Fire Department (OFD)

Tetra Tech requested records for the Site maintained by the OFD. No records were found for the Site.

As stated previously in Section 5.1, Tetra Tech also requested records from the OFD pertaining to an illegal discharge of PCE into a storm drain at a property north of the Site. A response is still pending from the OFD. Upon receipt and review of records (if any are found), if changes to our findings are warranted, an addendum letter will be prepared.

Ontario Planning Department (OPD)

The Site is located in an area of Ontario zoned under a Specific Plan for Rail Industrial uses (industrial properties including corporate manufacturing, research and industrial, and multi-tenant industrial directly serviced by rail).

San Bernardino County Department of Public Health (SBCDPH)

Tetra Tech requested records for the Site maintained by the SBCDPH, Division of Environmental Health Services. No records (water wells or septic systems) were found for the Site.

San Bernardino County Fire Department (SBCFD)

Tetra Tech requested records for the Site maintained by the SBCFD. A response is still pending from the SBCFD. Upon receipt and review of records (if any are found), if changes to our findings are warranted, an addendum letter will be prepared.

South Coast Air Quality Management District (SCAQMD)

Tetra Tech requested records for the Site maintained by the SCAQMD. The SCAQMD maintains records by Site address only. As no current or historical street address was found associated with the Site, the SCAQMD did not find any records for the Site.

5.3 Physical Setting

The physical setting of the Site is shown on a 1981 United States Geological Survey (USGS) 7.5-minute topographic map depicting the Site and surrounding area. The setting is one of a predominantly agricultural area in the City of Ontario at that time with an eastern drainage.

The location of the Site is shown on the 1966 (photorevised 1981) USGS Guasti, California quadrangle map. According to the contour lines on the topographic map, the Site is located approximately 870 to 880 feet above mean sea level (msl). The topography in the vicinity of the Site slopes gently downward to the south.

Additional physical setting information is presented in Section 5.9.

5.4 Historical Site Use Information

Past land uses were evaluated to evaluate historical practices or conditions that may have impacted the Site. This was accomplished via an ownership records review, review of previous environmental investigation reports, a review of historical city directories, and a review and analysis of aerial photographs and topographic maps.

5.4.1 Prior Ownership and Usage

Readily available ownership information obtained from the San Bernardino County Assessor’s website is summarized for each of the three Site parcels in the table below.

Table 5.4.1 – Prior Ownership Review		
APN	Owner	Year
0211-281-04	Hermann J. and Charles H. Carter Trust	1979
	Hermann J. Carter Trust	1980
	Wayne and Corrine F. McAllister	1980
	James A. and Alice F. Stephens	1980
	Ontario Industrial Partners	1982
	Milliken Company	1991
	County of San Bernardino	1991
0211-281-21	County of San Bernardino	1991
0211-281-23	County of San Bernardino	1991
No earlier ownership records were available.		

Preliminary title report information provided to Tetra Tech by J.P. Morgan was generally consistent with information found on the San Bernardino County Assessor’s website and also indicated private individual ownership of the Site property in the 1920s.

According to historical records reviewed, the Site appears to have been vacant or undeveloped land in 1903 and agricultural land (active or fallow) since at least 1938). Historic agricultural activities at the Site may have been subject to the application of pesticides and herbicides, which potentially could contain a number of hazardous substances. Initial screening-level near-surface soil sampling was conducted in those sections of the Site that were not part of the former borrow area for the MSL. The results of the initial screening-level soil sampling and analysis, summarized in a separate report being prepared concurrently with this report, had no chlorinated pesticides’ or California Code of Regulation metals’ concentrations that are indicative of elevated concentrations of agriculturally-related chemicals. However, in the event of any future construction and/or excavation activities at the Site, dust suppression will be necessary. Additionally, near-surface soils should be sampled and analyzed prior to being removed from the Site for any purpose.

5.4.2 Aerial Photography Review

Aerial photographs dated 1938, 1949, 1953, 1968, 1977, 1989, 1994, and 2002 were obtained for review from EDR of Milford, Connecticut. Aerial photographs dated 1980, 1986, 1992, 1996, 1999, and 2005 were reviewed at the San Bernardino County SWMD offices. Descriptions of the features depicted in these photographs are provided in the following table (Table 5.4.2).

1938, 1949, 1953, 1968, 1977, 1980, 1986, 1989, 1992, 1994, 1996, 1999, 2002, and 2005

Table 5.4.2 – Aerial Photography Review		
Year Reviewed	Site Use	Surrounding Property Use
1938 1949 1953	Agricultural land (groves or vineyards).	Agricultural land (groves or vineyards).
1968	Agricultural land (groves or	Agricultural land (groves or vineyards) except

Table 5.4.2 – Aerial Photography Review		
Year Reviewed	Site Use	Surrounding Property Use
1977	vineyards).	landfilling activities at the adjacent MSL property to the south were evident.
1977 1980 1986	Agricultural land (groves or vineyards). A portion of the Site just west of the central area appeared to be non-agricultural and possible used by the adjacent landfill to the south as a soils borrow pit.	No significant changes noted except the adjacent building to the north of the Site at 1600 South Milliken Avenue had been partially constructed.
1989	The Site appeared to be fallow agricultural land. It appeared that rough-grading activities were underway for the construction of the current railroad spur that crosses the western portion of the Site. The gully trending to the south across the Site was evident at the end of Dupont Street.	No significant changes noted except the adjacent building to the north of the Site at 1600 South Milliken Avenue had been completely constructed.
1992 1994 1996	No significant changes noted except the Site appeared to be active agricultural land.	No significant changes noted except the SCE substation to the north was under construction.
1999	No significant changes noted although the current railroad spur that crosses the western portion of the Site appeared to have been completed.	No significant changes noted except Francis Street had been constructed between Haven Avenue to the west and Dupont Street to the East.
2002	The Site appeared similar when compared to the day of Tetra Tech's Site visit.	No significant changes noted except all but one of the buildings to the north of the Site beyond Francis Street had been constructed: 3505 East Francis Street).
2004	No significant changes noted.	No significant changes noted except two of the three commercial buildings to the west of Haven Avenue had been constructed.
2005	The Site appeared similar when compared to the day of Tetra Tech's Site visit.	The surrounding area appeared similar when compared to the day of Tetra Tech's Site visit.

No potential environmental concerns associated with the historical use of the Site were noted by Tetra Tech during the review of aerial photographs with the possible exception of historical agricultural use.

The MSL to the south is considered to be a PAOC (refer to Section 5.4.6 for discussion).

5.4.3 Sanborn Fire Insurance Maps

A search of Sanborn Fire Insurance Maps by EDR Sanborn Inc., reported to be the owner of one of the largest and most complete collections of Sanborn fire insurance maps, was requested by Tetra Tech. According to EDR Sanborn, Inc., maps depicting the Site were not found.

5.4.4 Historical City Directories

A historical city directory abstract was obtained from EDR. City directories dated from 1922 to 2003 were reviewed at approximate 5-year intervals. As no current or historical street address was found associated with the Site, there were not listings in the city directory abstract for the Site. No surrounding property addresses were listed.

5.4.5 Historical Topographic Maps

Topographic maps were obtained for review from EDR. Topographic maps dated 1903, 1941, 1954, 1966, 1973, and 1981 were reviewed. Descriptions of the features depicted on these maps are provided in the following table below.

Table 5.4.5 – Topographic Map Review		
Year Reviewed	Site Use	Surrounding Property Use
1903 1941	Vacant or undeveloped land.	Vacant or undeveloped land.
1954	Agricultural land (groves or vineyards). A small structure was depicted near the southeastern corner of the Site.	Agricultural land (groves or vineyards) except the MSL property to the south was depicted as vacant or undeveloped.
1966	Agricultural land (groves or vineyards) with no on-site structures. A portion of the Site just west of the central area was depicted as vacant or undeveloped (same location as apparent soil borrow pit noted on aerial photographs).	No significant changes noted except a road and a few structures were depicted on the MSL property to the south.
1973 1981	No significant changes noted.	No significant changes noted.

No potential environmental concerns associated with the historical use of the Site were noted by Tetra Tech during the review of aerial photographs with the possible exception of historical agricultural use.

The MSL to the south is considered to be a PAOC (refer to Section 5.4.6 for discussion).

5.4.6 Previous Environmental Investigations

Previous environmental investigation reports were provided to Tetra Tech by J.P. Morgan Investment Management, Inc., and reviewed at the California Regional Water Quality Control Board – Santa Ana Region (SARWQCB) and San Bernardino County Solid Waste Management Division (SBCSWMD) offices. The previous environmental investigation reports reviewed pertained to the Site and/or the adjacent Milliken Sanitary Landfill. Previous environmental investigation reports cited in the discussion below are referenced in Section 13.0.

SITE

Phase I Preliminary Site Assessment, 20-Acre Site Adjacent to Milliken Landfill, Ontario, California: unpublished professional report prepared for County of San Bernardino Solid Waste Management Division, prepared by Moore & Taber (M&T): dated June 6, 1991

The M&T (1991) assessment pertained only to the eastern Site parcel. The historical use of the parcel Site (undeveloped or agricultural land) presented in the M&T (1991) report was consistent with historical Site use found by Tetra Tech during the current Phase I ESA.

At the time of their Site inspection, M&T reported the eastern parcel was primarily covered by a vineyard. An approximate 2-foot by 20-foot area described as a “dark brown to black oily unidentified substance” was observed by M&T along the northern boundary of the parcel. The source of the substance was thought to have been the adjacent property to the north (Nordstrom Distribution Center). Note: this substance was not noted by Tetra Tech during its Site inspection for this assessment. M&T reported the adjacent property owner had plans to clean up the substance.

The M&T (1991) report included brief summary of the adjacent Milliken Sanitary Landfill that was consistent with other documentation reviewed by Tetra Tech.

Based on the information obtained during their assessment, M&T concluded:

- The “potential for contamination as a result of hazardous substance/waste discharge” to the Site was considered moderate to low.
- Although there may be residual concentrations of pesticides in near-surface soils, prior agricultural use of the Site was not expected to affect future use of the Site.
- There was no direct evidence that VOC-impacted groundwater and landfill gas associated with the adjacent Milliken Sanitary Landfill had impacted the Site.

Based on the information obtained during their assessment, M&T recommended:

- The dark brown to black oily unidentified substance should be cleaned up prior to development of the Site.
- Although no additional investigation was recommended, M&T stated that more extensive data collection and limited sampling and analysis of near surface soils may be appropriate depending on the future used of the Site.

Settlement Agreement and Release Between Lusk Ontario Industrial Partners II (OIP) and San Bernardino County: dated August 19, 1991.

According to the Settlement Agreement and Release (Agreement), San Bernardino County agreed to purchase “approximately 83.49 acres” of OIP’s property directly abutting the Milliken Landfill to the north (83.49 acres does not match current total acreage of the parcels as on file at the SBCAO). This property is the Site for the current Phase I ESA by Tetra Tech. Other items in the Agreement included but were not limited to:

- San Bernardino County cannot use the property for the storage or disposal of solid or hazardous waste.
- San Bernardino County may use the property to establish a household hazardous waste collection center for off-Site disposal.

- San Bernardino County may use the property to establish a facility for recycling, transfer, treatment, storage and/or processing of municipal solid waste for off-site sale, use, storage, and/or disposal.
- The approximate 26-acre borrow pit west of the Milliken Landfill may not be used as a solid or hazardous waste disposal facility.
- The approximate 26-acre borrow pit west of the Milliken Landfill may be used to store or dispose of inert debris.
- OIP and San Bernardino County were to retain a mutually acceptable expert consultant to evaluate the Site, as well as additional OIP property within a 2,000-foot radius of the landfill, to determine the extent, if any, to which the properties have been or have the potential to be adversely affected by the migration of landfill gas.
- By entering into the Agreement, San Bernardino County was not admitting any liability regarding the alleged migration of landfill gas from the Milliken Landfill.

Report of Preliminary Evaluation; Landfill Gas Impacts on Property Adjacent to Milliken Landfill, unpublished professional report prepared for Lathan & Watkins (Attorneys at Law) of San Diego, CA, prepared by Converse Environmental West (CEW): dated October 8, 1991

The CEW (1991) evaluation was performed to provide technical support to counsel for the San Bernardino County Solid Waste Management Department to assess the potential for migration of landfill gas onto the adjacent property to the north (owned by OIP). CEW reviewed regulatory agency regulations, previous reports for the Milliken Landfill, and “raw data” of landfill gas sampling and analysis results from other consultants provided by OIP.

Based on their review of the data, CEW concluded:

- In 1989, perimeter probes on the MSL property adjacent to the northeastern corner had methane gas concentrations up to 50% (equivalent to 500,000 parts per million per volume or ppmv). There was no landfill gas extraction system at the MSL at that time.
- By the end of 1990, methane concentrations were reported not to exceed 2% (2,000 ppmv).
- Sewer lines adjacent and north of the Milliken Landfill may be a conduit for migration of landfill gas.
- Migration of landfill gas beyond 1,000 feet from the Milliken Landfill was not likely based on current conditions.
- Properties developed within a 1,000-foot “buffer zone” surrounding the Milliken Landfill should be constructed with adequate landfill gas control and monitoring measures including parking lot and slab vent pipe systems, slab landfill gas barrier membranes.
- The potential for landfill gas migration may create disclosure obligations for San Bernardino County.

Based on their review of the data, CEW recommended:

- The adjacent sewer lines to the north of the Milliken Landfill should be investigated for potential to be a conduit for migration of landfill gas.
- Soils / geologic investigations for new construction within and adjacent to a 1,000-foot buffer zone around the Milliken Landfill should include a landfill gas study.
- Within a 1,000-foot buffer zone, installation and monitoring of landfill gas with monitoring probes installed down to approximately 100 feet bgs at various distances from the Milliken Landfill (up to 1,000 feet distant).
- Installation and monitoring of deeper monitoring probes (down to 200 feet bgs) should be considered.
- Identify impermeable soil layers and modify monitoring probes if necessary to be able to get below the impermeable soil layers.

Based on this information and that presented in additional reports discussed below, it is likely in Tetra Tech's judgment, that landfill gasses are present beneath at least part of the Site. The potential presence of landfill gasses (including methane gas) at the Site is considered a REC. However, there is a responsible party, the MSL owner and there is no known source of landfill gas at the Site. Although the likely presence of landfill gasses at the Site is considered a REC, no further investigation with respect to landfill gasses is recommended at the Site at this time. However, it is recommended, as a part of the Site design process, that a landfill gas survey be conducted across the Site and the results be used to design and install a passive landfill gas mitigation system if and as judged appropriate by a consultant familiar with landfill gas characterization and mitigation.

Memorandum of Landfill Gas and Facilities Lease: dated May 2, 1995

San Bernardino County granted to Milliken Landfill Gas Corporation or its successors and assigns all rights to landfill gas and the exclusive right to test for, collect, produce, remove, treat, process, and sell landfill gas from in or upon the landfill property.

Report / Recommendation from San Bernardino County Real Estate Services to the Board of Supervisors: dated July 7, 1998

On August 19, 1991, San Bernardino County entered into a settlement agreement and release of liability with Ontario Industrial Partners (OIP) related to alleged migration of landfill gas from Milliken Landfill. The settlement included sharing costs for road and rail improvements on the Site. San Bernardino County owns and operates the Milliken Landfill. In 1997, ATC Realty Sixteen, Inc. owned the property and also entered into an Agreement in accordance with the terms and settlements of the previous Agreement (Folder 5.7 – 1997-10-07). ATC Realty Sixteen, Inc. had entered into a purchase option agreement with Majestic Realty to sell the land to Majestic Realty.

Landfill Gas Impacts on the Adjacent Northern Property, County of San Bernardino, Milliken Sanitary Landfill, unpublished professional report prepared for County of San Bernardino Solid Waste Management Division, prepared by Bryan A. Stirrat & Associates (BAS): dated November 2005

BAS (2005) reported the Milliken Sanitary Landfill to be an inactive solid waste disposal facility at the time of their study. The landfill was stopped accepting waste in 1999 and was closed in steps (1999, and 2004 / 2005). The Milliken Sanitary Landfill is owned and operated by the San Bernardino County Solid Waste Management Division (SWMD). The BAS (2005) report included a brief summary of the CEW (1991) report, which was copied in an appendix.

According to the BAS (2005) report, the landfill gas extraction system has been upgraded in the years since the CEW (1991) report and encompasses the entire Milliken Sanitary Landfill property. After extraction, landfill gas is routed to a flare station located at the eastern side of the landfill where it is combusted then routed to a power generation facility reported to be owned and operated by Algonquin Power Systems, Inc. According to the BAS (2005) report, the landfill gas extraction system on the northern perimeter of the landfill was designed with the understanding that the adjacent property to the north (the Site) would be vacant. However, with the planned development of the Site, the SWMD will make substantial improvements to the landfill gas extraction system prior to any on-Site construction. The improvements will make the Milliken Sanitary Landfill in compliance with Rule 1150.1 of the South Coast Air Quality Management District (SCAQMD), the agency that oversees regulatory compliance for landfill gas emissions and migration control.

The BAS (2005) report stated SCAQMD Rule 1150.1 includes installation and maintenance of subsurface refuse boundary probes to determine if landfill gas is migrating off of a landfill property. Design, spacing, and depth of the probes are determined on the land use of properties adjacent to a landfill. The BAS (2005) report stated the California Integrated Waste Management Board (CIWMB) also requires subsurface refuse boundary probes.

The BAS (2005) report stated the Milliken Sanitary Landfill has been historically prone to subsurface landfill gas migration, likely due to native geology. Previous monitoring results had indicated “significant migration” around four of the seven landfill gas monitoring probes (MLP0380, MLP0390, MLP0400, and MLP0410) currently located along the northern Milliken Sanitary Landfill boundary. Vertical landfill gas extraction wells were installed near probes MLP0390 and MLP0400 and have reportedly been successful in mitigating landfill gas migration.

Based on the information obtained during their study, BAS concluded:

- Compliance with SCAQMD Rule 1150.1 will require subsurface refuse boundary probes be installed at 100-foot spacings along the northern boundary of the Milliken Sanitary Landfill.
- Installation and operation of vertical landfill gas extraction wells will be required along the entire northern boundary of the Milliken Sanitary Landfill property.
- Soils / geologic investigations for new construction within and adjacent to a 1,000-foot buffer zone around the Milliken Sanitary Landfill should include a landfill gas study.

Based on the information obtained during their study, BAS recommended:

- Abandon the existing seven subsurface refuse boundary probes along the northern side of the Milliken Sanitary Landfill.
- Install new subsurface refuse boundary probes at the northern side of the 50-foot utility easement adjacent and north of the Milliken Sanitary Landfill property (southern boundary of the Site). The SWMD is reportedly going to maintain a 50-foot overlying the utility easement.
- Weekly monitoring of the newly installed subsurface refuse boundary probes for total organic compounds (TOCs).
- Install 33 vertical landfill gas extraction wells in “trash along the lower bench of the landfill”. These wells would be on the Milliken Sanitary Landfill property.
- Landfill gas mitigation measures for buildings that are constructed within 200 feet of the refuse boundary including a passive subsurface ventilation system and a polyethylene or polyvinyl chloride vapor barrier integrated into the foundation design of the building.
- Consideration of landfill gas mitigation measures for buildings that are constructed within 200 feet of the refuse boundary including subslab monitoring probes or an automated sensor network.

Phase I Environmental Site Assessment, Milliken Surplus Property, City of Ontario, County of San Bernardino, California, unpublished professional report prepared for County of San Bernardino Solid Waste Management Division, prepared by BAS: dated December 14, 2005

The historical use of the Site (undeveloped or agricultural land) presented in the BAS (2005) report was consistent with historical Site use found by Tetra Tech during the current Phase I ESA.

At the time of their Site inspection, BAS reported the western parcel was primarily covered by an abandoned vineyard and the UPRR railroad spur crossing the parcel, the middle parcel was covered with native vegetation and a large man-made depression (former soil borrow pit) was located in the approximate center of the parcel, and the eastern parcel was covered with native vegetation. BAS noted the north-south trending gully crossing the Site south of Dupont Street; several “metal stub-outs,

reminiscent of well boxes, on the southern portion of the Site”, and stated there was evidence of a previous brush fire in the central portion of the Site. The BAS (2005) report included brief summary of the adjacent Milliken Sanitary Landfill that was consistent with other documentation reviewed by Tetra Tech.

Based on the information obtained during their assessment, BAS concluded:

- Prior agricultural use of the Site was considered to be a *de minimis* condition, stating that “prior use of pesticides on developed agricultural lands in Southern California has not been found to present a material risk of harm to public health or the environment”.
- Should soil be taken from the Site for off-Site disposal, testing for pesticides would be required.
- The Site could be affected by migration of landfill gases from the adjacent Milliken Sanitary Landfill.

Based on the information obtained during their assessment, BAS recommended:

- Limited soil sampling to assess potential pesticide concentrations.
- If pesticides are found, BAS recommended further assessment in the previously burnt areas of the Site for dioxins.
- Future on-Site buildings should be designed and constructed with landfill gas (methane and non-methane organic gases) mitigation measures.
- Trash and debris should be removed from the Site prior to development.

Hazardous Gas Assessment, Milliken Sanitary Landfill (Adjacent Northern Property), Sares Regis Group, Ontario, CA, unpublished professional report prepared for Sares Regis Group of Irvine, CA, prepared by GeoScience Analytical (GSA): dated April 19, 2006

The GSA (2006) assessment (soil gas survey) was performed to assess the applicability of methane prevention and monitoring systems requirements in connection with the construction of buildings on the Site. One-hundred and twenty-two (122) soil probes were advanced across the Site in a grid pattern to a depth of four feet below ground surface (bgs). Laboratory results reported methane gas concentrations ranging from 0.6 to 33.2 ppmv, ethane concentrations ranging from <0.2 to 0.7 ppmv, and ethylene concentrations ranging from <0.2 to 0.6 ppmv. GSA reported the methane gas concentrations found were significantly below the Lower Explosive Limit (LEL) for methane gas of 50,000 ppmv. Although not reported, the concentrations of ethane and ethylene were also significantly below their respective LELs (30,000 ppmv and 27,000 ppmv, respectively). GSA recommended no mitigation beyond “minimal required levels for sites within a methane zone (landfill proximity) as defined by the County of San Bernardino, recommendations of 3rd party consultants and that ordinary mitigation routinely made a part of an industrial project under similar circumstances.” GSA listed the following mitigation measures:

- Trench dams and conduit seals within 200 feet of the landfill boundary.
- Passive subhardscape parking lot venting within 100 feet of the landfill boundary.
- Passive interior ventilation for all occupied structures within 200 feet of the landfill boundary.
- In lieu of interior ventilation, passive subslab ventilation and gas impervious membrane for all occupied structures within 200 feet of the landfill boundary.

MILLIKEN SANITARY LANDFILL

History

The MSL is operated by the San Bernardino County Solid Waste Management Department (SWMD). The MSL is a Class III disposal facility that accepted refuse from the 1950s to March 1999. A Class III

disposal facility is permitted to accept non-hazardous municipal solid waste. Of the approximate 196 acres that comprise the MSL, approximately 140 were used for landfilling activities. The MSL property also includes an approximate 30-acre borrow pit at the west end of the property and approximately 26 acres at the east end of the property which are used for administrative offices and landfill / vehicle maintenance activities. Two sedimentation basins are also located at the east end of the property. The MSL stopped accepting refuse in 1996 and closure of the facility took place in three phases. Closure of the approximate 23-acre East Mound was completed in March 1997. Closure of the north and east sides of the Main Mound (approximate 45 acres) was completed in December 1997. Closure of the remainder of the Main Mound was completed in July 2005.

The operation of the MSL has been overseen by several regulatory agencies including the City of Ontario, San Bernardino County Department of Environmental Health Services, South Coast Air Quality Management District (SCAQMD), California Regional Water Quality Control Board – Santa Ana Region (SARWQCB), and California Integrated Waste Management Board.

When the landfill gas control system (monitoring, extraction, flare, and gas condensate systems) has been modified in the past (i.e., alteration, removal and/or installation of wells to the system) the SWMD conducted the work per the requirements of a variance permit issued by the SCAQMD. The permit required work to be done under a phasing plan to ensure only limited portions of the systems were off-line at any time.

During previous During normal operation and maintenance activities, if an emergency or system failure of the landfill gas monitoring, extraction, and/or flare systems occurs, the SWMD is required under their SCAQMD operating permit conditions to respond / address the issue within 24 hours of detection. The MSL also operates under a post-closure emergency response plan. The landfill gas monitoring, extraction, and flare systems will be active until it is determined by the regulatory oversight agencies that 1) landfill gas control measures are no longer necessary or 2) monitoring results indicate that landfill gas migration poses no threat to the environment.

Several environmental monitoring and control systems are in operation at the MSL property. A summary of these is provided below. There are several sampling and analysis programs conducted at the MSL. Locations of the closest sampling points relative to the Site and historical and/or current results of sampling and analysis at the MSL for points located closest to the Site are summarized at the end of this section.

Groundwater Monitoring and Treatment System

Subsurface investigations conducted at the MSL in 1987 and 1988 found groundwater impacted with volatile organic compounds (VOCs), particularly beneath the western portion of the landfill. Subsequent investigations also found that a VOC-impacted groundwater plume extended south of the MSL property beneath adjacent properties. Water samples from an “upgradient” groundwater monitoring well (M-1) located on the MSL property near the northern boundary have also been impacted with VOCs. Groundwater monitoring activities associated with the MSL have been ongoing since 1988.

The groundwater monitoring system currently consists of 27 groundwater monitoring wells including five upgradient monitoring wells and 22 downgradient monitoring wells installed between 1988 and 1996. The two upgradient monitoring wells are located on the MSL property near the northern boundary. Historically there were three other upgradient monitoring wells located between approximately 1,300 and 3,600 feet north of the MSL property. The downgradient monitoring wells are located on the MSL property near the southern boundary as well as up to several hundred feet further south.

Waste discharge requirements for groundwater monitoring well purge water were waived under RWQCB Resolution No. R8-2002-0044 adopted on September 6, 2003. Purge water is now used for dust control and the Milliken Sanitary Landfill as needed.

The groundwater treatment system became operational in March 1999 and was designed to remove VOCs from the upper unconfined aquifer beneath the MSL and to contain impacted groundwater at the Point of Compliance (POC – apparent source location of VOCs in the groundwater beneath the MSL). There are 13 groundwater extraction wells located along the POC. Groundwater collected from the extraction wells is routed to the top of an aeration channel through conveyance lines. Corrugated pipe in the aeration channel induces turbulent flow (aeration) in the extracted groundwater as it passes along the aeration channel. The treatment system effluent is reported to have “no measurable concentrations of VOCs”. The treated water is discharged to the bottom of the borrow pit, located adjacent and west of the MSL, where it evaporated or infiltrates into the soil. During the first quarter 2005 monitoring event it was reported that approximately 0.46 million gallons of water were treated and the system removed approximately 0.01 pounds of VOCs. Approximately 24.4 pounds of VOCs has been removed since the groundwater treatment system became operational.

Surface Water Monitoring System

Surface water monitoring currently occurs at four monitoring stations on the MSL property including one on the MSL property near the northern boundary.

Leachate Collection and Treatment System

Since the MSL began operations in 1957, the base refuse cells were unlined per regulations at that time (BAS, 1996). The MSL reportedly does not have a leachate collection and removal system (BAS, 1996).

Landfill Gas Monitoring System

The landfill gas monitoring system at the MSL includes 54 multi-depth sampling probes on the MSL property along the northern, eastern, and southern perimeters, including seven sampling probes along the northern boundary of the MSL at depths of 19 to 100 feet bgs. There are no sampling probes along the western boundary as it is adjacent to the borrow pit on the MSL property.

According to information in a Periodic Site Review report [Bryan A. Stirrat & Associates (BAS), 1996], results from a 1988 Air Solid Waste Assessment Test (ASWAT) report indicated evidence of landfill gas migration to adjacent properties north and south of the MSL.

Landfill Gas Extraction and Flare System

The landfill gas extraction and flare systems at the MSL began operating in 1991 and currently consist of 284 vertical gas extraction wells and three flares. The perimeter extraction system is used to mitigate possible subsurface lateral migration of landfill gas off of the MSL property. The interior extraction system is used to mitigate the typically high heat generated as well as providing surface emissions control at the MSL property. The landfill gas extraction system consists of numerous vertical extraction wells to depths from 20 to 150 feet bgs. The landfill gas extraction and flare systems are actually two separate systems that have been integrated into one treatment unit. Use of a blower at the flare system creates a vacuum in the gas extraction system. Landfill gas is extracted from the refuse prism through perforated sections in the extraction wells, is conveyed via header and lateral piping to the flare system, and discharged by the blower under positive pressure to the flare where the gas is combusted.

Landfill Gas Condensate Management System

When landfill gas cools in the landfill gas extraction system piping, condensate liquid forms and flows to integrated holding tanks within the system near the flare station. Condensate in the holding tanks is conveyed to the flare station using a pneumatic pump assembly and conveyance piping. Condensate is destructed in the flare by use of an atomizing injection system.

Sampling and Analysis Programs

Several sampling and analysis programs are conducted at the MSL with respect to the environmental monitoring and control systems described previously. These include:

- Groundwater sampling and analysis.
- Surface water sampling and analysis.
- Soil-pore gas sampling and analysis.
- Landfill gas sampling and analysis.
- Landfill gas condensate sampling and analysis.

Groundwater Sampling and Analysis

Two groundwater monitoring wells are located on the MSL property near the Site. Groundwater monitoring well M-1 is located south of the middle of the southern Site boundary of parcel 0211-281-23, (near the southwestern part of the Site) within approximately 25 feet of the Site. Groundwater monitoring well M-4 is located south of the southern Site boundary where parcels 0211-281-21 and 0211-281-04 meet, within approximately 25 feet of the Site.

According to information from the most recent water quality monitoring report available [GeoLogic Associates (GLA), 2005], groundwater sampling and analysis was performed at groundwater monitoring well M-1 from December 1987 to October 2001, and at groundwater monitoring well M-4 from June 1988 to October 2003. Groundwater monitoring wells M-1 and M-4 have not been sampled since those times due to the wells being dry (no groundwater encountered). Groundwater levels in the vicinity have generally declined in response to regional long-term drought conditions and/or groundwater extraction.

Historically, analysis of water samples collected from groundwater monitoring wells M-1 and M-4 has included selected metals, VOCs, and SVOCs. Historically, no constituents at concentrations above the maximum contaminant levels (MCLs) for drinking water established by the United States Environmental Protection Agency (USEPA) and/or California Department of Health Services (CADHS) were found in the sampled water from groundwater monitoring well M-4. Four of the constituents (all VOCs) above the MCLs were historically detected in sampled water from groundwater monitoring well M-1 and are summarized below.

Well	Constituent	Historical Concentration Range (µg/L)	Last Sampling Concentration (µg/L)	MCL (µg/L)
M-1	1,1-Dichloroethane	2.0 to 22.4	11	5
	Tetrachloroethene	1.9 to 36	6.4	5
	Trichloroethene	1.2 to 6.4	2.7	5
	Vinyl Chloride	0.36 to 1.6	0.6	0.5

Notes:

MCL = Maximum contaminant level

µg/L = micrograms per liter

The GLA (2005) report stated that groundwater monitoring well M-1 has been monitored with the compliance wells based on “the proximity of this well to the landfill and apparent influence of the landfill on the groundwater sampled at this location.” Based on historical laboratory results and proximity of groundwater monitoring well M-1 to the Site (located within approximately 25 feet of the Site), it is likely in Tetra Tech’s judgment that groundwater beneath the western part of the Site has been impacted with VOCs. The likely presence of VOC-impacted groundwater beneath the western side of the Site is considered to be a recognized environmental condition (REC). However, there is a responsible party, the MSL owner.

Although the likely presence of VOC-groundwater beneath the western side of the Site is considered a REC, based on the depth to groundwater and the presence of a responsible party, no further investigation is recommended at this time.

Surface Water Sampling and Analysis

One surface water monitoring station is located on the MSL property near the Site. MSW-3 is located approximately 125 feet west-southwest of groundwater monitoring well M-4, within approximately 50 feet of the Site. No surface water was observed at the four surface water monitoring stations during the first quarter (Winter) 2005 monitoring event; therefore, no surface water samples were collected for analysis.

Soil Pore Gas Sampling and Analysis

Three soil pore gas sampling locations (soil gas probes) are located on the MSL property near the Site. Locations M-4L and MPG-57 are located within approximately 50 feet west and east of groundwater monitoring well M-4, respectively, and within approximately 25 to 50 feet of the Site. Location MPG-46 is located approximately 200 feet southwest of groundwater monitoring well M-1 and within approximately 100 feet of the Site. Field screening of soil gas probes is conducted during second quarter (Spring) and fourth quarter (Fall) of each year. According to the GLA (2005) report (the most recent report provided to Tetra Tech), field screening results conducted during the second quarter (Spring) fourth quarter (Fall) of 2004 indicated no measurable concentrations of methane gas.

Historical maximum concentrations from the third quarter (Fall) 2000 for locations MPG-46 and MPG-57 are summarized in the following table:

Well	Constituent	Maximum Concentration (ppbv)
MPG-46	1,1,2,2-Tetrachloroethane	13
	1,1,2-Trichloroethane	26
	1,2,4-Trimethylbenzene	270
	1,3,5-Trimethylbenzene	97
	1,2-Dichloroethane	5.0
	2-Butanone	5.2
	2-Hexanone	15
	Benzene	230
	Ethylbenzene	170
	o-Xylene	170
	m and p-Xylenes	370
	Styrene	55

Well	Constituent	Maximum Concentration (ppbv)
MPG-57	Toluene	140
	1,2,4-Trimethylbenzene	49
	Ethylbenzene	23
	o-Xylene	24
	p and m-Xylenes	52
<u>Notes:</u> ppbv = parts per billion by volume		

The occurrence of several anomalous hydrocarbon concentrations (benzene, toluene, ethylbenzene, and xylenes) was reported by GLS to be suspect. The reported benzene concentration above (230 ppbv) equates to a benzene concentration of 747 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). The California Health Hazard Screening Level (CHSSL) concentration for benzene is $122 \mu\text{g}/\text{m}^3$.

Landfill Gas Sampling and Analysis

Seven landfill gas sampling probes are located on the MSL property near the Site along the northern MSL perimeter. Sampling probes MLP0360, MLP0370, MLP0380, MLP0390, MLP0400, MLP0410, and MLP0420 are located within approximately 25 feet of the Site at approximate 200-foot intervals along the northern boundary of the MSL. According to the most recent data available [third quarter (Fall) 2000 to third quarter (Fall) 2005], the maximum detected methane gas concentration was 0.7% (7,000 ppmv) in MLP0390 during the third quarter (Fall) 2004 sampling event.

As discussed previously, previous monitoring results had indicated “significant migration” around four of the seven sampling probes (MLP0380, MLP0390, MLP0400, and MLP0410). Vertical landfill gas extraction wells were installed near probes MLP0390 and MLP0400 and have reportedly been successful in mitigating landfill gas migration (BAS, 2005).

Instantaneous surface emissions monitoring was conducted across the entire MSL, which is divided into 106 grids (approximately 50,000 square feet each) for this type of monitoring. Twenty-seven (27) of the grids are located along the northern MSL boundary: A1 through Z1 and AA1. Total organic compound (TOC) concentrations were measured using a portable flame ionization detector (FID) held within three inches of the landfill surface. One grid (N1) had a maximum TOC concentration above the SCAQMD Rule 1150.1 standard of 500 ppmv. The TOC concentration at grid N1 during re-testing two week later was 100 ppmv. Grid N1 is located adjacent and south of perimeter probe MLP0390 (near middle of northern MSL perimeter).

Integrated surface sampling was conducted for each of the 106 grids across the entire MSL, including the 27 grids located along the northern MSL boundary. Air samples were collected using a sampling pump held within three inches of the landfill surface over a continuous 25-minute period while a field technician walked across a prescribed path over the sampling grid. The maximum TOC concentration detected in grids along the northern MSL boundary was 5 ppmv (below the SCAQMD Rule 1150.1 standard of 50 ppmv for integrated surface sampling). Grid E1 is located adjacent and south of perimeter probe MLP0370 (western side of northern MSL perimeter) and grid X1 is located adjacent and south of perimeter probe MLP0410 (eastern side of northern MSL perimeter).

Two of the air samples from grids located along the northern MSL boundary were also analyzed for methane, total gaseous non-methane organic compounds (TGNMO), and core group toxic air contaminants (which included hydrogen sulfide and selected VOCs). Laboratory results above method detection limits are summarized in the following table:

Grid	Constituent	Concentration (ppbv)
E1	Methane	2.26
	TGNMO	2.46
	Benzene	1.55
	Carbon Tetrachloride	0.12
	Toluene	8.55
	o-Xylene	1.57
	m and p-Xylenes	4.28
X1	Methane	2.36
	TGNMO	2.08
	Benzene	1.63
	Carbon Tetrachloride	0.12
	Toluene	9.82
	o-Xylene	2.44
	m and p-Xylenes	4.24
<u>Notes:</u> TGNMO = total gaseous non-methane organic compounds ppbv = parts per billion by volume		

Based on these MSL landfill gas monitoring results, it is likely in Tetra Tech's judgment, that landfill gases are present beneath at least part of the Site. The potential presence of landfill gases (excluding methane gas) at the Site is considered a REC. However, there is a responsible party, the MSL owner. Although the likely presence of landfill gases at the Site is considered a REC, no further investigation with respect to landfill gases is recommended at the Site at this time. However, it is recommended, as a part of the Site design process, that results from the April 2006 Hazard Gas Assessment by GSA be used to design and install a passive landfill gas mitigation system if and as judged appropriate by a consultant familiar with landfill gas characterization and mitigation.

5.5 Historical Adjoining Property Use Information

Historical adjoining property use information is summarized above in Section 5.4 and Tables 5.4.2, 5.4.4, and 5.4.5. As discussed above in Section 5.4.6, the adjacent MSL is considered to be a PAOC to the Site. No PAOCs associated with the historical use of the other adjoining properties to the Site were found.

5.6 Agency Jurisdiction

Agencies with environmental or other jurisdiction over the Site include the following:

California EPA, Department of Toxic Substances Control (Cal-EPA DTSC)
Glendale Office, 1101 North Grandview Avenue, Glendale, California 91201
Phone: (818) 551-2800
Fax: (818) 551-2976

Cypress Office, 5796 Corporate Avenue, Cypress, CA 90630
Phone: (714) 484-5300
Fax: (714) 484-5302

California Division of Oil, Gas, and Geothermal Resources (CADOGGR)
5816 Corporate Avenue, Suite 200, Cypress, CA 90630

Phone: (714) 816-6847
Fax: (714) 816-6853

California State Fire Marshal (CSFM)

P.O. Box 944246, Sacramento, CA 94244
Phone: (916) 445-8477
Fax: (916) 445-8526

California Water Quality Control Board – Santa Ana Region (SARWOCB)

3737 Main Street, Suite 500, Riverside, CA 92501
Phone: (951) 782-4130 (LUST/SLIC/Landfills)
Fax: (951) 781-6288 (LUST/SLIC/Landfills)

City of Ontario (Building, Fire, and Planning Departments – OBD, OFD and OPD)

303 East B Street, Ontario, CA 91764
Phone: (909) 395-2009
Fax: (909) 395-2395

San Bernardino County Department of Public Health (SBCDPH)

385 North Arrowhead Avenue, San Bernardino, CA 92415
Phone: (909) 387-4666
Fax: (909) 387-4323

San Bernardino County Fire Department (SBCFD)

620 South E Street, San Bernardino, CA 92415
Phone: (909) 386-8401
Fax: (909) 386-8460

South Coast Air Quality Management District (SCAQMD)

21865 Copley Drive, Diamond Bar, CA 91765
Phone: (909) 396-3700
Fax: (909) 396-3330

All of the agencies cited above have been contacted by Tetra Tech. The information obtained is summarized in Sections 5.2 and 5.4.6.

5.7 Document Requests

Document requests were submitted to all of the agencies cited in Section 5.6 or an agency was visited and requested documents were reviewed at the agency. All of the agencies cited above in Section 5.6 have been contacted by Tetra Tech. The information obtained is summarized in Section 5.2. Where written requests were submitted, the requests are included in Appendix E. All documents requested from J.P. Morgan and the Sares*Regis Group were received by Tetra Tech.

5.8 Knowledge of Environmental Proceedings

Sources interviewed or agency records reviewed did not disclose any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the Site with the exception of the 1991 Settlement Agreement and Release between San Bernardino County and a former Site owner (OIP) previously discussed in Section 5.4.6.

Sources interviewed or agency records reviewed did not disclose any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the Site.

Sources interviewed or agency records reviewed did not disclose any notices from governmental entities regarding any possible violation of environmental laws or potential liability relating to hazardous substances or petroleum products.

5.9 Environmental Site Setting

5.9.1 Geologic Setting

The Site is located within the Chino Subbasin of the Upper Santa Ana Valley Groundwater Basin [California Department of Water Resources (CADWR), 2003]. The Chino Subbasin is bounded on the north by impermeable rocks of the San Gabriel Mountains and by the Cucamonga fault, on the east by the Rialto-Colton fault, on the southeast by the contact with impermeable rocks forming the Jurupa Mountains and low divides connecting the exposures, on the south by contact with impermeable rocks of the Puente Hills and by the Chino fault, and on the northwest by the San Jose fault.

According to information from previous subsurface investigations at the adjacent MSL, soils beneath the Site are expected to be comprised of gravels, sands, and silts (GLA, 1999).

5.9.2 Groundwater Depth and Flow Direction

According to groundwater depth and flow direction information from previous subsurface investigations at the adjacent MSL, the depth to groundwater at the MSL is on the order of approximately 250 feet below ground surface and flows to the south to southwest. There are two aquifers: an upper unconfined aquifer with a thickness of only a few feet, and a lower partially-confined aquifer (GLA, 1999). The two aquifers are separated by a locally-continuous, low-permeability aquitard (weathered clays, sandy clay, and/or silts) that varies in thickness from approximately 5 to 40 feet.

5.9.3 Potential for On-Site Impacts from On- or Off-Site Sources

No obvious on- or off-Site sources of adverse environmental impacts to the Site were observed with the exception of the former MLS adjacent to the south of the Site. No evidence of staining, stressed vegetation, irregular topography, depressions, odors or deteriorated pavement indicative of a release of hazardous substances or impacted soil or groundwater was observed at the Site. No evidence of petroleum products storage or use was observed.

As discussed previously in Section 5.4.6, the adjacent MSL property adjacent and south of the Site is considered to be source of two RECs at the Site: the likely presence of VOC-impacted groundwater in the western part of the Site and landfill gases beneath at least part of the Site.

5.9.4 Soils Reports and/or Organic Vapor Concentrations

Results from a Hazardous Gas Assessment (soil gas survey) conducted at the Site in April 2006 by GSA were summarized previously in Section 5.4.6. Laboratory results reported methane, ethane, and ethylene gas concentrations significantly below their respective LELs.

Four monitoring wells were depicted on the Site property on a 2006 ALTA / ACSM Land Title Survey of the Site provided to Tetra Tech by J.P. Morgan: three near the southern Site boundary and one near the northern Site boundary. Tetra Tech observed the three monitoring wells near the southern Site boundary

during the Site reconnaissance. The wells appeared to be landfill gas sampling points. Tetra Tech was not able to locate the monitoring well near the northern Site boundary depicted on the ALTA / ACSM Land Title Survey. No identifying numbers or letters were observed on the monitoring wells. San Bernardino County SWMD personnel stated the monitoring wells were old landfill gas sampling points but no sampling results were found in their files. It is recommended that the current property owner be requested to provide information on the monitoring wells including information on their construction. When no longer needed, the monitoring wells should be abandoned in accordance with applicable regulations.

6.0 ON-SITE RECONNAISSANCE

6.1 Methodology and Limiting Conditions

A Site visit was conducted by Tetra Tech representative Mr. Steven Grod, Project Manager, between 7:00 a.m. and 9:00 a.m. on April 12, 2006. Tetra Tech was unaccompanied during the Site visit. The Site visit consisted of a walk through of the Site, and visual reconnaissance of neighboring properties from curbside later in the day. The walk through of the Site consisted of a walk around the perimeter of the Site and across the Site at approximate 0.2 mile spacings. There were no other limiting conditions.

6.2 General Site Setting

The vicinity of the Site can generally be described as a mixed industrial, commercial, and undeveloped area of the City of Ontario. The Site is located approximately 870 to 880 feet above mean sea level with a gentle slope downward to the south.

6.3 Exterior Observations

The Site was unimproved land on the day of the Site visit except for a railroad spur crossed the western portion of the Site.

6.4 Interior Observations

No structures were located on the Site at the time of the Site reconnaissance.

6.5 Storage Tanks

6.5.1 Underground Storage Tanks (USTs)

No visual evidence (i.e., pipes, vents, and dispensers) indicating existing or historic on-Site USTs was observed at the Site. No information from Site history research and review of records and/or databases maintained by City, County, State, and Federal agencies revealed the presence of historical USTs at the Site.

6.5.2 Aboveground Storage Tanks (ASTs)

No visual evidence (i.e., pipes, vents, and dispensers) indicating existing or historic on-Site ASTs was observed at the Site. No information from Site history research and review of records and/or databases maintained by City, County, State, and Federal agencies revealed the presence of historical ASTs at the Site.

6.6 Hazardous Material Usage

No hazardous materials usage was observed at the Site at the time of the Site reconnaissance.

6.7 Solid Waste Management

Minimal quantities of non-hazardous refuse was observed on the Site including aluminum cans, glass bottles, miscellaneous paper and plastic trash, chain-link fencing, couch cushions, wood doors, concrete rubble, and some automobile tires. The non-hazardous refuse is not considered to be a PAOC to the Site. No other evidence of inappropriate solid waste disposal was observed at the Site.

6.8 Hazardous Waste Management

No hazardous waste was observed at the Site at the time of the Site reconnaissance.

6.9 Polychlorinated Biphenyls (PCBs) Containing Equipment

Three transformer vaults were observed on the northern side of the Site. Tetra Tech did not have access to the interior of the vaults. Any transformer equipment inside the vaults is owned by Southern California Edison (SCE). A release of transformer fluids would typically be the responsibility of utility provider, SCE, the owner and operator of the transformers. The transformers vaults observed are not considered to be a PAOC to the Site.

No other equipment potentially containing PCBs was observed at the Site at the time of the Site reconnaissance.

6.10 Water and Wastewater/Storm Water

6.10.1 Water Supply

Potable water will be provided to the Site by the City of Ontario. Site reconnaissance and review of local records did not reveal the presence of other on-Site water supply or irrigation wells. According to information contained in the EDR database report and from the City of Ontario, no public water supply wells were reported to be located within one-quarter mile of the Site.

According to information from the City of Ontario website, the water department maintains and operates 21 water wells throughout the City of Ontario. The water from these wells is treated with chlorine and put into the distribution system and into reservoirs. Approximately 85% of water provided by the City of Ontario is obtained from water wells. The remaining 15% of water provided by the City of Ontario is imported surface water supplied through the Metropolitan Water District (MWD) of Southern California and the Inland Empire Utilities Agency (IEUA). This water comes from the Sacramento/San Joaquin Bay-Delta in Northern California. Treated potable water provided by the City of Ontario is reported to be in compliance with drinking water standards established by the USEPA and CADHS.

6.10.2 Wastewater

No industrial or domestic wastewater is generated from on-Site activities.

6.10.3 Storm Water

No concerns regarding the management of storm water at the Site were found during this assessment. Storm water is expected to percolate into unpaved areas of the Site, or flow into on-Site storm drains. Reportedly, the storm drain system for Dupont Street conveys storm water from properties to the north into two catch basins on the west and east sides of Dupont Street, north of Francis Street (BAS, 2005). The catch basins reportedly discharge to a 42-inch concrete storm water pipe which ultimately discharges from the end of Dupont Street onto the Site on the north side of the Site approximately parcels 0211-281-04 and 23 meet. A gully crosses the Site in a north - south direction from this point and ultimately the storm water drains into a sedimentation basin on the MSL property. Storm water is not considered to be a PAOC to the Site at the present time.

6.11 Air Emissions

No Site operations involving emissions that appeared to require permitting, emission controls, or abatement activities were observed. However, this should not be considered a compliance audit.

6.12 Dry Cleaning Operations

Site reconnaissance, as well as review of available municipal records and regulatory records, did not reveal the presence of current or historic on-Site dry cleaning operations.

6.13 Site-Specific Environmental Issues

Site-specific environmental (or potential Site-specific environmental) issues found during this assessment included the following:

- Landfill gases (excluding methane).
- Groundwater in the western part of the Site likely being impacted with VOCs.
- Desert-Sands Flower-Loving Fly (DSFLF) is not currently an environmental issue because it has not been found at the Site. However, DSFLF habitat is present at the Site. If the DSFLF were found at the Site in the future, it could have a significant impact on Site development schedule and cost.
- Burrowing owl: Not currently an environmental issue at the Site. Burrowing owls are present at the Site and a mitigation and monitoring plan (M&MP) will be need to be developed and implemented. Depending on the M&MP that is selected, the relocation costs could be potentially significant (\$250,000 to \$300,000).
- Possibly the San Diego Horned Lizard (SDHL): Not currently an environmental issue at the Site. However, SDHLs have been observed at the Site. If a M&MP is needed for the SDHL, it can be prepared and implemented along with the burrowing owl M&MP. The resulting additional cost is not expected to be significant.

7.0 INTERVIEWS

7.1 Interview with Owner

The County of San Bernardino owns the Site property. Tetra Tech interviewed Mr. Darren Meeka with the San Bernardino County SWMD while at their offices to review records for the MSL. Mr. Meeka stated that the monitoring wells housings observed by Tetra Tech on the Site were old landfill gas sampling points but no sampling results were found in their files. Mr. Meeka did not have any additional information regarding the Site or MSL that was not in the SWMD records.

7.2 Interview with Site Manager

The Site was unimproved land at the time of the Site reconnaissance and there was no Site Manager to interview.

7.3 Interviews with Occupants

The Site was unimproved land at the time of the Site reconnaissance and there were no occupants to interview.

7.4 Interviews with Local Government Officials

Information obtained from interviews with local government officials is included in the discussions in Section 5.2.

7.4 Interviews with Others

No interviews were conducted with individuals other than those cited above in Section 7.0.

8.0 FINDINGS

In the professional opinion of Tetra Tech, an appropriate level of inquiry has been made into the previous ownership and uses of the Site consistent with good commercial and customary practice with the intent to minimize environmental liability. Based on the information cited in this assessment, current regulatory guidelines, and the judgment of Tetra Tech, the findings in Sections 8.1 and 8.2 are presented.

8.1 Suspect Environmental Conditions (ASTM Scope Considerations)

No suspect environmental conditions (based on ASTM scope considerations) have been found at the Site. However, the following PAOCs were found for the Site:

- No evidence of RECs has been found at the Site except for the likely presence of impacted groundwater beneath the western part of the Site and landfill gases (excluding methane gas) beneath at least part of the Site.
- The adjacent MSL property adjacent and south of the Site is considered to be to the source of the likely VOC-impacted groundwater and landfill gases at the Site.
- No evidence of HRECs has been found at the Site.
- Current Site use is not a potential area of concern (PAOC).
- Three on-Site inactive landfill gas monitoring wells are present at the Site and a fourth is shown to be present but could not be located. These wells are not of environmental concern but should be abandoned when no longer needed.
- The results of the initial screening-level soil sampling and analysis conducted concurrently with this assessment had no chlorinated pesticides' or California Code of Regulation metals' concentrations that are indicative of elevated concentrations of agriculturally-related chemicals. The potential for agriculturally-related chemicals to be present at the Site is considered to be a *de minimus* condition.

8.2 Suspect Environmental Conditions (Non-ASTM Scope Considerations)

No suspect environmental conditions (based on non-ASTM scope considerations) have been found at the Site. However, the following PAOC was found for the Site:

- None of the species that were part of the biological evaluation is considered to be of significant environmental concern to the Site at this time. However, if the Desert Sands Flower-Loving Fly (DSFLF) were found at the Site in the future, it could have a significant impact on Site development schedule and cost. In addition, depending on which mitigation and monitoring approach is selected for the burrowing owl, the relocation costs could be potentially significant (\$250,000 to \$300,000).

9.0 OPINION

In the professional opinion of Tetra Tech, an appropriate level of inquiry has been made into the previous ownership and uses of the Site consistent with good commercial and customary practice with the intent to minimize environmental liability. Based on the information cited in this assessment, current regulatory guidelines, and the judgment of Tetra Tech, the following opinions in Sections 9.1 and 9.2 are presented:

9.1 Suspect Environmental Conditions (ASTM Scope Considerations)

According to the sources cited in the body of this ESA, the Site appears to have been vacant or undeveloped land in 1903 and agricultural land (active or fallow since at least 1938). Historic agricultural activities at the Site may have been subject to the application of pesticides and herbicides, which potentially could contain a number of hazardous substances. Initial screening-level near-surface soil sampling was conducted in those sections of the Site that were not part of the former borrow area for the MSL. The results of the initial screening-level soil sampling and analysis had no chlorinated pesticides' or California Code of Regulation metals' concentrations that are indicative of elevated concentrations of agriculturally-related chemicals. The potential for agriculturally-related chemicals to be present at the Site is considered to be a *de minimus* condition. However, in the event of any future construction and/or excavation activities at the Site, dust suppression will be necessary. Additionally, near-surface soils should be sampled and analyzed prior to being removed from the Site for any purpose.

Four monitoring wells were depicted on the Site property on a 2006 ALTA / ACSM Land Title Survey of the Site provided to Tetra Tech by J.P. Morgan: three near the southern Site boundary and one near the northern Site boundary. Tetra Tech observed the three abovegrade monitoring wells housings near the southern Site boundary during the Site reconnaissance. The monitoring wells appeared to be landfill gas sampling points. Tetra Tech was not able to locate the monitoring well near the northern Site boundary depicted on the ALTA / ACSM Land Title Survey. No identifying numbers or letters were observed on the monitoring well housings. San Bernardino County SWMD personnel stated the monitoring wells were old landfill gas sampling points but no sampling results were found in their files. It is recommended that the current property owner be requested to provide information on the monitoring wells including information on their construction. When no longer needed, the monitoring wells should be abandoned in accordance with applicable regulations.

The MSL is operated by the San Bernardino County Solid Waste Management Department (SWMD). The MSL is a Class III disposal facility that accepted refuse from the 1950s to 1999. Closure of the MSL took place in three phases. Two phases were closed in 1997 and the remaining phase was closed in 2005. The MSL is considered to be the source of the two RECs described below.

Groundwater impacted with elevated concentrations of volatile organic compounds (VOCs) has been encountered in sampled water from some of the groundwater monitoring wells at the MSL. One of these groundwater monitoring wells (M-1) is located adjacent to the southwest part of the Site. There are no known sources of VOCs at the Site. Based on the results of sampling in groundwater monitoring well M-1, in Tetra Tech's judgment, it is likely that groundwater beneath the western side of the Site has been impacted by VOCs. The likely presence of VOC-impacted groundwater beneath the western side of the Site considered a recognized environmental condition (REC). However, there is a responsible party, the MSL owner, groundwater is relatively deep (approximately 250 feet bgs) and there is a groundwater collection systems operating at the MSL. Although the likely presence of VOC-impacted groundwater beneath the western side of the Site is considered a REC, based on the depth to groundwater, the operation of the groundwater collection system at the MSL, and the involvement of a responsible party, no further investigation is recommended at this time.

Historically, elevated concentrations of methane gas have been reported at the Site prior to the startup of the MSL landfill gas collection system. Elevated concentrations of landfill gases have been reported in MSL gas sampling probes adjacent to the southern boundary of the Site. A Hazardous Gas Assessment (soil gas survey) was conducted at the Site in April 2006 by another consultant and included collection of 122 soil gas samples across the Site at a depth of four feet. Laboratory results reported methane, ethane, and ethylene gas concentrations significantly below their respective Lower Explosive Limits (LELs). There are no known sources of landfill gas at the Site. Based on the MSL landfill gas monitoring results, it is likely in Tetra Tech's judgment, that landfill gases are present beneath at least part of the Site. The potential presence of landfill gases (excluding methane gas) at the Site is considered a REC. However, there is a responsible party, the MSL owner and there is a landfill gas collection system operating at the MSL. Although the likely presence of landfill gases at the Site is considered a REC, no further investigation with respect to landfill gases is recommended at the Site at this time. However, it is recommended, as a part of the Site design process, that results from the April 2006 Hazard Gas Assessment by GSA be used to design and install a passive landfill gas mitigation system if and as judged appropriate by a consultant familiar with landfill gas characterization and mitigation.

No other suspect environmental conditions have been found during the conduct of this ESA.

9.2 Suspect Environmental Conditions (Non-ASTM Scope Considerations)

A biological issues evaluation of selected species was conducted with respect to animals reported to be present at, or potentially present at the Site. The species that were evaluated were the Delhi Sands Flower-Loving Fly (DSFLF), burrowing owl, San Bernardino Kangaroo Rat (SBKR), and San Diego Horned Lizard (SDHL). The DSFLF and SBKR were not found at the Site by prior consultants. The burrowing owl and SDHL were observed at the Site by prior consultants. None of these species is considered to be of significant environmental concern to the Site at this time. However, if the DSFLF were found at the Site in the future, it could have a significant impact on Site development schedule and cost. In addition, a mitigation and monitoring plan (M&MP) will be necessary for the burrowing owl and possibly the SDHL. Depending on which M&MP approach is selected for the burrowing owl, the relocation costs could be potentially significant (\$250,000 to \$300,000). The additional costs for the SDHL M&MP, if needed, are not likely to be significant.

No other suspect non-ASTM scope environmental conditions have been found during the conduct of this ESA.

Recommendations

Based on the information gathered during the performance of this assessment, current regulatory guidelines, and the judgment of Tetra Tech, the following recommendations are presented for consideration:

- In the event of any future construction and/or excavation activities at the Site, dust suppression may be necessary. Additionally, near-surface soils should be sampled and analyzed prior to being removed from the Site for any purpose.
- No groundwater monitoring is recommended at this time.
- Information on the monitoring wells at the Site, including information on their construction should be obtained. When no longer needed, the monitoring wells should be abandoned in accordance with applicable regulations.

- Results from the April 2006 Hazard Gas Assessment by GSA should be used to design and install a passive landfill gas mitigation system if and as judged appropriate by a consultant familiar with landfill gas characterization and mitigation.
- A mitigation & monitoring plan (M&MP) should be prepared for the burrowing owl and possibly the San Diego Horned Lizard as a part of the Site development planning and permit preparation. Following agency approval, the M&MP should be implemented.

10.0 CONCLUSIONS

In the professional opinion of Tetra Tech, an appropriate level of inquiry has been made into the previous ownership and uses of the Site consistent with good commercial and customary practice with the intent to minimize environmental liability. Based on the information cited in this assessment, current regulatory guidelines, and the judgment of Tetra Tech, the following conclusion has been drawn:

- We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527 of the Milliken Surplus Property located at the southwest corner of the intersection of Haven Avenue and Francis Street in Ontario, San Bernardino County, California (APNs 0211-281-04, 21, and 23).
- This assessment revealed no evidence of recognized environmental conditions in connection with the Site with the exception of the likely presence of VOC-impacted groundwater beneath the western side of the Site and landfill gases (excluding methane gas) beneath at least part of the Site.

However, there is a responsible party, the MSL owner. Groundwater is deep (approximately 250 feet bgs) and there are groundwater and landfill gas collection systems at the MSL. There is no known source of VOCs or landfill gas at the Site. Therefore, no further investigation of this REC is recommended at this time. Additional comments on these RECs are presented in Sections 8 and 9.

11.0 DEVIATIONS

There have been no deviations from either ASTM Standard Practice for Environmental Site Assessments Designation E 1527-05 or the J.P. Morgan Environmental Site Assessment Scope of Work dated September 27, 2004 that Tetra Tech is aware of that would affect the conclusion of this Phase I ESA. Tetra Tech acknowledges that both the referenced ASTM standard and J.P. Morgan scope of work have been reviewed prior to issuance of the report and all requirements have been met.

12.0 ADDITIONAL (NON-ASTM STANDARD) SERVICES

12.1 Asbestos-Containing Materials (ACMs)

The site is unimproved land and no suspect ACMs were observed during the Site visit.

12.2 Radon

The Site is located within a Zone 2 radon area, indicating that the average indoor radon level is equal or greater than 2.0 picoCuries (pCi/L) or equal or less than 4.0 pCi/L. The U.S. EPA action level for radon is 4.0 pCi/L. Eighteen tests were conducted within San Bernardino County as part of the EPA/State Residential Radon Survey and National Residential Radon Survey. The tests performed inside 1st floor living areas reported indoor average levels below the USEPA action level. Three tests were conducted within the same zip code area as the Site (91761) and the tests reported radon levels below the USEPA action level.

Based on the radon zone in which the Site is located, and the expected absence of regularly occupied subgrade living spaces at the Site, radon is not considered to be a PAOC to the Site.

12.3 Lead-Based Paint (LBP)

The site is unimproved land and no suspect LBP was observed during the Site visit.

12.4 Lead in Drinking Water

As discussed previously in Section 6.10.1, potable water will be provided to the Site by the City of Ontario. The City of Ontario obtains approximately 85% of the water from local water wells. The remaining 15% of the water is imported surface water supplied through the MWD and IEUA. Treated potable water provided by the City of Ontario is reported to be in compliance with drinking water standards established by the USEPA and CADHS.

12.5 Surface Water and Wetlands

No evidence of surface water bodies or wetland areas was observed on the Site. No symbols depicting surface water bodies or wetland areas were observed on the topographic map. According to Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) information, Community Panel Nos. 06071C 8637F and 06071C 8641F, with the exception of the northeastern portion of the eastern parcel the Site is located in Zone X (shaded): "Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood."

12.6 Regulatory Compliance

The Site is unimproved land and does not appear to have regulatory compliance issues associated with the existing usage. Future development will likely require compliance with applicable environmental regulations. This is not intended to be a regulatory compliance audit and a compliance audit was not part of the scope of work for this assessment.

12.7 Cultural and Historic Resources

Evaluation of cultural and historic resources was not a part of the scope of work requested by J.P. Morgan for this Phase I ESA.

12.8 Industrial Hygiene

Evaluation of industrial hygiene was not a part of the scope of work requested by J.P. Morgan for this Phase I ESA.

12.9 Health and Safety

Evaluation of health and safety was not a part of the scope of work requested by J.P. Morgan for this Phase I ESA.

12.10 Ecological Resources

Evaluation of ecologic resources was not a part of the scope of work requested by J.P. Morgan for this Phase I ESA.

12.11 Endangered Species

Evaluation of endangered species was not a part of the scope of work requested by J.P. Morgan for this Phase I ESA. However, Tetra Tech was retained by J.P. Morgan to conduct a biological issues evaluation for the Site. The biological issues evaluation is presented under separate cover. A brief summary of the biological issues evaluation findings is presented in this section of the Phase I ESA.

Delhi Sands Giant Flower Loving Fly (DSFLF)

The Milliken Surplus Property is located on mapped Delhi sand series which has been designated as critical habitat for the Delhi Sands Giant Flower Loving Fly (*Rhaphiomidas terminatus abdominalis*) (DSFLF). This insect was determined to be endangered under the Endangered Species Act by the United States Fish and Wildlife Service (USFWS) in 1993. Three annual focused surveys have been conducted for the DSFLF in 2003 to 2005. No DSFLF have been found. Therefore the DSFLF is not an environmental issue relative to Site development at this time.

It should be noted that even though no DSFLF have been found at the Site, if there is any federal funding or federal permits required for Site development, the proponent of the development would have to enter into formal consultation under Section 7 of the Endangered Species Act for the loss of critical habitat.

The focused surveys are considered to be applicable for approximately one year. In the event Site development has not commenced by approximately November 2005, another focused survey may be required. If the DSFLF were present at the time of a subsequent survey, there likely would be a significant level of effort necessary to prepare a habitat conservation plan which could have a significant impact on the development of the Site.

San Bernardino Kangaroo Rat (SBKR)

The San Bernardino kangaroo rat (*Dipodomys mariami parvus*) (SBKR) was listed by the USFW in 1998 as endangered under the Endangered Species Act. This mammal has been identified as a Species of Concern by the California Department of Fish and Game (CDFG). A focused survey for SBKR was conducted at the Site in 2005. No evidence of the SBKR was found. The Site is not located within designated or proposed designated critical habitat for this species. Therefore, the SBKR is not an environmental issue relative to Site development at this time.

Burrowing Owl

The burrowing owl (*Athene cunicularia*) is listed as a California Species of Concern by the CDFG. It is also subject to USFWS regulation under the Migratory Bird Act of 1918. The burrowing owl has no other federal listing status. The results of a focused survey for burrowing owl conducted in 2005 indicated the presence of 16 adult birds on site. Nesting activities were observed at one permanent burrow colony. It is expected that one of three approaches will need to be utilized with respect to the presence of the burrowing owl and Site development: (1) Maintain present habitat; (2) Passive relocation within the Site; or (3) Relocation off-Site. Once an approach is selected, it will need to be described in a mitigation and monitoring plan (M&MP) that is submitted to the CDFG for review and approval. Preparation and review of the M&MP is expected to take 6 to 12 months. Depending on the mitigation approach that is selected, the costs are expected to be in the range of \$20,000 to \$30,000 (Approach No. 1) to \$250,000 to \$300,000 (Approach No. 3). Any relocation of the burrowing owl needs to be conducted outside the breeding and nesting season (15 February through 01 September) by a licensed biologist. The presence of the burrowing owl is not an environmental issue with respect to Site development at this time provided the appropriate mitigation and monitoring are conducted.

San Diego Horned Lizard (SDHL)

The San Diego horned lizard (*Phrynosoma coronatum blainvillei*) (SDHL) is listed as a California Species of Concern by the CDFG. The SDHL has no federal listing status. A number of SDHLs were noted during the conduct of the focused survey for the burrowing owl and SBKR. It is not clear whether a focused survey and a M&MP will be needed for the SDHL. Tetra Tech has made background inquiries. However, in the event that either or both are required, it is expected that they can be conducted within the Site development schedule and the cost would be the same order of magnitude as Approach No. 1 for the burrowing owl (regardless of which mitigation approach is selected for the SDHL). Therefore, the presence of the SDHL is not an environmental issue with respect to Site development at this time, provided the appropriate mitigation and monitoring (if required) are conducted.

12.12 Indoor Air Quality/Microbial Contaminants

Evaluation of air quality/microbial contaminants was not a part of the scope of work requested by J.P. Morgan for this Phase I ESA.

13.0 REFERENCES

Documents:

Advanced Earth Sciences, Inc. (AES), Report, As-Built Construction Quality Assurance Report for the Phase 3 Final Closure Construction at the Milliken Sanitary Landfill, San Bernardino County, California, unpublished professional report prepared for County of San Bernardino Solid Waste Management Division: dated November 2005.

American Society of Testing and Materials (ASTM), “Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process,” ASTM Designation E 1527-00.

Bryan A. Stirrat & Associates (BAS), Landfill Gas Impacts on the Adjacent Northern Property, County of San Bernardino, Milliken Sanitary Landfill, unpublished professional report prepared for County of San Bernardino Solid Waste Management Division: dated November 2005.

BAS, Rule 1150.1 Quarterly Monitoring Report, Milliken Sanitary Landfill, Facility ID No. 7371, Third Quarter 2005 (July, August, September), unpublished professional report prepared for County of San Bernardino Solid Waste Management Division: dated November 2005.

BAS, Phase I Environmental Site Assessment, Milliken Surplus Property, City of Ontario, County of San Bernardino, California, unpublished professional report prepared for County of San Bernardino Solid Waste Management Division: dated December 14, 2005.

California Department of Water Resources, California’s Groundwater Bulletin 118: dated 2003.

Converse Environmental West (CEW), Report of Preliminary Evaluation, Landfill Gas Impacts on Property Adjacent to Milliken Landfill, unpublished professional report prepared for Lathan & Watkins (Attorneys at Law) of San Diego, CA: dated October 8, 1991.

Environmental Data Resources, Inc. (EDR), The EDR-Radius Map with GeoCheck[®], 100-Acre Property, Haven Ave. & Francis St., Ontario, CA, Inquiry Number 1649549.2s: dated April 6, 2006.

EDR, The EDR-City Directory Abstract, 100-Acre Property, Haven Ave. & Francis St., Ontario, CA, Inquiry Number 1649549.6: dated April 6, 2006.

GeoLogic Associates (GLA), First Quarter (Winter) 2005 / Annual Water Quality Monitoring Report, Santa Ana Region (includes Milliken Sanitary Landfill), unpublished professional report prepared for County of San Bernardino Solid Waste Management Division: dated April 2005.

GeoScience Analytical (GSA), Hazardous Gas Assessment, Milliken Sanitary Landfill (Adjacent Northern Property), Sares Regis Group, Ontario, CA, unpublished professional report prepared for Sares Regis Group of Irvine, CA: dated April 19, 2006.

J.P. Morgan Investment Management, Inc. “Environmental Site Assessment, Work Order – Exhibit B”; dated September 27, 2004.

Memorandum of Landfill Gas and Facilities Lease: dated May 2, 1995.

Documents (continued):

Moore & Taber (M&T), Phase I Preliminary Site Assessment, 20-Acre Site Adjacent to Milliken Landfill, Ontario, California, unpublished professional report prepared for County of San Bernardino Solid Waste Management Division: dated June 6, 1991.

Osborne Biological Consulting (OBC), Third Year Focused Survey for Delhi Sands Giant Flower-Loving Fly (*Rhaphiomidas terminatus abdominalis*) on a 103-Acre Site North of the Milliken Sanitary Landfill, Ontario, California, unpublished professional report prepared for Solid Waste Management Division, County of San Bernardino, CA: dated September 20, 2005.

OBC, General Biology for a 103-Acre Site North of the Milliken Sanitary Landfill, Ontario, California, unpublished professional report prepared for Solid Waste Management Division, County of San Bernardino, CA: dated November 4, 2005.

San Bernardino County Real Estate Services, Report / Recommendation to the Board of Supervisors: dated July 7, 1998.

Settlement Agreement and Release Between Lusk Ontario Industrial Partners II (OIP) and San Bernardino County: dated August 19, 1991.

Tom Dodson & Associates, Focused Surveys for San Bernardino Kangaroo Rat (*Dipodomys mariami parvus*) (SBKR) and Burrowing Owl (*Althene cunicularia*) for a 103-Acre Parcel North of Milliken Sanitary Landfill, City of Ontario, San Bernardino County, California, unpublished professional report prepared for Lilburn Corporation of San Bernardino County, CA: dated April 2005.

Yerkes, R.F., McCulloch, T.H., Schoellhamer, J.E. and Vedder, J.G., Geology of the Los Angeles Basin, California - an introduction: United States Geological Survey Professional Paper 420-A: dated 1965.

Maps:

California Department of Oil, Gas, and Geothermal Resources (CADOGGR), Regional Wildcat Map W1-5, Northern Los Angeles Basin: dated December 13, 2004.

EDR, EDR Historical Topographic Map Report, 100-Acre Property, Haven Ave. & Francis St., Ontario, CA, Inquiry Number 1649549.4: topographic maps dated 1903, 1941, 1954, 1966, 1973, and 1981.

United States Geological Survey (USGS), Guasti, California Quadrangle - 7.5 Minute Topographic Map: dated 1966 (photorevised 1981).

Agencies/Persons Contacted/Records Reviewed:

CADOGGR.

California Environmental Protection Agency, Department of Toxic Substances Control (Cal-EPA DTSC).

California Regional Water Quality Control Board – Santa Ana Region (SARWQCB).

California State Fire Marshal (CSFM).

Agencies/Persons Contacted/Records Reviewed (continued):

Ontario Building, Fire, and Planning Departments (OBD, OFD, and OPD).

San Bernardino County Department of Public Health (SBCDPH).

San Bernardino County Fire Department (SBCFD).

San Bernardino County Solid Waste Management Division (SBCSWMD).

South Coast Air Quality Management District (SCAQMD).

Aerial Photographs:

EDR, The EDR Aerial Photo Decade Package, 100-Acre Property, Haven Ave. & Francis St., Ontario, CA, Inquiry Number 1649549.5: aerial photographs dated 1938, 1949, 1953, 1968, 1977, 1989, 1994, and 2002.

San Bernardino County SWMD: aerial photographs dated 1980, 1986, 1992, 1996, 1999, and 2005.

14.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

Mr. Steven Grod performed the Phase I ESA. Mr. Jon Lovegreen provided technical review. The signatures of both environmental professionals are included in this Section of the report.



STEVEN GROD, REA 07806
Project Manager
Phone: 949.250.6788 ext. 5910



JON R. LOVEGREEN, REA 00032
Manager, Private Practice Group (PPG)
Phone: 949.250.6788 ext. 5934

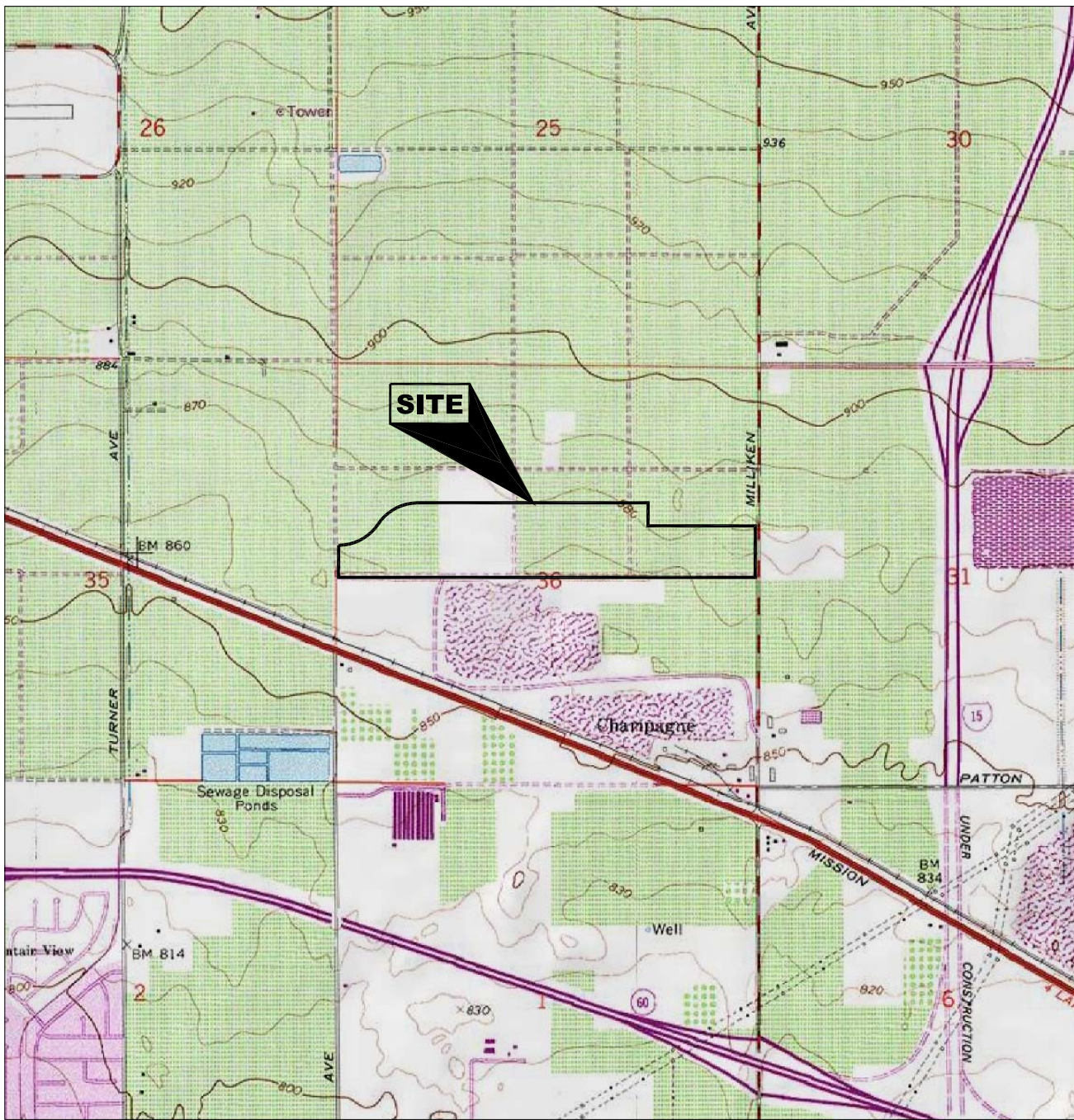
15.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

The qualifications of Mr. Steven Grod, who performed the Phase I ESA and Mr. Jon Lovegreen who provided technical review, are summarized in the resumes that are included in Appendix F.

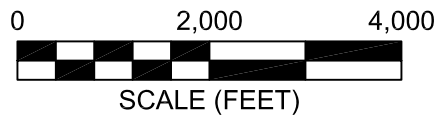
FIGURES

Figure 1 – Site Location Map

Figure 2 – Site Map



USGS TOPOGRAPHIC MAP
 GUASTI, CALIFORNIA
 1966, PHOTOREVISED 1981
 CONTOUR INTERVAL: 10 FEET



SITE LOCATION MAP

MILLIKEN SURPLUS PROPERTY
 SWC HAVEN AVENUE AND FRANCIS STREET
 ONTARIO, CALIFORNIA 91761

JUNE 8, 2006

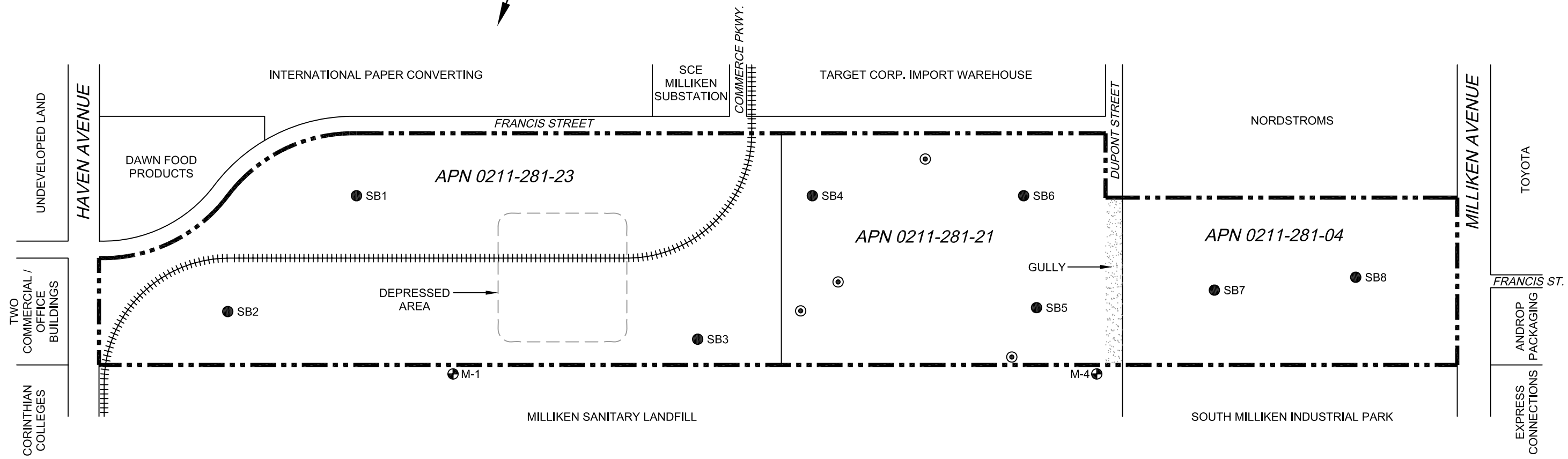
TETRA TECH PROJ. NO.: T17965

Tetra Tech, Inc.

FIGURE NO. 1



ASSUMED GROUNDWATER
FLOW DIRECTION

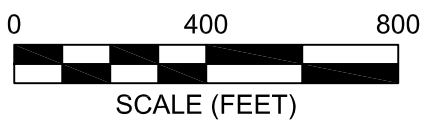


LEGEND

- SITE BOUNDARY
- SB2 SOIL BORING LOCATION AND DESIGNATION
- ⊙ APPARENT LANDFILL GAS MONITORING WELL
- ⊕ M-1 GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- ++++ RAILROAD SPUR

NOTES

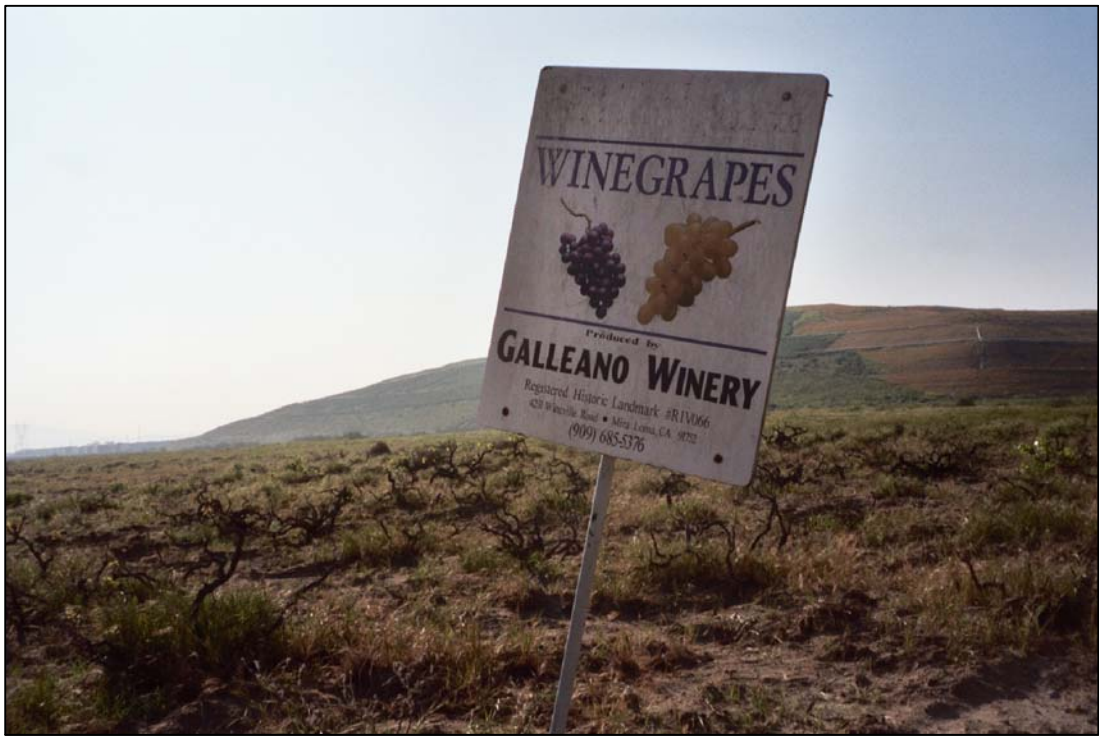
1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. BASE MAP DERIVED FROM SAN BERNARDINO COUNTY ASSESSOR'S PARCEL MAP AND AERIAL PHOTOGRAPH (TERRASERVER, 2004).
3. SITE FEATURES OBTAINED DURING A SITE RECONNAISSANCE BY PERSONNEL FROM TETRA TECH.



SITE MAP MILLIKEN SURPLUS PROPERTY SWC HAVEN AVENUE AND FRANCIS STREET ONTARIO, CALIFORNIA 91761	JUNE 8, 2006	Tetra Tech, Inc. FIGURE NO. 2
	TETRA TECH PROJ. NO.: T17965	

APPENDIX A
PHOTOGRAPHIC DOCUMENTATION

A-1



LOOKING SOUTHEAST ACROSS THE SITE FROM NEAR THE NORTHWEST CORNER.

A-2



LOOKING EAST FROM NEAR THE CENTER OF THE SITE.

**PHOTOGRAPHIC
DOCUMENTATION**

MILLIKEN SURPLUS PROPERTY
SWC HAVEN AVENUE AND FRANCIS STREET
ONTARIO, CALIFORNIA 91761

JUNE 8, 2006

TETRA TECH PROJ. NO.: T17965

Tetra Tech, Inc.

A-3



LOOKING WEST AT RAILROAD SPUR CROSSING THE WESTERN PORTION OF THE SITE.

A-4



LOOKING SOUTHWEST AT DEPRESSED AREA ON WEST CENTRAL PORTION OF THE SITE.

**PHOTOGRAPHIC
DOCUMENTATION**

MILLIKEN SURPLUS PROPERTY
SWC HAVEN AVENUE AND FRANCIS STREET
ONTARIO, CALIFORNIA 91761

JUNE 8, 2006

TETRA TECH PROJ. NO.: T17965

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A-5



LOOKING NORTH AT DEPRESSED AREA ON WEST CENTRAL PORTION OF THE SITE.

A-6



LOOKING SOUTHWEST ACROSS THE SITE FROM NEAR THE NORTHEAST CORNER.

**PHOTOGRAPHIC
DOCUMENTATION**

MILLIKEN SURPLUS PROPERTY
SWC HAVEN AVENUE AND FRANCIS STREET
ONTARIO, CALIFORNIA 91761

JUNE 8, 2006

TETRA TECH PROJ. NO.: T17965

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A-7



LOOKING SOUTH AT GULLY CROSSING THE SITE SOUTH OF DUPONT STREET.

A-8



LOOKING WEST ALONG SOUTHERN PORTION OF SITE.

**PHOTOGRAPHIC
DOCUMENTATION**

MILLIKEN SURPLUS PROPERTY
SWC HAVEN AVENUE AND FRANCIS STREET
ONTARIO, CALIFORNIA 91761

JUNE 8, 2006

TETRA TECH PROJ. NO.: T17965

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A-9



LOOKING NORTHWEST AT ON-SITE APPARENT LANDFILL GAS MONITORING WELL.

A-10



LOOKING SOUTHWEST AND DOWN AT ON-SITE APPARENT LANDFILL GAS MONITORING WELL.

**PHOTOGRAPHIC
DOCUMENTATION**

MILLIKEN SURPLUS PROPERTY
SWC HAVEN AVENUE AND FRANCIS STREET
ONTARIO, CALIFORNIA 91761

JUNE 8, 2006

TETRA TECH PROJ. NO.: T17965

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A-11



LOOKING EAST-SOUTHEAST AT THE MILLIKEN SANITARY LANDFILL.

A-12



LOOKING SOUTHWEST AT THE FORMER BORROW PIT WEST OF THE MILLIKEN SANITARY LANDFILL.

**PHOTOGRAPHIC
DOCUMENTATION**

MILLIKEN SURPLUS PROPERTY
SWC HAVEN AVENUE AND FRANCIS STREET
ONTARIO, CALIFORNIA 91761

JUNE 8, 2006

TETRA TECH PROJ. NO.: T17965

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A-13



LOOKING SOUTHWEST AT GROUNDWATER AND SOIL VAPOR MONITORING WELLS
NEAR THE NORTHWEST CORNER OF THE MILLIKEN SANITARY LANDFILL.

A-14



LOOKING SOUTHWEST AT A PERIMETER PROBE FOR MONITORING LANDFILL GAS
NEAR THE NORTHWEST CORNER OF THE MILLIKEN SANITARY LANDFILL.

**PHOTOGRAPHIC
DOCUMENTATION**

MILLIKEN SURPLUS PROPERTY
SWC HAVEN AVENUE AND FRANCIS STREET
ONTARIO, CALIFORNIA 91761

JUNE 8, 2006

TETRA TECH PROJ. NO.: T17965

Tetra Tech, Inc.

APPENDIX B
REGULATORY DATABASE REPORT



The EDR Radius Map™ Report

**100-Acre Property
Haven Ave. & Francis St.
Ontario, CA 91761**

Inquiry Number: 1649549.2s

April 06, 2006

The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

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with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

HAVEN AVE. & FRANCIS ST.
ONTARIO, CA 91761

COORDINATES

Latitude (North): 34.042000 - 34° 2' 31.2"
Longitude (West): 117.567500 - 117° 34' 3.0"
Universal Transverse Mercator: Zone 11
UTM X (Meters): 447616.9
UTM Y (Meters): 3766763.5
Elevation: 875 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map: 34117-A5 GUASTI, CA
Most Recent Revision: 1981

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

FEDERAL RECORDS

NPL..... National Priority List
Proposed NPL..... Proposed National Priority List Sites
Delisted NPL..... National Priority List Deletions
NPL RECOVERY..... Federal Superfund Liens
CERC-NFRAP..... CERCLIS No Further Remedial Action Planned
CORRACTS..... Corrective Action Report
RCRA-TSDF..... Resource Conservation and Recovery Act Information
US ENG CONTROLS..... Engineering Controls Sites List
US INST CONTROL..... Sites with Institutional Controls
DOD..... Department of Defense Sites

EXECUTIVE SUMMARY

US BROWNFIELDS	A Listing of Brownfields Sites
CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
UMTRA	Uranium Mill Tailings Sites
ODI	Open Dump Inventory
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
MINES	Mines Master Index File
RAATS	RCRA Administrative Action Tracking System

STATE AND LOCAL RECORDS

AWP	Annual Workplan Sites
Cal-Sites	Calsites Database
CA BOND EXP. PLAN	Bond Expenditure Plan
NFA	No Further Action Determination
REF	Unconfirmed Properties Referred to Another Agency
SCH	School Property Evaluation Program
Toxic Pits	Toxic Pits Cleanup Act Sites
WMUDS/SWAT	Waste Management Unit Database
LUST	Geotracker's Leaking Underground Fuel Tank Report
AST	Aboveground Petroleum Storage Tank Facilities
Notify 65	Proposition 65 Records
DEED	Deed Restriction Listing
VCP	Voluntary Cleanup Program Properties
CLEANERS	Cleaner Facilities
WIP	Well Investigation Program Case List
CDL	Clandestine Drug Labs

TRIBAL RECORDS

INDIAN RESERV	Indian Reservations
INDIAN LUST	Leaking Underground Storage Tanks on Indian Land
INDIAN UST	Underground Storage Tanks on Indian Land

EDR PROPRIETARY RECORDS

Manufactured Gas Plants	EDR Proprietary Manufactured Gas Plants
EDR Historical Auto Stations	EDR Proprietary Historic Gas Stations
EDR Historical Cleaners	EDR Proprietary Historic Dry Cleaners

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

FEDERAL RECORDS

CERCLIS: The Comprehensive Environmental Response, Compensation and Liability Information System contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

A review of the CERCLIS list, as provided by EDR, and dated 10/24/2005 has revealed that there is 1 CERCLIS site within approximately 1.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
MILLIKEN SAN LDFL	MILLIKEN AVE & HWY 60	1/2 - 1 SE	M58	45

RCRAInfo: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System(RCRIS). The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month Large quantity generators generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

A review of the RCRA-LQG list, as provided by EDR, and dated 02/21/2006 has revealed that there are 3 RCRA-LQG sites within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
WELLA MANUFACTURING	950 S DUPONT AVE	1/2 - 1 NNE	Z108	90
<u>Lower Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
MILLIKEN LANDFILL	2050 SOUTH MILLIKEN AVE	1/2 - 1 SE	K51	40
3 M WEST COAST DISTRIBUTION CE	5151 E PHILADELPHIA ST	1/2 - 1 SE	X100	82

RCRAInfo: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System(RCRIS). The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month Large quantity generators generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

A review of the RCRA-SQG list, as provided by EDR, and dated 02/24/2006 has revealed that there are

EXECUTIVE SUMMARY

12 RCRA-SQG sites within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
SOURCEONE HEALTHCARE TECHNOLOG	1590 MILLIKEN AVENUE	1/2 - 1 ENE	G29	25
<i>B M W OF N AMERICA INC W RGN T</i>	<i>1175 S DUPONT AVE</i>	<i>1/2 - 1 NNE</i>	<i>Q72</i>	<i>57</i>
<i>C AND H MANUFACTURING INC</i>	<i>4280 LOWELL ST</i>	<i>1/2 - 1 NNE</i>	<i>T77</i>	<i>59</i>
<i>B M W OF NORTH AMERICA</i>	<i>1150 S MILLIKEN AVE</i>	<i>1/2 - 1 NE</i>	<i>V91</i>	<i>71</i>
<i>CHEVRON CHEM CO</i>	<i>1106 S MILLIKEN AVE</i>	<i>1/2 - 1 NE</i>	<i>V97</i>	<i>75</i>
<i>FLEET SERVICES</i>	<i>800 S MILLIKEN AVE UNIT</i>	<i>1/2 - 1 NE</i>	<i>101</i>	<i>84</i>
<i>TOYOTA MOTOR SALES</i>	<i>1425 ROCKEFELLER AVE</i>	<i>1/2 - 1 NE</i>	<i>Y103</i>	<i>84</i>
<i>CITRUS MOTORS ONTARIO INC</i>	<i>1315 WANAMAKER DR</i>	<i>1/2 - 1 NE</i>	<i>Y106</i>	<i>88</i>
<i>1309 WANNAMAKER AVE</i>	<i>1309 WANAMAKER AVE</i>	<i>1/2 - 1 NE</i>	<i>Y112</i>	<i>92</i>
<i>CALIFORNIA HARDWARE CO</i>	<i>3601 E JURUPA</i>	<i>1/2 - 1 WNW</i>	<i>115</i>	<i>94</i>
<u>Lower Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
<i>AMERICAN METAL RECYCLING INC</i>	<i>2202 S MILLIKEN AVE</i>	<i>1/2 - 1 SE</i>	<i>S85</i>	<i>64</i>
<i>HAMILTON FIXTURE WEST</i>	<i>5005 E PHILADELPHIA</i>	<i>1/2 - 1 SE</i>	<i>X98</i>	<i>75</i>

ERNS: The Emergency Response Notification System records and stores information on reported releases of oil and hazardous substances. The source of this database is the U.S. EPA.

A review of the ERNS list, as provided by EDR, and dated 12/31/2005 has revealed that there are 2 ERNS sites within approximately 0.75 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
1595 DUPONT AVE	1595 DUPONT AVE	1/4 - 1/2 ENE	A2	6
1595 DUPONT STREET	1595 DUPONT STREET	1/4 - 1/2 ENE	A4	8

HMIRS: The Hazardous Materials Incident Report System contains hazardous material spill incidents reported to the Department of Transportation. The source of this database is the U.S. EPA.

A review of the HMIRS list, as provided by EDR, and dated 12/31/2005 has revealed that there are 3 HMIRS sites within approximately 0.75 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
Not reported	3371 E FRANCIS AVE	1/2 - 1 W	I39	28
Not reported	3371 FRANCIS ST	1/2 - 1 W	I41	30
Not reported	3371 E FRANCIS	1/2 - 1 W	I43	30

FUDS: The Listing includes locations of Formerly Used Defense Sites Properties where the US Army Corps Of Engineers is actively working or will take necessary cleanup actions.

A review of the FUDS list, as provided by EDR, and dated 12/05/2005 has revealed that there is 1 FUDS site within approximately 1.75 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
MIRA LOMA QUARTERMASTER DEPOT		1 - 2 SE	117	98

EXECUTIVE SUMMARY

SSTS: Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

A review of the SSTS list, as provided by EDR, and dated 12/31/2003 has revealed that there is 1 SSTS site within approximately 0.75 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
POOL BRITE	1595 DUPONT AVE	1/4 - 1/2 ENE	A3	6

FINDS: The Facility Index System contains both facility information and "pointers" to other sources of information that contain more detail. These include: RCRIS; Permit Compliance System (PCS); Aerometric Information Retrieval System (AIRS); FATES (FIFRA [Federal Insecticide Fungicide Rodenticide Act] and TSCA Enforcement System, FTTS [FIFRA/TSCA Tracking System]; CERCLIS; DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes); Federal Underground Injection Control (FURS); Federal Reporting Data System (FRDS); Surface Impoundments (SIA); TSCA Chemicals in Commerce Information System (CICS); PADS; RCRA-J (medical waste transporters/disposers); TRIS; and TSCA. The source of this database is the U.S. EPA/NTIS.

A review of the FINDS list, as provided by EDR, and dated 01/09/2006 has revealed that there are 5 FINDS sites within approximately 0.75 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
SOURCEONE HEALTHCARE TECHNOLOG	1590 MILLIKEN AVENUE	1/2 - 1 ENE	G30	25
<u>Lower Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
DIAMOND WIPES INTERNATIONAL IN	4200 E MISSION BLVD	1/2 - 1 SSE	37	27
MM MILLICAN GENCO LLC	2050 SOUTH MILLICAN AVE	1/2 - 1 SE	K50	39
MILLIKEN LANDFILL	2050 SOUTH MILLIKEN AVE	1/2 - 1 SE	K51	40
SAFARILAND LIMITED	3120 MISSION BLVD	1/2 - 1 WSW	N61	47

STATE AND LOCAL RECORDS

NFE: This category contains properties that are suspected of being contaminated. These are unconfirmed contaminated properties that need to be assessed using the PEA process. PEA in Progress indicates properties where DTSC has determined a PEA is required, but not currently underway.

A review of the NFE list, as provided by EDR, and dated 08/08/2005 has revealed that there is 1 NFE site within approximately 1 mile of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
AMERICAN METAL RECYCLING INC	2202 S MILLIKEN AVE	1/2 - 1 SE	S85	64

EXECUTIVE SUMMARY

SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Integrated Waste Management Board's Solid Waste Information System (SWIS) database.

A review of the SWF/LF list, as provided by EDR, and dated 12/08/2005 has revealed that there are 2 SWF/LF sites within approximately 1.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
MILLIKEN SANITARY LANDFILL	2050 SOUTH MILLIKEN AVE	1/2 - 1 SE	K54	42
EAST COUNTY LINE	PHILADELPHIA AVE / FL	1 - 2 SE	116	96

WDS: California Water Resources Control Board - Waste Discharge System.

A review of the CA WDS list, as provided by EDR, and dated 12/19/2005 has revealed that there are 4 CA WDS sites within approximately 0.75 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
ANDROP PACKAGING INC	4400 E FRANCIS ST	1/2 - 1 E	59	45
<u>Lower Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
DONG JIN AMERICA INC	1905 S MILLIKEN AVE	1/2 - 1 ESE	32	26
KEYSTONE ENGINEER	1600 EXCISE AVE	1/2 - 1 WNW	44	30
GW CLEANUP-MILLIKEN LANDFILL	2050 S MILLIKEN AVE	1/2 - 1 SE	K52	40

CORTESE: This database identifies public drinking water wells with detectable levels of contamination, hazardous substance sites selected for remedial action, sites with known toxic material identified through the abandoned site assessment program, sites with USTs having a reportable release and all solid waste disposal facilities from which there is known migration. The source is the California Environmental Protection Agency/Office of Emergency Information.

A review of the Cortese list, as provided by EDR, and dated 04/01/2001 has revealed that there is 1 Cortese site within approximately 1.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
MILLIKEN LANDFILL	2050 MILLIKEN	1/2 - 1 SE	K55	43

SWRCY: A listing of recycling facilities in California.

A review of the SWRCY list, as provided by EDR, and dated 01/05/2006 has revealed that there is 1 SWRCY site within approximately 1.25 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
AMR DIVISION NATL METAL/STEEL	2202 S MILLIKEN AVE	1/2 - 1 SE	S82	62

EXECUTIVE SUMMARY

CA FID: The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

A review of the CA FID UST list, as provided by EDR, and dated 10/31/1994 has revealed that there are 3 CA FID UST sites within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
<i>PETERSON MFG. CO., INC.</i>	<i>1207 MILLIKEN AVE</i>	<i>1/2 - 1 NE</i>	<i>P87</i>	<i>69</i>
<u>Lower Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
<i>DARLING DELEWARE</i>	<i>2107 S MILLIKEN</i>	<i>1/2 - 1 SE</i>	<i>M69</i>	<i>56</i>
<i>AMR DIVISION NATL METAL/STEEL</i>	<i>2202 S MILLIKEN AVE</i>	<i>1/2 - 1 SE</i>	<i>S82</i>	<i>62</i>

CA SLIC: SLIC Region comes from the California Regional Water Quality Control Board.

A review of the SLIC list, as provided by EDR, and dated 01/09/2006 has revealed that there is 1 SLIC site within approximately 1.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
INLAND CONTAINER CORPORATION	N/A	1/2 - 1 ENE	U88	70

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, and dated 01/09/2006 has revealed that there are 4 UST sites within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
<i>NORDSTROM'S DIST CENTER</i>	<i>1600 S MILLIKEN AVE</i>	<i>1/2 - 1 ENE</i>	<i>G26</i>	<i>22</i>
<u>Lower Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
<i>PICK-A-PART AUTO DISMNTLG</i>	<i>2025 S MILLIKEN AVE</i>	<i>1/2 - 1 SE</i>	<i>K46</i>	<i>33</i>
AMER METAL RECYCLING INC	2202 S MILLIKEN AVE	1/2 - 1 SE	S83	63
ALLEGIANCE HEALTHCARE COR	4551 E PHILADELPHIA ST	1/2 - 1 SE	S89	71

HIST UST: Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there are 3 HIST UST sites within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
PETERSON MFG. CO., INC.	1207 MILLIKEN AVENUE	1/2 - 1 NE	P86	69
<u>Lower Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
STILES DEAD ANIMAL REMOVAL	2107 S MILLIKEN AVE	1/2 - 1 SE	M70	56
AMERICAN METAL REDUCTION CO.	2202 S MILLIKEN AVE	1/2 - 1 SE	S84	63

EXECUTIVE SUMMARY

SWEEPS: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1980's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 3 SWEEPS UST sites within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
PETERSON MFG. CO., INC.	1207 MILLIKEN AVE	1/2 - 1 NE	P87	69
<u>Lower Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
DARLING DELEWARE	2107 S MILLIKEN	1/2 - 1 SE	M69	56
AMR DIVISION NATL METAL/STEEL	2202 S MILLIKEN AVE	1/2 - 1 SE	S82	62

CHMIRS: The California Hazardous Material Incident Report System contains information on reported hazardous material incidents, i.e., accidental releases or spills. The source is the California Office of Emergency Services.

A review of the CHMIRS list, as provided by EDR, and dated 12/31/2004 has revealed that there are 3 CHMIRS sites within approximately 0.75 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
Not reported	1595 S. DUPONT ST	1/4 - 1/2 ENE	A5	8
Not reported	1505 S. DUPONT AVE	1/4 - 1/2 ENE	E17	16
<u>Lower Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
Not reported	3551 EAST FRANCIS	1/4 - 1/2 WSW	13	13

DEHS Permit System: San Bernardino County Fire Department Hazardous Materials Division.

A review of the San Bern. Co. Permit list, as provided by EDR, and dated 12/21/2005 has revealed that there are 62 San Bern. Co. Permit sites within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
TARGET #0595	4061 E FRANCIS	1/8 - 1/4 ENE	A1	6
SMALLEY & CO	1505 DUPONT AVE C	1/4 - 1/2 ENE	B7	11
FIBRE GLASS-EVERCOAT CO	1505 S DUPONT J	1/4 - 1/2 ENE	B8	11
SCE-MILLIKEN SUBSTATION	1600 COMMERCE PKWY	1/4 - 1/2 NW	9	11
STAPLES	1500 S DUPONT AVE	1/4 - 1/2 NE	C11	12
LESLIE'S SWIMMING POOL SUPPLIE	1595 S DUPONT AVE STE A	1/4 - 1/2 ENE	E19	18
FLUORO-SEAL, INC.	1555 DUPONT AVE C	1/4 - 1/2 ENE	E20	18
DAWN FOOD PRODUCTS, INC	3505 E FRANCIS ST	1/4 - 1/2 W	22	20
W & T AUTO WRECKING INC.	2025 S MILLIKEN B	1/2 - 1 E	F23	20
NORDSTROM'S DIST CENTER	1600 S MILLIKEN AVE	1/2 - 1 ENE	G26	22
DPI WEST FLEET MAINTENANCE SHO	1590 MILLIKEN AVE #G	1/2 - 1 ENE	G31	25
DAL-TILE ONTARIO REGIONAL DIST	3625 E JURUPA ST	1/2 - 1 NW	33	26
WHITMIRE DISTRIBUTION	1351 DOUBLEDAY	1/2 - 1 NNE	H35	27
GRAINGER INDUSTRIAL SUPPLY	1500 S MILLIKEN #A	1/2 - 1 ENE	36	27
INLAND PLASTICS INC	1455 S DOUBLEDAY AVE	1/2 - 1 NNE	H38	28
SAINT GOBAIN ABRASIVES	3790 E JURUPA ST	1/2 - 1 NE	J45	33
BANK OF AMERICA	1275 S. DUPONT ST	1/2 - 1 NNE	L47	34

EXECUTIVE SUMMARY

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
COMPUMERIC	1390 S MILLIKEN AVE	1/2 - 1 NE	J56	43
TOYOTA MOTOR SALES-ONT/ PARTS	1425 TOYOTA WAY	1/2 - 1 ENE	57	44
ANDROP PACKAGING INC	4400 E FRANCIS ST	1/2 - 1 E	59	45
WEST COAST CHAIN MFG CO.	4245 PACIFIC PRIVADO	1/2 - 1 NE	P66	52
TNT LOGISTICS NORTH AMERICA	1001 DOUBLEDAY AVE	1/2 - 1 N	71	57
HAYES AXLE INC	4250 E LOWELL ST	1/2 - 1 NNE	Q73	57
C & H MFG INC	4280 LOWELL ST	1/2 - 1 NNE	T78	61
TOYO TIRES	3855 E JURUPA ST	1/2 - 1 ENE	U81	62
CALIF. AUTHORITY/RACING F	1155 S MILLIKEN #E	1/2 - 1 NE	V90	71
B M W OF NORTH AMERICA	1150 S MILLIKEN AVE	1/2 - 1 NE	V91	71
SIERRA GRAPHIX PRINTING	845 S MILLIKEN STE H	1/2 - 1 NE	V92	72
OTTO INTERNATIONAL, INC	3550-A E JURUPA ST	1/2 - 1 WNW	96	75
LEGGETT & PLATT, INC	1050 S DUPONT AVE	1/2 - 1 NNE	99	81
CONVERSE	4450 E LOWELL ST	1/2 - 1 NE	104	86
CITRUS MOTORS ONTARIO INC	1375 WOODRUFF WAY	1/2 - 1 ENE	105	86
BIO-LAB, INC	4051 SANTA ANA ST	1/2 - 1 N	107	89
WELLA MFG OF VIRGINIA, INC.	950 S DUPONT AVE	1/2 - 1 NNE	T109	91
ARROW ELECTRONICS	1251 S ROCKEFELLER	1/2 - 1 NE	110	91
APPLIED INDUST TECHNOLOGIES-CA	4189 E SANTA ANA ST	1/2 - 1 NNE	AA111	92
HALSTEEL INC.	4190 E SANTA ANA ST	1/2 - 1 NNE	AA113	92
HALSTEEL INC	4190 SANTA ANA ST	1/2 - 1 NNE	AA114	93
CALIFORNIA HARDWARE CO	3601 E JURUPA	1/2 - 1 WNW	115	94
<u>Lower Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
BRIDGESTONE FIRESTONE	4000 E MISSION BLVD	1/4 - 1/2 SSW	12	12
SKECHERS USA, INC	4100 E MISSION AVE	1/4 - 1/2 S	D14	14
ETOYS DISTRIBUTION, LLC	4100 E MISSION BLVD	1/4 - 1/2 S	D15	15
FED EX EXPRESS	3371 E FRANCIS ST	1/2 - 1 W	I42	30
KEYSTONE ENGINEER	1600 EXCISE AVE	1/2 - 1 WNW	44	30
PICK-A-PART AUTO DISMNTLG	2025 S MILLIKEN AVE	1/2 - 1 SE	K46	33
MILLIKEN LANDFILL	2050 MILLIKEN AVE	1/2 - 1 SE	K53	41
SAFARILAND LTD	3120 MISSION BLVD	1/2 - 1 WSW	N63	49
QUICK STUFF #7724	3500 E PHILADELPHIA ST	1/2 - 1 SW	O65	52
HAVEN-PHILADELPHIA MOBIL	2200 S HAVEN AVE STE A	1/2 - 1 SW	O67	54
STILES ANIMAL REMOVAL INC	2107 S MILLIKEN AVE	1/2 - 1 SE	M68	55
TOTAL WAREHOUSING, INC	3350 E CEDAR ST	1/2 - 1 WSW	R74	58
CUSTOMIZED DISTRIBUTION SVCS	3355 E CEDAR ST A	1/2 - 1 WSW	R75	58
COUNTY SALVAGE POOL	2165 S MILLIKEN AVE	1/2 - 1 SE	S76	59
CAM GUARD SYSTEMS, INC	2175 S MILLIKEN AVE	1/2 - 1 SE	S79	61
MILLIKEN TRUCK	2175 S MILLIKEN AVE	1/2 - 1 SE	S80	61
AMR DIVISION NATL METAL/STEEL	2202 S MILLIKEN AVE	1/2 - 1 SE	S82	62
AMERICAN METAL RECYCLING INC	2202 S MILLIKEN AVE	1/2 - 1 SE	S85	64
KAWASAKI MOTOR CORP.,USA	2155 S EXCISE AVE STE A	1/2 - 1 SW	W93	74
MAG INSTRUMENT, INC	1950 STERLING	1/2 - 1 WSW	94	74
DISTRIBUTION ALTERNATIVES	2155 EXCISE AVE	1/2 - 1 SW	W95	74
HAMILTON FIXTURE WEST	5005 E PHILADELPHIA	1/2 - 1 SE	X98	75
FLEX SOLUTIONS	3351 E PHILADELPHIA	1/2 - 1 SW	102	84

EXECUTIVE SUMMARY

HAZNET: The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000-1,000,000 annually, representing approximately 350,000-500,000 shipments. Data from non-California manifests & continuation sheets are not included at the present time. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, & disposal method. The source is the Department of Toxic Substance Control is the agency

A review of the HAZNET list, as provided by EDR, and dated 12/31/2003 has revealed that there are 18 HAZNET sites within approximately 0.75 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
LESLIES POOL MART	1595 SOUTH DUPONT	1/4 - 1/2 ENE	A6	10
MAGESTIC- CCC IV LLC	1500 S DUPONT ST	1/4 - 1/2 NE	C10	12
BEDFORD PROPERTY INVESTORS INC	1505-1555 DUPONT AVE	1/4 - 1/2 ENE	E16	15
BEDFORD PROPERTY INVESTORS, IN	1555 DUPONT AVE	1/4 - 1/2 ENE	E18	17
REFRIGERANT RECOVERY CORP/AMER	1505 DUPONT AVENUE	1/4 - 1/2 ENE	E21	18
PICK-A-PART AUTO DISMANTLING	2025A S MILLEKEN AVE	1/2 - 1 E	F24	20
STYLES ANIMAL REMOVAL INC	2107 MILLKEN AVE	1/2 - 1 E	F25	22
NORDSTROM DISTRIBUTION CENTER	1600 SOUTH MILLIKEN AVE	1/2 - 1 ENE	G27	23
NORDSTROM DISTRIBUTION CENTER	1600 SO MILLIKEN AVE	1/2 - 1 ENE	G28	23
TECH PACKAGING INC	1351 DOUBLEDAY AVE	1/2 - 1 NNE	H34	27
OL ASSOCIATES	1275 S DUPONT	1/2 - 1 NNE	L48	34
TOYOTA MOTOR SALES-ONT/ PARTS	1425 TOYOTA WAY	1/2 - 1 ENE	57	44
<u>Lower Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
SKECHERS USA, INC	4100 E MISSION AVE	1/4 - 1/2 S	D14	14
FEDERAL EXPRESS INC	3371 E FRANCIS	1/2 - 1 W	I40	28
KEYSTONE ENGINEER	1600 EXCISE AVE	1/2 - 1 WNW	44	30
SAN BERNARDINO CO., SOLID WAST	2050 S MILLIKEN AVE	1/2 - 1 SE	K49	35
SAFARILAND LTD	3120 E MISSION BLVD	1/2 - 1 WSW	N62	47
JACK IN THE BOX INC	3500 E PHILADELPHIA	1/2 - 1 SW	O64	51

Emissions Inventory Data: Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies

A review of the EMI list, as provided by EDR, and dated 12/31/2003 has revealed that there are 4 EMI sites within approximately 0.75 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
SAN BERNARDINO CO., SOLID WAST	2050 S MILLIKEN AVE	1/2 - 1 SE	K49	35
SAFARILAND LTD.	3120 E. MISSION BLVD.	1/2 - 1 WSW	N60	46
SAFARILAND LTD	3120 E MISSION BLVD	1/2 - 1 WSW	N62	47
SAFARILAND LTD	3120 MISSION BLVD	1/2 - 1 WSW	N63	49

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

<u>Site Name</u>	<u>Database(s)</u>
EAST FRANCIS/W OF CAMPUS/400-5	CDL
14576 PHILADELPHIA STREET, SPA	CDL
2141 PHILADELPHIA STREET, SUIT	CDL
MOTOWORLD RACING	CLEANERS
SUNCOAST POST TENSION	HAZNET
HUB CONSTRUCTION	HAZNET
INTERNATIONAL PAPER, INC.	HAZNET, San Bern. Co. Permit
CROWN LIFT TRUCKS	HAZNET, San Bern. Co. Permit
ARCO FACILITY NO 06521	RCRA-SQG, FINDS, HAZNET
ARCO PRODUCTS COMPANY	HAZNET
PRESTIGE STATION INC 5965	HAZNET
UNITED PARCEL SERVICE INC	HAZNET
KME FIRE APPARATUS	HAZNET
BAXTER HEALTHCARE INC.; FLD SLS &	HAZNET
AGRICULTURAL PRODUCTS INC	HAZNET, San Bern. Co. Permit
CHINO BASIN WATER DISTRICT	HAZNET
DBA CARDINAL HEALTH	HAZNET
EARTH PROTECTION SERVICES, INC	HAZNET
LONGS DRUG STORES/MEC	HAZNET
PACIFIC COLLISION CENTERS	RCRA-SQG
4EVER INKS LLC	RCRA-SQG
AGRICULTURAL PROD INC	RCRA-SQG, FINDS
JASPER ENGINE EXCHANGE, INC	San Bern. Co. Permit
VISUAL IMPACT	San Bern. Co. Permit
EXEL, INC.	San Bern. Co. Permit
VERIZON CALIFORNIA INC.	San Bern. Co. Permit
CALICO BRANDS INC	San Bern. Co. Permit
ARCO PETROLEUM PROD #5965	San Bern. Co. Permit
NATIONAL DISTR CENTERS LP	San Bern. Co. Permit
FRENCH & PACIFIC TRADING	San Bern. Co. Permit
KEM KREST CORPORATION	San Bern. Co. Permit
MULTISOURCE INC	San Bern. Co. Permit
ADT SECURITY SERVICES	San Bern. Co. Permit
AMEC	San Bern. Co. Permit
USF LOGISTICS	CA WDS

OVERVIEW MAP - 1649549.2s



★ Target Property

▲ Sites at elevations higher than or equal to the target property

◆ Sites at elevations lower than the target property

▲ Manufactured Gas Plants

■ National Priority List Sites

■ Landfill Sites

■ Dept. Defense Sites

■ Indian Reservations BIA

— County Boundary

— Power transmission lines

— Oil & Gas pipelines

■ 100-year flood zone

■ 500-year flood zone

■ Federal Wetlands

■ Areas of Concern

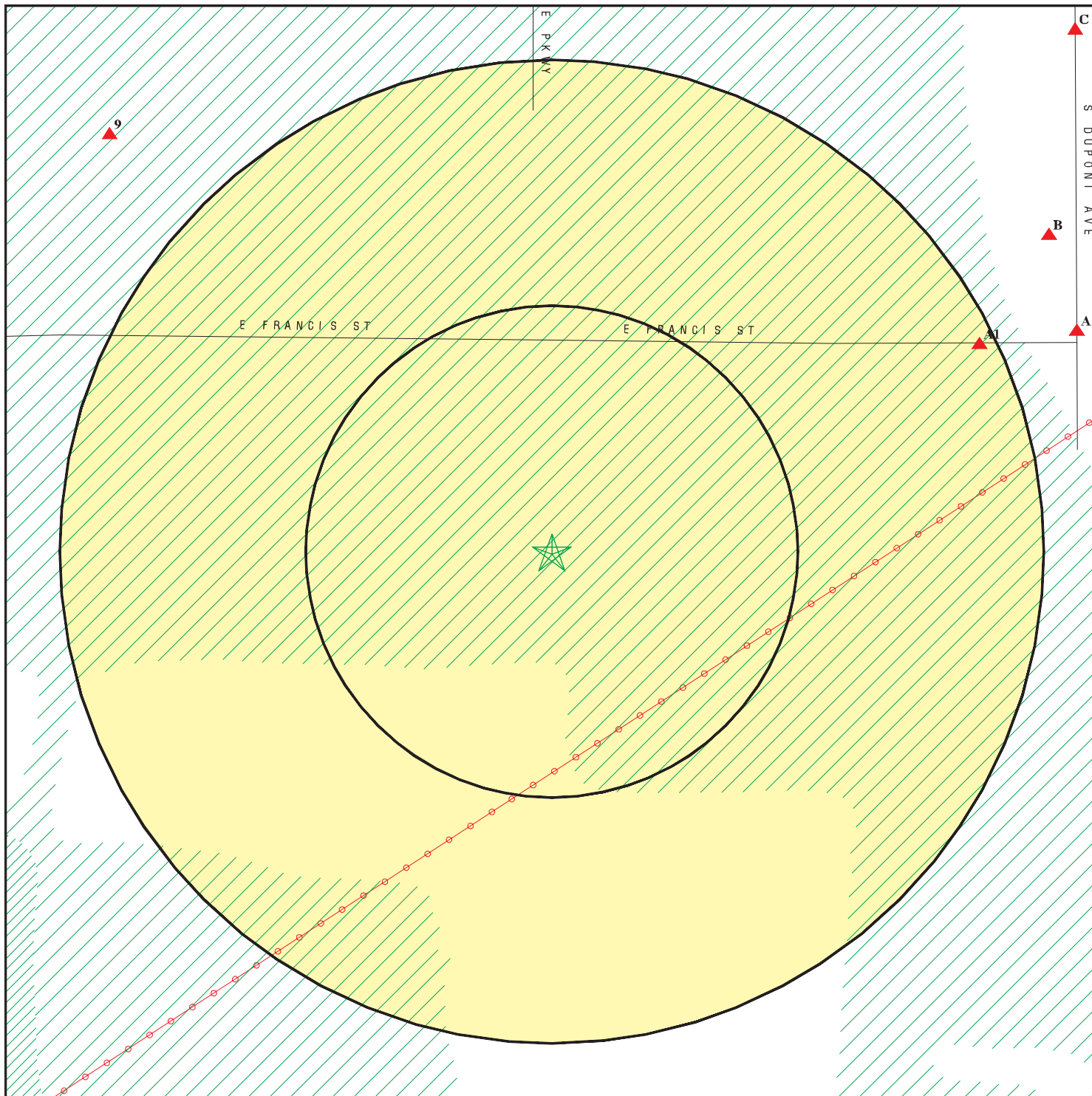


This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 100-Acre Property
 ADDRESS: Haven Ave. & Francis St.
 Ontario CA 91761
 LAT/LONG: 34.0420 / 117.5675

CLIENT: Tetra Tech Inc.
 CONTACT: Steven Grod
 INQUIRY #: 1649549.2s
 DATE: April 06, 2006

DETAIL MAP - 1649549.2s



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites

- Indian Reservations BIA
- Power transmission lines
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- Areas of Concern



This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 100-Acre Property
 ADDRESS: Haven Ave. & Francis St.
 Ontario CA 91761
 LAT/LONG: 34.0420 / 117.5675

CLIENT: Tetra Tech Inc.
 CONTACT: Steven Grod
 INQUIRY #: 1649549.2s
 DATE: April 06, 2006

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
<u>FEDERAL RECORDS</u>								
NPL		1.750	0	0	0	0	0	0
Proposed NPL		1.750	0	0	0	0	0	0
Delisted NPL		1.750	0	0	0	0	0	0
NPL RECOVERY		0.750	0	0	0	0	NR	0
CERCLIS		1.250	0	0	0	1	0	1
CERC-NFRAP		1.250	0	0	0	0	0	0
CORRACTS		1.750	0	0	0	0	0	0
RCRA TSD		1.250	0	0	0	0	0	0
RCRA Lg. Quan. Gen.		1.000	0	0	0	3	NR	3
RCRA Sm. Quan. Gen.		1.000	0	0	0	12	NR	12
ERNS		0.750	0	0	2	0	NR	2
HMIRS		0.750	0	0	0	3	NR	3
US ENG CONTROLS		1.250	0	0	0	0	0	0
US INST CONTROL		1.250	0	0	0	0	0	0
DOD		1.750	0	0	0	0	0	0
FUDS		1.750	0	0	0	0	1	1
US BROWNFIELDS		1.250	0	0	0	0	0	0
CONSENT		1.750	0	0	0	0	0	0
ROD		1.750	0	0	0	0	0	0
UMTRA		1.250	0	0	0	0	0	0
ODI		1.250	0	0	0	0	0	0
TRIS		0.750	0	0	0	0	NR	0
TSCA		0.750	0	0	0	0	NR	0
FTTS		0.750	0	0	0	0	NR	0
SSTS		0.750	0	0	1	0	NR	1
PADS		0.750	0	0	0	0	NR	0
MLTS		0.750	0	0	0	0	NR	0
MINES		1.000	0	0	0	0	NR	0
FINDS		0.750	0	0	0	5	NR	5
RAATS		0.750	0	0	0	0	NR	0
<u>STATE AND LOCAL RECORDS</u>								
AWP		1.750	0	0	0	0	0	0
Cal-Sites		1.750	0	0	0	0	0	0
CA Bond Exp. Plan		1.750	0	0	0	0	0	0
NFA		1.000	0	0	0	0	NR	0
NFE		1.000	0	0	0	1	NR	1
REF		1.000	0	0	0	0	NR	0
SCH		1.000	0	0	0	0	NR	0
Toxic Pits		1.750	0	0	0	0	0	0
State Landfill		1.250	0	0	0	1	1	2
CA WDS		0.750	0	0	0	4	NR	4
WMUDS/SWAT		1.250	0	0	0	0	0	0
Cortese		1.250	0	0	0	1	0	1
SWRCY		1.250	0	0	0	1	0	1
LUST		1.250	0	0	0	0	0	0
CA FID UST		1.000	0	0	0	3	NR	3

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
SLIC		1.250	0	0	0	1	0	1
UST		1.000	0	0	0	4	NR	4
HIST UST		1.000	0	0	0	3	NR	3
AST		1.000	0	0	0	0	NR	0
SWEEPS UST		1.000	0	0	0	3	NR	3
CHMIRS		0.750	0	0	3	0	NR	3
Notify 65		1.750	0	0	0	0	0	0
DEED		1.250	0	0	0	0	0	0
VCP		1.250	0	0	0	0	0	0
DRYCLEANERS		1.000	0	0	0	0	NR	0
WIP		1.000	0	0	0	0	NR	0
CDL		0.750	0	0	0	0	NR	0
San Bern. Co. Permit		1.000	0	1	10	51	NR	62
HAZNET		0.750	0	0	6	12	NR	18
EMI		0.750	0	0	0	4	NR	4
<u>TRIBAL RECORDS</u>								
INDIAN RESERV		1.750	0	0	0	0	0	0
INDIAN LUST		1.250	0	0	0	0	0	0
INDIAN UST		1.000	0	0	0	0	NR	0
<u>EDR PROPRIETARY RECORDS</u>								
Manufactured Gas Plants		1.750	0	0	0	0	0	0
EDR Historical Auto Stations		1.000	0	0	0	0	NR	0
EDR Historical Cleaners		1.000	0	0	0	0	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

MAP FINDINGS

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

Site

Database(s)

EDR ID Number
 EPA ID Number

A1 **TARGET #0595** **San Bern. Co. Permit** **S106230086**
ENE **4061 E FRANCIS** **N/A**
1/8-1/4 **ONTARIO, CA 91761**

Site 1 of 6 in cluster A

Relative:
Higher

DEHS Permit:
 Facility ID: FA0008167
 Facility Status: INACTIVE
 Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
 Permit Number: PT0014410
 Expiration Date: 3/31/2006
 Region: SAN BERNARDINO

Actual:
884 ft.

A2 **1595 DUPONT AVE** **ERNS** **99629882**
ENE **1595 DUPONT AVE** **N/A**
1/4-1/2 **ONTARIO, CA 91761**

Site 2 of 6 in cluster A

Relative:
Higher

[Click this hyperlink](#) while viewing on your computer to access additional ERNS detail in the EDR Site Report.

Actual:
887 ft.

A3 **POOL BRITE** **SSTS** **1004439536**
ENE **1595 DUPONT AVE** **N/A**
1/4-1/2 **ONTARIO, CA 91761**

Site 3 of 6 in cluster A

Relative:
Higher

SSTS:
 Product: LESLIE'S CHLORINATOR TABLETS
 Status: Active
 Registration #: 011411CA 001
 Report Year: 1997
 Permit: Registered
 Product #: 01141100003
 Product Type: End-use blend, formulation, or concentrate
 Product Class: 20
 Product Use: 9
 Market: Marketed in the United States
 Country: Not reported
 Region: Not reported

Product: LESLIE'S FLOATING CHLORINATOR
 Status: Active
 Registration #: 011411CA 001
 Report Year: 1997
 Permit: Registered
 Product #: 01141100005
 Product Type: End-use blend, formulation, or concentrate
 Product Class: 30
 Product Use: 5
 Market: Marketed in the United States
 Country: Not reported
 Region: Not reported

Actual:
887 ft.

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

POOL BRITE (Continued)

1004439536

Product: LESLIE'S REFILLABLE CHLORINATOR CARTRIDGE
Status: Active
Registration #: 011411CA 001
Report Year: 1997
Permit: Registered
Product #: 01141100006
Product Type: End-use blend, formulation, or concentrate
Product Class: 30
Product Use: 9
Market: Marketed in the United States
Country: Not reported
Region: Not reported

Product: LESLIE'S ALGI KILL
Status: Active
Registration #: 011411CA 001
Report Year: 1997
Permit: Registered
Product #: 01141100007
Product Type: End-use blend, formulation, or concentrate
Product Class: 30
Product Use: 5
Market: Marketed in the United States
Country: Not reported
Region: Not reported

Product: LESLIE'S JUMBO CHLORINATOR TABLETS
Status: Active
Registration #: 011411CA 001
Report Year: 1997
Permit: Registered
Product #: 01141100008
Product Type: End-use blend, formulation, or concentrate
Product Class: 20
Product Use: 9
Market: Marketed in the United States
Country: Not reported
Region: Not reported

Product: LESLIE'S POWER POWDER
Status: Active
Registration #: 011411CA 001
Report Year: 1997
Permit: Registered
Product #: 01141100009
Product Type: End-use blend, formulation, or concentrate
Product Class: 30
Product Use: 9
Market: Marketed in the United States
Country: Not reported
Region: Not reported

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
 EPA ID Number

POOL BRITE (Continued)

1004439536

Product: LESLIE'S ALGAE CONTROL
 Status: Active
 Registration #: 011411CA 001
 Report Year: 1997
 Permit: Registered
 Product #: 01141100011
 Product Type: End-use blend, formulation, or concentrate
 Product Class: 30
 Product Use: 5
 Market: Marketed in the United States
 Country: Not reported
 Region: Not reported

Product: LESLIE'S CHLOR BRITE III
 Status: Active
 Registration #: 011411CA 001
 Report Year: 1997
 Permit: Registered
 Product #: 01141100015
 Product Type: End-use blend, formulation, or concentrate
 Product Class: 30
 Product Use: 9
 Market: Marketed in the United States
 Country: Not reported
 Region: Not reported

A4
ENE
 1/4-1/2
 1531 ft.

1595 DUPONT STREET
1595 DUPONT STREET
ONTARIO, CA

ERNS 99629947
N/A

Site 4 of 6 in cluster A

Relative:
Higher

[Click this hyperlink](#) while viewing on your computer to access additional ERNS detail in the EDR Site Report.

Actual:
887 ft.

A5
ENE
 1/4-1/2
 1531 ft.

1595 S. DUPONT ST
ONTARIO, CA

CHMIRS S105660903
N/A

Site 5 of 6 in cluster A

Relative:
Higher

CHMIRS:
 OES Control Number: 99-2859
 Extent of Release: Not reported
 Property Use: Not reported
 Incident Date: Not reported
Date Completed: Not reported
 Time Completed : Not reported
 Agency Id Number : Not reported
 Agency Incident Number : Not reported
 OES Incident Number : 99-2859
 Time Notified : Not reported
 Surrounding Area : Not reported
 Estimated Temperature : Not reported
 Property Management : Not reported
 More Than Two Substances Involved? : Not reported
 Special Studies 1 : Not reported
 Special Studies 2 : Not reported

Actual:
887 ft.

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
 EPA ID Number

(Continued)

S105660903

Special Studies 3 :	Not reported
Special Studies 4 :	Not reported
Special Studies 5 :	Not reported
Special Studies 6 :	Not reported
Resp Agency Personnel # Of Decontaminated :	Not reported
Others Number Of Decontaminated :	Not reported
Others Number Of Injuries :	Not reported
Others Number Of Fatalities :	Not reported
Vehicle Make/year :	Not reported
Vehicle License Number :	Not reported
Vehicle State :	Not reported
Vehicle Id Number :	Not reported
CA/DOT/PUC/ICC Number :	Not reported
Company Name :	Not reported
Reporting Officer Name/ID :	Not reported
Report Date :	Not reported
Comments :	Not reported
Facility Telephone Number :	Not reported
Waterway Involved :	No
Waterway :	Not reported
Spill Site :	Not reported
Cleanup By :	Unknown
Containment :	Not reported
What Happened :	Not reported
Type :	Not reported
Other :	Not reported
Substance :	Calcium Hypochloride / Chlorine Cloud
Quantity Released :	
E Date :	Not reported
Contained :	No
Site Type :	Merchant/Business
Evacuations :	0
Num Of Injuries :	0
Num Of Fatalities :	0
Date/Time :	Not reported
Year :	1999
Agency :	San Bernardino Co Health/HazMat
BBLS :	0
Cups :	0
CUFT :	0
Gallons :	0
Grams :	0
Pounds :	20
Liters :	0
Ounces :	0
Pints :	0
Quarts :	0
Sheen :	0
Tons :	0
Unknown :	0
Description :	Small fire in storage room of a chemical manufacturing facility caused sprinklers to go off and burning is creating a chemical cloud of chlorine. Evacuations of surrounding areas has begun. Since it is an industrial area not many people evacuated yet
Incident date :	7/8/1999 12:00:00 AM
Admin Agency :	San Bernardino County Health Department
OES date :	Not reported

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

(Continued)

S105660903

OES time : Not reported
 OES notification : 7/8/199904:30:22 AM
 Amount : Not reported

A6
ENE
 1/4-1/2
 1531 ft.

LESLIES POOL MART
1595 SOUTH DUPONT
ONTARIO, CA 91761

HAZNET **S103974789**
N/A

Site 6 of 6 in cluster A

Relative:
Higher

HAZNET:

Actual:
887 ft.

Gepaid: CAC001498024
 TSD EPA ID: CAT080033681
 Gen County: San Bernardino
 Tsd County: Los Angeles
 Tons: .3000
 Facility Address 2: Not reported
 Waste Category: Other organic solids
 Disposal Method: Disposal, Other
 Contact: LESLIES POOL MART
 Telephone: (818) 701-3880
 Mailing Name: Not reported
 Mailing Address: 1595 SOUTH DUPONT
 ONTARIO, CA 91761
 County San Bernardino

Gepaid: CAC001498024
 TSD EPA ID: CAD044429835
 Gen County: San Bernardino
 Tsd County: Los Angeles
 Tons: .0900
 Facility Address 2: Not reported
 Waste Category: Unspecified organic liquid mixture
 Disposal Method: Disposal, Other
 Contact: LESLIES POOL MART
 Telephone: (818) 701-3880
 Mailing Name: Not reported
 Mailing Address: 1595 SOUTH DUPONT
 ONTARIO, CA 91761
 County San Bernardino

Gepaid: CAC001498024
 TSD EPA ID: CAD008252405
 Gen County: San Bernardino
 Tsd County: Los Angeles
 Tons: .2085
 Facility Address 2: Not reported
 Waste Category: Unspecified organic liquid mixture
 Disposal Method: Recycler
 Contact: LESLIES POOL MART
 Telephone: (818) 701-3880
 Mailing Name: Not reported
 Mailing Address: 1595 SOUTH DUPONT
 ONTARIO, CA 91761
 County San Bernardino

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
 EPA ID Number

LESLIES POOL MART (Continued)

S103974789

Gepaid: CAC001498024
 TSD EPA ID: CAT080033681
 Gen County: San Bernardino
 Tsd County: Los Angeles
 Tons: .3336
 Facility Address 2: Not reported
 Waste Category: Unspecified organic liquid mixture
 Disposal Method: Disposal, Other
 Contact: LESLIES POOL MART
 Telephone: (818) 701-3880
 Mailing Name: Not reported
 Mailing Address: 1595 SOUTH DUPONT
 ONTARIO, CA 91761
 County San Bernardino

**B7
 ENE
 1/4-1/2
 1574 ft.**

**SMALLEY & CO
 1505 DUPONT AVE C
 ONTARIO, CA 91761**

San Bern. Co. Permit

**S104770198
 N/A**

Site 1 of 2 in cluster B

**Relative:
 Higher**

DEHS Permit:
 Facility ID: FA0006217
 Facility Status: ACTIVE
 Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
 Permit Number: PT0006227
 Expiration Date: 11/30/2006
 Region: SAN BERNARDINO

**Actual:
 889 ft.**

**B8
 ENE
 1/4-1/2
 1585 ft.**

**FIBRE GLASS-EVERCOAT CO
 1505 S DUPONT J
 ONTARIO, CA 91762**

San Bern. Co. Permit

**S104766213
 N/A**

Site 2 of 2 in cluster B

**Relative:
 Higher**

DEHS Permit:
 Facility ID: FA0003210
 Facility Status: ACTIVE
 Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
 Permit Number: PT0006676
 Expiration Date: 5/31/2006
 Region: SAN BERNARDINO

**Actual:
 889 ft.**

**9
 NW
 1/4-1/2
 1634 ft.**

**SCE-MILLIKEN SUBSTATION
 1600 COMMERCE PKWY
 ONTARIO, CA 91761**

San Bern. Co. Permit

**S105047541
 N/A**

**Relative:
 Higher**

DEHS Permit:
 Facility ID: FA0000245
 Facility Status: ACTIVE
 Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
 Permit Number: PT0000373
 Expiration Date: 2/28/2006
 Region: SAN BERNARDINO

**Actual:
 884 ft.**

MAP FINDINGS

Map ID			
Direction			
Distance			
Distance (ft.)			EDR ID Number
Elevation	Site	Database(s)	EPA ID Number

C10 NE 1/4-1/2 1988 ft.	MAGESTIC- CCC IV LLC 1500 S DUPONT ST ONTARIO, CA 91761 Site 1 of 2 in cluster C Relative: Higher Actual: 895 ft.	HAZNET	S103975980 N/A
	HAZNET: Gepaid: CAC001171040 TSD EPA ID: CAT080013352 Gen County: San Bernardino Tsd County: Los Angeles Tons: .1251 Facility Address 2: Not reported Waste Category: Waste oil and mixed oil Disposal Method: Recycler Contact: MAGESTIC - CCC IV LLC Telephone: (562) 948-8303 Mailing Name: Not reported Mailing Address: 13191 CROSSROADS NORTH 6TH FLR CITY OF INDUSTRY, CA 91746 County: San Bernardino		

C11 NE 1/4-1/2 1988 ft.	STAPLES 1500 S DUPONT AVE ONTARIO, CA 91761 Site 2 of 2 in cluster C Relative: Higher Actual: 895 ft.	San Bern. Co. Permit	S104905334 N/A
	DEHS Permit: Facility ID: FA0006432 Facility Status: INACTIVE Permit Category: LIMITED QUANTITY GENERATOR(B) Permit Number: PT0000590 Expiration Date: 12/31/2004 Region: SAN BERNARDINO Facility ID: FA0006432 Facility Status: ACTIVE Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES Permit Number: PT0000592 Expiration Date: 12/31/2005 Region: SAN BERNARDINO		

12 SSW 1/4-1/2 2259 ft.	BRIDGESTONE FIRESTONE 4000 E MISSION BLVD ONTARIO, CA 91761 Relative: Lower Actual: 853 ft.	San Bern. Co. Permit	S106112229 N/A
	DEHS Permit: Facility ID: FA0007810 Facility Status: INACTIVE Permit Category: AST OPERATING PERMIT Permit Number: PT0014088 Expiration Date: 12/31/2005 Region: SAN BERNARDINO Facility ID: FA0007810 Facility Status: ACTIVE Permit Category: ABOVEGROUND PETROLEUM STORAGE (AST) (SPCC) Permit Number: PT0014087		

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
 EPA ID Number

BRIDGESTONE FIRESTONE (Continued)

S106112229

Expiration Date: 12/31/2005
 Region: SAN BERNARDINO

Facility ID: FA0007810
 Facility Status: ACTIVE
 Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES (W/GEN PRMT)
 Permit Number: PT0014090
 Expiration Date: 12/31/2005
 Region: SAN BERNARDINO

Facility ID: FA0007810
 Facility Status: ACTIVE
 Permit Category: SPECIAL GENERATOR(B)
 Permit Number: PT0016201
 Expiration Date: 12/31/2005
 Region: SAN BERNARDINO

13
 WSW
 1/4-1/2
 2284 ft.

**3551 EAST FRANCIS
 ONTARIO, CA 90050**

**CHMIRS S10566964
 N/A**

**Relative:
 Lower**

CHMIRS:
 OES Control Number: 00-2803
 Extent of Release: Not reported
 Property Use: Not reported
 Incident Date: Not reported
Date Completed: Not reported
 Time Completed : Not reported
 Agency Id Number : Not reported
 Agency Incident Number : Not reported
 OES Incident Number : 00-2803
 Time Notified : Not reported
 Surrounding Area : Not reported
 Estimated Temperature : Not reported
 Property Management : Not reported
 More Than Two Substances Involved? : Not reported
 Special Studies 1 : Not reported
 Special Studies 2 : Not reported
 Special Studies 3 : Not reported
 Special Studies 4 : Not reported
 Special Studies 5 : Not reported
 Special Studies 6 : Not reported
 Resp Agncy Personel # Of Decontaminated : Not reported
 Others Number Of Decontaminated : Not reported
 Others Number Of Injuries : Not reported
 Others Number Of Fatalities : Not reported
 Vehicle Make/year : Not reported
 Vehicle License Number : Not reported
 Vehicle State : Not reported
 Vehicle Id Number : Not reported
 CA/DOT/PUC/ICC Number : Not reported
 Company Name : Not reported
 Reporting Officer Name/ID : Not reported
 Report Date : Not reported
 Comments : Not reported
 Facility Telephone Number : Not reported
 Waterway Involved : Yes
 Waterway : Storm Drain

**Actual:
 870 ft.**

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
 EPA ID Number

(Continued)

S10566964

Spill Site :	Not reported
Cleanup By :	Contractor
Containment :	Not reported
What Happened :	Not reported
Type :	Not reported
Other :	Not reported
Substance :	Tertachloretheline
Quantity Released :	
E Date :	Not reported
Contained :	No
Site Type :	Road
Evacuations :	0
Num Of Injuries :	0
Num Of Fatalities :	0
Date/Time :	Not reported
Year :	2000
Agency :	Ontario FD
BBLS :	0
Cups :	0
CUFT :	0
Gallons :	250
Grams :	0
Pounds :	0
Liters :	0
Ounces :	0
Pints :	0
Quarts :	0
Sheen :	0
Tons :	0
Unknown :	0
Description :	Illegal Dump
Incident date :	6/23/200012:00:00 AM
Admin Agency :	Not reported
OES date :	Not reported
OES time :	Not reported
OES notification :	6/23/200010:49:55 AM
Amount :	Not reported

D14
South
1/4-1/2
2335 ft.

SKECHERS USA, INC
4100 E MISSION AVE
ONTARIO, CA 91761

HAZNET **S105790454**
San Bern. Co. Permit **N/A**

Site 1 of 2 in cluster D

Relative:
Lower

HAZNET:
 Gepaid: CAL000265145
 TSD EPA ID: CAT080013352
 Gen County: San Bernardino
 Tsd County: San Bernardino
 Tons: 0.04
 Facility Address 2: Not reported
 Waste Category: Waste oil and mixed oil
 Disposal Method: Recycler
 Contact: MICKEY GRIFFIN EXT 2671
 Telephone: (909) 390-1600
 Mailing Name: Not reported
 Mailing Address: 1777 S VINTAGE AVE
 ONTARIO, CA 91761
 County San Bernardino

Actual:
851 ft.

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
 EPA ID Number

SKECHERS USA, INC (Continued)

S105790454

DEHS Permit:
 Facility ID: FA0007654
 Facility Status: ACTIVE
 Permit Category: SPECIAL GENERATOR(B)
 Permit Number: PT0013163
 Expiration Date: 2/28/2006
 Region: SAN BERNARDINO

Facility ID: FA0007654
 Facility Status: ACTIVE
 Permit Category: SPECIAL HANDLER
 Permit Number: PT0013164
 Expiration Date: 2/28/2005
 Region: SAN BERNARDINO

D15
South
1/4-1/2
2335 ft.

ETOYS DISTRIBUTION, LLC
4100 E MISSION BLVD
ONTARIO, CA 91761

San Bern. Co. Permit

S106910815
N/A

Site 2 of 2 in cluster D

Relative:
Lower

DEHS Permit:
 Facility ID: FA0002944
 Facility Status: INACTIVE
 Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
 Permit Number: PT0000231
 Expiration Date: 12/31/2001
 Region: SAN BERNARDINO

Actual:
851 ft.

E16
ENE
1/4-1/2
2411 ft.

BEDFORD PROPERTY INVESTORS INC
1505-1555 DUPONT AVE
ONTARIO, CA 91761

HAZNET

S107139761
N/A

Site 1 of 6 in cluster E

Relative:
Higher

HAZNET:
 Gepaid: CAC002561226
 TSD EPA ID: CAD980884183
 Gen County: San Bernardino
 Tsd County: San Bernardino
 Tons: 0.09
 Facility Address 2: Not reported
 Waste Category: Unspecified solvent mixture Waste
 Disposal Method: Disposal, Other
 Contact: MATT POWERS
 Telephone: (714) 544-7144
 Mailing Name: Not reported
 Mailing Address: 3002 DOW AVE STE 220
 TUSTIN, CA 92780
 County: San Bernardino

Actual:
895 ft.

MAP FINDINGS

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

Site

Database(s)

EDR ID Number
 EPA ID Number

E17
ENE
1/4-1/2
2411 ft.

1505 S. DUPONT AVE
ONTARIO, CA

CHMIRS **S105663432**
N/A

Site 2 of 6 in cluster E

Relative:
Higher

CHMIRS:

Actual:
895 ft.

OES Control Number:	99-0222
Extent of Release:	Not reported
Property Use:	Not reported
Incident Date:	Not reported
Date Completed: Not reported	
Time Completed :	Not reported
Agency Id Number :	Not reported
Agency Incident Number :	Not reported
OES Incident Number :	99-0222
Time Notified :	Not reported
Surrounding Area :	Not reported
Estimated Temperature :	Not reported
Property Management :	Not reported
More Than Two Substances Involved? :	Not reported
Special Studies 1 :	Not reported
Special Studies 2 :	Not reported
Special Studies 3 :	Not reported
Special Studies 4 :	Not reported
Special Studies 5 :	Not reported
Special Studies 6 :	Not reported
Resp Agency Personel # Of Decontaminated :	Not reported
Others Number Of Decontaminated :	Not reported
Others Number Of Injuries :	Not reported
Others Number Of Fatalities :	Not reported
Vehicle Make/year :	Not reported
Vehicle License Number :	Not reported
Vehicle State :	Not reported
Vehicle Id Number :	Not reported
CA/DOT/PUC/ICC Number :	Not reported
Company Name :	Not reported
Reporting Officer Name/ID :	Not reported
Report Date :	Not reported
Comments :	Not reported
Facility Telephone Number :	Not reported
Waterway Involved :	No
Waterway :	Not reported
Spill Site :	Not reported
Cleanup By :	Unknown
Containment :	Not reported
What Happened :	Not reported
Type :	Not reported
Other :	Not reported
Substance :	Resin
Quantity Released :	
E Date :	Not reported
Contained :	Yes
Site Type :	Industrial Plant
Evacuations :	0
Num Of Injuries :	0
Num Of Fatalities :	0
Date/Time :	Not reported
Year :	1999

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
 EPA ID Number

(Continued) S105663432

Agency :	Ontario Fire
BBLS :	0
Cups :	0
CUFT :	0
Gallons :	3
Grams :	0
Pounds :	0
Liters :	0
Ounces :	0
Pints :	0
Quarts :	0
Sheen :	0
Tons :	0
Unknown :	0
Description :	Abandoned unmarked 55 gallon drum of which 3 gallons spilled to the asphalt. Drum was at the rear of an industrial manufacturing plant. No further details are available at this time.
Incident date :	1/15/1999 12:00:00 AM
Admin Agency :	San Bernardino County Health Department
OES date :	Not reported
OES time :	Not reported
OES notification :	1/16/1999 11:25:28 AM
Amount :	Not reported

E18	BEDFORD PROPERTY INVESTORS, INC	HAZNET	S103952203
ENE	1555 DUPONT AVE		N/A
1/4-1/2	ONTARIO, CA 91761		
2411 ft.			

Relative:	Site 3 of 6 in cluster E		
Higher	HAZNET:		
	Gepaid:	CAC001144824	
Actual:	TSD EPA ID:	CAD050806850	
895 ft.	Gen County:	San Bernardino	
	Tsd County:	Los Angeles	
	Tons:	.0750	
	Facility Address 2:	Not reported	
	Waste Category:	Other organic solids	
	Disposal Method:	Transfer Station	
	Contact:	BEDFORD PROPERTY INVESTORS INC	
	Telephone:	(000) 000-0000	
	Mailing Name:	Not reported	
	Mailing Address:	270 LAFAYETTE CIRCLE	
		LAFAYETTE, CA 94549	
	County	San Bernardino	
	Gepaid:	CAC001144824	
	TSD EPA ID:	CAT080013352	
	Gen County:	San Bernardino	
	Tsd County:	Los Angeles	
	Tons:	.1668	
	Facility Address 2:	Not reported	
	Waste Category:	Unspecified oil-containing waste	
	Disposal Method:	Recycler	
	Contact:	BEDFORD PROPERTY INVESTORS INC	
	Telephone:	(000) 000-0000	
	Mailing Name:	Not reported	
	Mailing Address:	270 LAFAYETTE CIRCLE	
		LAFAYETTE, CA 94549	

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

MAP FINDINGS

BEDFORD PROPERTY INVESTORS, INC (Continued)

EDR ID Number
 EPA ID Number

Database(s)

County San Bernardino

S103952203

E19 **LESLIE'S SWIMMING POOL SUPPLIES CA**
ENE **1595 S DUPONT AVE STE A**
1/4-1/2 **ONTARIO, CA 91761**
2411 ft.

San Bern. Co. Permit **S106803210**
N/A

Site 4 of 6 in cluster E

Relative:
Higher

DEHS Permit:
 Facility ID: FA0004419
 Facility Status: ACTIVE
 Permit Category: EPCRA FACILITY
 Permit Number: PT0013977
 Expiration Date: 5/31/2006
 Region: SAN BERNARDINO

Actual:
895 ft.

Facility ID: FA0004419
 Facility Status: ACTIVE
 Permit Category: HAZMAT HANDLER- 51-99 EMPLOYEES
 Permit Number: PT0007386
 Expiration Date: 5/31/2006
 Region: SAN BERNARDINO

E20 **FLUORO-SEAL, INC.**
ENE **1555 DUPONT AVE C**
1/4-1/2 **ONTARIO, CA 91761**
2411 ft.

San Bern. Co. Permit **S106910860**
N/A

Site 5 of 6 in cluster E

Relative:
Higher

DEHS Permit:
 Facility ID: FA0003247
 Facility Status: INACTIVE
 Permit Category: GENERATOR - 0-10 EMPLOYEES
 Permit Number: PT0007070
 Expiration Date: 8/31/2002
 Region: SAN BERNARDINO

Actual:
895 ft.

Facility ID: FA0003247
 Facility Status: INACTIVE
 Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES (W/GEN PRMT)
 Permit Number: PT0007069
 Expiration Date: 8/31/2002
 Region: SAN BERNARDINO

E21 **REFRIGERANT RECOVERY CORP/AMER**
ENE **1505 DUPONT AVENUE**
1/4-1/2 **ONTARIO, CA 91761**
2411 ft.

HAZNET **S103984009**
N/A

Site 6 of 6 in cluster E

Relative:
Higher

Actual:
895 ft.

Map ID
Direction
Distance
Distance (ft.)
Elevation

MAP FINDINGS

Database(s)
EDR ID Number
EPA ID Number

REFRIGERANT RECOVERY CORP/AMER (Continued)

S103984009

HAZNET:

Gepaid: CAL922444768
TSD EPA ID: CAT080011059
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: .9174
Facility Address 2: Not reported
Waste Category: Waste oil and mixed oil
Disposal Method: Recycler
Contact: DEANSBANK ONTARIO PARTNERS
Telephone: (714) 944-4111
Mailing Name: Not reported
Mailing Address: 783 OLD HICKORY BLVD STE 251W
BRENTWOOD, TN 37027

County San Bernardino

Gepaid: CAL922444768
TSD EPA ID: CAD050806850
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: 2.9000
Facility Address 2: Not reported
Waste Category: Waste oil and mixed oil
Disposal Method: Recycler
Contact: DEANSBANK ONTARIO PARTNERS
Telephone: (714) 944-4111
Mailing Name: Not reported
Mailing Address: 783 OLD HICKORY BLVD STE 251W
BRENTWOOD, TN 37027

County San Bernardino

Gepaid: CAL922444768
TSD EPA ID: CAD050806850
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: .9000
Facility Address 2: Not reported
Waste Category: Other inorganic solid waste
Disposal Method: Transfer Station
Contact: DEANSBANK ONTARIO PARTNERS
Telephone: (714) 944-4111
Mailing Name: Not reported
Mailing Address: 783 OLD HICKORY BLVD STE 251W
BRENTWOOD, TN 37027

County San Bernardino

Gepaid: CAL922444768
TSD EPA ID: CAD050806850
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: 3.7500
Facility Address 2: Not reported
Waste Category: Waste oil and mixed oil
Disposal Method: Recycler
Contact: DEANSBANK ONTARIO PARTNERS
Telephone: (714) 944-4111
Mailing Name: Not reported
Mailing Address: 783 OLD HICKORY BLVD STE 251W

MAP FINDINGS

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

Site

Database(s)

EDR ID Number
 EPA ID Number

REFRIGERANT RECOVERY CORP/AMER (Continued)

S103984009

BRENTWOOD, TN 37027
 County San Bernardino

22
West
1/4-1/2
2491 ft.

DAWN FOOD PRODUCTS, INC
3505 E FRANCIS ST
ONTARIO, CA 91761

San Bern. Co. Permit

S106911456
N/A

Relative:
Equal

DEHS Permit:
 Facility ID: FA0009835
 Facility Status: ACTIVE
 Permit Category: HAZMAT HANDLER 11-25 EMPLOYEES
 Permit Number: PT0016762
 Expiration Date: 5/31/2006
 Region: SAN BERNARDINO

Actual:
875 ft.

Facility ID: FA0009835
 Facility Status: ACTIVE
 Permit Category: EPCRA FACILITY
 Permit Number: PT0016761
 Expiration Date: 5/31/2006
 Region: SAN BERNARDINO

F23
East
1/2-1
2779 ft.

W & T AUTO WRECKING INC.
2025 S MILLIKEN B
ONTARIO, CA 91761

San Bern. Co. Permit

S104772104
N/A

Site 1 of 3 in cluster F

Relative:
Higher

DEHS Permit:
 Facility ID: FA0007174
 Facility Status: ACTIVE
 Permit Category: SPECIAL HANDLER
 Permit Number: PT0003704
 Expiration Date: 4/30/2006
 Region: SAN BERNARDINO

Actual:
881 ft.

Facility ID: FA0007174
 Facility Status: ACTIVE
 Permit Category: SPECIAL GENERATOR(B)
 Permit Number: PT0003691
 Expiration Date: 4/30/2006
 Region: SAN BERNARDINO

F24
East
1/2-1
2780 ft.

PICK-A-PART AUTO DISMANTLING
2025A S MILLEKEN AVE
ONTARIO, CA 91761

HAZNET

S104574456
N/A

Site 2 of 3 in cluster F

Relative:
Higher

Actual:
879 ft.

Map ID
Direction
Distance
Distance (ft.)
Elevation

MAP FINDINGS

Database(s)
EPA ID Number

EDR ID Number
EPA ID Number

PICK-A-PART AUTO DISMANTLING (Continued)

S104574456

HAZNET:

Gepaid: CAD981689995
TSD EPA ID: CAD981696420
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: 23.3520
Facility Address 2: Not reported
Waste Category: Oil/water separation sludge
Disposal Method: Transfer Station
Contact: THUTTON P MCELROY
Telephone: (909) 390-5270
Mailing Name: Not reported
Mailing Address: 2025A S MILLIKEN AVE
ONTARIO, CA 91761 - 2304
County San Bernardino

Gepaid: CAD981689995
TSD EPA ID: CAT080025711
Gen County: San Bernardino
Tsd County: San Bernardino
Tons: .5212
Facility Address 2: Not reported
Waste Category: Aqueous solution with less than 10% total organic residues
Disposal Method: Recycler
Contact: THUTTON P MCELROY
Telephone: (909) 390-5270
Mailing Name: Not reported
Mailing Address: 2025A S MILLIKEN AVE
ONTARIO, CA 91761 - 2304
County San Bernardino

Gepaid: CAD981689995
TSD EPA ID: CAT080025711
Gen County: San Bernardino
Tsd County: San Bernardino
Tons: 4.1700
Facility Address 2: Not reported
Waste Category: Waste oil and mixed oil
Disposal Method: Not reported
Contact: THUTTON P MCELROY
Telephone: (909) 390-5270
Mailing Name: Not reported
Mailing Address: 2025A S MILLIKEN AVE
ONTARIO, CA 91761 - 2304
County San Bernardino

Gepaid: CAD981689995
TSD EPA ID: CAT080025711
Gen County: San Bernardino
Tsd County: San Bernardino
Tons: 7.1307
Facility Address 2: Not reported
Waste Category: Waste oil and mixed oil
Disposal Method: Recycler
Contact: THUTTON P MCELROY
Telephone: (909) 390-5270
Mailing Name: Not reported
Mailing Address: 2025A S MILLIKEN AVE

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

MAP FINDINGS

PICK-A-PART AUTO DISMANTLING (Continued)

EDR ID Number
 EPA ID Number

Database(s)

S104574456

ONTARIO, CA 91761 - 2304
 County San Bernardino
 Gepaid: CAD981689995
 TSD EPA ID: CAT000613927
 Gen County: San Bernardino
 Tsd County: San Bernardino
 Tons: 0.2668
 Facility Address 2: Not reported
 Waste Category: Aqueous solution with less than 10% total organic residues
 Disposal Method: Transfer Station
 Contact: THUTTON P MCELROY
 Telephone: (909) 390-5270
 Mailing Name: Not reported
 Mailing Address: 2025A S MILLIKEN AVE
 ONTARIO, CA 91761 - 2304
 County San Bernardino

[Click this hyperlink](#) while viewing on your computer to access 14 additional CA HAZNET record(s) in the EDR Site Report.

F25
East
1/2-1
2850 ft.

STYLES ANIMAL REMOVAL INC
2107 MILLKEN AVE
ONTARIO, CA 91761

HAZNET S103989701
N/A

Site 3 of 3 in cluster F

Relative:
Higher

HAZNET:
 Gepaid: CAC001142544
 TSD EPA ID: CAD028409019
 Gen County: San Bernardino
 Tsd County: Los Angeles
 Tons: .3753
 Facility Address 2: Not reported
 Waste Category: Aqueous solution with less than 10% total organic residues
 Disposal Method: Treatment, Tank
 Contact: STYLES ANIMAL REMOVAL INC
 Telephone: (000) 000-0000
 Mailing Name: Not reported
 Mailing Address: 2107 MILLKEN AVE
 ONTARIO, CA 91761
 County San Bernardino

Actual:
879 ft.

G26
ENE
1/2-1
2894 ft.

NORDSTROM'S DIST CENTER
1600 S MILLIKEN AVE
ONTARIO, CA 91761

UST U003971310
San Bern. Co. Permit N/A

Site 1 of 6 in cluster G

Relative:
Higher

DEHS Permit:
 Facility ID: FA0004990
 Facility Status: ACTIVE
 Permit Category: SPECIAL GENERATOR(B)
 Permit Number: PT0006367
 Expiration Date: 7/31/2006
 Region: SAN BERNARDINO

 Facility ID: FA0004990
 Facility Status: ACTIVE

Actual:
890 ft.

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

NORDSTROM'S DIST CENTER (Continued)

U003971310

Permit Category: SPECIAL HANDLER
Permit Number: PT0006366
Expiration Date: 7/31/2006
Region: SAN BERNARDINO

State UST:
Facility ID: 92028771
Total Tanks: Not reported
Region: STATE
Local Agency: 36000L

**G27
ENE
1/2-1
2894 ft.**

**NORDSTROM DISTRIBUTION CENTER
1600 SOUTH MILLIKEN AVE
ONTARIO, CA 91761**

**HAZNET S104565546
N/A**

Site 2 of 6 in cluster G

**Relative:
Higher**

HAZNET:
Gepaid: CAC001135504
TSD EPA ID: CAT080013352
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: .3336
Facility Address 2: Not reported
Waste Category: Unspecified oil-containing waste
Disposal Method: Recycler
Contact: NORDSTROMS
Telephone: (000) 000-0000
Mailing Name: Not reported
Mailing Address: 1600 SOUTH MILLIKEN AVE
ONTARIO, CA 91761

**Actual:
890 ft.**

County San Bernardino

Gepaid: CAC001135504
TSD EPA ID: CAT080022148
Gen County: San Bernardino
Tsd County: San Bernardino
Tons: .0150
Facility Address 2: Not reported
Waste Category: Alkaline solution without metals (pH > 12.5)
Disposal Method: Transfer Station
Contact: NORDSTROMS
Telephone: (000) 000-0000
Mailing Name: Not reported
Mailing Address: 1600 SOUTH MILLIKEN AVE
ONTARIO, CA 91761

County San Bernardino

**G28
ENE
1/2-1
2894 ft.**

**NORDSTROM DISTRIBUTION CENTER
1600 SO MILLIKEN AVE
ONTARIO, CA 91761**

**HAZNET S105723207
N/A**

Site 3 of 6 in cluster G

**Relative:
Higher**

**Actual:
890 ft.**

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

NORDSTROM DISTRIBUTION CENTER (Continued)

S105723207

HAZNET:
Gepaid: CAL000143766
TSD EPA ID: Not reported
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: 1.87
Facility Address 2: Not reported
Waste Category: Waste oil and mixed oil
Disposal Method: Recycler
Contact: DARREN DAVALT
Telephone: (800) 688-3756
Mailing Name: Not reported
Mailing Address: 1600 S MILLIKEN AVE
ONTARIO, CA 91761 - 2301
County: Not reported
Gepaid: CAL000143766
TSD EPA ID: Not reported
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: 6.85
Facility Address 2: Not reported
Waste Category: Off-specification, aged, or surplus organics
Disposal Method: Disposal, Land Fill
Contact: DARREN DAVALT
Telephone: (800) 688-3756
Mailing Name: Not reported
Mailing Address: 1600 S MILLIKEN AVE
ONTARIO, CA 91761 - 2301
County: Not reported
Gepaid: CAL000143766
TSD EPA ID: Not reported
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: 0.06
Facility Address 2: Not reported
Waste Category: Off-specification, aged, or surplus organics
Disposal Method: Transfer Station
Contact: DARREN DAVALT
Telephone: (800) 688-3756
Mailing Name: Not reported
Mailing Address: 1600 S MILLIKEN AVE
ONTARIO, CA 91761 - 2301
County: Not reported
Gepaid: CAL000143766
TSD EPA ID: Not reported
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: 2.08
Facility Address 2: Not reported
Waste Category: Off-specification, aged, or surplus organics
Disposal Method: Recycler
Contact: DARREN DAVALT
Telephone: (800) 688-3756
Mailing Name: Not reported
Mailing Address: 1600 S MILLIKEN AVE

MAP FINDINGS

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

Site

Database(s)

EDR ID Number
 EPA ID Number

NORDSTROM DISTRIBUTION CENTER (Continued)

S105723207

ONTARIO, CA 91761 - 2301

County Not reported

G29
ENE
 1/2-1
 2910 ft.

SOURCEONE HEALTHCARE TECHNOLOGIES INC
1590 MILLIKEN AVENUE
ONTARIO, CA 91761

RCRA-SQG

1007989018
CAR000159244

Site 4 of 6 in cluster G

Relative:
Higher

RCRAInfo:
 Owner: AIRPORT DISTRIBUTION PARTNERS
 EPA ID: CAR000159244
 Contact: JOHN NADZAN
 440-701-1269

Actual:
891 ft.

Classification: Small Quantity Generator
 TSDF Activities: Not reported
 Violation Status: No violations found

G30
ENE
 1/2-1
 2910 ft.

SOURCEONE HEALTHCARE TECHNOLOGIES INC
1590 MILLIKEN AVENUE
ONTARIO, CA 91761

FINDS

1007998173
110020741107

Site 5 of 6 in cluster G

Relative:
Higher

FINDS:
 Other Pertinent Environmental Activity Identified at Site:
 RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM

Actual:
891 ft.

G31
ENE
 1/2-1
 2910 ft.

DPI WEST FLEET MAINTENANCE SHOP
1590 MILLIKEN AVE #G
ONTARIO, CA 91761

San Bern. Co. Permit

S106230141
N/A

Site 6 of 6 in cluster G

Relative:
Higher

DEHS Permit:
 Facility ID: FA0008336
 Facility Status: INACTIVE
 Permit Category: SPECIAL GENERATOR(B)
 Permit Number: PT0014575
 Expiration Date: 5/31/2005
 Region: SAN BERNARDINO

Actual:
891 ft.

Facility ID: FA0008336
 Facility Status: INACTIVE
 Permit Category: SPECIAL HANDLER
 Permit Number: PT0014574
 Expiration Date: 5/31/2005
 Region: SAN BERNARDINO

MAP FINDINGS

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

Site

Database(s)

EDR ID Number
 EPA ID Number

32
ESE
1/2-1
2980 ft.

DONG JIN AMERICA INC
1905 S MILLIKEN AVE
ONTARIO, CA 91761

CA WDS **S106800901**
N/A

Relative:
Lower

WDS:

Actual:
871 ft.

Facility ID: Santa Ana River 36I019161
 Facility Contact: Tae Sang You Facility Telephone: (909) 605-2909
 SIC Code: 2821 SIC Code 2: Not reported
 Agency Name: DONG JIN AMERICA INC
 Agency Address: 1905 S Milliken Ave
 Ontario 91761
 Agency Contact: Tae Sang You Agency Phone: (909) 605-2909
 Design Flow: Not reported Baseline Flow: Not reported
 Facility Type: Industrial - Facility that treats and/or disposes of liquid or semisolid wastes from any servicing, producing, manufacturing or processing operation of whatever nature, including mining, gravel washing, geothermal operations, air conditioning, ship building and repairing, oil production, storage and disposal operations, water pumping.
 Facility Status: Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.
 Agency Type: Private
 Waste Type: Not reported
 Threat to Water: Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality.
 Complexity: Category C - Facilities having no waste treatment systems, such as cooling water dischargers or those who must comply through best management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as dairy waste ponds.
 Reclamation: Not reported
 POTW: Not reported
 NPDES Number: CAS000001 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board
 Subregion: 8

33
NW
1/2-1
2999 ft.

DAL-TILE ONTARIO REGIONAL DIST CTR
3625 E JURUPA ST
ONTARIO, CA 91761

San Bern. Co. Permit **S104768705**
N/A

Relative:
Higher

DEHS Permit:

Actual:
899 ft.

Facility ID: FA0005105
 Facility Status: ACTIVE
 Permit Category: HAZMAT HANDLER- 100+ EMPLOYEES
 Permit Number: PT0000709
 Expiration Date: 10/31/2006
 Region: SAN BERNARDINO

MAP FINDINGS

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

Site

Database(s)

EDR ID Number
 EPA ID Number

H34
NNE
1/2-1
3174 ft.

TECH PACKAGING INC
1351 DOUBLEDAY AVE
ONTARIO, CA 91761

HAZNET

S107143265
N/A

Site 1 of 3 in cluster H

Relative:
Higher

HAZNET:

Actual:
911 ft.

Gepaid: CAC002570164
 TSD EPA ID: CAT080033681
 Gen County: San Bernardino
 Tsd County: San Bernardino
 Tons: 0.22
 Facility Address 2: Not reported
 Waste Category: Off-specification, aged, or surplus organics
 Disposal Method: Recycler
 Contact: TRACY BROWN/OFF MGR
 Telephone: (909) 937-9009
 Mailing Name: Not reported
 Mailing Address: 1351 DOUBLEDAY AVE
 ONTARIO, CA 91761
 County: San Bernardino

H35
NNE
1/2-1
3174 ft.

WHITMIRE DISTRIBUTION
1351 DOUBLEDAY
ONTARIO, CA 91761

San Bern. Co. Permit

S106911189
N/A

Site 2 of 3 in cluster H

Relative:
Higher

DEHS Permit:

Actual:
911 ft.

Facility ID: FA0007296
 Facility Status: INACTIVE
 Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
 Permit Number: PT0007956
 Expiration Date: 5/31/2003
 Region: SAN BERNARDINO

36
ENE
1/2-1
3220 ft.

GRAINGER INDUSTRIAL SUPPLY
1500 S MILLIKEN #A
ONTARIO, CA 91764

San Bern. Co. Permit

S106230139
N/A

Relative:
Higher

DEHS Permit:

Actual:
900 ft.

Facility ID: FA0008330
 Facility Status: ACTIVE
 Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
 Permit Number: PT0014562
 Expiration Date: 5/31/2006
 Region: SAN BERNARDINO

37
SSE
1/2-1
3260 ft.

DIAMOND WIPES INTERNATIONAL INC
4200 E MISSION BLVD
ONTARIO, CA 91761

FINDS

1008900333
110023747560

Relative:
Lower

Actual:
852 ft.

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

MAP FINDINGS

DIAMOND WIPES INTERNATIONAL INC (Continued)

EDR ID Number
 EPA ID Number

1008900333

FINDS:

Other Pertinent Environmental Activity Identified at Site:
 NEW JERSEY-NEW JERSEY ENVIRONMENTAL MANAGEMENT SYSTEM

**H38
 NNE
 1/2-1
 3271 ft.**

**INLAND PLASTICS INC
 1455 S DOUBLEDAY AVE
 ONTARIO, CA 91761**

**San Bern. Co. Permit S104767150
 N/A**

Site 3 of 3 in cluster H

**Relative:
 Higher**

DEHS Permit:

Facility ID: FA0003969
 Facility Status: PENDING
 Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
 Permit Number: PT0009774
 Expiration Date: 11/30/2005
 Region: SAN BERNARDINO

**Actual:
 911 ft.**

Facility ID: FA0003969
 Facility Status: PENDING
 Permit Category: SPECIAL GENERATOR(B)
 Permit Number: PT0009773
 Expiration Date: 11/30/2005
 Region: SAN BERNARDINO

**I39
 West
 1/2-1
 3290 ft.**

**3371 E FRANCIS AVE
 ONTARIO, CA**

**HMIRS 20018046
 N/A**

Site 1 of 5 in cluster I

**Relative:
 Lower**

[Click this hyperlink](#) while viewing on your computer to access additional HMIRS detail in the EDR Site Report.

**Actual:
 868 ft.**

**I40
 West
 1/2-1
 3290 ft.**

**FEDERAL EXPRESS INC
 3371 E FRANCIS
 ONTARIO, CA 91761**

**HAZNET S104580483
 N/A**

Site 2 of 5 in cluster I

**Relative:
 Lower**

HAZNET:

Gepaid: CAL000172510
 TSD EPA ID: CAT000613927
 Gen County: San Bernardino
 Tsd County: San Bernardino
 Tons: 0.009
 Facility Address 2: Not reported
 Waste Category: Aqueous solution with less than 10% total organic residues
 Disposal Method: Not reported
 Contact: FEDERAL EXPRESS INC
 Telephone: (510) 347-2400
 Mailing Name: Not reported
 Mailing Address: 1980 NONCONNAH BLVD
 MEMPHIS, TN 38132
 County: San Bernardino

**Actual:
 868 ft.**

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

FEDERAL EXPRESS INC (Continued)

S104580483

Gepaid: CAL000172510
TSD EPA ID: CAT000613927
Gen County: San Bernardino
Tsd County: San Bernardino
Tons: 0.421
Facility Address 2: Not reported
Waste Category: Aqueous solution with less than 10% total organic residues
Disposal Method: Transfer Station
Contact: FEDERAL EXPRESS INC
Telephone: (510) 347-2400
Mailing Name: Not reported
Mailing Address: 1980 NONCONNAH BLVD
MEMPHIS, TN 38132
County San Bernardino

Gepaid: CAL000172510
TSD EPA ID: Not reported
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: 0.10
Facility Address 2: Not reported
Waste Category: Off-specification, aged, or surplus organics
Disposal Method: Transfer Station
Contact: BARBARA HODICK
Telephone: (901) 434-8460
Mailing Name: Not reported
Mailing Address: 3620 HACKS CROSS RD BLDG B 2ND FL
MEMPHIS, TN 38125 - 7113
County Not reported

Gepaid: CAL000172510
TSD EPA ID: Not reported
Gen County: San Bernardino
Tsd County: San Bernardino
Tons: 0.39
Facility Address 2: Not reported
Waste Category: Aqueous solution with less than 10% total organic residues
Disposal Method: Transfer Station
Contact: BARBARA HODICK
Telephone: (901) 434-8460
Mailing Name: Not reported
Mailing Address: 3620 HACKS CROSS RD BLDG B 2ND FL
MEMPHIS, TN 38125 - 7113
County Not reported

Gepaid: CAL000172510
TSD EPA ID: Not reported
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: 5.00
Facility Address 2: Not reported
Waste Category: Oil/water separation sludge
Disposal Method: Recycler
Contact: BARBARA HODICK
Telephone: (901) 434-8460
Mailing Name: Not reported
Mailing Address: 3620 HACKS CROSS RD BLDG B 2ND FL
MEMPHIS, TN 38125 - 7113

MAP FINDINGS

Map ID							
Direction							
Distance							
Distance (ft.)							EDR ID Number
Elevation	Site				Database(s)		EPA ID Number

FEDERAL EXPRESS INC (Continued)

S104580483

County Not reported

[Click this hyperlink](#) while viewing on your computer to access 13 additional CA HAZNET record(s) in the EDR Site Report.

I41 West 1/2-1 3290 ft.	3371 FRANCIS ST ONTARIO, CA Site 3 of 5 in cluster I	HMIRS	2005010261 N/A
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Relative: Lower [Click this hyperlink](#) while viewing on your computer to access additional HMIRS detail in the EDR Site Report.

Actual: 868 ft.

I42 West 1/2-1 3290 ft.	FED EX EXPRESS 3371 E FRANCIS ST ONTARIO, CA 91761 Site 4 of 5 in cluster I	San Bern. Co. Permit	S106446667 N/A
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Relative: Lower

DEHS Permit:

Facility ID:	FA0008415
Facility Status:	ACTIVE
Permit Category:	SPECIAL HANDLER
Permit Number:	PT0014691
Expiration Date:	5/31/2006
Region:	SAN BERNARDINO

Facility ID:	FA0008415
Facility Status:	ACTIVE
Permit Category:	SPECIAL GENERATOR(B)
Permit Number:	PT0014690
Expiration Date:	5/31/2006
Region:	SAN BERNARDINO

I43 West 1/2-1 3290 ft.	3371 E FRANCIS ONTARIO, CA Site 5 of 5 in cluster I	HMIRS	2000080813 N/A
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Relative: Lower [Click this hyperlink](#) while viewing on your computer to access additional HMIRS detail in the EDR Site Report.

Actual: 868 ft.

44 WNW 1/2-1 3318 ft.	KEYSTONE ENGINEER 1600 EXCISE AVE ONTARIO, CA 91761	HAZNET San Bern. Co. Permit CA WDS	S105725861 N/A
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Relative: Lower

Actual: 872 ft.

Map ID
Direction
Distance
Distance (ft.)
Elevation

MAP FINDINGS

Database(s)
EDR ID Number
EPA ID Number

KEYSTONE ENGINEER (Continued)

S105725861

HAZNET:

Gepaid: CAL000229832
TSD EPA ID: Not reported
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: 2.29
Facility Address 2: Not reported
Waste Category: Waste oil and mixed oil
Disposal Method: Recycler
Contact: JOME NAVARAT - EH&S COORD
Telephone: (213) 763-6687
Mailing Name: Not reported
Mailing Address: 1444 SO SAN PEDRO ST
LOS ANGELES, CA 90015
County: Not reported

Gepaid: CAL000229832
TSD EPA ID: Not reported
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: 4.17
Facility Address 2: Not reported
Waste Category: Unspecified aqueous solution
Disposal Method: Recycler
Contact: JOME NAVARAT - EH&S COORD
Telephone: (213) 763-6687
Mailing Name: Not reported
Mailing Address: 1444 SO SAN PEDRO ST
LOS ANGELES, CA 90015
County: Not reported

Gepaid: CAL000229832
TSD EPA ID: Not reported
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: 0.25
Facility Address 2: Not reported
Waste Category: Other organic solids
Disposal Method: Disposal, Land Fill
Contact: JOME NAVARAT - EH&S COORD
Telephone: (213) 763-6687
Mailing Name: Not reported
Mailing Address: 1444 SO SAN PEDRO ST
LOS ANGELES, CA 90015
County: Not reported

Gepaid: CAL000229832
TSD EPA ID: Not reported
Gen County: San Bernardino
Tsd County: 99
Tons: 0.20
Facility Address 2: Not reported
Waste Category: Unspecified oil-containing waste
Disposal Method: Treatment, Incineration
Contact: JOME NAVARAT - EH&S COORD
Telephone: (213) 763-6687
Mailing Name: Not reported
Mailing Address: 1444 SO SAN PEDRO ST

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

KEYSTONE ENGINEER (Continued)

S105725861

County LOS ANGELES, CA 90015
Not reported
Gepaid: CAL000229832
TSD EPA ID: CAT080013352
Gen County: San Bernardino
Tsd County: San Bernardino
Tons: 9.27
Facility Address 2: Not reported
Waste Category: Waste oil and mixed oil
Disposal Method: Recycler
Contact: JOME NAVARAT - EH&S COORD
Telephone: (562) 497-3272
Mailing Name: Not reported
Mailing Address: 4401 DONALD DOUGLAS DR
LONG BEACH, CA 90808
County San Bernardino

[Click this hyperlink](#) while viewing on your computer to access 3 additional CA HAZNET record(s) in the EDR Site Report.

WDS:

Facility ID: Santa Ana River 361017694
Facility Contact NAVARAT, JOME Facility Telephone (909) 937-9753
SIC Code: Not reported SIC Code 2: Not reported
Agency Name: KEYSTONE ENGINEER
Agency Address: 1444 S San Pedro St
Los Angeles 90015 - 3183
Agency Contact: NAVARAT, JOME Agency Phone: (213) 749-5471
Design Flow: Not reported Baseline Flow: Not reported
Facility Type: Industrial - Facility that treats and/or disposes of liquid or semisolid wastes from any servicing, producing, manufacturing or processing operation of whatever nature, including mining, gravel washing, geothermal operations, air conditioning, ship building and repairing, oil production, storage and disposal operations, water pumping.
Facility Status: Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.
Agency Type: Private
Waste Type: Not reported
Threat to Water: Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality.
Complexity: Category C - Facilities having no waste treatment systems, such as cooling water dischargers or those who must comply through best management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as dairy waste ponds.
Reclamation: Not reported
POTW: Not reported
NPDES Number: CAS000001 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board
Subregion: 8

DEHS Permit:

Facility ID: FA0008278
Facility Status: ACTIVE
Permit Category: SPECIAL GENERATOR(B)
Permit Number: PT0014478

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
 EPA ID Number

KEYSTONE ENGINEER (Continued)

S105725861

Expiration Date: 4/30/2006
 Region: SAN BERNARDINO

 Facility ID: FA0008278
 Facility Status: ACTIVE
 Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
 Permit Number: PT0014477
 Expiration Date: 4/30/2006
 Region: SAN BERNARDINO

**J45
 NE
 1/2-1
 3391 ft.**

**SAINT GOBAIN ABRASIVES
 3790 E JURUPA ST
 ONTARIO, CA 91761**

**San Bern. Co. Permit S105047761
 N/A**

Site 1 of 2 in cluster J

**Relative:
 Higher**

DEHS Permit:
 Facility ID: FA0005868
 Facility Status: ACTIVE
 Permit Category: LIMITED QUANTITY GENERATOR(B)
 Permit Number: PT0000739
 Expiration Date: 4/30/2006
 Region: SAN BERNARDINO

**Actual:
 907 ft.**

**K46
 SE
 1/2-1
 3431 ft.**

**PICK-A-PART AUTO DISMNTLG
 2025 S MILLIKEN AVE
 ONTARIO, CA 91761**

**UST U003784883
 San Bern. Co. Permit N/A**

Site 1 of 8 in cluster K

**Relative:
 Lower**

DEHS Permit:
 Facility ID: FA0005320
 Facility Status: ACTIVE
 Permit Category: GENERATOR - 11-25 EMPLOYEES
 Permit Number: PT0002794
 Expiration Date: 7/31/2006
 Region: SAN BERNARDINO

 Facility ID: FA0005320
 Facility Status: ACTIVE
 Permit Category: ABOVEGROUND PETROLEUM STORAGE (AST) (SPCC)
 Permit Number: PT0002795
 Expiration Date: 7/31/2006
 Region: SAN BERNARDINO

 Facility ID: FA0005320
 Facility Status: ACTIVE
 Permit Category: HAZMAT HANDLER 26-50 EMPLOYEES (W/GEN PRMT)
 Permit Number: PT0002793
 Expiration Date: 7/31/2006
 Region: SAN BERNARDINO

 Facility ID: FA0005320
 Facility Status: ACTIVE
 Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
 Permit Number: PT0011422
 Expiration Date: 7/31/2006
 Region: SAN BERNARDINO

**Actual:
 865 ft.**

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

MAP FINDINGS

PICK-A-PART AUTO DISMNTLG (Continued)

EDR ID Number
 EPA ID Number

U003784883

State UST:
 Facility ID: 86010680
 Total Tanks: Not reported
 Region: STATE
 Local Agency: 36000L

**L47
 NNE
 1/2-1
 3487 ft.**

**BANK OF AMERICA
 1275 S. DUPONT ST
 ONTARIO, CA 91761**

San Bern. Co. Permit

**S105298521
 N/A**

Site 1 of 2 in cluster L

**Relative:
 Higher**

DEHS Permit:
 Facility ID: FA0001333
 Facility Status: ACTIVE
 Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
 Permit Number: PT0009879
 Expiration Date: 12/31/2005
 Region: SAN BERNARDINO

**Actual:
 913 ft.**

**L48
 NNE
 1/2-1
 3487 ft.**

**OL ASSOCIATES
 1275 S DUPONT
 ONTARIO, CA 91761**

HAZNET

**S104905441
 N/A**

Site 2 of 2 in cluster L

**Relative:
 Higher**

HAZNET:
 Gepaid: CAL000089948
 TSD EPA ID: CAD009452657
 Gen County: San Bernardino
 Tsd County: San Mateo
 Tons: .6463
 Facility Address 2: Not reported
 Waste Category: Aqueous solution with 10% or more total organic residues
 Disposal Method: Recycler
 Contact: OL ASSOCIATES
 Telephone: (714) 640-6900
 Mailing Name: Not reported
 Mailing Address: 450 NEWPORT CENTER DR STE 304
 NEWPORT BEACH, CA 92660
 County: San Bernardino
 Gepaid: CAL000089948
 TSD EPA ID: CAD009452657
 Gen County: San Bernardino
 Tsd County: San Mateo
 Tons: .0208
 Facility Address 2: Not reported
 Waste Category: Latex waste
 Disposal Method: Recycler
 Contact: OL ASSOCIATES
 Telephone: (714) 640-6900
 Mailing Name: Not reported
 Mailing Address: 450 NEWPORT CENTER DR STE 304
 NEWPORT BEACH, CA 92660
 County: San Bernardino

**Actual:
 913 ft.**

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

OL ASSOCIATES (Continued)

S104905441

Gepaid: CAL000089948
TSD EPA ID: CAD009452657
Gen County: San Bernardino
Tsd County: San Mateo
Tons: .2293
Facility Address 2: Not reported
Waste Category: Aqueous solution with less than 10% total organic residues
Disposal Method: Recycler
Contact: OL ASSOCIATES
Telephone: (714) 640-6900
Mailing Name: Not reported
Mailing Address: 450 NEWPORT CENTER DR STE 304
NEWPORT BEACH, CA 92660
County: San Bernardino

**K49
SE
1/2-1
3535 ft.**

**SAN BERNARDINO CO., SOLID WAST
2050 S MILLIKEN AVE
ONTARIO, CA 91761**

**HAZNET S100868222
EMI N/A**

Site 2 of 8 in cluster K

**Relative:
Lower**

HAZNET:

**Actual:
862 ft.**

Gepaid: CAD982485708
TSD EPA ID: CAT000613893
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: 0.1668
Facility Address 2: Not reported
Waste Category: Aqueous solution with less than 10% total organic residues
Disposal Method: Transfer Station
Contact: CNTY OF SAN BERNARDINO WASTE
Telephone: (909) 386-8735
Mailing Name: Not reported
Mailing Address: 222 W HOSPITALITY LN FL 2
SAN BERNARDINO, CA 92408 - 3200
County: San Bernardino

Gepaid: CAD982485708
TSD EPA ID: CAT000613927
Gen County: San Bernardino
Tsd County: San Bernardino
Tons: 0.5252
Facility Address 2: Not reported
Waste Category: Aqueous solution with less than 10% total organic residues
Disposal Method: Transfer Station
Contact: CNTY OF SAN BERNARDINO WASTE
Telephone: (909) 386-8735
Mailing Name: Not reported
Mailing Address: 222 W HOSPITALITY LN FL 2
SAN BERNARDINO, CA 92408 - 3200
County: San Bernardino

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

SAN BERNARDINO CO., SOLID WAST (Continued)

S100868222

Gepaid: CAD982485708
TSD EPA ID: AZD049318009
Gen County: San Bernardino
Tsd County: 99
Tons: .1475
Facility Address 2: Not reported
Waste Category: Household waste
Disposal Method: Transfer Station
Contact: CNTY OF SAN BERNARDINO WASTE
Telephone: (909) 386-8735
Mailing Name: Not reported
Mailing Address: 222 W HOSPITALITY LN FL 2
SAN BERNARDINO, CA 92408 - 3200
County San Bernardino

Gepaid: CAD982485708
TSD EPA ID: CAD050806850
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: .1000
Facility Address 2: Not reported
Waste Category: Off-specification, aged, or surplus organics
Disposal Method: Transfer Station
Contact: CNTY OF SAN BERNARDINO WASTE
Telephone: (909) 386-8735
Mailing Name: Not reported
Mailing Address: 222 W HOSPITALITY LN FL 2
SAN BERNARDINO, CA 92408 - 3200
County San Bernardino

Gepaid: CAD982485708
TSD EPA ID: CAD050806850
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: 1.1000
Facility Address 2: Not reported
Waste Category: Other organic solids
Disposal Method: Transfer Station
Contact: CNTY OF SAN BERNARDINO WASTE
Telephone: (909) 386-8735
Mailing Name: Not reported
Mailing Address: 222 W HOSPITALITY LN FL 2
SAN BERNARDINO, CA 92408 - 3200
County San Bernardino

[Click this hyperlink](#) while viewing on your computer to access 37 additional CA HAZNET record(s) in the EDR Site Report.

EMISSIONS :

Year : 1990
Facility ID : 7371
Air District Code : SC
SIC Code : 4953
Air Basin : SC
Air District Name : SOUTH COAST AQMD
Community Health Air Pollution Info System : Not reported
Consolidated Emission Reporting Rule : Not reported
County Code : 36

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

SAN BERNARDINO CO., SOLID WAST (Continued)

S100868222

County ID :	36
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	39
NOX - Oxides of Nitrogen Tons/Yr:	3
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr :	3
Part. Matter 10 Micrometers and Smaller Tons/Yr :	3
Year :	1996
Facility ID :	7371
Air District Code :	SC
SIC Code :	4953
Air Basin :	SC
Air District Name :	SOUTH COAST AQMD
Community Health Air Pollution Info System :	Not reported
Consolidated Emission Reporting Rule :	Not reported
County Code :	36
County ID :	36
Total Organic Hydrocarbon Gases Tons/Yr:	3
Reactive Organic Gases Tons/Yr:	1
Carbon Monoxide Emissions Tons/Yr:	1
NOX - Oxides of Nitrogen Tons/Yr:	10
SOX - Oxides of Sulphur Tons/Yr:	2
Particulate Matter Tons/Yr :	3
Part. Matter 10 Micrometers and Smaller Tons/Yr :	3
Year :	1997
Facility ID :	7371
Air District Code :	SC
SIC Code :	4953
Air Basin :	SC
Air District Name :	SOUTH COAST AQMD
Community Health Air Pollution Info System :	Not reported
Consolidated Emission Reporting Rule :	Not reported
County Code :	36
County ID :	36
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	9
NOX - Oxides of Nitrogen Tons/Yr:	7
SOX - Oxides of Sulphur Tons/Yr:	1
Particulate Matter Tons/Yr :	3
Part. Matter 10 Micrometers and Smaller Tons/Yr :	3
Year :	1998
Facility ID :	7371
Air District Code :	SC
SIC Code :	4953
Air Basin :	SC
Air District Name :	SOUTH COAST AQMD
Community Health Air Pollution Info System :	Not reported
Consolidated Emission Reporting Rule :	Not reported
County Code :	36
County ID :	36
Total Organic Hydrocarbon Gases Tons/Yr:	1
Reactive Organic Gases Tons/Yr:	0

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

SAN BERNARDINO CO., SOLID WAST (Continued)

S100868222

Carbon Monoxide Emissions Tons/Yr: 9
NOX - Oxides of Nitrogen Tons/Yr: 7
SOX - Oxides of Sulphur Tons/Yr: 1
Particulate Matter Tons/Yr : 3
Part. Matter 10 Micrometers and Smaller Tons/Yr : 3

Year : 1999
Facility ID : 7371
Air District Code : SC
SIC Code : 4953
Air Basin : SC
Air District Name : SOUTH COAST AQMD
Community Health Air Pollution Info System : Not reported
Consolidated Emission Reporting Rule : Not reported
County Code : 36
County ID : 36
Total Organic Hydrocarbon Gases Tons/Yr: 1
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 9
NOX - Oxides of Nitrogen Tons/Yr: 7
SOX - Oxides of Sulphur Tons/Yr: 1
Particulate Matter Tons/Yr : 3
Part. Matter 10 Micrometers and Smaller Tons/Yr : 3

Year : 2000
Facility ID : 7371
Air District Code : SC
SIC Code : 4953
Air Basin : SC
Air District Name : SOUTH COAST AQMD
Community Health Air Pollution Info System : Not reported
Consolidated Emission Reporting Rule : Not reported
County Code : 36
County ID : 36
Total Organic Hydrocarbon Gases Tons/Yr: 1
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 9
NOX - Oxides of Nitrogen Tons/Yr: 7
SOX - Oxides of Sulphur Tons/Yr: 1
Particulate Matter Tons/Yr : 3
Part. Matter 10 Micrometers and Smaller Tons/Yr : 3

Year : 2001
Facility ID : 7371
Air District Code : SC
SIC Code : 4953
Air Basin : SC
Air District Name : SOUTH COAST AQMD
Community Health Air Pollution Info System : Not reported
Consolidated Emission Reporting Rule : Not reported
County Code : 36
County ID : 36
Total Organic Hydrocarbon Gases Tons/Yr: 3
Reactive Organic Gases Tons/Yr: 1
Carbon Monoxide Emissions Tons/Yr: 3
NOX - Oxides of Nitrogen Tons/Yr: 6
SOX - Oxides of Sulphur Tons/Yr: 1

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
 EPA ID Number

SAN BERNARDINO CO., SOLID WAST (Continued)

S100868222

Particulate Matter Tons/Yr : 2
 Part. Matter 10 Micrometers and Smaller Tons/Yr : 2

Year : 2002
 Facility ID : 7371
 Air District Code : SC
 SIC Code : 4953
 Air Basin : SC
 Air District Name : SOUTH COAST AQMD
 Community Health Air Pollution Info System : Not reported
 Consolidated Emission Reporting Rule : Not reported
 County Code : 36
 County ID : 36
 Total Organic Hydrocarbon Gases Tons/Yr: 3
 Reactive Organic Gases Tons/Yr: 1
 Carbon Monoxide Emissions Tons/Yr: 1
 NOX - Oxides of Nitrogen Tons/Yr: 7
 SOX - Oxides of Sulphur Tons/Yr: 2
 Particulate Matter Tons/Yr : 1
 Part. Matter 10 Micrometers and Smaller Tons/Yr : 1

Year : 2003
 Facility ID : 7371
 Air District Code : SC
 SIC Code : 4953
 Air Basin : SC
 Air District Name : SOUTH COAST AQMD
 Community Health Air Pollution Info System : Not reported
 Consolidated Emission Reporting Rule : Not reported
 County Code : 36
 County ID : 36
 Total Organic Hydrocarbon Gases Tons/Yr: 3
 Reactive Organic Gases Tons/Yr: 1
 Carbon Monoxide Emissions Tons/Yr: 1
 NOX - Oxides of Nitrogen Tons/Yr: 7
 SOX - Oxides of Sulphur Tons/Yr: 2
 Particulate Matter Tons/Yr : 1
 Part. Matter 10 Micrometers and Smaller Tons/Yr : 1

K50 MM MILLICAN GENCO LLC
SE 2050 SOUTH MILLICAN AVENUE
1/2-1 ONTARIO, CA 91761
3535 ft.

FINDS 1006322844
110012624954

Site 3 of 8 in cluster K

**Relative:
 Lower**

FINDS:

Other Pertinent Environmental Activity Identified at Site:
 AEROMETRIC INFORMATION RETRIEVAL SYSTEM/AIRS FACILITY SYSTEM

**Actual:
 862 ft.**

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

K51
SE
1/2-1
3535 ft.

MILLIKEN LANDFILL
2050 SOUTH MILLIKEN AVENUE
ONTARIO, CA 91761

FINDS **1000285029**
RCRA-LQG **CAD982485708**

Site 4 of 8 in cluster K

Relative:
Lower

RCRAInfo:
 Owner: SAN BERNARDINO COUNTY
 (415) 555-1212
 EPA ID: CAD982485708

Actual:
862 ft.

Contact: Not reported
 Classification: Large Quantity Generator
 TSDF Activities: Not reported
 Violation Status: No violations found

FINDS:

Other Pertinent Environmental Activity Identified at Site:
 AEROMETRIC INFORMATION RETRIEVAL SYSTEM/AIRS FACILITY SYSTEM
 COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND INFORMATION SYSTEM
 NATIONAL EMISSIONS INVENTORY
 PERMIT COMPLIANCE SYSTEM
 RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM

K52
SE
1/2-1
3535 ft.

GW CLEANUP-MILLIKEN LANDFILL
2050 S MILLIKEN AVE
ONTARIO, CA 91761

CA WDS **S105689547**
N/A

Site 5 of 8 in cluster K

Relative:
Lower

WDS:
 Facility ID: Santa Ana River 362738001
 Facility Contact: ARTHUR L. RIVERA Facility Telephone: (909) 386-8775
 SIC Code: Not reported SIC Code 2: Not reported
 Agency Name: SAN BERNARDINO CO. DPW - WSD
 Agency Address: 222 W. HOSPITALITY LN., 2ND FL
 SAN BERNARDINO 92415 - 0117
 Agency Contact: PETER WULFMAN Agency Phone: (909) 386-8701
 Design Flow: 0.0374 Million Gal/Day Baseline Flow: 0.0374 Million Gal/Day
 Facility Type: Industrial - Facility that treats and/or disposes of liquid or semisolid wastes from any servicing, producing, manufacturing or processing operation of whatever nature, including mining, gravel washing, geothermal operations, air conditioning, ship building and repairing, oil production, storage and disposal operations, water pumping.
 Facility Status: Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.
 Agency Type: County
 Waste Type: Contaminated Ground Water - Hazardous/Influent or Solid Wastes that contain toxic, corrosive, ignitable or reactive substances and must be managed according to applicable DOHS standards.
 Threat to Water: Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality.
 Complexity: Category A - Any major NPDES facility, any non-NPDES facility (particularly those with toxic wastes) that would be a major if discharge was made to surface or ground waters, or any Class I disposal site. Includes any small-volume complex facility (particularly those with toxicwastes) with numerous discharge points, leak detection systems or ground water monitoring wells.
 Reclamation: No reclamation requirements associated with this facility.

Actual:
862 ft.

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

MAP FINDINGS

GW CLEANUP-MILLIKEN LANDFILL (Continued)

EDR ID Number
 EPA ID Number

Database(s)

S105689547

POTW: The facility is not a POTW.
 NPDES Number: Not reported
 Subregion: 8

Facility ID: Santa Ana River 36I005243
 Facility Contact: Not reported
 SIC Code: Not reported
 Agency Name: SAN BERNARDINO CO. DPW - WSD
 Agency Address: 222 W. HOSPITALITY LN., 2ND FL
 SAN BERNARDINO 92415 - 0117
 Agency Contact: PETER WULFMAN
 Design Flow: Not reported
 Facility Type: Industrial - Facility that treats and/or disposes of liquid or semisolid wastes from any servicing, producing, manufacturing or processing operation of whatever nature, including mining, gravel washing, geothermal operations, air conditioning, ship building and repairing, oil production, storage and disposal operations, water pumping.

Facility Status: Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.

Agency Type: County
 Waste Type: Not reported
 Threat to Water: Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality.

Complexity: Category C - Facilities having no waste treatment systems, such as cooling water dischargers or those who must comply through best management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as dairy waste ponds.

Reclamation: Not reported
 POTW: Not reported
 NPDES Number: CAS000001 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board
 Subregion: 8

**K53
 SE
 1/2-1
 3535 ft.**

**MILLIKEN LANDFILL
 2050 MILLIKEN AVE
 ONTARIO, CA 91761**

**San Bern. Co. Permit S106544672
 N/A**

Site 6 of 8 in cluster K

**Relative:
 Lower**

DEHS Permit:
 Facility ID: FA0008944
 Facility Status: ACTIVE
 Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
 Permit Number: PT0015115
 Expiration Date: 10/31/2006
 Region: SAN BERNARDINO

**Actual:
 862 ft.**

Facility ID: FA0008944
 Facility Status: ACTIVE
 Permit Category: SPECIAL GENERATOR(B)
 Permit Number: PT0015116
 Expiration Date: 10/31/2006
 Region: SAN BERNARDINO

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

MAP FINDINGS

Database(s)
 EDR ID Number
 EPA ID Number

K54	MILLIKEN SANITARY LANDFILL	SWF/LF	S105548873
SE	2050 SOUTH MILLIKEN AVENUE		N/A
1/2-1	ONTARIO, CA		
3535 ft.			
Site 7 of 8 in cluster K			
Relative:	LF:		
Lower	Facility ID: 36-AA-0054	Operator: Co of San Bernardino Solid Waste Mgt Div	
Actual:	Operator Addr: PETER H. WULFMAN- Manager		
862 ft.	222 West Hospitality Lane, 2nd Floor		
	San Bernardino, CA 92415		
	Date: Not reported		
	Address: Not reported		
	Prep By: Not reported		
	DOHS Number: Not reported		
	CUP Number: Not reported		
	CIWMB: Not reported		
	Activity: Solid Waste Disposal Site		
	Operator's Status: Closing		
	Owner: Co of San Bernardino Solid Waste Mgt Div		
	Facility Phone 2 : Not reported		
	Owner Address: PETER H. WULFMAN- Manager		
	222 West Hospitality Lane, 2nd Floor		
	San Bernardino, CA 92415		
	Operator Phone: (909) 386-8735	Owner Telephone: (909) 386-8735	
	Regulation Status: Suspended	Region: STATE	
	Location: Not reported		
	Parcel Num: Not reported		
	Parcel Num 2 : Not reported		
	Land Use: Not reported		
	Sig. Change Since Last Visit: Not reported		
	Site Size: Not reported		
	Other Observations: Not reported		
	Issue And Observations: Not reported		
	Recommendations / Follow Up: Not reported		
	Program Type: Financial Assurance Responsibilities		
	Public Notice: Not reported		
	PERMTIER: Not reported		
	Lat/Long: 34.03525 / -117.59134	Permit Date: 9/30/1997	
	Accepted Waste: Agricultural, Industrial, Mixed municipal		
	Restrictions:		
	Status : Not reported	Swisnumber : Not reported	
	Site Type : Not reported	Aka : Not reported	
	Type Of Waste : Not reported	Disposal Area : Not reported	
	SWFP Date : Not reported	WDR Number : Not reported	
	Dates Operation : Not reported	Closure Approve : Not reported	
	Dt Of Field Units : Not reported	Surface Condition : Not reported	
	Lea Date : Not reported	Reassess Site : Not reported	
	Leachate : Not reported	Emrgncy Response: Not reported	
	Landfill Gas : Not reported		
	Priority For Site Assessment : Not reported		
	Other Recommendation : Not reported		
	Explanation: Not Reported		
	No Further Action: Not Reported		
	Permitted Throughput with Units: 3500		
	Actual Throughput with Units: Tons/day		
	Actual Capacity with Units: 24800000		
	Permitted Capacity with Units: 24800000		

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

MAP FINDINGS

MILLIKEN SANITARY LANDFILL (Continued)

EDR ID Number
 EPA ID Number

Database(s)

S105548873

Remaining Capacity with Units:	Cubic Yards	
Permitted Total Acreage:	196	
Remaining Capacity :	2364423	
Fill Area:	Not reported	Inspection Frequency : Quarterly
Landuse Name:	Industrial	GIS Source: External
Permit Status:	Permitted	Category: Disposal
Unit Number:	01	Closure Date: 03/08/99
Closure Type:	Actual	Disposal Acreage: 140
Year Opened:	Not reported	Year Closed: Not reported
Last Waste Tire Inspection Count :	Not reported	
Last Waste Tire Inspection Date:	Not reported	
Original Waste Tire Count:	Not reported	
Original Waste Tire Count Date:	Not reported	
Type Of Refuse:	Not reported	
Avg Depth Of Fill:	Not reported	
Addtl Expansion Area:	Not reported	
Site Description:	Not Reported	

K55
SE
 1/2-1
 3535 ft.

MILLIKEN LANDFILL
2050 MILLIKEN
ONTARIO, CA 91761

Cortese S104765354
N/A

Site 8 of 8 in cluster K

Relative:
Lower

CORTESE:
 Region: CORTESE
 Fac Address 2: Not reported

Actual:
862 ft.

J56
NE
 1/2-1
 3624 ft.

COMPUMERIC
1390 S MILLIKEN AVE
ONTARIO, CA 91761

San Bern. Co. Permit S106230137
N/A

Site 2 of 2 in cluster J

Relative:
Higher

DEHS Permit:
 Facility ID: FA0008155
 Facility Status: ACTIVE
 Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
 Permit Number: PT0014282
 Expiration Date: 3/31/2006
 Region: SAN BERNARDINO

Facility ID: FA0008155
 Facility Status: ACTIVE
 Permit Category: LIMITED QUANTITY GENERATOR(B)
 Permit Number: PT0014281
 Expiration Date: 3/31/2006
 Region: SAN BERNARDINO

Actual:
909 ft.

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

57 **TOYOTA MOTOR SALES-ONT/ PARTS**
ENE **1425 TOYOTA WAY**
1/2-1 **ONTARIO, CA 91761**
3752 ft.

HAZNET **S105790463**
San Bern. Co. Permit **N/A**

Relative:
Higher

HAZNET:

Actual:
903 ft.

Gepaid: CAR000107359
 TSD EPA ID: CAT080013352
 Gen County: San Bernardino
 Tsd County: San Bernardino
 Tons: 0.08
 Facility Address 2: Not reported
 Waste Category: Unspecified oil-containing waste
 Disposal Method: Recycler
 Contact: TAMMY KIKUMOTO
 Telephone: (310) 468-5291
 Mailing Name: TAMMY KIKUMOTO
 Mailing Address: 19001 WESTERN AVE G410
 TORRANCE, CA 90509
 County: San Bernardino

Gepaid: CAR000107359
 TSD EPA ID: CAD008252405
 Gen County: San Bernardino
 Tsd County: San Bernardino
 Tons: 0.09
 Facility Address 2: Not reported
 Waste Category: Off-specification, aged, or surplus organics
 Disposal Method: Transfer Station
 Contact: TAMMY KIKUMOTO
 Telephone: (310) 468-5291
 Mailing Name: TAMMY KIKUMOTO
 Mailing Address: 19001 WESTERN AVE G410
 TORRANCE, CA 90509
 County: San Bernardino

Gepaid: CAR000107359
 TSD EPA ID: CAD008252405
 Gen County: San Bernardino
 Tsd County: San Bernardino
 Tons: 0.04
 Facility Address 2: Not reported
 Waste Category: Unspecified organic liquid mixture
 Disposal Method: Recycler
 Contact: TAMMY KIKUMOTO
 Telephone: (310) 468-5291
 Mailing Name: TAMMY KIKUMOTO
 Mailing Address: 19001 WESTERN AVE G410
 TORRANCE, CA 90509
 County: San Bernardino

Gepaid: CAR000107359
 TSD EPA ID: CAT080033681
 Gen County: San Bernardino
 Tsd County: San Bernardino
 Tons: 0.6
 Facility Address 2: Not reported
 Waste Category: Other organic solids
 Disposal Method: Recycler
 Contact: TAMMY KIKUMOTO
 Telephone: (310) 468-5291

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

MAP FINDINGS

TOYOTA MOTOR SALES-ONT/ PARTS (Continued)

EDR ID Number
 EPA ID Number

Database(s)

S105790463

Mailing Name: TAMMY KIKUMOTO
 Mailing Address: 19001 WESTERN AVE G410
 TORRANCE, CA 90509
 County: San Bernardino

DEHS Permit:
 Facility ID: FA0006761
 Facility Status: ACTIVE
 Permit Category: SPECIAL GENERATOR(B)
 Permit Number: PT0008554
 Expiration Date: 4/30/2006
 Region: SAN BERNARDINO

Facility ID: FA0006761
 Facility Status: ACTIVE
 Permit Category: SPECIAL HANDLER
 Permit Number: PT0008558
 Expiration Date: 4/30/2006
 Region: SAN BERNARDINO

**M58
 SE
 1/2-1
 3874 ft.**

**MILLIKEN SAN LDFL
 MILLIKEN AVE & HWY 60
 ONTARIO, CA 91761**

**CERCLIS 1000285030
 CAD980695076**

Site 1 of 4 in cluster M

**Relative:
 Lower**

CERCLIS Classification Data:
 Federal Facility: Not a Federal Facility
 Non NPL Status: Other Cleanup Activity: State-Lead Cleanup
 NPL Status: Not on the NPL
 Contact: Betsy Curnow
 Contact Title: Not reported
 Contact: Jere Johnson
 Contact Title: Not reported

Contact Tel: (415) 972-3093

Contact Tel: (415) 972-3094

**Actual:
 853 ft.**

CERCLIS Assessment History:
 Assessment: DISCOVERY Completed: 11/01/1979
 Assessment: PRELIMINARY ASSESSMENT Completed: 07/01/1984
 Assessment: PRELIMINARY ASSESSMENT Completed: 11/01/1988
 Assessment: SITE INSPECTION Completed: 05/01/1990
 Assessment: SITE REASSESSMENT Completed: 02/13/2003

CERCLIS Site Status:
 Low

CERCLIS Alias Name(s):
 MILLIKEN SITE #1
 SAN BERNARDINO CO LDFL

**59
 East
 1/2-1
 3899 ft.**

**ANDROP PACKAGING INC
 4400 E FRANCIS ST
 ONTARIO, CA 91761**

**San Bern. Co. Permit S104905302
 CA WDS N/A**

**Relative:
 Higher**

WDS:
 Facility ID: Santa Ana River 361017211
 Facility Contact LAURIER GAGNON
 SIC Code: Not reported
 Agency Name: ANDROP PACKAGING INC
 Agency Address: 4400 E Francis St
 Ontario 91761 - 2327
 Agency Contact: LAURIER GAGNON

Facility Telephone (909) 605-8842
 SIC Code 2: Not reported

Agency Phone: (909) 605-8842

**Actual:
 879 ft.**

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

MAP FINDINGS

ANDROP PACKAGING INC (Continued)

S104905302

Design Flow:	Not reported	Baseline Flow:	Not reported
Facility Type:	Industrial - Facility that treats and/or disposes of liquid or semisolid wastes from any servicing, producing, manufacturing or processing operation of whatever nature, including mining, gravel washing, geothermal operations, air conditioning, ship building and repairing, oil production, storage and disposal operations, water pumping.		
Facility Status:	Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.		
Agency Type:	Private		
Waste Type:	Not reported		
Threat to Water:	Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality.		
Complexity:	Category C - Facilities having no waste treatment systems, such as cooling water dischargers or those who must comply through best management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as dairy waste ponds.		
Reclamation:	Not reported		
POTW:	Not reported		
NPDES Number:	CAS000001 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board		
Subregion:	8		
DEHS Permit:			
Facility ID:	FA0000950		
Facility Status:	ACTIVE		
Permit Category:	HAZMAT HANDLER 26-50 EMPLOYEES (W/GEN PRMT)		
Permit Number:	PT0000500		
Expiration Date:	11/30/2006		
Region:	SAN BERNARDINO		
Facility ID:	FA0000950		
Facility Status:	ACTIVE		
Permit Category:	GENERATOR - 26-50 EMPLOYEES		
Permit Number:	PT0016165		
Expiration Date:	11/30/2006		
Region:	SAN BERNARDINO		

**N60
 WSW
 1/2-1
 3924 ft.**

**SAFARILAND LTD.
 3120 E. MISSION BLVD.
 ONTARIO, CA 91761**

**EMI S106838699
 N/A**

Site 1 of 4 in cluster N

**Relative:
 Lower**

EMISSIONS :	
Year :	2001
Facility ID :	82260
Air District Code :	SC
SIC Code :	7996
Air Basin :	SC
Air District Name :	SOUTH COAST AQMD
Community Health Air Pollution Info System :	Y
Consolidated Emission Reporting Rule :	B
County Code :	36
County ID :	36
Total Organic Hydrocarbon Gases Tons/Yr:	23
Reactive Organic Gases Tons/Yr:	22

**Actual:
 858 ft.**

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

MAP FINDINGS

SAFARILAND LTD. (Continued)

EDR ID Number
 EPA ID Number

Database(s)

S106838699

Carbon Monoxide Emissions Tons/Yr: 0
 NOX - Oxides of Nitrogen Tons/Yr: 0
 SOX - Oxides of Sulphur Tons/Yr: 0
 Particulate Matter Tons/Yr : 0
 Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

N61
WSW
1/2-1
3924 ft.

SAFARILAND LIMITED
3120 MISSION BLVD
ONTARIO, CA 91761

FINDS 1004441608
110001193930

Site 2 of 4 in cluster N

Relative:
Lower

FINDS:

Other Pertinent Environmental Activity Identified at Site:
 AEROMETRIC INFORMATION RETRIEVAL SYSTEM/AIRS FACILITY SYSTEM
 NATIONAL EMISSIONS INVENTORY

Actual:
858 ft.

N62
WSW
1/2-1
3924 ft.

SAFARILAND LTD
3120 E MISSION BLVD
ONTARIO, CA 91761

HAZNET S100872892
EMI N/A

Site 3 of 4 in cluster N

Relative:
Lower

HAZNET:

Gepaid: CAL000055992
 TSD EPA ID: CAD008364432
 Gen County: San Bernardino
 Tsd County: Los Angeles
 Tons: .4587
 Facility Address 2: Not reported
 Waste Category: Unspecified solvent mixture Waste
 Disposal Method: Recycler
 Contact: SAFARI LAND LTD INC
 Telephone: (909) 923-7300
 Mailing Name: Not reported
 Mailing Address: 3120 E MISSION BLVD
 ONTARIO, CA 91762
 County San Bernardino

Gepaid: CAL000055992
 TSD EPA ID: Not reported
 Gen County: San Bernardino
 Tsd County: San Bernardino
 Tons: 0.27
 Facility Address 2: Not reported
 Waste Category: Aqueous solution with less than 10% total organic residues
 Disposal Method: Transfer Station
 Contact: PETER STOCKS - PURCHASING MGR
 Telephone: (909) 923-7300
 Mailing Name: Not reported
 Mailing Address: 3120 E MISSION BLVD
 ONTARIO, CA 91762
 County Not reported

Actual:
858 ft.

Map ID
Direction
Distance
Distance (ft.)
Elevation

MAP FINDINGS

Database(s)
EPA ID Number
EDR ID Number

SAFARILAND LTD (Continued)

S100872892

Gepaid: CAL000055992
TSD EPA ID: CAD008364432
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: .2085
Facility Address 2: Not reported
Waste Category: Unspecified solvent mixture Waste
Disposal Method: Recycler
Contact: SAFARI LAND LTD INC
Telephone: (909) 923-7300
Mailing Name: Not reported
Mailing Address: 3120 E MISSION BLVD
ONTARIO, CA 91762
County San Bernardino

Gepaid: CAL000055992
TSD EPA ID: CAD008364432
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: 0.0625
Facility Address 2: Not reported
Waste Category: Alkaline solution without metals (pH > 12.5)
Disposal Method: Treatment, Tank
Contact: SAFARI LAND LTD INC
Telephone: (909) 923-7300
Mailing Name: Not reported
Mailing Address: 3120 E MISSION BLVD
ONTARIO, CA 91762
County San Bernardino

Gepaid: CAL000055992
TSD EPA ID: CAD008364432
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: 1.0087
Facility Address 2: Not reported
Waste Category: Unspecified solvent mixture Waste
Disposal Method: Recycler
Contact: SAFARI LAND LTD INC
Telephone: (909) 923-7300
Mailing Name: Not reported
Mailing Address: 3120 E MISSION BLVD
ONTARIO, CA 91762
County San Bernardino

[Click this hyperlink](#) while viewing on your computer to access 23 additional CA HAZNET record(s) in the EDR Site Report.

EMISSIONS :

Year : 2002
Facility ID : 82260
Air District Code : SC
SIC Code : 7996
Air Basin : SC
Air District Name : SOUTH COAST AQMD
Community Health Air Pollution Info System : Not reported
Consolidated Emission Reporting Rule : Not reported
County Code : 36

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

MAP FINDINGS

SAFARILAND LTD (Continued)

EDR ID Number
 EPA ID Number

Database(s)

S100872892

County ID : 36
 Total Organic Hydrocarbon Gases Tons/Yr: 36
 Reactive Organic Gases Tons/Yr: 23
 Carbon Monoxide Emissions Tons/Yr: 0
 NOX - Oxides of Nitrogen Tons/Yr: 0
 SOX - Oxides of Sulphur Tons/Yr: 0
 Particulate Matter Tons/Yr : 0
 Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

Year : 2003
 Facility ID : 82260
 Air District Code : SC
 SIC Code : 7996
 Air Basin : SC
 Air District Name : SOUTH COAST AQMD
 Community Health Air Pollution Info System : Not reported
 Consolidated Emission Reporting Rule : Not reported
 County Code : 36
 County ID : 36
 Total Organic Hydrocarbon Gases Tons/Yr: 36
 Reactive Organic Gases Tons/Yr: 23
 Carbon Monoxide Emissions Tons/Yr: 0
 NOX - Oxides of Nitrogen Tons/Yr: 0
 SOX - Oxides of Sulphur Tons/Yr: 0
 Particulate Matter Tons/Yr : 0
 Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

N63
WSW
1/2-1
3924 ft.

SAFARILAND LTD
3120 MISSION BLVD
ONTARIO, CA 91761

EMI 1006014729
San Bern. Co. Permit N/A

Site 4 of 4 in cluster N

Relative:
Lower

DEHS Permit:
 Facility ID: FA0005860
 Facility Status: ACTIVE
 Permit Category: GENERATOR - 251-499 EMPLOYEES
 Permit Number: PT0005642
 Expiration Date: 9/30/2006
 Region: SAN BERNARDINO

Actual:
858 ft.

Facility ID: FA0005860
 Facility Status: ACTIVE
 Permit Category: HAZMAT HANDLER 251-499 EMPLOYEES (W/GEN PRMT)
 Permit Number: PT0005641
 Expiration Date: 9/30/2006
 Region: SAN BERNARDINO

EMISSIONS :

Year : 1995
 Facility ID : 82260
 Air District Code : SC
 SIC Code : 7996
 Air Basin : SC
 Air District Name : SOUTH COAST AQMD
 Community Health Air Pollution Info System : Not reported
 Consolidated Emission Reporting Rule : Not reported
 County Code : 36
 County ID : 36

Map ID
Direction
Distance
Distance (ft.)
Elevation

MAP FINDINGS

Database(s)
EDR ID Number
EPA ID Number

SAFARILAND LTD (Continued)

1006014729

Total Organic Hydrocarbon Gases Tons/Yr: 17
Reactive Organic Gases Tons/Yr: 16
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr : 0
Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

Year : 1996
Facility ID : 82260
Air District Code : SC
SIC Code : 7996
Air Basin : SC
Air District Name : SOUTH COAST AQMD
Community Health Air Pollution Info System : Not reported
Consolidated Emission Reporting Rule : Not reported
County Code : 36
County ID : 36
Total Organic Hydrocarbon Gases Tons/Yr: 21
Reactive Organic Gases Tons/Yr: 20
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr : 0
Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

Year : 1997
Facility ID : 82260
Air District Code : SC
SIC Code : 7996
Air Basin : SC
Air District Name : SOUTH COAST AQMD
Community Health Air Pollution Info System : Not reported
Consolidated Emission Reporting Rule : Not reported
County Code : 36
County ID : 36
Total Organic Hydrocarbon Gases Tons/Yr: 16
Reactive Organic Gases Tons/Yr: 15
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr : 0
Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

Year : 1998
Facility ID : 82260
Air District Code : SC
SIC Code : 7996
Air Basin : SC
Air District Name : SOUTH COAST AQMD
Community Health Air Pollution Info System : Not reported
Consolidated Emission Reporting Rule : Not reported
County Code : 36
County ID : 36
Total Organic Hydrocarbon Gases Tons/Yr: 16
Reactive Organic Gases Tons/Yr: 15
Carbon Monoxide Emissions Tons/Yr: 0

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
 EPA ID Number

SAFARILAND LTD (Continued)

1006014729

NOX - Oxides of Nitrogen Tons/Yr: 0
 SOX - Oxides of Sulphur Tons/Yr: 0
 Particulate Matter Tons/Yr : 0
 Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

Year : 1999
 Facility ID : 82260
 Air District Code : SC
 SIC Code : 7996
 Air Basin : SC
 Air District Name : SOUTH COAST AQMD
 Community Health Air Pollution Info System : Not reported
 Consolidated Emission Reporting Rule : Not reported
 County Code : 36
 County ID : 36
 Total Organic Hydrocarbon Gases Tons/Yr: 16
 Reactive Organic Gases Tons/Yr: 15
 Carbon Monoxide Emissions Tons/Yr: 0
 NOX - Oxides of Nitrogen Tons/Yr: 0
 SOX - Oxides of Sulphur Tons/Yr: 0
 Particulate Matter Tons/Yr : 0
 Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

Year : 2000
 Facility ID : 82260
 Air District Code : SC
 SIC Code : 7996
 Air Basin : SC
 Air District Name : SOUTH COAST AQMD
 Community Health Air Pollution Info System : Not reported
 Consolidated Emission Reporting Rule : Not reported
 County Code : 36
 County ID : 36
 Total Organic Hydrocarbon Gases Tons/Yr: 16
 Reactive Organic Gases Tons/Yr: 15
 Carbon Monoxide Emissions Tons/Yr: 0
 NOX - Oxides of Nitrogen Tons/Yr: 0
 SOX - Oxides of Sulphur Tons/Yr: 0
 Particulate Matter Tons/Yr : 0
 Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

O64
SW
1/2-1
3947 ft.

JACK IN THE BOX INC
3500 E PHILADELPHIA
ONTARIO, CA 91761

HAZNET S106092773
N/A

Site 1 of 3 in cluster O

Relative:
Lower

HAZNET:
 Gepaid: CAL000238050
 TSD EPA ID: Not reported
 Gen County: San Bernardino
 Tsd County: 99
 Tons: 1.83
 Facility Address 2: Not reported
 Waste Category: Off-specification, aged, or surplus organics
 Disposal Method: Recycler
 Contact: PAUL DENEKA/ENVIRON MGR
 Telephone: (858) 571-2689
 Mailing Name: Not reported

Actual:
844 ft.

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

MAP FINDINGS

JACK IN THE BOX INC (Continued)

EDR ID Number
 EPA ID Number

Database(s)

S106092773

Mailing Address: 12265 W BAYAUD AVE STE 300
 LAKEWOOD, CO 80228
 County Not reported
 Gepaid: CAL000238050
 TSD EPA ID: CAD028409019
 Gen County: San Bernardino
 Tsd County: San Bernardino
 Tons: 0.37
 Facility Address 2: Not reported
 Waste Category: Unspecified organic liquid mixture
 Disposal Method: Treatment, Tank
 Contact: MATTHEW THOMPSON/PROGRAM MGR
 Telephone: (847) 888-0276
 Mailing Name: TITAN MANAGEMENT GROUP, LLC
 Mailing Address: 820 TOLLGATE ROAD
 ELGIN, IL 60123
 County San Bernardino

O65
SW
1/2-1
3947 ft.

QUICK STUFF #7724
3500 E PHILADELPHIA ST
ONTARIO, CA 91761

San Bern. Co. Permit

S106112232
N/A

Site 2 of 3 in cluster O

Relative:
Lower

DEHS Permit:
 Facility ID: FA0005498
 Facility Status: ACTIVE
 Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
 Permit Number: PT0012535
 Expiration Date: 4/30/2006
 Region: SAN BERNARDINO

Actual:
844 ft.

Facility ID: FA0005498
 Facility Status: ACTIVE
 Permit Category: HAZMAT HANDLER - UST ONLY
 Permit Number: PT0001200
 Expiration Date: 4/30/2006
 Region: SAN BERNARDINO

Facility ID: FA0005498
 Facility Status: ACTIVE
 Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
 Permit Number: PT0012536
 Expiration Date: 4/30/2006
 Region: SAN BERNARDINO

P66
NE
1/2-1
3975 ft.

WEST COAST CHAIN MFG CO.
4245 PACIFIC PRIVADO
ONTARIO, CA 91761

HAZNET
San Bern. Co. Permit

S105047973
N/A

Site 1 of 3 in cluster P

Relative:
Higher

Actual:
915 ft.

Map ID
Direction
Distance
Distance (ft.)
Elevation

MAP FINDINGS

Database(s)
EDR ID Number
EPA ID Number

WEST COAST CHAIN MFG CO. (Continued)

S105047973

HAZNET:

Gepaid: CAL000205954
TSD EPA ID: Not reported
Gen County: San Bernardino
Tsd County: San Bernardino
Tons: 0.72
Facility Address 2: Not reported
Waste Category: Aqueous solution with less than 10% total organic residues
Disposal Method: Transfer Station
Contact: MICHAEL WINEGAR/PROD MGR
Telephone: (909) 923-7800
Mailing Name: Not reported
Mailing Address: PO BOX 9088
ONTARIO, CA 91762 - 7609

County Not reported

Gepaid: CAL000205954
TSD EPA ID: CAT000613927
Gen County: San Bernardino
Tsd County: San Bernardino
Tons: 0.79
Facility Address 2: Not reported
Waste Category: Aqueous solution with less than 10% total organic residues
Disposal Method: Transfer Station
Contact: MICHAEL WINEGAR-VICE PRESIDENT
Telephone: (909) 923-7800
Mailing Name: PROD MGR
Mailing Address: PO BOX 9088
ONTARIO, CA 91762 - 7609

County San Bernardino

Gepaid: CAL000205954
TSD EPA ID: Not reported
Gen County: San Bernardino
Tsd County: San Bernardino
Tons: 0.07
Facility Address 2: Not reported
Waste Category: Aqueous solution with less than 10% total organic residues
Disposal Method: Transfer Station
Contact: MICHAEL WINEGAR/PROD MGR
Telephone: (909) 923-7800
Mailing Name: Not reported
Mailing Address: PO BOX 9088
ONTARIO, CA 91762 - 7609

County Not reported

Gepaid: CAL000205954
TSD EPA ID: Not reported
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: 0.81
Facility Address 2: Not reported
Waste Category: Aqueous solution with less than 10% total organic residues
Disposal Method: Transfer Station
Contact: MICHAEL WINEGAR/PROD MGR
Telephone: (909) 923-7800
Mailing Name: Not reported
Mailing Address: PO BOX 9088

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
 EPA ID Number

WEST COAST CHAIN MFG CO. (Continued)

S105047973

ONTARIO, CA 91762 - 7609
 County Not reported
 DEHS Permit:
 Facility ID: FA0007248
 Facility Status: ACTIVE
 Permit Category: SPECIAL HANDLER
 Permit Number: PT0000950
 Expiration Date: 8/31/2006
 Region: SAN BERNARDINO

 Facility ID: FA0007248
 Facility Status: ACTIVE
 Permit Category: SPECIAL GENERATOR(B)
 Permit Number: PT0000952
 Expiration Date: 8/31/2006
 Region: SAN BERNARDINO

**O67
 SW
 1/2-1
 3975 ft.**

**HAVEN-PHILADELPHIA MOBIL
 2200 S HAVEN AVE STE A
 ONTARIO, CA 91761**

**San Bern. Co. Permit S106112218
 N/A**

Site 3 of 3 in cluster O

**Relative:
 Lower**

DEHS Permit:
 Facility ID: FA0008008
 Facility Status: ACTIVE
 Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
 Permit Number: PT0014075
 Expiration Date: 11/30/2006
 Region: SAN BERNARDINO

Facility ID: FA0008008
 Facility Status: ACTIVE
 Permit Category: HAZMAT HANDLER - UST ONLY
 Permit Number: PT0014074
 Expiration Date: 11/30/2006
 Region: SAN BERNARDINO

Facility ID: FA0008008
 Facility Status: ACTIVE
 Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
 Permit Number: PT0014077
 Expiration Date: 11/30/2006
 Region: SAN BERNARDINO

Facility ID: FA0008008
 Facility Status: ACTIVE
 Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
 Permit Number: PT0014076
 Expiration Date: 11/30/2006
 Region: SAN BERNARDINO

MAP FINDINGS

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

Site

Database(s)

EDR ID Number
 EPA ID Number

M68
SE
1/2-1
4010 ft.

STILES ANIMAL REMOVAL INC
2107 S MILLIKEN AVE
ONTARIO, CA 91761

HAZNET
San Bern. Co. Permit

S105036501
N/A

Site 2 of 4 in cluster M

Relative:
Lower

HAZNET:

Actual:
851 ft.

Gepaid: CAL000038513
 TSD EPA ID: CAT000613927
 Gen County: San Bernardino
 Tsd County: San Bernardino
 Tons: .2501
 Facility Address 2: Not reported
 Waste Category: Aqueous solution with less than 10% total organic residues
 Disposal Method: Transfer Station
 Contact: STILES ANIMAL REMOVAL
 Telephone: (909) 390-9828
 Mailing Name: Not reported
 Mailing Address: PO BOX 428
 ALTA LOMA, CA 91701 - 0428
 County: San Bernardino

Gepaid: CAL000038513
 TSD EPA ID: Not reported
 Gen County: San Bernardino
 Tsd County: San Bernardino
 Tons: 0.06
 Facility Address 2: Not reported
 Waste Category: Aqueous solution with less than 10% total organic residues
 Disposal Method: Transfer Station
 Contact: STEVE STILES
 Telephone: (909) 390-9828
 Mailing Name: Not reported
 Mailing Address: PO BOX 428
 ALTA LOMA, CA 91701 - 0428
 County: Not reported

DEHS Permit:

Facility ID: FA0006474
 Facility Status: ACTIVE
 Permit Category: SPECIAL HANDLER
 Permit Number: PT0001488
 Expiration Date: 7/31/2006
 Region: SAN BERNARDINO

Facility ID: FA0006474
 Facility Status: ACTIVE
 Permit Category: SPECIAL GENERATOR(B)
 Permit Number: PT0001489
 Expiration Date: 7/31/2006
 Region: SAN BERNARDINO

MAP FINDINGS

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

Site

Database(s)

EDR ID Number
 EPA ID Number

M69
SE
1/2-1
4010 ft.

DARLING DELEWARE
2107 S MILLIKEN
ONTARIO, CA 91761

CA FID UST
SWEEPS UST **S101618987**
 N/A

Site 3 of 4 in cluster M

Relative:
Lower

FID:

Actual:
851 ft.

Facility ID:	36005872	Regulate ID:	00067707
Reg By:	Active Underground Storage Tank Location		
Cortese Code:	Not reported	SIC Code:	Not reported
Status:	Active	Facility Tel:	(714) 947-5252
Mail To:	Not reported		
	2107 S MILLIKEN		
	ONTARIO, CA 91761		
Contact:	Not reported	Contact Tel:	Not reported
DUNs No:	Not reported	NPDES No:	Not reported
Creation:	10/22/93	Modified:	00/00/00
EPA ID:	Not reported		
Comments:	Not reported		

SWEEPS:

Status :	Not reported
Comp Number :	29132
Number :	Not reported
Board Of Equalization :	44-033002
Ref Date :	Not reported
Act Date :	Not reported
Created Date :	Not reported
Tank Status :	Not reported
Owner Tank Id :	Not reported
Swrcb Tank Id :	36-000-029132-000001
Actv Date :	Not reported
Capacity :	10000
Tank Use :	M.V. FUEL
Stg :	PRODUCT
Content :	DIESEL
Number Of Tanks :	1

M70
SE
1/2-1
4010 ft.

STILES DEAD ANIMAL REMOVAL
2107 S MILLIKEN AVE
ONTARIO, CA 91761

HIST UST **U001570090**
 N/A

Site 4 of 4 in cluster M

Relative:
Lower

UST HIST:

Actual:
851 ft.

Facility ID:	67707	Owner Name:	STILES DEAD ANIMAL REMOVAL
Total Tanks:	1	Region:	STATE
Owner Address:	2107 SO. MILLIKEN		
	ONTARIO, CA 91701		
Tank Used for:	WASTE	Container Num:	1
Tank Num:	1	Year Installed:	1973
Tank Capacity:	00005000	Tank Construction:	/8 2 inches
Type of Fuel:	3		
Leak Detection:	Visual, Stock Inventor	Telephone:	(714) 947-5252
Contact Name:	P.A. STILES/STEVE STILES	Other Type:	DEAD REMOVAL
Facility Type:	Other		

MAP FINDINGS

Map ID
Direction
Distance
Distance (ft.)
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

71
North
1/2-1
4030 ft.

TNT LOGISTICS NORTH AMERICA
1001 DOUBLEDAY AVE
ONTARIO, CA 91761

San Bern. Co. Permit

S106230079
N/A

Relative:
Higher

DEHS Permit:

Facility ID: FA0008358
Facility Status: ACTIVE
Permit Category: SPECIAL GENERATOR(B)
Permit Number: PT0014600
Expiration Date: 5/31/2006
Region: SAN BERNARDINO

Actual:
919 ft.

Facility ID: FA0008358
Facility Status: ACTIVE
Permit Category: HAZMAT HANDLER 26-50 EMPLOYEES
Permit Number: PT0014597
Expiration Date: 5/31/2006
Region: SAN BERNARDINO

Q72
NNE
1/2-1
4053 ft.

B M W OF N AMERICA INC W RGN TRAINING CT
1175 S DUPONT AVE
ONTARIO, CA 91761

RCRA-SQG
FINDS

1004675789
CAR000077107

Relative:
Higher

Site 1 of 2 in cluster Q

RCRAInfo:

Owner: B M W OF NORTH AMERICA INC
(201) 307-4000
EPA ID: CAR000077107
Contact: JOHN LOWERY
(909) 975-7325

Actual:
922 ft.

Classification: Small Quantity Generator
TSDF Activities: Not reported
Violation Status: No violations found

FINDS:

Other Pertinent Environmental Activity Identified at Site:
HAZARDOUS WASTE TRACKING SYSTEM-DATAMART
RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM

Q73
NNE
1/2-1
4075 ft.

HAYES AXLE INC
4250 E LOWELL ST
ONTARIO, CA 91761

San Bern. Co. Permit
CA WDS

S102040157
N/A

Relative:
Higher

Site 2 of 2 in cluster Q

WDS:

Facility ID: Santa Ana River 361014729
Facility Contact: Not reported
SIC Code: Not reported
Agency Name: HAYES AXLE INC
Agency Address: Not reported
Agency Contact: Not reported
Design Flow: Not reported
Facility Type: Not reported
Facility Status: Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.

Facility Telephone: Not reported
SIC Code 2: Not reported
Agency Phone: Not reported
Baseline Flow: Not reported

Actual:
921 ft.

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

MAP FINDINGS

HAYES AXLE INC (Continued)

EDR ID Number
 EPA ID Number

Database(s)

S102040157

Agency Type: Not reported
 Waste Type: Not reported
 Threat to Water: Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality.
 Complexity: Category C - Facilities having no waste treatment systems, such as cooling water dischargers or thosewho must comply through best management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as dairy waste ponds.
 Reclamation: Not reported
 POTW: Not reported
 NPDES Number: CAS000001 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board
 Subregion: 8
 DEHS Permit:
 Facility ID: FA0003726
 Facility Status: ACTIVE
 Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
 Permit Number: PT0006677
 Expiration Date: 9/30/2006
 Region: SAN BERNARDINO

R74
WSW
 1/2-1
 4073 ft.

TOTAL WAREHOUSING, INC
3350 E CEDAR ST
ONTARIO, CA 91761

San Bern. Co. Permit S106230065
N/A

Relative:
Lower

Site 1 of 2 in cluster R

Actual:
851 ft.

DEHS Permit:
 Facility ID: FA0008220
 Facility Status: ACTIVE
 Permit Category: SPECIAL HANDLER
 Permit Number: PT0014392
 Expiration Date: 3/31/2006
 Region: SAN BERNARDINO

 Facility ID: FA0008220
 Facility Status: ACTIVE
 Permit Category: SPECIAL GENERATOR(B)
 Permit Number: PT0014393
 Expiration Date: 3/31/2006
 Region: SAN BERNARDINO

R75
WSW
 1/2-1
 4095 ft.

CUSTOMIZED DISTRIBUTION SVCS
3355 E CEDAR ST A
ONTARIO, CA 91761

San Bern. Co. Permit S105481979
N/A

Relative:
Lower

Site 2 of 2 in cluster R

Actual:
851 ft.

DEHS Permit:
 Facility ID: FA0007459
 Facility Status: ACTIVE
 Permit Category: HAZMAT HANDLER 11-25 EMPLOYEES
 Permit Number: PT0012686
 Expiration Date: 8/31/2006

Map ID
Direction
Distance
Distance (ft.)
Elevation

MAP FINDINGS

CUSTOMIZED DISTRIBUTION SVCS (Continued)

EDR ID Number
EPA ID Number

Database(s)

Region: SAN BERNARDINO

S105481979

S76
SE
1/2-1
4142 ft.

COUNTY SALVAGE POOL
2165 S MILLIKEN AVE
ONTARIO, CA 91761

San Bern. Co. Permit

S102040018
N/A

Site 1 of 8 in cluster S

Relative:
Lower

DEHS Permit:

Actual:
849 ft.

Facility ID: FA0002522
Facility Status: ACTIVE
Permit Category: SPECIAL HANDLER
Permit Number: PT0007804
Expiration Date: 5/31/2005
Region: SAN BERNARDINO

Facility ID: FA0002522
Facility Status: ACTIVE
Permit Category: SPECIAL GENERATOR(B)
Permit Number: PT0007805
Expiration Date: 5/31/2005
Region: SAN BERNARDINO

T77
NNE
1/2-1
4153 ft.

C AND H MANUFACTURING INC
4280 LOWELL ST
ONTARIO, CA 91761

RCRA-SQG
FINDS
HAZNET

1004677172
CAR000094052

Site 1 of 2 in cluster T

Relative:
Higher

RCRAInfo:

Actual:
922 ft.

Owner: C AND H MANUFACTURING INC
(909) 930-0088
EPA ID: CAR000094052
Contact: EDWARD HAGERTY
(909) 930-0088

Classification: Small Quantity Generator
TSDF Activities: Not reported

Violation Status: No violations found

FINDS:

Other Pertinent Environmental Activity Identified at Site:
HAZARDOUS WASTE TRACKING SYSTEM-DATAMART
RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM

HAZNET:

Gepaid: CAR000094052
TSD EPA ID: Not reported
Gen County: San Bernardino
Tsd County: San Bernardino
Tons: 0.74
Facility Address 2: Not reported
Waste Category: Aqueous solution with less than 10% total organic residues
Disposal Method: Transfer Station
Contact: --
Telephone: (909) 930-0088
Mailing Name: Not reported
Mailing Address: 4280 LOWELL ST

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
 EPA ID Number

C AND H MANUFACTURING INC (Continued)

1004677172

ONTARIO, CA 91761
 County Not reported
 Gepaid: CAR000094052
 TSD EPA ID: CAT000613927
 Gen County: San Bernardino
 Tsd County: San Bernardino
 Tons: 0.47
 Facility Address 2: Not reported
 Waste Category: Aqueous solution with less than 10% total organic residues
 Disposal Method: Transfer Station
 Contact: ROY FRANKS FACILITY MGR
 Telephone: (909) 930-0088
 Mailing Name: EDWARD HAGERTY
 Mailing Address: 4280 LOWELL ST
 ONTARIO, CA 91761
 County San Bernardino
 Gepaid: CAR000094052
 TSD EPA ID: CAT080013352
 Gen County: San Bernardino
 Tsd County: San Bernardino
 Tons: 7.63
 Facility Address 2: Not reported
 Waste Category: Unspecified oil-containing waste
 Disposal Method: Recycler
 Contact: ROY FRANKS FACILITY MGR
 Telephone: (909) 930-0088
 Mailing Name: EDWARD HAGERTY
 Mailing Address: 4280 LOWELL ST
 ONTARIO, CA 91761
 County San Bernardino
 Gepaid: CAR000094052
 TSD EPA ID: Not reported
 Gen County: San Bernardino
 Tsd County: Not reported
 Tons: 0.45
 Facility Address 2: Not reported
 Waste Category: Unspecified oil-containing waste
 Disposal Method: Not reported
 Contact: --
 Telephone: (909) 930-0088
 Mailing Name: Not reported
 Mailing Address: 4280 LOWELL ST
 ONTARIO, CA 91761
 County Not reported
 Gepaid: CAR000094052
 TSD EPA ID: Not reported
 Gen County: San Bernardino
 Tsd County: San Bernardino
 Tons: 0.32
 Facility Address 2: Not reported
 Waste Category: Aqueous solution with less than 10% total organic residues
 Disposal Method: Transfer Station
 Contact: --
 Telephone: (909) 930-0088
 Mailing Name: Not reported

MAP FINDINGS

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation Site
 Database(s)
 EDR ID Number
 EPA ID Number

C AND H MANUFACTURING INC (Continued)

1004677172

Mailing Address: 4280 LOWELL ST
 ONTARIO, CA 91761
 County Not reported

**T78
 NNE
 1/2-1
 4153 ft.**

**C & H MFG INC
 4280 LOWELL ST
 ONTARIO, CA 91761**

**San Bern. Co. Permit S105790450
 N/A**

Site 2 of 2 in cluster T

**Relative:
 Higher**

DEHS Permit:
 Facility ID: FA0007841
 Facility Status: ACTIVE
 Permit Category: GENERATOR - 11-25 EMPLOYEES
 Permit Number: PT0013659
 Expiration Date: 9/30/2006
 Region: SAN BERNARDINO

**Actual:
 922 ft.**

Facility ID: FA0007841
 Facility Status: ACTIVE
 Permit Category: HAZMAT HANDLER 11-25 EMPLOYEES (W/GEN PRMT)
 Permit Number: PT0013658
 Expiration Date: 9/30/2006
 Region: SAN BERNARDINO

**S79
 SE
 1/2-1
 4165 ft.**

**CAM GUARD SYSTEMS, INC
 2175 S MILLIKEN AVE
 ONTARIO, CA 91761**

**San Bern. Co. Permit S106911437
 N/A**

Site 2 of 8 in cluster S

**Relative:
 Lower**

DEHS Permit:
 Facility ID: FA0009782
 Facility Status: ACTIVE
 Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
 Permit Number: PT0016636
 Expiration Date: 5/31/2006
 Region: SAN BERNARDINO

**Actual:
 849 ft.**

**S80
 SE
 1/2-1
 4165 ft.**

**MILLIKEN TRUCK
 2175 S MILLIKEN AVE
 ONTARIO, CA 91761**

**San Bern. Co. Permit S106910993
 N/A**

Site 3 of 8 in cluster S

**Relative:
 Lower**

DEHS Permit:
 Facility ID: FA0004735
 Facility Status: INACTIVE
 Permit Category: GENERATOR - 0-10 EMPLOYEES
 Permit Number: PT0002959
 Expiration Date: 8/31/2004
 Region: SAN BERNARDINO

**Actual:
 849 ft.**

Facility ID: FA0004735
 Facility Status: INACTIVE
 Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES (W/GEN PRMT)
 Permit Number: PT0002958
 Expiration Date: 8/31/2004

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

MAP FINDINGS

MILLIKEN TRUCK (Continued)

EDR ID Number
 EPA ID Number

Region: SAN BERNARDINO

S106910993

**U81
 ENE
 1/2-1
 4181 ft.**

**TOYO TIRES
 3855 E JURUPA ST
 ONTARIO, CA 91761**

San Bern. Co. Permit

**S104905332
 N/A**

Site 1 of 2 in cluster U

**Relative:
 Higher**

DEHS Permit:
 Facility ID: FA0006765
 Facility Status: ACTIVE
 Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
 Permit Number: PT0000573
 Expiration Date: 12/31/2006
 Region: SAN BERNARDINO

**S82
 SE
 1/2-1
 4181 ft.**

**AMR DIVISION NATL METAL/STEEL
 2202 S MILLIKEN AVE
 ONTARIO, CA 91761**

**CA FID UST
 SWRCY
 San Bern. Co. Permit
 SWEEPS UST**

**S101591287
 N/A**

Site 4 of 8 in cluster S

**Relative:
 Lower**

CA SWRCY
 Certification Status : O
 Facility Phone Number : (909) 605-0326
 Whether The Facility Is Grandfathered : Not reported
 Convenience Zone Where Facility Located : 0
 Convenience Zone Where Facility Located 2 : 0
 Convenience Zone Where Facility Located 3 : 0
 Convenience Zone Where Facility Located 4 : 0
 Convenience Zone Where Facility Located 5 : 0
 Convenience Zone Where Facility Located 6 : 0
 Convenience Zone Where Facility Located 7 : 0
 Aluminum Beverage Containers Redeemed : AL
 Glass Beverage Containers Redeemed : GL
 Plastic Beverage Containers Redeemed : PL
 Other mat beverage containers redeemed : Not Accepted
 Refillable Beverage Containers Redeemed : Not Accepted
 Date facility became certified : 06/03/04
 Date facility began operating (no date indicates never operational) : 06/16/04
 Date facility ceased operating (no date indicates still operating) : / /

FID:

Facility ID:	36003794	Regulate ID:	00000758
Reg By:	Active Underground Storage Tank Location		
Cortese Code:	Not reported	SIC Code:	Not reported
Status:	Active	Facility Tel:	Not reported
Mail To:	Not reported P O BOX ONTARIO, CA 91761		
Contact:	Not reported	Contact Tel:	Not reported
DUNs No:	Not reported	NPDES No:	Not reported
Creation:	10/22/93	Modified:	00/00/00
EPA ID:	Not reported		
Comments:	Not reported		

DEHS Permit:

Facility ID: FA0009954
 Facility Status: ACTIVE

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

AMR DIVISION NATL METAL/STEEL (Continued)

S101591287

Permit Category: GENERATOR - 0-10 EMPLOYEES
Permit Number: PT0016969
Expiration Date: 8/31/2006
Region: SAN BERNARDINO

Facility ID: FA0009954
Facility Status: ACTIVE
Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES (W/GEN PRMT)
Permit Number: PT0016970
Expiration Date: 8/31/2006
Region: SAN BERNARDINO

SWEEPS:

Status : A
Comp Number : 758
Number : 9
Board Of Equalization : 44-019777
Ref Date : 09-05-91
Act Date : 09-05-91
Created Date : 02-29-88
Tank Status : A
Owner Tank Id : ONE
Swrcb Tank Id : 36-000-000758-000001
Actv Date : 08-22-88
Capacity : 10000
Tank Use : M.V. FUEL
Stg : P
Content : DIESEL
Number Of Tanks : 1

S83
SE
1/2-1
4181 ft.

AMER METAL RECYCLING INC
2202 S MILLIKEN AVE
ONTARIO, CA 91761

UST U003784797
N/A

Site 5 of 8 in cluster S

Relative:
Lower

State UST:
Facility ID: 86009267
Total Tanks: Not reported
Region: STATE
Local Agency: 36000L

Actual:
848 ft.

S84
SE
1/2-1
4181 ft.

AMERICAN METAL REDUCTION CO.
2202 S MILLIKEN AVE
ONTARIO, CA 91761

HIST UST U001569938
N/A

Site 6 of 8 in cluster S

Relative:
Lower

UST HIST:
Facility ID: 758
Total Tanks: 2
Owner Address: 2202 S. MILLIKEN AVE.
ONTARIO, CA 91761
Tank Used for: PRODUCT
Tank Num: 1
Tank Capacity: 00010000
Type of Fuel: DIESEL
Leak Detection: Stock Inventor
Contact Name: VINCENT NOVACK, PRES

Owner Name: AMERICAN METAL REDUCTION CO.,
Region: STATE

Container Num: ONE
Year Installed: 1968
Tank Construction: Not Reported

Telephone: (714) 947-1336

Actual:
848 ft.

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

MAP FINDINGS

AMERICAN METAL REDUCTION CO. (Continued)

EDR ID Number
 EPA ID Number

Database(s)

U001569938

Facility Type:	Other	Other Type:	Not reported
Facility ID:	758	Owner Name:	AMERICAN METAL REDUCTION CO.,
Total Tanks:	2	Region:	STATE
Owner Address:	2202 S. MILLIKEN AVE. ONTARIO, CA 91761		
Tank Used for:	PRODUCT		
Tank Num:	2	Container Num:	TWO
Tank Capacity:	00010000	Year Installed:	1968
Type of Fuel:	REGULAR	Tank Construction:	Not Reported
Leak Detection:	Stock Inventor		
Contact Name:	VINCENT NOVACK, PRES	Telephone:	(714) 947-1336
Facility Type:	Other	Other Type:	Not reported

**S85
 SE
 1/2-1
 4181 ft.**

**AMERICAN METAL RECYCLING INC
 2202 S MILLIKEN AVE
 ONTARIO, CA 91761**

**RCRA-SQG 1000360735
 FINDS CAD982007122
 HAZNET
 FTTS
 NFE
 San Bern. Co. Permit
 CA WDS**

Site 7 of 8 in cluster S

**Relative:
 Lower**

**Actual:
 848 ft.**

FTTS:
 Case Number: Not reported
 Docket Number: PCB-95-0305
 Complaint Issued: 12/20/1994
 Complaint Closed: / /
 Abatement Amount: 0.0000
 Proposed Penalty: 89000.0000
 Final Assessment: 26165.0000
 Final Order Date: 06/21/1996
 Close Date: / /
 Violation: PCB, Failure to Report, Use; Fail to Inspect/Make Recs of Inspect, PCB, Use

FTTS Insp:
 Region: 09
 Inspected Date: 12/11/1991
 Insp Number: 19911211CA015 1
 Violation occurred: No
 Inspector: NSAUER
 Investigation Type: Section 6 PCB State Conducted
 Facility Function: User
 Investig Reason: Not reported
 Legislation Code: TSCA

RCRAInfo:
 Owner: NOT REQUIRED
 (415) 555-1212
 EPA ID: CAD982007122
 Contact: Not reported
 Classification: Small Quantity Generator
 TSDF Activities: Not reported

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

MAP FINDINGS

AMERICAN METAL RECYCLING INC (Continued)

EDR ID Number
 EPA ID Number

Database(s)

1000360735

Violation Status: Violations exist

Regulation Violated:	Not reported
Area of Violation:	GENERATOR-GENERAL REQUIREMENTS
Date Violation Determined:	09/24/1991
Actual Date Achieved Compliance:	02/28/1992
Regulation Violated:	Not reported
Area of Violation:	GENERATOR-RECORDKEEPING REQUIREMENTS
Date Violation Determined:	09/24/1991
Actual Date Achieved Compliance:	02/28/1992
Regulation Violated:	Not reported
Area of Violation:	GENERATOR-OTHER REQUIREMENTS
Date Violation Determined:	09/24/1991
Actual Date Achieved Compliance:	02/28/1992

There are 3 violation record(s) reported at this site:

<u>Evaluation</u>	<u>Area of Violation</u>	<u>Date of Compliance</u>
Compliance Evaluation Inspection	GENERATOR-GENERAL REQUIREMENTS	19920228
	GENERATOR-RECORDKEEPING REQUIREMENTS	19920228
	GENERATOR-OTHER REQUIREMENTS	19920228

FINDS:

Other Pertinent Environmental Activity Identified at Site:
 NATIONAL COMPLIANCE DATABASE SYSTEM
 RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM

NFE:

Facility ID : 36280142
 Dtsc Region Code : 4
 Region Code Definition : CYPRESS
 County Code : 36
 Site Name Under : AMERICAN METALS RECYCLING
 Current Status Date : 01222001
 Current Status Code : PEAR
 Current Status : PRELIMINARY ENDANGERMENT ASSESSMENT REQUIRED
 Lead Agency Code : Not reported
 Lead Agency : N/A
 Site Type Code : Not reported
 Site Type : N/A
 National Priorities List : N
 Tier : Not reported
 Source Of Funding Code : Not reported
 Staff Member : JCULLY
 Supervisor : Not reported
 Sic Code : 28
 Sic Code Definition : MANU - CHEMICALS & ALLIED PRODUCTS
 Site Mitigatn & Brnfls Reuse Prog (SMBR) Code : SA
 SMBR Branch : SO CAL - GLENDALE
 Regional Water Quality Control Board : Not reported
 RWQCB Definition : Not reported
 Site Access Controlled : Not reported
 Listed In Haz Wst & Substncs Sites List (CORTESE) : Not reported
 Date Hazard Ranked : Not reported
 GW Contamination Suspected : Not reported
 # Of Sources Contributing To Contamination : 0
 Lat/Long : 0° 0' 0" / 0° 0' 0"

Map ID
Direction
Distance
Distance (ft.)
Elevation

MAP FINDINGS

Database(s)
EDR ID Number
EPA ID Number

AMERICAN METAL RECYCLING INC (Continued)

1000360735

Direction Lat : Not reported
Direction Long : Not reported
Lat/long Method : Not reported
Entity Lat/long Coordinates Refer To : Not reported
State Assembly Distt Code : 61
State Senate Distt Code : 32
Identifying Code: Not reported
ID Value: Not reported
Other ID Desc: Not reported
Alternate Name(s): AMERICAN METALS RECYCLING
AMERICAN METALS RECYCLING
Address(es) : 2202 SOUTH MILLIKEN AVENUE
ONTARIO, CA 91761
Background Info : National Metal and Steel Corporation used to operate a metal recycling operation at this site. This site was alleged to have discharged heavy metals in an unauthorized manner. Tanks were also degreased and rinsed on site. The facility also accepted transformers and batteries at one time, all of which were unauthorized activities. Soil has been shown to be contaminated with lead having concentration as high as 5,500 mg/kg and copper with concentration as high as 6,100 mg/kg. During November 1999, American Metals Recycling conducted soil sampling for VOC's along the south side of the property, where underground tanks were routinely cut-up. The last sampling event was on December of 1993 with high concentrations of lead and copper. Various VOC's, including 1,2-DCA, 1,3- diclorobenzene, chlorobenzene, methylene chloride, BTEX, and others have been detected in site soils since 1989.
Not reported
Not reported
Not reported
Not reported
to be contaminated with lead having concentrations as high as 6,100 mg/kg and copper w/concentrations as high as 6,100 mg/kg
Dunring November,1999, American Metals Recycling conducted soil
Not reported
Facility Id : Not reported
AWP Activities Code : Not reported
DTSC Site Activity Code : Not reported
Activity Code Def: Not reported
AWP Activity Id : Not reported
Dt Activity Due For Completion : Not reported
Revised Due Date : Not reported
Date Activity Completed : Not reported
Est # Of Person-years To Complete : Not reported
Est. Size Of An Activity Code : Not reported
Site Status When Activity Commitment Made : Not reported
Status Code Definition : Not reported
Cubic Yards Of Solids Removed At Completion : Not reported
Gallons Of Liquid Removed Upon Completion : Not reported
Cubic Yards Of Solids Treated Upon Completion : Not reported
Actvty Deleted Via Commitmnt/Completns Screen : Not reported
Special Program Code: Not reported
Special Program : Not reported
Comments Date : 03131998
Comments : Site screening performed. Recommended further site investiga-

Map ID
Direction
Distance
Distance (ft.)
Elevation

MAP FINDINGS

Database(s)
EDR ID Number
EPA ID Number

AMERICAN METAL RECYCLING INC (Continued)

1000360735

tion under U.S. EPA Cooperative Agreement. Low priority.

HAZNET:

Gepaid: CAD982007122
TSD EPA ID: Not reported
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: 1.12
Facility Address 2: Not reported
Waste Category: Waste oil and mixed oil
Disposal Method: Recycler
Contact: ROBIN ROBINSON/PROGRAM MGR
Telephone: (714) 630-8901
Mailing Name: Not reported
Mailing Address: 2202 S MILLIKEN AVE
ONTARIO, CA 91761 - 2307
County: Not reported

Gepaid: CAD982007122
TSD EPA ID: Not reported
Gen County: San Bernardino
Tsd County: Kings
Tons: 0.40
Facility Address 2: Not reported
Waste Category: Polychlorinated biphenyls and material containing PCB's
Disposal Method: Disposal, Land Fill
Contact: ROBIN ROBINSON/PROGRAM MGR
Telephone: (714) 630-8901
Mailing Name: Not reported
Mailing Address: 2202 S MILLIKEN AVE
ONTARIO, CA 91761 - 2307
County: Not reported

Gepaid: CAD982007122
TSD EPA ID: Not reported
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: 2.76
Facility Address 2: Not reported
Waste Category: Waste oil and mixed oil
Disposal Method: Recycler
Contact: ROBIN ROBINSON/PROGRAM MGR
Telephone: (714) 630-8901
Mailing Name: Not reported
Mailing Address: 2202 S MILLIKEN AVE
ONTARIO, CA 91761 - 2307
County: Not reported

Gepaid: CAD982007122
TSD EPA ID: CAD000088252
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: .7500
Facility Address 2: Not reported
Waste Category: Unspecified oil-containing waste
Disposal Method: Transfer Station
Contact: LEVI ROSU, PRES
Telephone: (000) 000-0000
Mailing Name: Not reported

Map ID
Direction
Distance
Distance (ft.)
Elevation

MAP FINDINGS

AMERICAN METAL RECYCLING INC (Continued)

EDR ID Number
EPA ID Number

Database(s)

1000360735

Mailing Address: 2202 S MILLIKEN AVE
ONTARIO, CA 91761 - 2307
County San Bernardino
Gepaid: CAD982007122
TSD EPA ID: CAD099452708
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: 1.8765
Facility Address 2: Not reported
Waste Category: Waste oil and mixed oil
Disposal Method: Recycler
Contact: LEVI ROSU, PRES
Telephone: (000) 000-0000
Mailing Name: Not reported
Mailing Address: 2202 S MILLIKEN AVE
ONTARIO, CA 91761 - 2307
County San Bernardino

[Click this hyperlink](#) while viewing on your computer to access 4 additional CA HAZNET record(s) in the EDR Site Report.

WDS:

Facility ID: Santa Ana River 361011019
Facility Contact TODD RUBIN Facility Telephone (909) 988-8000
SIC Code: Not reported SIC Code 2: Not reported
Agency Name: AMERICAN METAL RECYCLING, INC.
Agency Address: 2202 S. MILLIKEN AVE.
ONTARIO 91761
Agency Contact: TODD RUBIN Agency Phone: (909) 988-8000
Design Flow: Not reported Baseline Flow: Not reported
Facility Type: Industrial - Facility that treats and/or disposes of liquid or semisolid wastes from any servicing, producing, manufacturing or processing operation of whatever nature, including mining, gravel washing, geothermal operations, air conditioning, ship building and repairing, oil production, storage and disposal operations, water pumping.
Facility Status: Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.
Agency Type: Private
Waste Type: Not reported
Threat to Water: Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality.
Complexity: Category C - Facilities having no waste treatment systems, such as cooling water dischargers or those who must comply through best management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as dairy waste ponds.
Reclamation: Not reported
POTW: Not reported
NPDES Number: CAS000001 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board
Subregion: 8

DEHS Permit:

Facility ID: FA0000891
Facility Status: INACTIVE
Permit Category: GENERATOR - 11-25 EMPLOYEES

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

MAP FINDINGS

AMERICAN METAL RECYCLING INC (Continued)

EDR ID Number
 EPA ID Number

Database(s)

1000360735

Permit Number: PT0002466
 Expiration Date: 7/31/2005
 Region: SAN BERNARDINO

Facility ID: FA0000891
 Facility Status: INACTIVE
 Permit Category: HAZMAT HANDLER 11-25 EMPLOYEES (W/GEN PRMT)
 Permit Number: PT0002467
 Expiration Date: 7/31/2005
 Region: SAN BERNARDINO

Facility ID: FA0000891
 Facility Status: INACTIVE
 Permit Category: ABOVEGROUND PETROLEUM STORAGE (AST) (SPCC)
 Permit Number: PT0002468
 Expiration Date: 7/31/2005
 Region: SAN BERNARDINO

Facility ID: FA0000891
 Facility Status: INACTIVE
 Permit Category: UST OWNERSHIP/OPERATING PERMIT (PER UST)
 Permit Number: PT0011670
 Expiration Date: 7/31/2005
 Region: SAN BERNARDINO

**P86
 NE
 1/2-1
 4190 ft.**

**PETERSON MFG. CO., INC.
 1207 MILLIKEN AVENUE
 ONTARIO, CA 91761**

**HIST UST U001570065
 N/A**

Site 2 of 3 in cluster P

**Relative:
 Higher**

UST HIST:

**Actual:
 918 ft.**

Facility ID: 10754
 Total Tanks: 1
 Owner Address: 2626 E. 25TH STREET
 LOS ANGELES, CA 90058

Tank Used for: PRODUCT
 Tank Num: 1
 Tank Capacity: 00010000
 Type of Fuel: DIESEL
 Leak Detection: Stock Inventor
 Contact Name: THOMAS R. PERRAS
 Facility Type: Other

Owner Name: PETERSON MFG. CO., INC. SUBSID
 Region: STATE

Container Num: 9
 Year Installed: Not reported
 Tank Construction: Not Reported

Telephone: (714) 947-3822
 Other Type: VEHICLE TRANSFER STA

**P87
 NE
 1/2-1
 4190 ft.**

**PETERSON MFG. CO., INC.
 1207 MILLIKEN AVE
 ONTARIO, CA 91761**

**CA FID UST S101618977
 SWEEPS UST N/A**

Site 3 of 3 in cluster P

**Relative:
 Higher**

**Actual:
 918 ft.**

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

MAP FINDINGS

PETERSON MFG. CO., INC. (Continued)

EDR ID Number
 EPA ID Number

Database(s)

S101618977

FID:

Facility ID:	36008538	Regulate ID:	00010754
Reg By:	Active Underground Storage Tank Location		
Cortese Code:	Not reported	SIC Code:	Not reported
Status:	Active	Facility Tel:	Not reported
Mail To:	Not reported		
	2626 E 025TH ST		
	ONTARIO, CA 91761		
Contact:	Not reported	Contact Tel:	Not reported
DUNs No:	Not reported	NPDES No:	Not reported
Creation:	10/22/93	Modified:	00/00/00
EPA ID:	Not reported		
Comments:	Not reported		

SWEEPS:

Status :	A
Comp Number :	10754
Number :	9
Board Of Equalization :	Not reported
Ref Date :	09-05-91
Act Date :	09-05-91
Created Date :	02-29-88
Tank Status :	A
Owner Tank Id :	Not reported
Swrcb Tank Id :	36-000-010754-000001
Actv Date :	08-24-88
Capacity :	10000
Tank Use :	M.V. FUEL
Stg :	P
Content :	DIESEL
Number Of Tanks :	1

U88
ENE
 1/2-1
 4230 ft.

INLAND CONTAINER CORPORATION
N/A
ONTARIO, CA

SLIC S101541276
N/A

Site 2 of 2 in cluster U

Relative:
Higher

CA STATE SLIC :	
Global Id :	SLT8R1404165
Region :	STATE
Assigned Name :	SLICSITE
Lead Agency Contact :	Not reported
Lead Agency :	Not reported
Lead Agency Case Number :	Not reported
Responsible Party :	Not reported
Recent Dtw :	Not reported
Facility Status :	Not reported
Substance Released :	Not reported

Actual:
911 ft.

SLIC Region 8:

Facility ID:	179
Type:	Soil
Region:	8
Facility Status:	Closed
Lead Agency:	Regional Board
Cross Street:	Not reported
Sub Release:	UNKNOWN
Staff:	Kamron Saremi, Tel 909-782-4303, SLIC

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
 EPA ID Number

INLAND CONTAINER CORPORATION (Continued)

S101541276

Location Code: Not reported
 Thomas Bros map: Not reported
 Program: SLIC
 CAO Number: Not reported
 ACL Number: Not reported
 Permit Number: Not reported
 Complexity: E

**S89
 SE
 1/2-1
 4257 ft.**

**ALLEGIANCE HEALTHCARE COR
 4551 E PHILADELPHIA ST
 ONTARIO, CA 91761**

**UST U003785260
 N/A**

Site 8 of 8 in cluster S

**Relative:
 Lower**

State UST:
 Facility ID: 91025961
 Total Tanks: Not reported
 Region: STATE
 Local Agency: 36000L

**Actual:
 849 ft.**

**V90
 NE
 1/2-1
 4366 ft.**

**CALIF. AUTHORITY/RACING F
 1155 S MILLIKEN #E
 ONTARIO, CA 91761**

**San Bern. Co. Permit S106910731
 N/A**

Site 1 of 4 in cluster V

**Relative:
 Higher**

DEHS Permit:
 Facility ID: FA0001718
 Facility Status: INACTIVE
 Permit Category: LIMITED QUANTITY GENERATOR(B)
 Permit Number: PT0007342
 Expiration Date: 9/30/2003
 Region: SAN BERNARDINO

**Actual:
 922 ft.**

**V91
 NE
 1/2-1
 4379 ft.**

**B M W OF NORTH AMERICA
 1150 S MILLIKEN AVE
 ONTARIO, CA 91761**

**RCRA-SQG 1000820124
 FINDS CAD983661505
 HAZNET
 San Bern. Co. Permit**

Site 2 of 4 in cluster V

**Relative:
 Higher**

RCRAInfo:
 Owner: B M W OF NORTH AMERICA
 (714) 391-0800
 EPA ID: CAD983661505
 Contact: DAN AGUILERA
 (714) 391-0800

**Actual:
 922 ft.**

Classification: Small Quantity Generator
 TSDF Activities: Not reported

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
 EPA ID Number

B M W OF NORTH AMERICA (Continued)

1000820124

Violation Status: No violations found

FINDS:

Other Pertinent Environmental Activity Identified at Site:
 RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM

HAZNET:

Gepaid: CAD983661505
 TSD EPA ID: NCD000648451
 Gen County: San Bernardino
 Tsd County: 99
 Tons: .2775
 Facility Address 2: Not reported
 Waste Category: Off-specification, aged, or surplus organics
 Disposal Method: Transfer Station
 Contact: B M W OF NORTH AMERICA
 Telephone: (714) 391-0800
 Mailing Name: Not reported
 Mailing Address: 1150 S MILLIKEN AVE
 ONTARIO, CA 91761 - 7840
 County San Bernardino

DEHS Permit:

Facility ID: FA0001513
 Facility Status: ACTIVE
 Permit Category: HAZMAT HANDLER- 51-99 EMPLOYEES
 Permit Number: PT0006247
 Expiration Date: 10/31/2006
 Region: SAN BERNARDINO

**V92
 NE
 1/2-1
 4424 ft.**

**SIERRA GRAPHIX PRINTING
 845 S MILLIKEN STE H
 ONTARIO, CA 91761**

**HAZNET S104770151
 San Bern. Co. Permit N/A**

Site 3 of 4 in cluster V

**Relative:
 Higher**

HAZNET:

Gepaid: CAL000064098
 TSD EPA ID: Not reported
 Gen County: San Bernardino
 Tsd County: Orange
 Tons: 0.03
 Facility Address 2: Not reported
 Waste Category: Liquids with halogenated organic compounds > 1000 mg/l
 Disposal Method: Transfer Station
 Contact: RONALD HOFFMAN OWNER
 Telephone: (909) 592-9947
 Mailing Name: Not reported
 Mailing Address: 302 S MILLIKEN AVE STE C
 ONTARIO, CA 91761
 County Not reported

**Actual:
 922 ft.**

Map ID
Direction
Distance
Distance (ft.)
Elevation

MAP FINDINGS

Database(s)
EPA ID Number

EDR ID Number
EPA ID Number

SIERRA GRAPHIX PRINTING (Continued)

S104770151

Gepaid: CAL000064098
TSD EPA ID: CAT000613976
Gen County: San Bernardino
Tsd County: San Bernardino
Tons: 0.05
Facility Address 2: Not reported
Waste Category: Liquids with halogenated organic compounds > 1000 mg/l
Disposal Method: Transfer Station
Contact: RONALD HOUNAN OWNER
Telephone: (909) 899-8206
Mailing Name: Not reported
Mailing Address: 320 S MILLIKEN STE H
ONTARIO, CA 91761
County San Bernardino

Gepaid: CAL000064098
TSD EPA ID: CAT000613976
Gen County: San Bernardino
Tsd County: Orange
Tons: .0208
Facility Address 2: Not reported
Waste Category: Liquids with halogenated organic compounds > 1000 mg/l
Disposal Method: Transfer Station
Contact: RONALD HOFFMAN
Telephone: (000) 000-0000
Mailing Name: Not reported
Mailing Address: 845 S MILLIKEN AVE STE C
ONTARIO, CA 91761
County San Bernardino

Gepaid: CAL000064098
TSD EPA ID: Not reported
Gen County: San Bernardino
Tsd County: Orange
Tons: 0.07
Facility Address 2: Not reported
Waste Category: Liquids with halogenated organic compounds > 1000 mg/l
Disposal Method: Transfer Station
Contact: RONALD HOFFMAN OWNER
Telephone: (909) 592-9947
Mailing Name: Not reported
Mailing Address: 302 S MILLIKEN AVE STE C
ONTARIO, CA 91761
County Not reported

DEHS Permit:
Facility ID: FA0006175
Facility Status: ACTIVE
Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES (W/GEN PRMT)
Permit Number: PT0004296
Expiration Date: 5/31/2006
Region: SAN BERNARDINO

Facility ID: FA0006175
Facility Status: ACTIVE
Permit Category: LIMITED QUANTITY GENERATOR(B)
Permit Number: PT0004297
Expiration Date: 5/31/2006

Map ID
Direction
Distance
Distance (ft.)
Elevation

MAP FINDINGS

SIERRA GRAPHIX PRINTING (Continued)

EDR ID Number
EPA ID Number

Database(s)

Region: SAN BERNARDINO

S104770151

W93
SW
1/2-1
4448 ft.

KAWASAKI MOTOR CORP.,USA
2155 S EXCISE AVE STE A
ONTARIO, CA 91761

San Bern. Co. Permit

S105298671
N/A

Site 1 of 2 in cluster W

Relative:
Lower

DEHS Permit:

Facility ID: FA0004229
Facility Status: ACTIVE
Permit Category: SPECIAL GENERATOR(B)
Permit Number: PT0010084
Expiration Date: 4/30/2006
Region: SAN BERNARDINO

Actual:
839 ft.

Facility ID: FA0004229
Facility Status: ACTIVE
Permit Category: SPECIAL HANDLER
Permit Number: PT0010083
Expiration Date: 4/30/2006
Region: SAN BERNARDINO

94
WSW
1/2-1
4449 ft.

MAG INSTRUMENT, INC
1950 STERLING
ONTARIO, CA 91761

San Bern. Co. Permit

S105697944
N/A

Relative:
Lower

DEHS Permit:

Facility ID: FA0007492
Facility Status: ACTIVE
Permit Category: GENERATOR - 0-10 EMPLOYEES
Permit Number: PT0012793
Expiration Date: 9/30/2006
Region: SAN BERNARDINO

Actual:
850 ft.

Facility ID: FA0007492
Facility Status: ACTIVE
Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES (W/GEN PRMT)
Permit Number: PT0012794
Expiration Date: 9/30/2006
Region: SAN BERNARDINO

W95
SW
1/2-1
4449 ft.

DISTRIBUTION ALTERNATIVES
2155 EXCISE AVE
ONTARIO, CA 91761

San Bern. Co. Permit

S106230081
N/A

Site 2 of 2 in cluster W

Relative:
Lower

DEHS Permit:

Facility ID: FA0008241
Facility Status: ACTIVE
Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
Permit Number: PT0014430
Expiration Date: 4/30/2006
Region: SAN BERNARDINO

Actual:
839 ft.

MAP FINDINGS

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

Site

Database(s)

EDR ID Number
 EPA ID Number

96
 WNW
 1/2-1
 4460 ft.

OTTO INTERNATIONAL, INC
3550-A E JURUPA ST
ONTARIO, CA 91761

San Bern. Co. Permit

S106230117
 N/A

Relative:
 Higher

DEHS Permit:

Facility ID: FA0008325
 Facility Status: ACTIVE
 Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
 Permit Number: PT0014560
 Expiration Date: 5/31/2006
 Region: SAN BERNARDINO

Actual:
 889 ft.

V97
 NE
 1/2-1
 4534 ft.

CHEVRON CHEM CO
1106 S MILLIKEN AVE
ONTARIO, CA 91761

RCRA-SQG
 FINDS

1000434351
 CAD000625764

Site 4 of 4 in cluster V

Relative:
 Higher

RCRAInfo:

Owner: NOT REQUIRED
 (415) 555-1212
 EPA ID: CAD000625764
 Contact: Not reported
 Classification: Small Quantity Generator
 TSDf Activities: Not reported
 Violation Status: No violations found

Actual:
 923 ft.

FINDS:

Other Pertinent Environmental Activity Identified at Site:
 RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM

X98
 SE
 1/2-1
 4566 ft.

HAMILTON FIXTURE WEST
5005 E PHILADELPHIA
ONTARIO, CA 91761

RCRA-SQG
 FINDS
 HAZNET
 EMI
 San Bern. Co. Permit

1000593518
 CAD982446643

Site 1 of 2 in cluster X

Relative:
 Lower

RCRAInfo:

Owner: JOHN SCHLEGEL
 (513) 860-0606
 EPA ID: CAD982446643
 Contact: NANCY PAYNE
 (909) 988-7600
 Classification: Small Quantity Generator
 TSDf Activities: Not reported
 Violation Status: No violations found

Actual:
 849 ft.

FINDS:

Other Pertinent Environmental Activity Identified at Site:
 HAZARDOUS WASTE TRACKING SYSTEM-DATAMART
 NATIONAL EMISSIONS INVENTORY
 RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM

Map ID
Direction
Distance
Distance (ft.)
Elevation

MAP FINDINGS

Database(s)
EPA ID Number

EDR ID Number
EPA ID Number

HAMILTON FIXTURE WEST (Continued)

1000593518

HAZNET:

Gepaid: CAD982446643
TSD EPA ID: Not reported
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: 0.45
Facility Address 2: Not reported
Waste Category: Unspecified aqueous solution
Disposal Method: Treatment, Tank
Contact: JOE AVALOS
Telephone: (909) 937-3100
Mailing Name: Not reported
Mailing Address: 5005 E PHILADELPHIA ST
ONTARIO, CA 91761
County: Not reported

Gepaid: CAD982446643
TSD EPA ID: Not reported
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: 0.45
Facility Address 2: Not reported
Waste Category: Unspecified solvent mixture Waste
Disposal Method: Recycler
Contact: JOE AVALOS
Telephone: (909) 937-3100
Mailing Name: Not reported
Mailing Address: 5005 E PHILADELPHIA ST
ONTARIO, CA 91761
County: Not reported

Gepaid: CAD982446643
TSD EPA ID: Not reported
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: Not reported
Facility Address 2: Not reported
Waste Category: Unspecified solvent mixture Waste
Disposal Method: Treatment, Tank
Contact: JOE AVALOS
Telephone: (909) 937-3100
Mailing Name: Not reported
Mailing Address: 5005 E PHILADELPHIA ST
ONTARIO, CA 91761
County: Not reported

Gepaid: CAD982446643
TSD EPA ID: Not reported
Gen County: San Bernardino
Tsd County: Orange
Tons: 0.15
Facility Address 2: Not reported
Waste Category: Other organic solids
Disposal Method: Transfer Station
Contact: JOE AVALOS
Telephone: (909) 937-3100
Mailing Name: Not reported
Mailing Address: 5005 E PHILADELPHIA ST

Map ID
Direction
Distance
Distance (ft.)
Elevation

MAP FINDINGS

HAMILTON FIXTURE WEST (Continued)

EDR ID Number
EPA ID Number

Database(s)

1000593518

County: ONTARIO, CA 91761
Not reported
Gepaid: CAD982446643
TSD EPA ID: Not reported
Gen County: San Bernardino
Tsd County: San Bernardino
Tons: 0.22
Facility Address 2: Not reported
Waste Category: Latex waste
Disposal Method: Transfer Station
Contact: JOE AVALOS
Telephone: (909) 937-3100
Mailing Name: Not reported
Mailing Address: 5005 E PHILADELPHIA ST
ONTARIO, CA 91761
County: Not reported

[Click this hyperlink](#) while viewing on your computer to access 20 additional CA HAZNET record(s) in the EDR Site Report.

DEHS Permit:

Facility ID: FA0003689
Facility Status: ACTIVE
Permit Category: HAZMAT HANDLER 101-250 EMPLOYEES (W/GEN PRMT)
Permit Number: PT0004757
Expiration Date: 8/31/2006
Region: SAN BERNARDINO

Facility ID: FA0003689
Facility Status: ACTIVE
Permit Category: GENERATOR - 101-250 EMPLOYEES
Permit Number: PT0004756
Expiration Date: 8/31/2006
Region: SAN BERNARDINO

EMISSIONS :

Year : 1990
Facility ID : 63396
Air District Code : SC
SIC Code : 2521
Air Basin : SC
Air District Name : SOUTH COAST AQMD
Community Health Air Pollution Info System : Not reported
Consolidated Emission Reporting Rule : Not reported
County Code : 36
County ID : 36
Total Organic Hydrocarbon Gases Tons/Yr: 25
Reactive Organic Gases Tons/Yr: 22
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr : 0
Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

Year : 1993
Facility ID : 63396
Air District Code : SC
SIC Code : 2521

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

HAMILTON FIXTURE WEST (Continued)

1000593518

Air Basin : SC
Air District Name : SOUTH COAST AQMD
Community Health Air Pollution Info System : Not reported
Consolidated Emission Reporting Rule : Not reported
County Code : 36
County ID : 36
Total Organic Hydrocarbon Gases Tons/Yr: 8
Reactive Organic Gases Tons/Yr: 4
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr : 0
Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

Year : 1993
Facility ID : 97558
Air District Code : SC
SIC Code : 2541
Air Basin : SC
Air District Name : SOUTH COAST AQMD
Community Health Air Pollution Info System : Not reported
Consolidated Emission Reporting Rule : Not reported
County Code : 36
County ID : 36
Total Organic Hydrocarbon Gases Tons/Yr: 6
Reactive Organic Gases Tons/Yr: 4
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr : 0
Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

Year : 1995
Facility ID : 63396
Air District Code : SC
SIC Code : 2521
Air Basin : SC
Air District Name : SOUTH COAST AQMD
Community Health Air Pollution Info System : Not reported
Consolidated Emission Reporting Rule : Not reported
County Code : 36
County ID : 36
Total Organic Hydrocarbon Gases Tons/Yr: 8
Reactive Organic Gases Tons/Yr: 4
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr : 0
Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

Year : 1995
Facility ID : 97558
Air District Code : SC
SIC Code : 2541
Air Basin : SC
Air District Name : SOUTH COAST AQMD
Community Health Air Pollution Info System : Not reported

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

HAMILTON FIXTURE WEST (Continued)

1000593518

Consolidated Emission Reporting Rule : Not reported
County Code : 36
County ID : 36
Total Organic Hydrocarbon Gases Tons/Yr: 6
Reactive Organic Gases Tons/Yr: 4
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr : 0
Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

Year : 1996
Facility ID : 97558
Air District Code : SC
SIC Code : 2541
Air Basin : SC
Air District Name : SOUTH COAST AQMD
Community Health Air Pollution Info System : Not reported
Consolidated Emission Reporting Rule : Not reported
County Code : 36
County ID : 36
Total Organic Hydrocarbon Gases Tons/Yr: 13
Reactive Organic Gases Tons/Yr: 9
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr : 0
Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

Year : 1997
Facility ID : 97558
Air District Code : SC
SIC Code : 2541
Air Basin : SC
Air District Name : SOUTH COAST AQMD
Community Health Air Pollution Info System : Not reported
Consolidated Emission Reporting Rule : Not reported
County Code : 36
County ID : 36
Total Organic Hydrocarbon Gases Tons/Yr: 10
Reactive Organic Gases Tons/Yr: 10
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr : 0
Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

Year : 1998
Facility ID : 97558
Air District Code : SC
SIC Code : 2541
Air Basin : SC
Air District Name : SOUTH COAST AQMD
Community Health Air Pollution Info System : Not reported
Consolidated Emission Reporting Rule : Not reported
County Code : 36
County ID : 36

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

HAMILTON FIXTURE WEST (Continued)

1000593518

Total Organic Hydrocarbon Gases Tons/Yr: 10
Reactive Organic Gases Tons/Yr: 10
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr : 0
Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

Year : 1999
Facility ID : 97558
Air District Code : SC
SIC Code : 2541
Air Basin : SC
Air District Name : SOUTH COAST AQMD
Community Health Air Pollution Info System : Not reported
Consolidated Emission Reporting Rule : Not reported
County Code : 36
County ID : 36
Total Organic Hydrocarbon Gases Tons/Yr: 10
Reactive Organic Gases Tons/Yr: 10
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr : 0
Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

Year : 2000
Facility ID : 97558
Air District Code : SC
SIC Code : 2541
Air Basin : SC
Air District Name : SOUTH COAST AQMD
Community Health Air Pollution Info System : Not reported
Consolidated Emission Reporting Rule : Not reported
County Code : 36
County ID : 36
Total Organic Hydrocarbon Gases Tons/Yr: 10
Reactive Organic Gases Tons/Yr: 10
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr : 0
Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

Year : 2001
Facility ID : 97558
Air District Code : SC
SIC Code : 2541
Air Basin : SC
Air District Name : SOUTH COAST AQMD
Community Health Air Pollution Info System : Not reported
Consolidated Emission Reporting Rule : Not reported
County Code : 36
County ID : 36
Total Organic Hydrocarbon Gases Tons/Yr: 2
Reactive Organic Gases Tons/Yr: 2
Carbon Monoxide Emissions Tons/Yr: 0

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
 EPA ID Number

HAMILTON FIXTURE WEST (Continued)

1000593518

NOX - Oxides of Nitrogen Tons/Yr: 0
 SOX - Oxides of Sulphur Tons/Yr: 0
 Particulate Matter Tons/Yr : 0
 Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

Year : 2002
 Facility ID : 97558
 Air District Code : SC
 SIC Code : 2541
 Air Basin : SC
 Air District Name : SOUTH COAST AQMD
 Community Health Air Pollution Info System : Not reported
 Consolidated Emission Reporting Rule : Not reported
 County Code : 36
 County ID : 36
 Total Organic Hydrocarbon Gases Tons/Yr: 1
 Reactive Organic Gases Tons/Yr: 1
 Carbon Monoxide Emissions Tons/Yr: 0
 NOX - Oxides of Nitrogen Tons/Yr: 0
 SOX - Oxides of Sulphur Tons/Yr: 0
 Particulate Matter Tons/Yr : 0
 Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

Year : 2003
 Facility ID : 97558
 Air District Code : SC
 SIC Code : 2541
 Air Basin : SC
 Air District Name : SOUTH COAST AQMD
 Community Health Air Pollution Info System : Not reported
 Consolidated Emission Reporting Rule : Not reported
 County Code : 36
 County ID : 36
 Total Organic Hydrocarbon Gases Tons/Yr: 1
 Reactive Organic Gases Tons/Yr: 1
 Carbon Monoxide Emissions Tons/Yr: 0
 NOX - Oxides of Nitrogen Tons/Yr: 0
 SOX - Oxides of Sulphur Tons/Yr: 0
 Particulate Matter Tons/Yr : 0
 Part. Matter 10 Micrometers and Smaller Tons/Yr : 0

99
NNE
1/2-1
4567 ft.

LEGGETT & PLATT, INC
1050 S DUPONT AVE
ONTARIO, CA 91761

San Bern. Co. Permit S105047633
N/A

Relative:
Higher

DEHS Permit:
 Facility ID: FA0004409
 Facility Status: ACTIVE
 Permit Category: GENERATOR - 0-10 EMPLOYEES
 Permit Number: PT0000448
 Expiration Date: 3/31/2006
 Region: SAN BERNARDINO

Actual:
928 ft.

Facility ID: FA0004409
 Facility Status: ACTIVE
 Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES (W/GEN PRMT)
 Permit Number: PT0000447
 Expiration Date: 3/31/2006

Map ID
Direction
Distance
Distance (ft.)
Elevation

MAP FINDINGS

LEGGETT & PLATT, INC (Continued)

EDR ID Number
EPA ID Number

Database(s)

Region: SAN BERNARDINO

S105047633

X100 3 M WEST COAST DISTRIBUTION CENTER
SE 5151 E PHILADELPHIA ST
1/2-1 ONTARIO, CA 91761
4659 ft.

FINDS 1000136397
HAZNET CAD982403966
RCRA-LQG

Relative:
Lower

Site 2 of 2 in cluster X

RCRAInfo:
Owner: NOT REQUIRED
(415) 555-1212
EPA ID: CAD982403966
Contact: Not reported
Classification: Large Quantity Generator
TSDF Activities: Not reported

Actual:
848 ft.

BIENNIAL REPORTS:

Last Biennial Reporting Year: 2003

Waste	Quantity (Lbs)	Waste	Quantity (Lbs)
D001	34753.00	D002	9752.00
D006	3948.00	D007	3948.00
D008	5885.00	D011	3948.00
D018	20683.00	D035	18665.00
D039	1209.30		

Violation Status: No violations found

FINDS:

Other Pertinent Environmental Activity Identified at Site:
HAZARDOUS WASTE TRACKING SYSTEM-DATAMART
RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM

HAZNET:

Gepaid: CAD982403966
TSD EPA ID: Not reported
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: 0.34
Facility Address 2: Not reported
Waste Category: Alkaline solution without metals (pH > 12.5)
Disposal Method: Not reported
Contact: D P. CARLSON/ADMNT LEAD ENVIRN
Telephone: (651) 778-4094
Mailing Name: Not reported
Mailing Address: BLDG 42-2E-27 PO BOX 33331
SAINT PAUL, MN 55133 - 3331
County: Not reported
Gepaid: CAD982403966
TSD EPA ID: Not reported
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: 10.97
Facility Address 2: Not reported
Waste Category: Off-specification, aged, or surplus inorganics
Disposal Method: Not reported
Contact: D P. CARLSON/ADMNT LEAD ENVIRN
Telephone: (651) 778-4094
Mailing Name: Not reported

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

3 M WEST COAST DISTRIBUTION CENTER (Continued)

1000136397

Mailing Address: BLDG 42-2E-27 PO BOX 33331
SAINT PAUL, MN 55133 - 3331
County Not reported
Gepaid: CAD982403966
TSD EPA ID: Not reported
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: 2.90
Facility Address 2: Not reported
Waste Category: Off-specification, aged, or surplus inorganics
Disposal Method: Transfer Station
Contact: D P. CARLSON/ADMNT LEAD ENVIRN
Telephone: (651) 778-4094
Mailing Name: Not reported
Mailing Address: BLDG 42-2E-27 PO BOX 33331
SAINT PAUL, MN 55133 - 3331
County Not reported
Gepaid: CAD982403966
TSD EPA ID: Not reported
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: 1.20
Facility Address 2: Not reported
Waste Category: Other inorganic solid waste
Disposal Method: Not reported
Contact: D P. CARLSON/ADMNT LEAD ENVIRN
Telephone: (651) 778-4094
Mailing Name: Not reported
Mailing Address: BLDG 42-2E-27 PO BOX 33331
SAINT PAUL, MN 55133 - 3331
County Not reported
Gepaid: CAD982403966
TSD EPA ID: Not reported
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: 0.11
Facility Address 2: Not reported
Waste Category: Other inorganic solid waste
Disposal Method: Transfer Station
Contact: D P. CARLSON/ADMNT LEAD ENVIRN
Telephone: (651) 778-4094
Mailing Name: Not reported
Mailing Address: BLDG 42-2E-27 PO BOX 33331
SAINT PAUL, MN 55133 - 3331
County Not reported

[Click this hyperlink](#) while viewing on your computer to access
19 additional CA HAZNET record(s) in the EDR Site Report.

MAP FINDINGS

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

Site

Database(s)

EDR ID Number
 EPA ID Number

101
NE
1/2-1
4674 ft.

FLEET SERVICES
800 S MILLIKEN AVE UNIT G
ONTARIO, CA 91761

RCRA-SQG **1000819557**
FINDS **CAD983655481**

Relative:
Higher

RCRAInfo:
 Owner: VAN ECK INC
 (714) 630-4213
 EPA ID: CAD983655481
 Contact: DICK VAN ECK
 (714) 630-4213
 Classification: Small Quantity Generator
 TSD Activities: Not reported
 Violation Status: No violations found

Actual:
925 ft.

FINDS:

Other Pertinent Environmental Activity Identified at Site:
 RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM

102
SW
1/2-1
4762 ft.

FLEX SOLUTIONS
3351 E PHILADELPHIA
ONTARIO, CA 91761

San Bern. Co. Permit **S104770888**
N/A

Relative:
Lower

DEHS Permit:
 Facility ID: FA0006575
 Facility Status: ACTIVE
 Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
 Permit Number: PT0009824
 Expiration Date: 12/31/2005
 Region: SAN BERNARDINO
 Facility ID: FA0006575
 Facility Status: ACTIVE
 Permit Category: LIMITED QUANTITY GENERATOR(B)
 Permit Number: PT0012907
 Expiration Date: 12/31/2005
 Region: SAN BERNARDINO

Actual:
836 ft.

Y103
NE
1/2-1
4845 ft.

TOYOTA MOTOR SALES
1425 ROCKEFELLER AVE
ONTARIO, CA 91761

RCRA-SQG **1004678310**
FINDS **CAR000107359**
HAZNET

Relative:
Higher

Site 1 of 3 in cluster Y

RCRAInfo:
 Owner: TOYOTA MOTOR SALES U S A INC
 (310) 468-4094
 EPA ID: CAR000107359
 Contact: JIM BAKER
 (310) 468-4094
 Classification: Small Quantity Generator
 TSD Activities: Not reported

Actual:
917 ft.

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

TOYOTA MOTOR SALES (Continued)

1004678310

Violation Status: No violations found

FINDS:

Other Pertinent Environmental Activity Identified at Site:
HAZARDOUS WASTE TRACKING SYSTEM-DATAMART
RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM

HAZNET:

Gepaid: CAR000107359
TSD EPA ID: Not reported
Gen County: San Bernardino
Tsd County: 99
Tons: 0.00
Facility Address 2: Not reported
Waste Category: Other inorganic solid waste
Disposal Method: Recycler
Contact: JIM BAKER
Telephone: (310) 468-4094
Mailing Name: Not reported
Mailing Address: 19001 WESTERN AVE
 TORRANCE, CA 90509
County Not reported

Gepaid: CAR000107359
TSD EPA ID: Not reported
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: 0.05
Facility Address 2: Not reported
Waste Category: Unspecified solvent mixture Waste
Disposal Method: Recycler
Contact: JIM BAKER
Telephone: (310) 468-4094
Mailing Name: Not reported
Mailing Address: 19001 WESTERN AVE
 TORRANCE, CA 90509
County Not reported

Gepaid: CAR000107359
TSD EPA ID: Not reported
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: 0.07
Facility Address 2: Not reported
Waste Category: Unspecified solvent mixture Waste
Disposal Method: Treatment, Incineration
Contact: JIM BAKER
Telephone: (310) 468-4094
Mailing Name: Not reported
Mailing Address: 19001 WESTERN AVE
 TORRANCE, CA 90509
County Not reported

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
 EPA ID Number

TOYOTA MOTOR SALES (Continued)

1004678310

Gepaid: CAR000107359
 TSD EPA ID: Not reported
 Gen County: San Bernardino
 Tsd County: Los Angeles
 Tons: 0.04
 Facility Address 2: Not reported
 Waste Category: Off-specification, aged, or surplus organics
 Disposal Method: Transfer Station
 Contact: JIM BAKER
 Telephone: (310) 468-4094
 Mailing Name: Not reported
 Mailing Address: 19001 WESTERN AVE
 TORRANCE, CA 90509
 County: Not reported

Gepaid: CAR000107359
 TSD EPA ID: Not reported
 Gen County: San Bernardino
 Tsd County: Los Angeles
 Tons: 1.00
 Facility Address 2: Not reported
 Waste Category: Off-specification, aged, or surplus organics
 Disposal Method: Recycler
 Contact: JIM BAKER
 Telephone: (310) 468-4094
 Mailing Name: Not reported
 Mailing Address: 19001 WESTERN AVE
 TORRANCE, CA 90509
 County: Not reported

[Click this hyperlink](#) while viewing on your computer to access
 13 additional CA HAZNET record(s) in the EDR Site Report.

**104
 NE
 1/2-1
 4910 ft.**

**CONVERSE
 4450 E LOWELL ST
 ONTARIO, CA 91761**

**San Bern. Co. Permit S106446716
 N/A**

**Relative:
 Higher**

DEHS Permit:
 Facility ID: FA0008394
 Facility Status: ACTIVE
 Permit Category: HAZMAT HANDLER 11-25 EMPLOYEES
 Permit Number: PT0014658
 Expiration Date: 5/31/2006
 Region: SAN BERNARDINO

**Actual:
 922 ft.**

**105
 ENE
 1/2-1
 4972 ft.**

**CITRUS MOTORS ONTARIO INC
 1375 WOODRUFF WAY
 ONTARIO, CA 91761**

**HAZNET S104564827
 San Bern. Co. Permit N/A**

**Relative:
 Higher**

**Actual:
 912 ft.**

Map ID
Direction
Distance
Distance (ft.)
Elevation

MAP FINDINGS

Database(s)
EPA ID Number

EDR ID Number
EPA ID Number

CITRUS MOTORS ONTARIO INC (Continued)

S104564827

HAZNET:

Gepaid: CA0000008086
TSD EPA ID: CAD044429835
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: .4587
Facility Address 2: Not reported
Waste Category: Hydrocarbon solvents (benzene, hexane, Stoddard, etc.)
Disposal Method: Recycler
Contact: DENNIS SHANNON
Telephone: (909) 390-0930
Mailing Name: Not reported
Mailing Address: PO BOX 4270
ONTARIO, CA 91761 - 8970
County: San Bernardino

Gepaid: CA0000008086
TSD EPA ID: CAD093459485
Gen County: San Bernardino
Tsd County: Fresno
Tons: .1162
Facility Address 2: Not reported
Waste Category: Unspecified solvent mixture Waste
Disposal Method: Transfer Station
Contact: DENNIS SHANNON
Telephone: (909) 390-0930
Mailing Name: Not reported
Mailing Address: PO BOX 4270
ONTARIO, CA 91761 - 8970
County: San Bernardino

Gepaid: CA0000008086
TSD EPA ID: CAT080013352
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: 9.5284
Facility Address 2: Not reported
Waste Category: Aqueous solution with 10% or more total organic residues
Disposal Method: Recycler
Contact: DENNIS SHANNON
Telephone: (909) 390-0930
Mailing Name: Not reported
Mailing Address: PO BOX 4270
ONTARIO, CA 91761 - 8970
County: San Bernardino

Gepaid: CA0000008086
TSD EPA ID: Not reported
Gen County: San Bernardino
Tsd County: 0
Tons: 0.834
Facility Address 2: Not reported
Waste Category: Aqueous solution with 10% or more total organic residues
Disposal Method: Transfer Station
Contact: DENNIS SHANNON
Telephone: (909) 390-0930
Mailing Name: Not reported
Mailing Address: PO BOX 4270

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
 EPA ID Number

CITRUS MOTORS ONTARIO INC (Continued)

S104564827

ONTARIO, CA 91761 - 8970
 County San Bernardino
 Gepaid: CA0000008086
 TSD EPA ID: CAT000613893
 Gen County: San Bernardino
 Tsd County: Los Angeles
 Tons: 0
 Facility Address 2: Not reported
 Waste Category:
 Disposal Method: Transfer Station
 Contact: DENNIS SHANNON
 Telephone: (909) 390-0930
 Mailing Name: Not reported
 Mailing Address: PO BOX 4270
 ONTARIO, CA 91761 - 8970
 County San Bernardino

[Click this hyperlink](#) while viewing on your computer to access 20 additional CA HAZNET record(s) in the EDR Site Report.

DEHS Permit:

Facility ID: FA0002199
 Facility Status: ACTIVE
 Permit Category: SPECIAL HANDLER
 Permit Number: PT0006727
 Expiration Date: 7/31/2006
 Region: SAN BERNARDINO

Facility ID: FA0002199
 Facility Status: ACTIVE
 Permit Category: SPECIAL GENERATOR(B)
 Permit Number: PT0006728
 Expiration Date: 7/31/2006
 Region: SAN BERNARDINO

Facility ID: FA0002199
 Facility Status: ACTIVE
 Permit Category: ABOVEGROUND PETROLEUM STORAGE (AST) (SPCC)
 Permit Number: PT0016453
 Expiration Date: 7/31/2006
 Region: SAN BERNARDINO

Y106
 NE
 1/2-1
 4975 ft.

CITRUS MOTORS ONTARIO INC
1315 WANAMAKER DR
ONTARIO, CA 91761

RCRA-SQG 1000856944
 FINDS CA0000008086

Site 2 of 3 in cluster Y

Relative:
 Higher

Actual:
 917 ft.

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

MAP FINDINGS

CITRUS MOTORS ONTARIO INC (Continued)

EDR ID Number
 EPA ID Number

Database(s)

1000856944

RCRAInfo:

Owner: DENNIS SHANNON
 (909) 986-6644
 EPA ID: CA000008086
 Contact: TODD HAYES
 (909) 986-6644

Classification: Small Quantity Generator
 TSDF Activities: Not reported

Violation Status: No violations found

FINDS:

Other Pertinent Environmental Activity Identified at Site:
 RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM

**107
 North
 1/2-1
 4983 ft.**

**BIO-LAB, INC
 4051 SANTA ANA ST
 ONTARIO, CA 91761**

**HAZNET
 San Bern. Co. Permit**

**S105697936
 N/A**

**Relative:
 Higher**

HAZNET:

Gepaid: CAP000108886
 TSD EPA ID: Not reported
 Gen County: San Bernardino
 Tsd County: Los Angeles
 Tons: 0.12
 Facility Address 2: Not reported
 Waste Category: Off-specification, aged, or surplus organics
 Disposal Method: Transfer Station
 Contact: Rex Stutchman
 Telephone: (770) 483-2600
 Mailing Name: Not reported
 Mailing Address: 1700 Old Covington Hwy
 Conyers, GA 30012
 County: Not reported

**Actual:
 931 ft.**

Gepaid: CAP000108886
 TSD EPA ID: Not reported
 Gen County: Not reported
 Tsd County: Los Angeles
 Tons: 0.25
 Facility Address 2: Not reported
 Waste Category: Aqueous solution with less than 10% total organic residues
 Disposal Method: Transfer Station
 Contact: Rex Stutchman
 Telephone: (770) 483-2600
 Mailing Name: Not reported
 Mailing Address: 1700 Old Covington Hwy
 Conyers, GA 30012
 County: Not reported

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
 EPA ID Number

BIO-LAB, INC (Continued)

S105697936

Gepaid: CAP000108886
 TSD EPA ID: Not reported
 Gen County: Not reported
 Tsd County: Los Angeles
 Tons: 0.7
 Facility Address 2: Not reported
 Waste Category: Liquids with pH <UN-> 2
 Disposal Method: Transfer Station
 Contact: Rex Stutchman
 Telephone: (770) 483-2600
 Mailing Name: Not reported
 Mailing Address: 1700 Old Covington Hwy
 Conyers, GA 30012
 County: Not reported

DEHS Permit:

Facility ID: FA0007563
 Facility Status: ACTIVE
 Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
 Permit Number: PT0012982
 Expiration Date: 1/31/2006
 Region: SAN BERNARDINO

Facility ID: FA0007563
 Facility Status: ACTIVE
 Permit Category: EPCRA FACILITY
 Permit Number: PT0013198
 Expiration Date: 1/31/2006
 Region: SAN BERNARDINO

**Z108
 NNE
 1/2-1
 4984 ft.**

**WELLA MANUFACTURING
 950 S DUPONT AVE
 ONTARIO, CA 91761**

**FINDS 1004676193
 RCRA-LQG CAR000082065**

Site 1 of 2 in cluster Z

**Relative:
 Higher**

RCRAInfo:
 Owner: WELLA MANUFACTURING OF VA INC
 (800) 334-9186

**Actual:
 933 ft.**

EPA ID: CAR000082065
 Contact: EUGENE HARTMAN
 (909) 937-6464

Classification: Large Quantity Generator
 TSD Activities: Not reported

Violation Status: No violations found

FINDS:

Other Pertinent Environmental Activity Identified at Site:
 HAZARDOUS WASTE TRACKING SYSTEM-DATAMART
 RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM

MAP FINDINGS

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

Site

Database(s)

EDR ID Number
 EPA ID Number

Z109
NNE
1/2-1
4984 ft.

WELLA MFG OF VIRGINIA, INC.
950 S DUPONT AVE
ONTARIO, CA 91761

HAZNET
San Bern. Co. Permit

S105726338
N/A

Site 2 of 2 in cluster Z

Relative:
Higher

HAZNET:
 Gepaid: CAR000082065
 TSD EPA ID: Not reported
 Gen County: San Bernardino
 Tsd County: Los Angeles
 Tons: 0.42
 Facility Address 2: Not reported
 Waste Category: Off-specification, aged, or surplus organics
 Disposal Method: Transfer Station
 Contact: G. HARTMAN-SR DISTRIBUTION MGR
 Telephone: (909) 937-6464
 Mailing Name: Not reported
 Mailing Address: 950 S DUPONT AVE
 ONTARIO, CA 91761
 County: Not reported
 Gepaid: CAR000082065
 TSD EPA ID: Not reported
 Gen County: San Bernardino
 Tsd County: Los Angeles
 Tons: 3.21
 Facility Address 2: Not reported
 Waste Category:
 Disposal Method: Transfer Station
 Contact: G. HARTMAN-SR DISTRIBUTION MGR
 Telephone: (909) 937-6464
 Mailing Name: Not reported
 Mailing Address: 950 S DUPONT AVE
 ONTARIO, CA 91761
 County: Not reported
 DEHS Permit:
 Facility ID: FA0008174
 Facility Status: ACTIVE
 Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
 Permit Number: PT0014331
 Expiration Date: 3/31/2006
 Region: SAN BERNARDINO

110
NE
1/2-1
5115 ft.

ARROW ELECTRONICS
1251 S ROCKEFELLER
ONTARIO, CA 91761

San Bern. Co. Permit

S106446733
N/A

Relative:
Higher

DEHS Permit:
 Facility ID: FA0008449
 Facility Status: ACTIVE
 Permit Category: HAZMAT HANDLER 11-25 EMPLOYEES
 Permit Number: PT0014741
 Expiration Date: 5/31/2006
 Region: SAN BERNARDINO

Actual:
923 ft.

MAP FINDINGS

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

Site

Database(s)

EDR ID Number
 EPA ID Number

AA111 **APPLIED INDUST TECHNOLOGIES-CA, LLC** **San Bern. Co. Permit** **S106910680**
NNE **4189 E SANTA ANA ST**
1/2-1 **ONTARIO, CA 91761**
5121 ft.

Site 1 of 3 in cluster AA

Relative:
Higher

DEHS Permit:
 Facility ID: FA0000999
 Facility Status: INACTIVE
 Permit Category: SPECIAL GENERATOR(B)
 Permit Number: PT0007473
 Expiration Date: 8/31/2003
 Region: SAN BERNARDINO

Actual:
934 ft.

Facility ID: FA0000999
 Facility Status: INACTIVE
 Permit Category: SPECIAL HANDLER
 Permit Number: PT0007474
 Expiration Date: 8/31/2003
 Region: SAN BERNARDINO

Y112 **1309 WANNAMAKER AVE** **RCRA-SQG** **1001022999**
NE **1309 WANAMAKER AVE** **FINDS** **CAR000003509**
1/2-1 **ONTARIO, CA 91762**
5123 ft.

Site 3 of 3 in cluster Y

Relative:
Higher

RCRAInfo:
 Owner: RAJA ASSOC
 (714) 731-7158
 EPA ID: CAR000003509
 Contact: KAY JAACKS
 (714) 731-7158
 Classification: Small Quantity Generator
 TSD Activities: Not reported
 Violation Status: No violations found

Actual:
920 ft.

FINDS:

Other Pertinent Environmental Activity Identified at Site:
 RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM

AA113 **HALSTEEL INC.** **San Bern. Co. Permit** **S105298641**
NNE **4190 E SANTA ANA ST**
1/2-1 **ONTARIO, CA 91761**
5124 ft.

Site 2 of 3 in cluster AA

Relative:
Higher

DEHS Permit:
 Facility ID: FA0003688
 Facility Status: ACTIVE
 Permit Category: SPECIAL GENERATOR(B)
 Permit Number: PT0010064
 Expiration Date: 10/31/2006
 Region: SAN BERNARDINO

Actual:
934 ft.

Facility ID: FA0003688
 Facility Status: ACTIVE
 Permit Category: HAZMAT HANDLER 11-25 EMPLOYEES (W/GEN PRMT)

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

MAP FINDINGS

HALSTEEL INC. (Continued)

EDR ID Number
 EPA ID Number

Database(s)

Permit Number: PT0010065
 Expiration Date: 10/31/2006
 Region: SAN BERNARDINO

S105298641

**AA114
 NNE
 1/2-1
 5132 ft.**

**HALSTEEL INC
 4190 SANTA ANA ST
 ONTARIO, CA 91761**

**San Bern. Co. Permit
 CA WDS**

**S105857403
 N/A**

Site 3 of 3 in cluster AA

**Relative:
 Higher**

WDS:

**Actual:
 934 ft.**

Facility ID: Santa Ana River 361017060
 Facility Contact: ERIC JENSEN
 SIC Code: Not reported
 Agency Name: HALSTEEL INC
 Agency Address: 4190 Santa Ana St
 Ontario 91761 - 1527
 Facility Telephone: (909) 937-1001
 SIC Code 2: Not reported
 Agency Contact: ERIC JENSEN
 Agency Phone: (909) 937-1001
 Design Flow: Not reported
 Baseline Flow: Not reported
 Facility Type: Industrial - Facility that treats and/or disposes of liquid or semisolid wastes from any servicing, producing, manufacturing or processing operation of whatever nature, including mining, gravel washing, geothermal operations, air conditioning, ship building and repairing, oil production, storage and disposal operations, water pumping.
 Facility Status: Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.
 Agency Type: Private
 Waste Type: Not reported
 Threat to Water: Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality.
 Complexity: Category C - Facilities having no waste treatment systems, such as cooling water dischargers or those who must comply through best management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as dairy waste ponds.
 Reclamation: Not reported
 POTW: Not reported
 NPDES Number: CAS000001 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board
 Subregion: 8
 DEHS Permit:
 Facility ID: FA0000902
 Facility Status: INACTIVE
 Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES
 Permit Number: PT0006678
 Expiration Date: 5/31/2003
 Region: SAN BERNARDINO

MAP FINDINGS

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

Site

Database(s)

EDR ID Number
 EPA ID Number

115
WNW
1/2-1
5239 ft.

CALIFORNIA HARDWARE CO
3601 E JURUPA
ONTARIO, CA 91761

RCRA-SQG
FINDS
HAZNET
San Bern. Co. Permit

1001217429
CAR000034280

Relative:
Higher

RCRAInfo:

Owner: AMARILLO HARDWARE CO
 (806) 376-4722

Actual:
885 ft.

EPA ID: CAR000034280

Contact: Not reported

Classification: Small Quantity Generator

TSDF Activities: Not reported

Violation Status: Violations exist

Regulation Violated: Not reported
 Area of Violation: GENERATOR-GENERAL REQUIREMENTS
 Date Violation Determined: 03/13/2002
 Actual Date Achieved Compliance: 04/02/2002
 Enforcement Action: WRITTEN INFORMAL
 Enforcement Action Date: 03/13/2002
 Penalty Type: Not reported

Regulation Violated: Not reported
 Area of Violation: GENERATOR-MANIFEST REQUIREMENTS
 Date Violation Determined: 03/13/2002
 Actual Date Achieved Compliance: 04/02/2002
 Enforcement Action: WRITTEN INFORMAL
 Enforcement Action Date: 03/13/2002
 Penalty Type: Not reported

Regulation Violated: Not reported
 Area of Violation: GENERATOR-PRE-TRANSPORT REQUIREMENTS
 Date Violation Determined: 03/13/2002
 Actual Date Achieved Compliance: 04/02/2002
 Enforcement Action: WRITTEN INFORMAL
 Enforcement Action Date: 03/13/2002
 Penalty Type: Not reported

There are 3 violation record(s) reported at this site:

<u>Evaluation</u>	<u>Area of Violation</u>	<u>Date of Compliance</u>
Compliance Evaluation Inspection	GENERATOR-GENERAL REQUIREMENTS	20020402
	GENERATOR-MANIFEST REQUIREMENTS	20020402
	GENERATOR-PRE-TRANSPORT REQUIREMENTS	20020402

FINDS:

Other Pertinent Environmental Activity Identified at Site:
 HAZARDOUS WASTE TRACKING SYSTEM-DATAMART
 RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

CALIFORNIA HARDWARE CO (Continued)

1001217429

HAZNET:

Gepaid: CAR000034280
TSD EPA ID: CAD050806850
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: .0040
Facility Address 2: Not reported
Waste Category: Alkaline solution without metals (pH > 12.5)
Disposal Method: Transfer Station
Contact: AMARILLO HARDWARE CO
Telephone: (806) 376-4722
Mailing Name: Not reported
Mailing Address: P O BOX 3640
ONTARIO, CA 91764
County San Bernardino

Gepaid: CAR000034280
TSD EPA ID: CAD050806850
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: .0200
Facility Address 2: Not reported
Waste Category: Off-specification, aged, or surplus organics
Disposal Method: Transfer Station
Contact: AMARILLO HARDWARE CO
Telephone: (806) 376-4722
Mailing Name: Not reported
Mailing Address: P O BOX 3640
ONTARIO, CA 91764
County San Bernardino

Gepaid: CAR000034280
TSD EPA ID: CAD050806850
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: .0035
Facility Address 2: Not reported
Waste Category: Liquids with pH <UN-> 2
Disposal Method: Transfer Station
Contact: AMARILLO HARDWARE CO
Telephone: (806) 376-4722
Mailing Name: Not reported
Mailing Address: P O BOX 3640
ONTARIO, CA 91764
County San Bernardino

Gepaid: CAR000034280
TSD EPA ID: CAD050806850
Gen County: San Bernardino
Tsd County: Los Angeles
Tons: 1.2375
Facility Address 2: Not reported
Waste Category: Other organic solids
Disposal Method: Transfer Station
Contact: AMARILLO HARDWARE CO
Telephone: (806) 376-4722
Mailing Name: Not reported
Mailing Address: P O BOX 3640

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

MAP FINDINGS

CALIFORNIA HARDWARE CO (Continued)

EDR ID Number
 EPA ID Number

Database(s)

1001217429

County: ONTARIO, CA 91764
 San Bernardino
 Gepaid: CAR000034280
 TSD EPA ID: CAD050806850
 Gen County: San Bernardino
 Tsd County: Los Angeles
 Tons: .5629
 Facility Address 2: Not reported
 Waste Category: Paint sludge
 Disposal Method: Transfer Station
 Contact: AMARILLO HARDWARE CO
 Telephone: (806) 376-4722
 Mailing Name: Not reported
 Mailing Address: P O BOX 3640
 ONTARIO, CA 91764
 County: San Bernardino

[Click this hyperlink](#) while viewing on your computer to access 32 additional CA HAZNET record(s) in the EDR Site Report.

DEHS Permit:

Facility ID: FA0001727
 Facility Status: ACTIVE
 Permit Category: GENERATOR - 26-50 EMPLOYEES
 Permit Number: PT0009206
 Expiration Date: 9/30/2006
 Region: SAN BERNARDINO

Facility ID: FA0001727
 Facility Status: ACTIVE
 Permit Category: EPCRA FACILITY
 Permit Number: PT0013800
 Expiration Date: 9/30/2005
 Region: SAN BERNARDINO

Facility ID: FA0001727
 Facility Status: ACTIVE
 Permit Category: HAZMAT HANDLER 26-50 EMPLOYEES (W/GEN PRMT)
 Permit Number: PT0009205
 Expiration Date: 9/30/2006
 Region: SAN BERNARDINO

116
 SE
 > 1
 5417 ft.

**EAST COUNTY LINE
 PHILADELPHIA AVE / FLOOD CONTROL BASIN
 MIRA LOMA, CA**

**SWF/LF S102361779
 N/A**

**Relative:
 Lower**

LF:

Facility ID: 33-CR-0033
 Operator Addr: 14310 Frederick Street
 Moreno Valley, CA 92553

Operator: County Of Riverside Waste Mgmt Dept

**Actual:
 841 ft.**

Date: Not reported
 Address: Not reported
 Prep By: Not reported
 DOHS Number: Not reported
 CUP Number: Not reported
 CIWMB: Not reported
 Activity: Solid Waste Disposal Site
 Operator's Status: Closed

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

MAP FINDINGS

EAST COUNTY LINE (Continued)

EDR ID Number
 EPA ID Number

Database(s)

S102361779

Owner:	Walker, Duncan		
Facility Phone 2 :	Not reported		
Owner Address:	Not reported		
		P.O. Box 4998	
		Hilo, HI 96720	
Operator Phone:	(951) 486-3200	Owner Telephone:	Not reported
Regulation Status:	Pre-regulations	Region:	STATE
Location:			Not reported
Parcel Num:			Not reported
Parcel Num 2 :			Not reported
Land Use:			Not reported
Sig. Change Since Last Visit:			Not reported
Site Size:			Not reported
Other Observations:			Not reported
Issue And Observations:			Not reported
Recommendations / Follow Up:			Not reported
Program Type:	Not reported		
Public Notice:	Not reported		
PERMTIER:	Not reported		
Lat/Long:	34.03346 / -117.50686	Permit Date:	Not reported
Accepted Waste:			
Restrictions:			
Status :	Not reported	Swisnumber :	Not reported
Site Type :	Not reported	Aka :	Not reported
Type Of Waste :	Not reported	Disposal Area :	Not reported
SWFP Date :	Not reported	WDR Number :	Not reported
Dates Operation :	Not reported	Closure Approve :	Not reported
Dt Of Field Units :	Not reported	Surface Condition :	Not reported
Lea Date :	Not reported	Reassess Site :	Not reported
Leachate :	Not reported	Emrgncy Response:	Not reported
Landfill Gas :			Not reported
Priority For Site Assessment :			Not reported
Other Recommendation :			Not reported
Explanation:			Not Reported
No Further Action:			Not Reported
Permitted Throughput with Units:			0
Actual Throughput with Units:			Not reported
Actual Capacity with Units:			0
Permitted Capacity with Units:			0
Remaining Capacity with Units:			Not reported
Permitted Total Acreage:			0
Remaining Capacity :			0
Fill Area:	Not reported	Inspec Frequency :	Annual
Landuse Name:	Not reported	GIS Source:	Map
Permit Status:	Not reported	Category:	Disposal
Unit Number:	01	Closure Date:	05/31/65
Closure Type:	Actual	Disposal Acreage:	0
Year Opened:	Not reported	Year Closed:	Not reported
Last Waste Tire Inspection Count :			Not reported
Last Waste Tire Inspection Date:			Not reported
Original Waste Tire Count:			Not reported
Original Waste Tire Count Date:			Not reported
Type Of Refuse:	Not reported		
Avg Depth Of Fill:			Not reported
Addtl Expansion Area:			Not reported
Site Description:			Not Reported

MAP FINDINGS

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

Site

Database(s)

EDR ID Number
 EPA ID Number

117 **MIRA LOMA QUARTERMASTER DEPOT**
SE
> 1 **MIRA LOMA, CA**
7835 ft.

FUDS **1008196534**
 N/A

Relative:
Lower

FUDS:

Actual:
813 ft.

Federal Facility ID: CA9799F5522
 Facility Name: MIRA LOMA QUARTERMASTER DEPOT
 City: MIRA LOMA
 State: CA
 EPA Region: 9
 County: RIVERSIDE
 Congressional District: 44
 US Army District: Los Angeles District (SPL)
 Fiscal Year: 2004
 Phone: 213-452-3921
 Inst ID: Not reported
 CTC: Not reported
 RAB: Not reported
 FUDS History : N/A
 FUDS Description : N/A

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
ONTARIO	1009216584	PACIFIC COLLISION CENTERS	1830 E CEDAR ST	91761	RCRA-SQG
ONTARIO	S105725660	SUNCOAST POST TENSION	1528 CEDAR AVE	91761	HAZNET
ONTARIO	S106446660	JASPER ENGINE EXCHANGE, INC	1477 E CEDAR ST D	91761	San Bern. Co. Permit
ONTARIO	S103968383	HUB CONSTRUCTION	CORNER OF BONDVIEW / PHILADELP	91761	HAZNET
ONTARIO	S106911173	VISUAL IMPACT	801 S DUPONT D	91761	San Bern. Co. Permit
ONTARIO	1009216512	4EVER INKS LLC	1855 E FRANCIS ST	91761	RCRA-SQG
ONTARIO	S106093556	INTERNATIONAL PAPER, INC.	3551 E FRANCIS ST STE B	91761	HAZNET, San Bern. Co. Permit
ONTARIO	S106105350	USF LOGISTICS	1521 E FRANCIS ST B	91761	CA WDS
ONTARIO	S106446669	EXEL, INC.	3551 E FRANCIS STE A	91761	San Bern. Co. Permit
ONTARIO	S107538398		EAST FRANCIS/W OF CAMPUS/400-5		CDL
ONTARIO	S106230090	CROWN LIFT TRUCKS	4250 E GREYSTONE DR	91761	HAZNET, San Bern. Co. Permit
ONTARIO	1005441320	ARCO FACILITY NO 06521	2195 S HAVEN	91761	RCRA-SQG, FINDS, HAZNET
ONTARIO	S103368291	VERIZON CALIFORNIA INC.	995 S HAVEN AVE	91761	San Bern. Co. Permit
ONTARIO	S105481962	CALICO BRANDS INC	2055 S HAVEN AVE	91761	San Bern. Co. Permit
ONTARIO	S103950628	ARCO PRODUCTS COMPANY	4525 EAST JURUPA	91761	HAZNET
ONTARIO	S105697866	ARCO PETROLEUM PROD #5965	4525 E JURUPA	91761	San Bern. Co. Permit
ONTARIO	S105723761	PRESTIGE STATION INC 5965	4524 E JURUPA	91761	HAZNET
ONTARIO	S105726295	UNITED PARCEL SERVICE INC	3121 E JURUPA AVE	91761	HAZNET
ONTARIO	S105726418	KME FIRE APPARATUS	5400 E JURUPA AVE	91761	HAZNET
ONTARIO	S106446690	NATIONAL DISTR CENTERS LP	2900 JURUPA BLVD UNIT O	91761	San Bern. Co. Permit
ONTARIO	S106910866	FRENCH & PACIFIC TRADING	1550 MILLIKEN AVE E	91761	San Bern. Co. Permit
ONTARIO	S106910947	KEM KREST CORPORATION	605 S MILLIKEN RD C / D	91761	San Bern. Co. Permit
ONTARIO	S106911002	MULTISOURCE INC	740 S MILLIKEN AVE 'D'	91761	San Bern. Co. Permit
ONTARIO	S106911408	ADT SECURITY SERVICES	603 S MILLIKEN AVE STE K	91761	San Bern. Co. Permit
ONTARIO	1001967408	AGRICULTURAL PROD INC	5001 E PHILADELPHIA ST	91761	RCRA-SQG, FINDS
ONTARIO	S100930536	BAXTER HEALTHCARE INC.; FLD SLS &	4551 E PHILADELPHIA	91761	HAZNET
ONTARIO	S102039822	AGRICULTURAL PRODUCTS INC	5001 E PHILADELPHIA	91761	HAZNET, San Bern. Co. Permit
ONTARIO	S103676093	CHINO BASIN WATER DISTRICT	915 PHILADELPHIA AVE	91761	HAZNET
ONTARIO	S103949493	DBA CARDINAL HEALTH	4551 E PHILADELPHIA ST	91761	HAZNET
ONTARIO	S107149985	EARTH PROTECTION SERVICES, INC	2821 E PHILADELPHIA ST STE C	91761	HAZNET
ONTARIO	S107528724		14576 PHILADELPHIA STREET, SPA	91761	CDL
ONTARIO	S107530913		2141 PHILADELPHIA STREET, SUIT	91761	CDL
ONTARIO	S105091989	LONGS DRUG STORES/MEC	5721 E SANTA ANA UNIT E	91761	HAZNET
ONTARIO	S106446734	AMEC	4201 SANTA ANA ST STE F	91761	San Bern. Co. Permit
ONTARIO	S106858661	MOTOWORLD RACING	4471 SANTA ANA ST STE G	91761	CLEANERS

EPA Waste Codes Addendum

Code	Description
D001	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.
D002	A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.
D006	CADMIUM
D007	CHROMIUM
D008	LEAD
D011	SILVER
D018	BENZENE
D035	METHYL ETHYL KETONE
D039	TETRACHLOROETHYLENE

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

FEDERAL RECORDS

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 02/24/2006	Source: EPA
Date Data Arrived at EDR: 03/01/2006	Telephone: N/A
Date Made Active in Reports: 03/31/2006	Last EDR Contact: 03/01/2006
Number of Days to Update: 30	Next Scheduled EDR Contact: 05/01/2006
	Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 8
Telephone: 303-312-6774

EPA Region 4
Telephone 404-562-8033

Proposed NPL: Proposed National Priority List Sites

Date of Government Version: 02/24/2006	Source: EPA
Date Data Arrived at EDR: 03/01/2006	Telephone: N/A
Date Made Active in Reports: 03/31/2006	Last EDR Contact: 03/01/2006
Number of Days to Update: 30	Next Scheduled EDR Contact: 05/01/2006
	Data Release Frequency: Quarterly

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 02/24/2006	Source: EPA
Date Data Arrived at EDR: 03/01/2006	Telephone: N/A
Date Made Active in Reports: 03/31/2006	Last EDR Contact: 03/01/2006
Number of Days to Update: 30	Next Scheduled EDR Contact: 05/01/2006
	Data Release Frequency: Quarterly

NPL RECOVERY: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991	Source: EPA
Date Data Arrived at EDR: 02/02/1994	Telephone: 202-564-4267
Date Made Active in Reports: 03/30/1994	Last EDR Contact: 03/06/2006
Number of Days to Update: 56	Next Scheduled EDR Contact: 05/22/2006
	Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 10/24/2005	Source: EPA
Date Data Arrived at EDR: 12/21/2005	Telephone: 703-413-0223
Date Made Active in Reports: 01/30/2006	Last EDR Contact: 03/21/2006
Number of Days to Update: 40	Next Scheduled EDR Contact: 06/19/2006
	Data Release Frequency: Quarterly

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 10/24/2005	Source: EPA
Date Data Arrived at EDR: 12/21/2005	Telephone: 703-413-0223
Date Made Active in Reports: 01/30/2006	Last EDR Contact: 03/21/2006
Number of Days to Update: 40	Next Scheduled EDR Contact: 06/19/2006
	Data Release Frequency: Quarterly

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/29/2005	Source: EPA
Date Data Arrived at EDR: 01/11/2006	Telephone: 800-424-9346
Date Made Active in Reports: 02/21/2006	Last EDR Contact: 03/06/2006
Number of Days to Update: 41	Next Scheduled EDR Contact: 06/05/2006
	Data Release Frequency: Quarterly

RCRA: Resource Conservation and Recovery Act Information

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS). The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 02/21/2006	Source: EPA
Date Data Arrived at EDR: 03/01/2006	Telephone: 800-424-9346
Date Made Active in Reports: 03/31/2006	Last EDR Contact: 03/01/2006
Number of Days to Update: 30	Next Scheduled EDR Contact: 04/24/2006
	Data Release Frequency: Quarterly

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2005	Source: National Response Center, United States Coast Guard
Date Data Arrived at EDR: 01/12/2006	Telephone: 202-260-2342
Date Made Active in Reports: 02/21/2006	Last EDR Contact: 01/12/2006
Number of Days to Update: 40	Next Scheduled EDR Contact: 04/24/2006
	Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/31/2005	Source: U.S. Department of Transportation
Date Data Arrived at EDR: 01/16/2006	Telephone: 202-366-4555
Date Made Active in Reports: 02/21/2006	Last EDR Contact: 01/16/2006
Number of Days to Update: 36	Next Scheduled EDR Contact: 04/17/2006
	Data Release Frequency: Annually

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 08/02/2005	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/12/2005	Telephone: 703-603-8867
Date Made Active in Reports: 10/06/2005	Last EDR Contact: 03/03/2006
Number of Days to Update: 55	Next Scheduled EDR Contact: 07/03/2006
	Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 01/10/2005	Source: Environmental Protection Agency
Date Data Arrived at EDR: 02/11/2005	Telephone: 703-603-8867
Date Made Active in Reports: 04/06/2005	Last EDR Contact: 03/03/2006
Number of Days to Update: 54	Next Scheduled EDR Contact: 07/03/2006
	Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2004	Source: USGS
Date Data Arrived at EDR: 02/08/2005	Telephone: 703-692-8801
Date Made Active in Reports: 08/04/2005	Last EDR Contact: 02/06/2006
Number of Days to Update: 177	Next Scheduled EDR Contact: 05/08/2006
	Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/05/2005	Source: U.S. Army Corps of Engineers
Date Data Arrived at EDR: 01/19/2006	Telephone: 202-528-4285
Date Made Active in Reports: 02/21/2006	Last EDR Contact: 04/03/2006
Number of Days to Update: 33	Next Scheduled EDR Contact: 07/03/2006
	Data Release Frequency: Varies

US BROWNFIELDS: A Listing of Brownfields Sites

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 11/29/2005	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/05/2005	Telephone: 202-566-2777
Date Made Active in Reports: 01/30/2006	Last EDR Contact: 03/13/2006
Number of Days to Update: 56	Next Scheduled EDR Contact: 06/12/2006
	Data Release Frequency: Semi-Annually

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/14/2004	Source: Department of Justice, Consent Decree Library
Date Data Arrived at EDR: 02/15/2005	Telephone: Varies
Date Made Active in Reports: 04/25/2005	Last EDR Contact: 03/13/2006
Number of Days to Update: 69	Next Scheduled EDR Contact: 04/24/2006
	Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 12/07/2005	Source: EPA
Date Data Arrived at EDR: 01/06/2006	Telephone: 703-416-0223
Date Made Active in Reports: 02/21/2006	Last EDR Contact: 04/05/2006
Number of Days to Update: 46	Next Scheduled EDR Contact: 07/03/2006
	Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 11/04/2005	Source: Department of Energy
Date Data Arrived at EDR: 11/28/2005	Telephone: 505-845-0011
Date Made Active in Reports: 01/30/2006	Last EDR Contact: 03/20/2006
Number of Days to Update: 63	Next Scheduled EDR Contact: 06/19/2006
	Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/09/2004	Telephone: 800-424-9346
Date Made Active in Reports: 09/17/2004	Last EDR Contact: 06/09/2004
Number of Days to Update: 39	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2003	Source: EPA
Date Data Arrived at EDR: 07/13/2005	Telephone: 202-566-0250
Date Made Active in Reports: 08/17/2005	Last EDR Contact: 03/21/2006
Number of Days to Update: 35	Next Scheduled EDR Contact: 06/19/2006
	Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2002	Source: EPA
Date Data Arrived at EDR: 04/27/2004	Telephone: 202-260-5521
Date Made Active in Reports: 05/21/2004	Last EDR Contact: 03/06/2006
Number of Days to Update: 24	Next Scheduled EDR Contact: 04/17/2006
	Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 01/17/2006	Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Date Data Arrived at EDR: 01/24/2006	Telephone: 202-566-1667
Date Made Active in Reports: 02/27/2006	Last EDR Contact: 03/20/2006
Number of Days to Update: 34	Next Scheduled EDR Contact: 06/19/2006
	Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

Date of Government Version: 01/17/2006	Source: EPA
Date Data Arrived at EDR: 01/24/2006	Telephone: 202-566-1667
Date Made Active in Reports: 02/27/2006	Last EDR Contact: 03/20/2006
Number of Days to Update: 34	Next Scheduled EDR Contact: 06/19/2006
	Data Release Frequency: Quarterly

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2003	Source: EPA
Date Data Arrived at EDR: 01/03/2005	Telephone: 202-564-4203
Date Made Active in Reports: 01/25/2005	Last EDR Contact: 03/06/2006
Number of Days to Update: 22	Next Scheduled EDR Contact: 07/17/2006
	Data Release Frequency: Annually

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 12/27/2005	Source: EPA
Date Data Arrived at EDR: 02/08/2006	Telephone: 202-566-0500
Date Made Active in Reports: 02/27/2006	Last EDR Contact: 02/08/2006
Number of Days to Update: 19	Next Scheduled EDR Contact: 05/08/2006
	Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 02/10/2006	Source: Nuclear Regulatory Commission
Date Data Arrived at EDR: 02/16/2006	Telephone: 301-415-7169
Date Made Active in Reports: 03/31/2006	Last EDR Contact: 04/03/2006
Number of Days to Update: 43	Next Scheduled EDR Contact: 07/03/2006
	Data Release Frequency: Quarterly

MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 11/08/2005	Source: Department of Labor, Mine Safety and Health Administration
Date Data Arrived at EDR: 12/27/2005	Telephone: 303-231-5959
Date Made Active in Reports: 01/30/2006	Last EDR Contact: 03/29/2006
Number of Days to Update: 34	Next Scheduled EDR Contact: 06/26/2006
	Data Release Frequency: Semi-Annually

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 01/09/2006	Source: EPA
Date Data Arrived at EDR: 01/16/2006	Telephone: N/A
Date Made Active in Reports: 02/21/2006	Last EDR Contact: 04/03/2006
Number of Days to Update: 36	Next Scheduled EDR Contact: 07/03/2006
	Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995	Source: EPA
Date Data Arrived at EDR: 07/03/1995	Telephone: 202-564-4104
Date Made Active in Reports: 08/07/1995	Last EDR Contact: 03/06/2006
Number of Days to Update: 35	Next Scheduled EDR Contact: 06/05/2006
	Data Release Frequency: No Update Planned

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2003	Source: EPA/NTIS
Date Data Arrived at EDR: 06/17/2005	Telephone: 800-424-9346
Date Made Active in Reports: 08/04/2005	Last EDR Contact: 03/17/2006
Number of Days to Update: 48	Next Scheduled EDR Contact: 06/12/2006
	Data Release Frequency: Biennially

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

STATE AND LOCAL RECORDS

AWP: Annual Workplan Sites

Known Hazardous Waste Sites. California DTSC's Annual Workplan (AWP), formerly BEP, identifies known hazardous substance sites targeted for cleanup.

Date of Government Version: 08/08/2005

Date Data Arrived at EDR: 08/29/2005

Date Made Active in Reports: 09/21/2005

Number of Days to Update: 23

Source: California Environmental Protection Agency

Telephone: 916-323-3400

Last EDR Contact: 04/05/2006

Next Scheduled EDR Contact: 05/29/2006

Data Release Frequency: Annually

CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database.

Date of Government Version: 08/08/2005

Date Data Arrived at EDR: 08/29/2005

Date Made Active in Reports: 09/21/2005

Number of Days to Update: 23

Source: Department of Toxic Substance Control

Telephone: 916-323-3400

Last EDR Contact: 04/05/2006

Next Scheduled EDR Contact: 05/29/2006

Data Release Frequency: Quarterly

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989

Date Data Arrived at EDR: 07/27/1994

Date Made Active in Reports: 08/02/1994

Number of Days to Update: 6

Source: Department of Health Services

Telephone: 916-255-2118

Last EDR Contact: 05/31/1994

Next Scheduled EDR Contact: N/A

Data Release Frequency: No Update Planned

NFA: No Further Action Determination

This category contains properties at which DTSC has made a clear determination that the property does not pose a problem to the environment or to public health.

Date of Government Version: 08/08/2005

Date Data Arrived at EDR: 08/29/2005

Date Made Active in Reports: 10/06/2005

Number of Days to Update: 38

Source: Department of Toxic Substances Control

Telephone: 916-323-3400

Last EDR Contact: 04/05/2006

Next Scheduled EDR Contact: 05/29/2006

Data Release Frequency: Quarterly

NFE: Properties Needing Further Evaluation

This category contains properties that are suspected of being contaminated. These are unconfirmed contaminated properties that need to be assessed using the PEA process. PEA in Progress indicates properties where DTSC is currently conducting a PEA. PEA Required indicates properties where DTSC has determined a PEA is required, but not currently underway.

Date of Government Version: 08/08/2005

Date Data Arrived at EDR: 08/29/2005

Date Made Active in Reports: 09/21/2005

Number of Days to Update: 23

Source: Department of Toxic Substances Control

Telephone: 916-323-3400

Last EDR Contact: 04/05/2006

Next Scheduled EDR Contact: 05/29/2006

Data Release Frequency: Quarterly

REF: Unconfirmed Properties Referred to Another Agency

This category contains properties where contamination has not been confirmed and which were determined as not requiring direct DTSC Site Mitigation Program action or oversight. Accordingly, these sites have been referred to another state or local regulatory agency.

Date of Government Version: 08/08/2005

Date Data Arrived at EDR: 08/29/2005

Date Made Active in Reports: 10/06/2005

Number of Days to Update: 38

Source: Department of Toxic Substances Control

Telephone: 916-323-3400

Last EDR Contact: 04/05/2006

Next Scheduled EDR Contact: 05/29/2006

Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 08/08/2005	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 08/29/2005	Telephone: 916-323-3400
Date Made Active in Reports: 10/06/2005	Last EDR Contact: 04/05/2006
Number of Days to Update: 38	Next Scheduled EDR Contact: 05/29/2006
	Data Release Frequency: Quarterly

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995	Source: State Water Resources Control Board
Date Data Arrived at EDR: 08/30/1995	Telephone: 916-227-4364
Date Made Active in Reports: 09/26/1995	Last EDR Contact: 01/30/2006
Number of Days to Update: 27	Next Scheduled EDR Contact: 05/01/2006
	Data Release Frequency: No Update Planned

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inventory of solid waste disposal facilities or landfills. These may be active or inactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 12/08/2005	Source: Integrated Waste Management Board
Date Data Arrived at EDR: 12/13/2005	Telephone: 916-341-6320
Date Made Active in Reports: 01/19/2006	Last EDR Contact: 03/15/2006
Number of Days to Update: 37	Next Scheduled EDR Contact: 06/12/2006
	Data Release Frequency: Quarterly

CA WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 12/19/2005	Source: State Water Resources Control Board
Date Data Arrived at EDR: 12/21/2005	Telephone: 916-341-5227
Date Made Active in Reports: 01/19/2006	Last EDR Contact: 03/21/2006
Number of Days to Update: 29	Next Scheduled EDR Contact: 06/19/2006
	Data Release Frequency: Quarterly

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000	Source: State Water Resources Control Board
Date Data Arrived at EDR: 04/10/2000	Telephone: 916-227-4448
Date Made Active in Reports: 05/10/2000	Last EDR Contact: 03/06/2006
Number of Days to Update: 30	Next Scheduled EDR Contact: 06/05/2006
	Data Release Frequency: Quarterly

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites). This listing is no longer updated by the state agency.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 05/29/2001
Date Made Active in Reports: 07/26/2001
Number of Days to Update: 58

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-9100
Last EDR Contact: 02/06/2006
Next Scheduled EDR Contact: 04/24/2006
Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 01/05/2006
Date Data Arrived at EDR: 01/09/2006
Date Made Active in Reports: 01/31/2006
Number of Days to Update: 22

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 01/09/2006
Next Scheduled EDR Contact: 04/10/2006
Data Release Frequency: Quarterly

LUST: Geotracker's Leaking Underground Fuel Tank Report

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 01/09/2006
Date Data Arrived at EDR: 01/09/2006
Date Made Active in Reports: 01/31/2006
Number of Days to Update: 22

Source: State Water Resources Control Board
Telephone: 916-341-5752
Last EDR Contact: 01/09/2006
Next Scheduled EDR Contact: 04/10/2006
Data Release Frequency: Quarterly

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 03/28/2006
Next Scheduled EDR Contact: 06/26/2006
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 916-542-5424
Last EDR Contact: 03/06/2006
Next Scheduled EDR Contact: 06/05/2006
Data Release Frequency: No Update Planned

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 01/16/2006
Next Scheduled EDR Contact: 04/17/2006
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-4130
Last EDR Contact: 02/06/2006
Next Scheduled EDR Contact: 05/08/2006
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

LUST REG 7: Leaking Underground Storage Tank Case Listing

Date of Government Version: 02/26/2004	Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Date Data Arrived at EDR: 02/26/2004	Telephone: 760-346-7491
Date Made Active in Reports: 03/24/2004	Last EDR Contact: 12/27/2005
Number of Days to Update: 27	Next Scheduled EDR Contact: 03/27/2006
	Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Date of Government Version: 06/07/2005	Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Date Data Arrived at EDR: 06/07/2005	Telephone: 760-346-7491
Date Made Active in Reports: 06/29/2005	Last EDR Contact: 04/03/2006
Number of Days to Update: 22	Next Scheduled EDR Contact: 07/03/2006
	Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database

Date of Government Version: 01/15/2006	Source: California Regional Water Quality Control Board Central Valley Region (5)
Date Data Arrived at EDR: 01/16/2006	Telephone: 916-464-3291
Date Made Active in Reports: 02/21/2006	Last EDR Contact: 01/16/2006
Number of Days to Update: 36	Next Scheduled EDR Contact: 04/03/2006
	Data Release Frequency: Quarterly

LUST REG 3: Leaking Underground Storage Tank Database

Date of Government Version: 05/19/2003	Source: California Regional Water Quality Control Board Central Coast Region (3)
Date Data Arrived at EDR: 05/19/2003	Telephone: 805-549-3147
Date Made Active in Reports: 06/02/2003	Last EDR Contact: 02/13/2006
Number of Days to Update: 14	Next Scheduled EDR Contact: 05/15/2006
	Data Release Frequency: No Update Planned

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001	Source: California Regional Water Quality Control Board North Coast (1)
Date Data Arrived at EDR: 02/28/2001	Telephone: 707-576-2220
Date Made Active in Reports: 03/29/2001	Last EDR Contact: 02/20/2006
Number of Days to Update: 29	Next Scheduled EDR Contact: 05/22/2006
	Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List

Date of Government Version: 09/30/2004	Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Date Data Arrived at EDR: 10/20/2004	Telephone: 510-286-0457
Date Made Active in Reports: 11/19/2004	Last EDR Contact: 01/09/2006
Number of Days to Update: 30	Next Scheduled EDR Contact: 04/10/2006
	Data Release Frequency: Quarterly

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994	Source: California Environmental Protection Agency
Date Data Arrived at EDR: 09/05/1995	Telephone: 916-341-5851
Date Made Active in Reports: 09/29/1995	Last EDR Contact: 12/28/1998
Number of Days to Update: 24	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SLIC: Statewide SLIC Cases

The Spills, Leaks, Investigations, and Cleanups (SLIC) listings includes unauthorized discharges from spills and leaks, other than from underground storage tanks or other regulated sites.

Date of Government Version: 01/09/2006	Source: State Water Resources Control Board
Date Data Arrived at EDR: 01/09/2006	Telephone: 916-341-5752
Date Made Active in Reports: 01/31/2006	Last EDR Contact: 01/09/2006
Number of Days to Update: 22	Next Scheduled EDR Contact: 04/10/2006
	Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

Date of Government Version: 04/03/2003	Source: California Regional Water Quality Control Board, North Coast Region (1)
Date Data Arrived at EDR: 04/07/2003	Telephone: 707-576-2220
Date Made Active in Reports: 04/25/2003	Last EDR Contact: 02/20/2006
Number of Days to Update: 18	Next Scheduled EDR Contact: 05/22/2006
	Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Any contaminated site that impacts groundwater or has the potential to impact groundwater.

Date of Government Version: 09/30/2004	Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Date Data Arrived at EDR: 10/20/2004	Telephone: 510-286-0457
Date Made Active in Reports: 11/19/2004	Last EDR Contact: 01/09/2006
Number of Days to Update: 30	Next Scheduled EDR Contact: 04/10/2006
	Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Any contaminated site that impacts groundwater or has the potential to impact groundwater.

Date of Government Version: 02/17/2006	Source: California Regional Water Quality Control Board Central Coast Region (3)
Date Data Arrived at EDR: 02/17/2006	Telephone: 805-549-3147
Date Made Active in Reports: 03/13/2006	Last EDR Contact: 02/13/2006
Number of Days to Update: 24	Next Scheduled EDR Contact: 05/15/2006
	Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Any contaminated site that impacts groundwater or has the potential to impact groundwater.

Date of Government Version: 11/17/2004	Source: Region Water Quality Control Board Los Angeles Region (4)
Date Data Arrived at EDR: 11/18/2004	Telephone: 213-576-6600
Date Made Active in Reports: 01/04/2005	Last EDR Contact: 01/23/2006
Number of Days to Update: 47	Next Scheduled EDR Contact: 04/24/2006
	Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Unregulated sites that impact groundwater or have the potential to impact groundwater.

Date of Government Version: 04/01/2005	Source: Regional Water Quality Control Board Central Valley Region (5)
Date Data Arrived at EDR: 04/05/2005	Telephone: 916-464-3291
Date Made Active in Reports: 04/21/2005	Last EDR Contact: 04/05/2006
Number of Days to Update: 16	Next Scheduled EDR Contact: 07/03/2006
	Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Date of Government Version: 05/24/2005	Source: Regional Water Quality Control Board, Victorville Branch
Date Data Arrived at EDR: 05/25/2005	Telephone: 619-241-6583
Date Made Active in Reports: 06/16/2005	Last EDR Contact: 04/03/2006
Number of Days to Update: 22	Next Scheduled EDR Contact: 07/03/2006
	Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SLIC REG 6L: SLIC Sites

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 03/06/2006
Next Scheduled EDR Contact: 06/05/2006
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 03/06/2006
Next Scheduled EDR Contact: 05/22/2006
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 01/17/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 35

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 04/05/2006
Next Scheduled EDR Contact: 07/03/2006
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

Date of Government Version: 12/14/2005
Date Data Arrived at EDR: 12/14/2005
Date Made Active in Reports: 01/19/2006
Number of Days to Update: 36

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 03/13/2006
Next Scheduled EDR Contact: 05/29/2006
Data Release Frequency: Annually

UST: Active UST Facilities

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 01/09/2006
Date Data Arrived at EDR: 01/09/2006
Date Made Active in Reports: 01/31/2006
Number of Days to Update: 22

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 01/09/2006
Next Scheduled EDR Contact: 04/10/2006
Data Release Frequency: Semi-Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

AST: Aboveground Petroleum Storage Tank Facilities

Registered Aboveground Storage Tanks.

Date of Government Version: 01/30/2006
Date Data Arrived at EDR: 01/30/2006
Date Made Active in Reports: 02/17/2006
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5712
Last EDR Contact: 01/30/2006
Next Scheduled EDR Contact: 05/01/2006
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1980's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994	Source: State Water Resources Control Board
Date Data Arrived at EDR: 07/07/2005	Telephone: N/A
Date Made Active in Reports: 08/11/2005	Last EDR Contact: 06/03/2005
Number of Days to Update: 35	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/31/2004	Source: Office of Emergency Services
Date Data Arrived at EDR: 11/30/2005	Telephone: 916-845-8400
Date Made Active in Reports: 01/19/2006	Last EDR Contact: 02/20/2006
Number of Days to Update: 50	Next Scheduled EDR Contact: 05/22/2006
	Data Release Frequency: Varies

NOTIFY 65: Proposition 65 Records

Proposition 65 Notification Records. NOTIFY 65 contains facility notifications about any release which could impact drinking water and thereby expose the public to a potential health risk.

Date of Government Version: 10/21/1993	Source: State Water Resources Control Board
Date Data Arrived at EDR: 11/01/1993	Telephone: 916-445-3846
Date Made Active in Reports: 11/19/1993	Last EDR Contact: 01/16/2006
Number of Days to Update: 18	Next Scheduled EDR Contact: 04/17/2006
	Data Release Frequency: No Update Planned

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 01/03/2006	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 01/04/2006	Telephone: 916-323-3400
Date Made Active in Reports: 01/19/2006	Last EDR Contact: 04/05/2006
Number of Days to Update: 15	Next Scheduled EDR Contact: 07/03/2006
	Data Release Frequency: Semi-Annually

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 08/08/2005	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 08/29/2005	Telephone: 916-323-3400
Date Made Active in Reports: 09/21/2005	Last EDR Contact: 04/05/2006
Number of Days to Update: 23	Next Scheduled EDR Contact: 05/29/2006
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 04/18/2005
Date Data Arrived at EDR: 04/18/2005
Date Made Active in Reports: 05/06/2005
Number of Days to Update: 18

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 04/03/2006
Next Scheduled EDR Contact: 07/03/2006
Data Release Frequency: Annually

WIP: Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 01/23/2006
Date Data Arrived at EDR: 01/24/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 28

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 01/23/2006
Next Scheduled EDR Contact: 04/24/2006
Data Release Frequency: Varies

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/10/2006
Date Made Active in Reports: 03/13/2006
Number of Days to Update: 31

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 02/08/2006
Next Scheduled EDR Contact: 04/24/2006
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method.

Date of Government Version: 12/31/2003
Date Data Arrived at EDR: 10/11/2005
Date Made Active in Reports: 10/31/2005
Number of Days to Update: 20

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 02/24/2006
Next Scheduled EDR Contact: 05/08/2006
Data Release Frequency: Annually

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2003
Date Data Arrived at EDR: 07/19/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 23

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 01/16/2006
Next Scheduled EDR Contact: 04/17/2006
Data Release Frequency: Varies

TRIBAL RECORDS

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 02/08/2005
Date Made Active in Reports: 08/04/2005
Number of Days to Update: 177

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 02/06/2006
Next Scheduled EDR Contact: 05/08/2006
Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN LUST: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 09/07/2005	Source: EPA Region 10
Date Data Arrived at EDR: 09/08/2005	Telephone: 206-553-2857
Date Made Active in Reports: 10/31/2005	Last EDR Contact: 01/10/2006
Number of Days to Update: 53	Next Scheduled EDR Contact: 05/22/2006
	Data Release Frequency: Varies

INDIAN LUST: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 12/01/2005	Source: Environmental Protection Agency
Date Data Arrived at EDR: 01/03/2006	Telephone: 415-972-3372
Date Made Active in Reports: 01/19/2006	Last EDR Contact: 02/20/2006
Number of Days to Update: 16	Next Scheduled EDR Contact: 05/22/2006
	Data Release Frequency: Varies

INDIAN UST: Underground Storage Tanks on Indian Land

Date of Government Version: 11/08/2005	Source: EPA Region 9
Date Data Arrived at EDR: 11/09/2005	Telephone: 415-972-3368
Date Made Active in Reports: 12/12/2005	Last EDR Contact: 02/20/2006
Number of Days to Update: 33	Next Scheduled EDR Contact: 05/22/2006
	Data Release Frequency: Varies

EDR PROPRIETARY RECORDS

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A	Source: EDR, Inc.
Date Data Arrived at EDR: N/A	Telephone: N/A
Date Made Active in Reports: N/A	Last EDR Contact: N/A
Number of Days to Update: N/A	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

EDR Historical Auto Stations: EDR Proprietary Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc.

Date of Government Version: N/A	Source: EDR, Inc.
Date Data Arrived at EDR: N/A	Telephone: N/A
Date Made Active in Reports: N/A	Last EDR Contact: N/A
Number of Days to Update: N/A	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Varies

EDR Historical Cleaners: EDR Proprietary Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 02/16/2006
Date Data Arrived at EDR: 02/17/2006
Date Made Active in Reports: 03/13/2006
Number of Days to Update: 24

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 01/23/2006
Next Scheduled EDR Contact: 04/24/2006
Data Release Frequency: Semi-Annually

Underground Tanks

Date of Government Version: 02/27/2006
Date Data Arrived at EDR: 02/28/2006
Date Made Active in Reports: 03/23/2006
Number of Days to Update: 23

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 02/27/2006
Next Scheduled EDR Contact: 04/24/2006
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

Site List

List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/09/2005
Date Made Active in Reports: 01/19/2006
Number of Days to Update: 41

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 03/13/2006
Next Scheduled EDR Contact: 05/29/2006
Data Release Frequency: Semi-Annually

FRESNO COUNTY:

CUPA Resources List

Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 01/18/2006
Date Data Arrived at EDR: 01/18/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 34

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 01/18/2006
Next Scheduled EDR Contact: 05/08/2006
Data Release Frequency: Semi-Annually

KERN COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Underground Storage Tank Sites & Tank Listing

Kern County Sites and Tanks Listing.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/09/2005
Date Made Active in Reports: 01/11/2006
Number of Days to Update: 33

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 03/27/2006
Next Scheduled EDR Contact: 06/05/2006
Data Release Frequency: Quarterly

LOS ANGELES COUNTY:

San Gabriel Valley Areas of Concern

San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 07/07/1999
Date Made Active in Reports: N/A
Number of Days to Update: 0

Source: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 07/06/1999
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

City of El Segundo Underground Storage Tank

Date of Government Version: 02/27/2006
Date Data Arrived at EDR: 02/28/2006
Date Made Active in Reports: 03/23/2006
Number of Days to Update: 23

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 02/27/2006
Next Scheduled EDR Contact: 05/15/2006
Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank

Date of Government Version: 03/28/2003
Date Data Arrived at EDR: 10/23/2003
Date Made Active in Reports: 11/26/2003
Number of Days to Update: 34

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 02/24/2006
Next Scheduled EDR Contact: 05/22/2006
Data Release Frequency: Annually

City of Torrance Underground Storage Tank

Date of Government Version: 02/27/2006
Date Data Arrived at EDR: 02/28/2006
Date Made Active in Reports: 03/23/2006
Number of Days to Update: 23

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 02/27/2006
Next Scheduled EDR Contact: 05/15/2006
Data Release Frequency: Semi-Annually

HMS: Street Number List

Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 10/31/2005
Date Data Arrived at EDR: 01/30/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 22

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 02/13/2006
Next Scheduled EDR Contact: 05/15/2006
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities

Date of Government Version: 02/14/2006
Date Data Arrived at EDR: 02/28/2006
Date Made Active in Reports: 03/13/2006
Number of Days to Update: 13

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 02/15/2006
Next Scheduled EDR Contact: 05/15/2006
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

City of Los Angeles Landfills

Date of Government Version: 03/01/2005
Date Data Arrived at EDR: 03/18/2005
Date Made Active in Reports: 04/08/2005
Number of Days to Update: 21

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 03/15/2006
Next Scheduled EDR Contact: 06/12/2006
Data Release Frequency: Varies

Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 01/05/2006
Date Data Arrived at EDR: 02/16/2006
Date Made Active in Reports: 03/13/2006
Number of Days to Update: 25

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 02/03/2006
Next Scheduled EDR Contact: 05/15/2006
Data Release Frequency: Annually

MARIN COUNTY:

Underground Storage Tank Sites

Currently permitted USTs in Marin County.

Date of Government Version: 02/10/2006
Date Data Arrived at EDR: 02/28/2006
Date Made Active in Reports: 03/23/2006
Number of Days to Update: 23

Source: Public Works Department Waste Management
Telephone: 415-499-6647
Last EDR Contact: 01/30/2006
Next Scheduled EDR Contact: 05/01/2006
Data Release Frequency: Semi-Annually

NAPA COUNTY:

Sites With Reported Contamination

Date of Government Version: 12/27/2005
Date Data Arrived at EDR: 12/28/2005
Date Made Active in Reports: 01/19/2006
Number of Days to Update: 22

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 03/27/2006
Next Scheduled EDR Contact: 06/26/2006
Data Release Frequency: Semi-Annually

Closed and Operating Underground Storage Tank Sites

Date of Government Version: 12/27/2005
Date Data Arrived at EDR: 12/28/2005
Date Made Active in Reports: 01/11/2006
Number of Days to Update: 14

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 03/27/2006
Next Scheduled EDR Contact: 06/26/2006
Data Release Frequency: Annually

ORANGE COUNTY:

List of Industrial Site Cleanups

Petroleum and non-petroleum spills.

Date of Government Version: 12/01/2005
Date Data Arrived at EDR: 12/20/2005
Date Made Active in Reports: 01/19/2006
Number of Days to Update: 30

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 03/08/2006
Next Scheduled EDR Contact: 06/05/2006
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

List of Underground Storage Tank Cleanups

Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 12/01/2005	Source: Health Care Agency
Date Data Arrived at EDR: 12/20/2005	Telephone: 714-834-3446
Date Made Active in Reports: 01/19/2006	Last EDR Contact: 03/08/2006
Number of Days to Update: 30	Next Scheduled EDR Contact: 06/05/2006
	Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities

Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 12/01/2005	Source: Health Care Agency
Date Data Arrived at EDR: 12/16/2005	Telephone: 714-834-3446
Date Made Active in Reports: 01/11/2006	Last EDR Contact: 03/08/2006
Number of Days to Update: 26	Next Scheduled EDR Contact: 06/05/2006
	Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities

List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 01/18/2006	Source: Placer County Health and Human Services
Date Data Arrived at EDR: 01/18/2006	Telephone: 530-889-7312
Date Made Active in Reports: 02/21/2006	Last EDR Contact: 03/20/2006
Number of Days to Update: 34	Next Scheduled EDR Contact: 06/19/2006
	Data Release Frequency: Semi-Annually

RIVERSIDE COUNTY:

Underground Storage Tank Tank List

Date of Government Version: 02/09/2006	Source: Health Services Agency
Date Data Arrived at EDR: 02/10/2006	Telephone: 951-358-5055
Date Made Active in Reports: 03/09/2006	Last EDR Contact: 01/16/2006
Number of Days to Update: 27	Next Scheduled EDR Contact: 04/17/2006
	Data Release Frequency: Quarterly

Listing of Underground Tank Cleanup Sites

Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 02/09/2006	Source: Department of Public Health
Date Data Arrived at EDR: 02/10/2006	Telephone: 951-358-5055
Date Made Active in Reports: 03/13/2006	Last EDR Contact: 01/16/2006
Number of Days to Update: 31	Next Scheduled EDR Contact: 04/17/2006
	Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

CS - Contaminated Sites

Date of Government Version: 02/02/2006	Source: Sacramento County Environmental Management
Date Data Arrived at EDR: 02/13/2006	Telephone: 916-875-8406
Date Made Active in Reports: 03/13/2006	Last EDR Contact: 01/30/2006
Number of Days to Update: 28	Next Scheduled EDR Contact: 05/01/2006
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ML - Regulatory Compliance Master List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 02/02/2006
Date Data Arrived at EDR: 02/10/2006
Date Made Active in Reports: 03/13/2006
Number of Days to Update: 31

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 01/30/2006
Next Scheduled EDR Contact: 05/01/2006
Data Release Frequency: Quarterly

SAN BERNARDINO COUNTY:

Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 12/21/2005
Date Data Arrived at EDR: 12/21/2005
Date Made Active in Reports: 01/19/2006
Number of Days to Update: 29

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 03/06/2006
Next Scheduled EDR Contact: 06/05/2006
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 05/16/2005
Date Data Arrived at EDR: 05/18/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 29

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 04/05/2006
Next Scheduled EDR Contact: 07/03/2006
Data Release Frequency: Quarterly

Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 11/01/2005
Date Data Arrived at EDR: 12/29/2005
Date Made Active in Reports: 01/19/2006
Number of Days to Update: 21

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 02/20/2006
Next Scheduled EDR Contact: 05/22/2006
Data Release Frequency: Varies

SAN FRANCISCO COUNTY:

Local Oversight Facilities

Date of Government Version: 12/07/2005
Date Data Arrived at EDR: 12/07/2005
Date Made Active in Reports: 01/19/2006
Number of Days to Update: 43

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 03/06/2006
Next Scheduled EDR Contact: 06/05/2006
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Underground Storage Tank Information

Date of Government Version: 12/07/2005
Date Data Arrived at EDR: 12/07/2005
Date Made Active in Reports: 01/11/2006
Number of Days to Update: 35

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 03/06/2006
Next Scheduled EDR Contact: 06/05/2006
Data Release Frequency: Quarterly

SAN MATEO COUNTY:

Business Inventory

List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 01/09/2006
Date Data Arrived at EDR: 01/10/2006
Date Made Active in Reports: 01/31/2006
Number of Days to Update: 21

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 01/09/2006
Next Scheduled EDR Contact: 04/10/2006
Data Release Frequency: Annually

Fuel Leak List

Date of Government Version: 01/11/2006
Date Data Arrived at EDR: 01/12/2006
Date Made Active in Reports: 01/31/2006
Number of Days to Update: 19

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 01/09/2006
Next Scheduled EDR Contact: 04/10/2006
Data Release Frequency: Semi-Annually

SANTA CLARA COUNTY:

Fuel Leak Site Activity Report

A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/28/2006
Next Scheduled EDR Contact: 06/26/2006
Data Release Frequency: No Update Planned

LOP Listing

A listing of open leaking underground storage tanks.

Date of Government Version: 10/24/2005
Date Data Arrived at EDR: 11/28/2005
Date Made Active in Reports: 12/12/2005
Number of Days to Update: 14

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 03/28/2006
Next Scheduled EDR Contact: 06/26/2006
Data Release Frequency: Varies

Hazardous Material Facilities

Date of Government Version: 12/12/2005
Date Data Arrived at EDR: 12/12/2005
Date Made Active in Reports: 01/19/2006
Number of Days to Update: 38

Source: City of San Jose Fire Department
Telephone: 408-277-4659
Last EDR Contact: 03/06/2006
Next Scheduled EDR Contact: 06/05/2006
Data Release Frequency: Annually

SOLANO COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Leaking Underground Storage Tanks

Date of Government Version: 12/13/2005
Date Data Arrived at EDR: 12/14/2005
Date Made Active in Reports: 01/19/2006
Number of Days to Update: 36

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 03/27/2006
Next Scheduled EDR Contact: 06/12/2006
Data Release Frequency: Quarterly

Underground Storage Tanks

Date of Government Version: 10/13/2005
Date Data Arrived at EDR: 10/31/2005
Date Made Active in Reports: 12/08/2005
Number of Days to Update: 38

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 03/27/2006
Next Scheduled EDR Contact: 06/12/2006
Data Release Frequency: Quarterly

SONOMA COUNTY:

Leaking Underground Storage Tank Sites

Date of Government Version: 01/23/2006
Date Data Arrived at EDR: 01/23/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 29

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 01/23/2006
Next Scheduled EDR Contact: 04/24/2006
Data Release Frequency: Quarterly

SUTTER COUNTY:

Underground Storage Tanks

Date of Government Version: 12/31/0005
Date Data Arrived at EDR: 01/05/2006
Date Made Active in Reports: 01/31/2006
Number of Days to Update: 26

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 04/03/2006
Next Scheduled EDR Contact: 07/03/2006
Data Release Frequency: Semi-Annually

VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks

The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 11/30/2005
Date Data Arrived at EDR: 01/04/2006
Date Made Active in Reports: 01/19/2006
Number of Days to Update: 15

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/15/2006
Next Scheduled EDR Contact: 06/12/2006
Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites

Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 08/01/2005
Date Data Arrived at EDR: 09/20/2005
Date Made Active in Reports: 10/06/2005
Number of Days to Update: 16

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 02/20/2006
Next Scheduled EDR Contact: 05/22/2006
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Listing of Underground Tank Cleanup Sites

Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 11/30/2005
Date Data Arrived at EDR: 01/03/2006
Date Made Active in Reports: 01/19/2006
Number of Days to Update: 16

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/15/2006
Next Scheduled EDR Contact: 06/12/2006
Data Release Frequency: Quarterly

Underground Tank Closed Sites List

Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 12/29/2005
Date Data Arrived at EDR: 01/20/2006
Date Made Active in Reports: 02/15/2006
Number of Days to Update: 26

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 01/11/2006
Next Scheduled EDR Contact: 04/10/2006
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report

Date of Government Version: 01/18/2006
Date Data Arrived at EDR: 02/09/2006
Date Made Active in Reports: 03/09/2006
Number of Days to Update: 28

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 01/16/2006
Next Scheduled EDR Contact: 04/17/2006
Data Release Frequency: Annually

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data

Source: PennWell Corporation
Telephone: (800) 823-6277

This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.
Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Nursing Homes

Source: National Institutes of Health

Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities

Source: Department of Social Services

Telephone: 916-657-4041

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 from the U.S. Fish and Wildlife Service.

Scanned Digital USGS 7.5' Topographic Map (DRG)

Source: United States Geologic Survey

A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

STREET AND ADDRESS INFORMATION

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GEOCHECK[®] - PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

100-ACRE PROPERTY
HAVEN AVE. & FRANCIS ST.
ONTARIO, CA 91761

TARGET PROPERTY COORDINATES

Latitude (North):	34.04200 - 34° 2' 31.2"
Longitude (West):	117.5675 - 117° 34' 3.0"
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	447616.9
UTM Y (Meters):	3766763.5
Elevation:	875 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	34117-A5 GUASTI, CA
Most Recent Revision:	1981

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

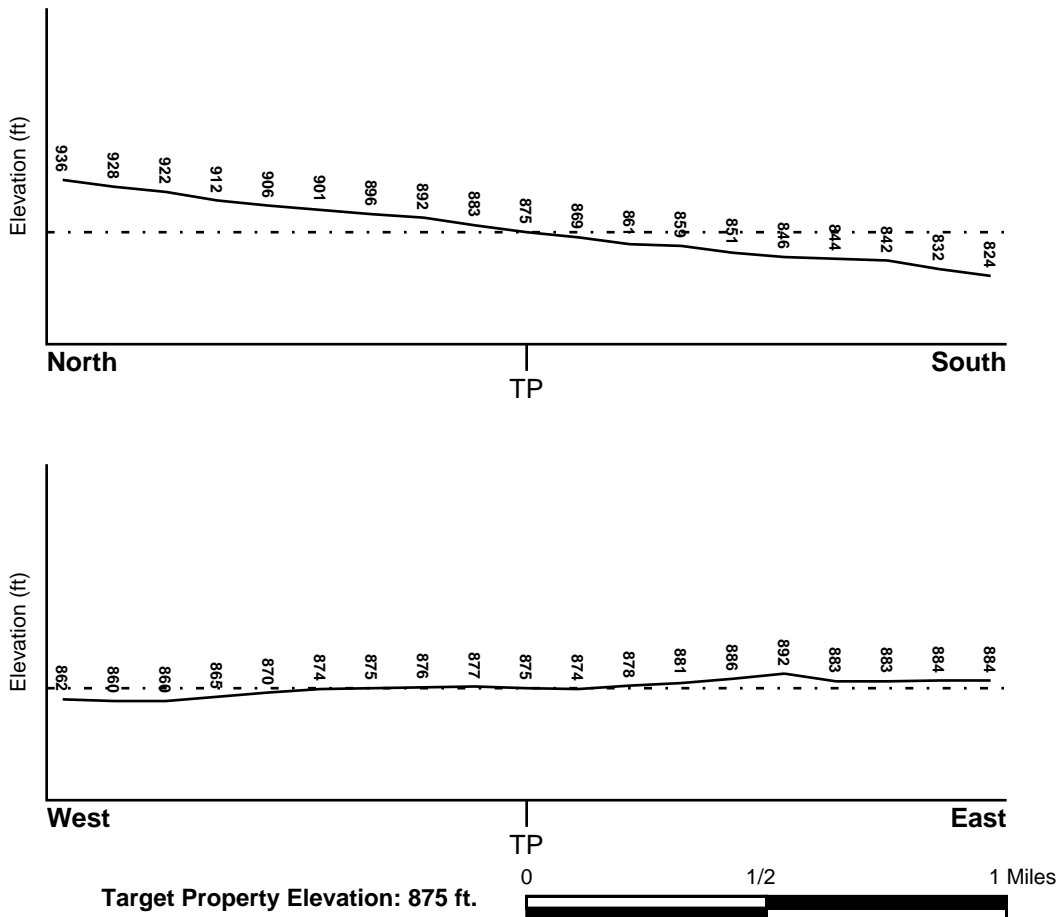
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General South

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County
SAN BERNARDINO, CA

FEMA Flood
Electronic Data
YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 06071C8637F

Additional Panels in search area: 06071C8641F
06071C8645F
06071C8639F
0602450020A

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property
GUASTI

NWI Electronic
Data Coverage
YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius: 1.25 miles
Status: Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

<u>MAP ID</u>	<u>LOCATION</u> <u>FROM TP</u>	<u>GENERAL DIRECTION</u> <u>GROUNDWATER FLOW</u>
Not Reported		

* ©1996 Site-specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

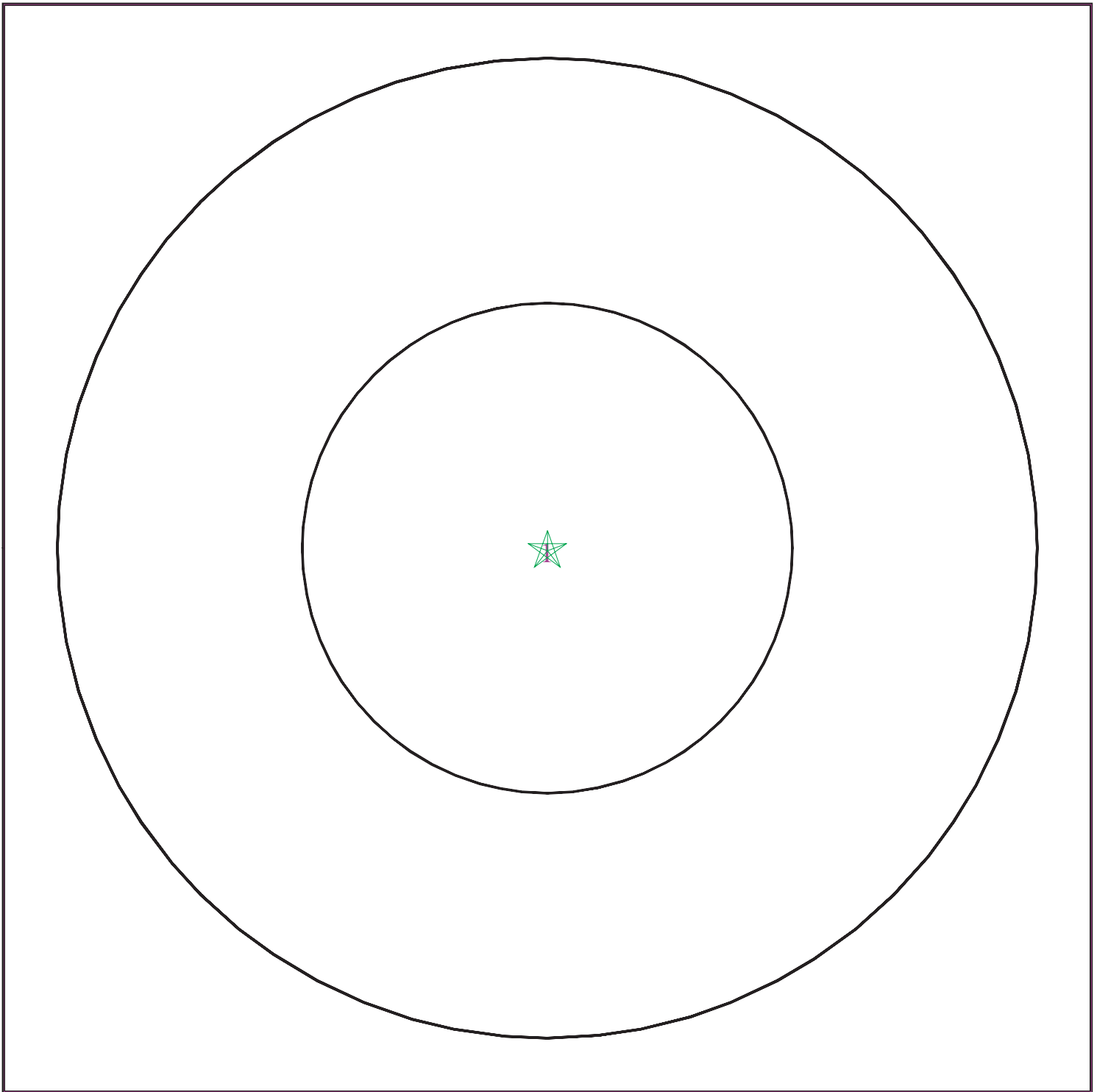
Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q (<i>decoded above as Era, System & Series</i>)

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 1649549.2s



- ★ Target Property
- ∩ SSURGO Soil
- ∩ Water



SITE NAME: 100-Acre Property
ADDRESS: Haven Ave. & Francis St.
Ontario CA 91761
LAT/LONG: 34.0420 / 117.5675

CLIENT: Tetra Tech Inc.
CONTACT: Steven Grod
INQUIRY #: 1649549.2s
DATE: April 06, 2006

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: DELHI

Soil Surface Texture: fine sand

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Somewhat excessive. Soils have high hydraulic conductivity and low water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: MODERATE

Depth to Bedrock Min: > 0 inches

Depth to Bedrock Max: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Permeability Rate (in/hr)	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	18 inches	fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 20.00 Min: 6.00	Max: 7.30 Min: 5.60
2	18 inches	60 inches	sand	Granular materials (35 pct. or less passing No. 200), Fine Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 20.00 Min: 6.00	Max: 7.80 Min: 6.10

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
2	USGS3221590	1/2 - 1 Mile ENE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

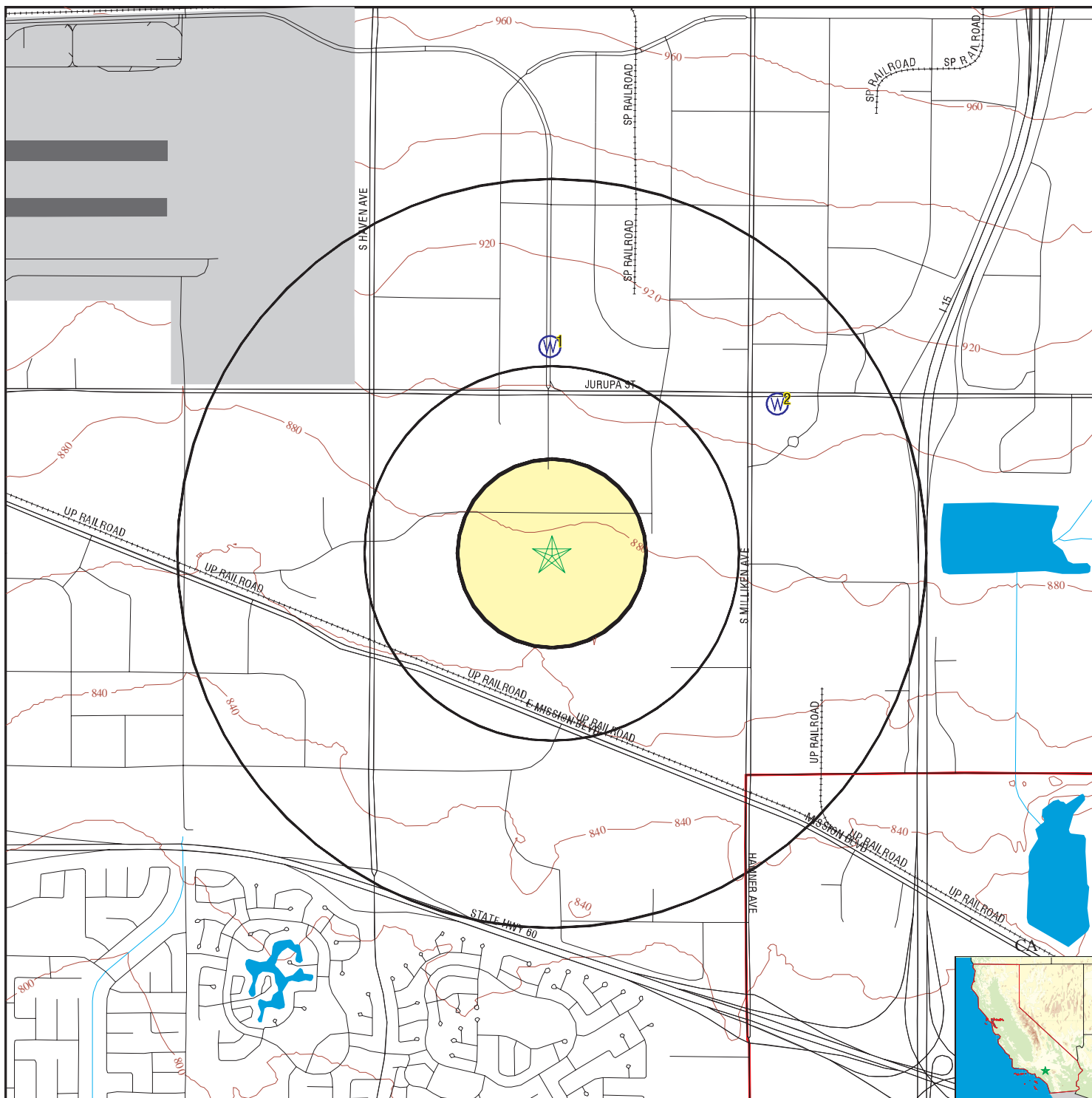
<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
1	1088	1/2 - 1 Mile North

PHYSICAL SETTING SOURCE MAP - 1649549.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Closest Hydrogeological Data
- Oil, gas or related wells

<p>SITE NAME: 100-Acre Property ADDRESS: Haven Ave. & Francis St. Ontario CA 91761 LAT/LONG: 34.0420 / 117.5675</p>	<p>CLIENT: Tetra Tech Inc. CONTACT: Steven Grod INQUIRY #: 1649549.2s DATE: April 06, 2006</p>
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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Database EDR ID Number

1
North
1/2 - 1 Mile
Higher
CA WELLS 1088

Water System Information:

Prime Station Code:	01S/07W-26A01 S	User ID:	TAN
FRDS Number:	3610034022	County:	San Bernardino
District Number:	13	Station Type:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Water Type:	Well/Groundwater	Well Status:	Active Raw
Source Lat/Long:	340300.0 1173400.0	Precision:	Undefined
Source Name:	WELL 26		
System Number:	3610034		
System Name:	ONTARIO, CITY OF		
Organization That Operates System:	303 EAST B STREET ONTARIO, CA 91764		
Pop Served:	140000	Connections:	30927
Area Served:	ONTARIO CITY		

Sample Information: * Only Findings Above Detection Level Are Listed

Sample Collected:	05/22/1984	Findings:	24.000 C
Chemical:	SOURCE TEMPERATURE C		
Sample Collected:	05/22/1984	Findings:	350.000 UMHO
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	05/22/1984	Findings:	7.600
Chemical:	PH (LABORATORY)		
Sample Collected:	05/22/1984	Findings:	160.000 MG/L
Chemical:	TOTAL ALKALINITY (AS CaCO3)		
Sample Collected:	05/22/1984	Findings:	146.000 MG/L
Chemical:	TOTAL HARDNESS (AS CaCO3)		
Sample Collected:	05/22/1984	Findings:	45.000 MG/L
Chemical:	CALCIUM		
Sample Collected:	05/22/1984	Findings:	8.000 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	05/22/1984	Findings:	21.000 MG/L
Chemical:	SODIUM		
Sample Collected:	05/22/1984	Findings:	2.000 MG/L
Chemical:	POTASSIUM		
Sample Collected:	05/22/1984	Findings:	11.000 MG/L
Chemical:	CHLORIDE		
Sample Collected:	05/22/1984	Findings:	13.000 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	05/22/1984	Findings:	.100 NTU
Chemical:	TURBIDITY (LAB)		
Sample Collected:	04/07/1987	Findings:	380.000 UMHO
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	04/07/1987	Findings:	7.800
Chemical:	PH (LABORATORY)		
Sample Collected:	04/07/1987	Findings:	173.000 MG/L
Chemical:	TOTAL ALKALINITY (AS CaCO3)		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Sample Collected:	04/07/1987	Findings:	210.000 MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	04/07/1987	Findings:	169.000 MG/L
Chemical:	TOTAL HARDNESS (AS CaCO ₃)		
Sample Collected:	04/07/1987	Findings:	54.000 MG/L
Chemical:	CALCIUM		
Sample Collected:	04/07/1987	Findings:	8.000 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	04/07/1987	Findings:	20.000 MG/L
Chemical:	SODIUM		
Sample Collected:	04/07/1987	Findings:	2.000 MG/L
Chemical:	POTASSIUM		
Sample Collected:	04/07/1987	Findings:	10.000 MG/L
Chemical:	CHLORIDE		
Sample Collected:	04/07/1987	Findings:	28.000 MG/L
Chemical:	SILICA		
Sample Collected:	04/07/1987	Findings:	220.000 MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	04/07/1987	Findings:	.900
Chemical:	LANGELIER INDEX @ 60 C		
Sample Collected:	04/07/1987	Findings:	12.000 MG/L
Chemical:	NITRATE (AS NO ₃)		
Sample Collected:	04/07/1987	Findings:	.150 NTU
Chemical:	TURBIDITY (LAB)		
Sample Collected:	04/07/1987	Findings:	1.100 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	05/06/1988	Findings:	370.000 UMHO
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	05/06/1988	Findings:	7.500
Chemical:	PH (LABORATORY)		
Sample Collected:	05/06/1988	Findings:	175.000 MG/L
Chemical:	TOTAL ALKALINITY (AS CaCO ₃)		
Sample Collected:	05/06/1988	Findings:	214.000 MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	05/06/1988	Findings:	56.000 MG/L
Chemical:	TOTAL HARDNESS (AS CaCO ₃)		
Sample Collected:	05/06/1988	Findings:	49.000 MG/L
Chemical:	CALCIUM		
Sample Collected:	05/06/1988	Findings:	8.000 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	05/06/1988	Findings:	21.000 MG/L
Chemical:	SODIUM		
Sample Collected:	05/06/1988	Findings:	1.000 MG/L
Chemical:	POTASSIUM		
Sample Collected:	05/06/1988	Findings:	9.000 MG/L
Chemical:	CHLORIDE		
Sample Collected:	05/06/1988	Findings:	.200 MG/L
Chemical:	FLUORIDE (TEMPERATURE DEPENDENT)		
Sample Collected:	05/06/1988	Findings:	30.000 MG/L
Chemical:	SILICA		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Sample Collected:	05/06/1988	Findings:	240.000 MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	05/06/1988	Findings:	.600
Chemical:	LANGELIER INDEX @ 60 C		
Sample Collected:	05/06/1988	Findings:	12.000 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	05/06/1988	Findings:	.100 NTU
Chemical:	TURBIDITY (LAB)		
Sample Collected:	07/13/1989	Findings:	3.000 UNITS
Chemical:	COLOR		
Sample Collected:	07/13/1989	Findings:	370.000 UMHO
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	07/13/1989	Findings:	7.900
Chemical:	PH (LABORATORY)		
Sample Collected:	07/13/1989	Findings:	185.000 MG/L
Chemical:	TOTAL ALKALINITY (AS CaCO3)		
Sample Collected:	07/13/1989	Findings:	226.000 MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	07/13/1989	Findings:	165.000 MG/L
Chemical:	TOTAL HARDNESS (AS CaCO3)		
Sample Collected:	07/13/1989	Findings:	51.000 MG/L
Chemical:	CALCIUM		
Sample Collected:	07/13/1989	Findings:	9.000 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	07/13/1989	Findings:	21.000 MG/L
Chemical:	SODIUM		
Sample Collected:	07/13/1989	Findings:	2.000 MG/L
Chemical:	POTASSIUM		
Sample Collected:	07/13/1989	Findings:	7.000 MG/L
Chemical:	CHLORIDE		
Sample Collected:	07/13/1989	Findings:	.300 MG/L
Chemical:	FLUORIDE (TEMPERATURE DEPENDENT)		
Sample Collected:	07/13/1989	Findings:	25.000 MG/L
Chemical:	SILICA		
Sample Collected:	07/13/1989	Findings:	100.000 UG/L
Chemical:	BORON		
Sample Collected:	07/13/1989	Findings:	250.000 UG/L
Chemical:	COPPER		
Sample Collected:	07/13/1989	Findings:	12.000 UG/L
Chemical:	LEAD		
Sample Collected:	07/13/1989	Findings:	200.000 UG/L
Chemical:	ALUMINUM		
Sample Collected:	07/13/1989	Findings:	245.000 MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	07/13/1989	Findings:	1.100
Chemical:	LANGELIER INDEX @ 60 C		
Sample Collected:	07/13/1989	Findings:	8.000 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07/13/1989	Findings:	4.000 NTU
Chemical:	TURBIDITY (LAB)		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Sample Collected:	07/13/1989	Findings:	12.400
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)		
Sample Collected:	07/13/1989	Findings:	2.000 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	08/12/1992	Findings:	360.000 UMHO
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	08/12/1992	Findings:	7.900
Chemical:	PH (LABORATORY)		
Sample Collected:	08/12/1992	Findings:	160.000 MG/L
Chemical:	TOTAL ALKALINITY (AS CACO3)		
Sample Collected:	08/12/1992	Findings:	195.000 MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	08/12/1992	Findings:	155.000 MG/L
Chemical:	TOTAL HARDNESS (AS CACO3)		
Sample Collected:	08/12/1992	Findings:	47.000 MG/L
Chemical:	CALCIUM		
Sample Collected:	08/12/1992	Findings:	9.000 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	08/12/1992	Findings:	22.000 MG/L
Chemical:	SODIUM		
Sample Collected:	08/12/1992	Findings:	2.000 MG/L
Chemical:	POTASSIUM		
Sample Collected:	08/12/1992	Findings:	11.000 MG/L
Chemical:	CHLORIDE		
Sample Collected:	08/12/1992	Findings:	.200 MG/L
Chemical:	FLUORIDE (TEMPERATURE DEPENDENT)		
Sample Collected:	08/12/1992	Findings:	230.000 MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	08/12/1992	Findings:	11.000 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	08/12/1992	Findings:	.150 NTU
Chemical:	TURBIDITY (LAB)		
Sample Collected:	03/31/1993	Findings:	1.000 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	08/02/1993	Findings:	2.000 PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	08/02/1993	Findings:	1.000 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	09/22/1993	Findings:	3.000 PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	09/22/1993	Findings:	2.000 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	11/18/1993	Findings:	1.000 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	01/25/1994	Findings:	3.000 UNITS
Chemical:	COLOR		
Sample Collected:	01/25/1994	Findings:	400.000 UMHO
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	01/25/1994	Findings:	8.100
Chemical:	PH (LABORATORY)		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Sample Collected:	01/25/1994	Findings:	155.000 MG/L
Chemical:	TOTAL ALKALINITY (AS CaCO3)		
Sample Collected:	01/25/1994	Findings:	189.000 MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	01/25/1994	Findings:	153.000 MG/L
Chemical:	TOTAL HARDNESS (AS CaCO3)		
Sample Collected:	01/25/1994	Findings:	46.000 MG/L
Chemical:	CALCIUM		
Sample Collected:	01/25/1994	Findings:	9.000 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	01/25/1994	Findings:	24.000 MG/L
Chemical:	SODIUM		
Sample Collected:	01/25/1994	Findings:	2.000 MG/L
Chemical:	POTASSIUM		
Sample Collected:	01/25/1994	Findings:	12.000 MG/L
Chemical:	CHLORIDE		
Sample Collected:	01/25/1994	Findings:	.200 MG/L
Chemical:	FLUORIDE (TEMPERATURE DEPENDENT)		
Sample Collected:	01/25/1994	Findings:	140.000 UG/L
Chemical:	IRON		
Sample Collected:	01/25/1994	Findings:	225.000 MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	01/25/1994	Findings:	1.100
Chemical:	LANGELIER INDEX @ 60 C		
Sample Collected:	01/25/1994	Findings:	.350 NTU
Chemical:	TURBIDITY (LAB)		
Sample Collected:	01/25/1994	Findings:	12.500
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)		
Sample Collected:	08/02/1994	Findings:	1.000 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	02/08/1995	Findings:	360.000 UMHO
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	02/08/1995	Findings:	8.100
Chemical:	PH (LABORATORY)		
Sample Collected:	02/08/1995	Findings:	150.000 MG/L
Chemical:	TOTAL ALKALINITY (AS CaCO3)		
Sample Collected:	02/08/1995	Findings:	183.000 MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	02/08/1995	Findings:	146.000 MG/L
Chemical:	TOTAL HARDNESS (AS CaCO3)		
Sample Collected:	02/08/1995	Findings:	45.000 MG/L
Chemical:	CALCIUM		
Sample Collected:	02/08/1995	Findings:	8.000 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	02/08/1995	Findings:	19.000 MG/L
Chemical:	SODIUM		
Sample Collected:	02/08/1995	Findings:	2.000 MG/L
Chemical:	POTASSIUM		
Sample Collected:	02/08/1995	Findings:	8.000 MG/L
Chemical:	CHLORIDE		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Sample Collected:	02/08/1995	Findings:	.200 MG/L
Chemical:	FLUORIDE (TEMPERATURE DEPENDENT)		
Sample Collected:	02/08/1995	Findings:	.050 UG/L
Chemical:	FOAMING AGENTS (MBAS)		
Sample Collected:	02/08/1995	Findings:	245.000 MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	02/08/1995	Findings:	1.100
Chemical:	LANGELIER INDEX @ 60 C		
Sample Collected:	02/08/1995	Findings:	6.000 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	02/08/1995	Findings:	12.400
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)		
Sample Collected:	07/23/1996	Findings:	310.000 UMHO
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	07/23/1996	Findings:	8.000
Chemical:	PH (LABORATORY)		
Sample Collected:	07/23/1996	Findings:	160.000 MG/L
Chemical:	TOTAL ALKALINITY (AS CaCO3)		
Sample Collected:	07/23/1996	Findings:	200.000 MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	07/23/1996	Findings:	150.000 MG/L
Chemical:	TOTAL HARDNESS (AS CaCO3)		
Sample Collected:	07/23/1996	Findings:	47.000 MG/L
Chemical:	CALCIUM		
Sample Collected:	07/23/1996	Findings:	8.000 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	07/23/1996	Findings:	21.000 MG/L
Chemical:	SODIUM		
Sample Collected:	07/23/1996	Findings:	2.000 MG/L
Chemical:	POTASSIUM		
Sample Collected:	07/23/1996	Findings:	9.000 MG/L
Chemical:	CHLORIDE		
Sample Collected:	07/23/1996	Findings:	220.000 MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	07/23/1996	Findings:	1.100
Chemical:	LANGELIER INDEX @ 60 C		
Sample Collected:	07/23/1996	Findings:	9.000 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07/23/1996	Findings:	.300 NTU
Chemical:	TURBIDITY (LAB)		
Sample Collected:	07/23/1996	Findings:	12.400
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)		
Sample Collected:	04/24/1997	Findings:	9.000 MG/L
Chemical:	NITRATE (AS NO3)		
Sample Collected:	07/17/1997	Findings:	1.190 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	08/20/1997	Findings:	21.000 C
Chemical:	SOURCE TEMPERATURE C		
Sample Collected:	08/20/1997	Findings:	345.000 UMHO
Chemical:	SPECIFIC CONDUCTANCE		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Sample Collected:	08/20/1997	Findings:	7.560
Chemical:	PH (LABORATORY)		
Sample Collected:	08/20/1997	Findings:	167.000 MG/L
Chemical:	TOTAL ALKALINITY (AS CaCO ₃)		
Sample Collected:	08/20/1997	Findings:	204.000 MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	08/20/1997	Findings:	149.000 MG/L
Chemical:	TOTAL HARDNESS (AS CaCO ₃)		
Sample Collected:	08/20/1997	Findings:	44.500 MG/L
Chemical:	CALCIUM		
Sample Collected:	08/20/1997	Findings:	8.230 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	08/20/1997	Findings:	21.700 MG/L
Chemical:	SODIUM		
Sample Collected:	08/20/1997	Findings:	1.760 MG/L
Chemical:	POTASSIUM		
Sample Collected:	08/20/1997	Findings:	8.000 MG/L
Chemical:	CHLORIDE		
Sample Collected:	08/20/1997	Findings:	281.000 UG/L
Chemical:	IRON		
Sample Collected:	08/20/1997	Findings:	248.000 UG/L
Chemical:	ALUMINUM		
Sample Collected:	08/20/1997	Findings:	1.330 PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	08/20/1997	Findings:	2.470 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	08/20/1997	Findings:	296.000 MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	08/20/1997	Findings:	.580
Chemical:	LANGELIER INDEX @ 60 C		
Sample Collected:	08/20/1997	Findings:	- .100
Chemical:	LANGELIER INDEX @ SOURCE TEMP.		
Sample Collected:	08/20/1997	Findings:	10.800 MG/L
Chemical:	NITRATE (AS NO ₃)		
Sample Collected:	08/20/1997	Findings:	.390 NTU
Chemical:	TURBIDITY (LAB)		
Sample Collected:	08/20/1997	Findings:	11.830
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)		
Sample Collected:	11/19/1997	Findings:	1.000 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	11/19/1997	Findings:	1.000 PCI/L
Chemical:	RADIUM 226 COUNTING ERROR		
Sample Collected:	11/19/1997	Findings:	1.000 PCI/L
Chemical:	URANIUM COUNTING ERROR		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Database EDR ID Number

2
ENE
1/2 - 1 Mile
Higher

FED USGS USGS3221590

Agency cd:	USGS	Site no:	340252117332201
Site name:	001S006W31D001S		
Latitude:	340252		
Longitude:	1173322	Dec lat:	34.04778964
Dec lon:	-117.55699596	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	071
Country:	US	Land net:	Not Reported
Location map:	GUASTI	Map scale:	24000
Altitude:	Not Reported	Altitude method:	Not Reported
Altitude accuracy:	Not Reported	Altitude datum:	Not Reported
Hydrologic:	Santa Ana. California. Area = 1680 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	Not Reported
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	702	Hole depth:	Not Reported
Source of depth data:	Not Reported	Project number:	9479335800
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zip	Total Sites	> 4 Pci/L	Pct. > 4 Pci/L
91761	3	0	0.00

Federal EPA Radon Zone for SAN BERNARDINO County: 2

- Note: Zone 1 indoor average level > 4 pCi/L.
- : Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
- : Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for SAN BERNARDINO COUNTY, CA

Number of sites tested: 18

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.678 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)

Source: United States Geologic Survey

A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW^R Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Services

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

California Drinking Water Quality Database

Source: Department of Health Services

Telephone: 916-324-2319

The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations for District 2, 3, 5 and 6

Source: Department of Conservation

Telephone: 916-323-1779

RADON

State Database: CA Radon

Source: Department of Health Services

Telephone: 916-324-2208

Radon Database for California

Area Radon Information

Source: USGS

Telephone: 703-356-4020

The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones

Source: EPA

Telephone: 703-356-4020

Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities

Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater

Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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APPENDIX C
ADDITIONAL RELEVANT DOCUMENTATION



First American Title Company

323 Court Street
San Bernardino, CA 92401-1604

Tom Dustin
County of San Bernardino
825 E. 3rd Street # 207
San Bernardino, CA 92405
Phone: (909)387-7813
Fax: (909)387-7833

Order Number: 0623-2232091 (13)

Title Officer: Gary R. Chaffin
Phone: (909)380-8725
Fax No.: (866)867-9199
E-Mail: grchaffin@firstam.com
Buyer:
Owner: County of San Bernardino
Property: vacant land
Ontario, California

PRELIMINARY REPORT

In response to the above referenced application for a policy of title insurance, this company hereby reports that it is prepared to issue, or cause to be issued, as of the date hereof, a Policy or Policies of Title Insurance describing the land and the estate or interest therein hereinafter set forth, insuring against loss which may be sustained by reason of any defect, lien or encumbrance not shown or referred to as an Exception below or not excluded from coverage pursuant to the printed Schedules, Conditions and Stipulations of said Policy forms.

The printed Exceptions and Exclusions from the coverage of said Policy or Policies are set forth in Exhibit A attached. Copies of the Policy forms should be read. They are available from the office which issued this report.

Please read the exceptions shown or referred to below and the exceptions and exclusions set forth in Exhibit A of this report carefully. The exceptions and exclusions are meant to provide you with notice of matters which are not covered under the terms of the title insurance policy and should be carefully considered.

It is important to note that this preliminary report is not a written representation as to the condition of title and may not list all liens, defects, and encumbrances affecting title to the land.

This report (and any supplements or amendments hereto) is issued solely for the purpose of facilitating the issuance of a policy of title insurance and no liability is assumed hereby. If it is desired that liability be assumed prior to the issuance of a policy of title insurance, a Binder or Commitment should be requested.

Dated as of January 03, 2006 at 7:30 A.M.

The form of Policy of title insurance contemplated by this report is:

TO BE DETERMINED

A specific request should be made if another form or additional coverage is desired.

Title to said estate or interest at the date hereof is vested in:

County of San Bernardino

The estate or interest in the land hereinafter described or referred to covered by this Report is:

A fee.

The Land referred to herein is described as follows:

(See attached Legal Description)

At the date hereof exceptions to coverage in addition to the printed Exceptions and Exclusions in said policy form would be as follows:

1. General and special taxes and assessments for the fiscal year 2006-2007, a lien not yet due or payable.
2. The lien of supplemental taxes, if any, assessed pursuant to Chapter 3.5 commencing with Section 75 of the California Revenue and Taxation Code.
3. The land lies within the boundaries of assessment District No. 100B (R), as disclosed by an assessment district map filed in Book 69 Page(s) 29 of maps of assessment districts.

(Affects Parcel No. 1)

4. The land lies within the boundaries of assessment District No. 103, as disclosed by an assessment district map filed in Book 41 Page(s) 12 of maps of assessment districts.

(Affects Parcel No. 1)

5. The lien of special tax assessed pursuant to Chapter 2.5 commencing with Section 53311 of the California Government Code for Community Facilities District No. 4, as disclosed by Notice of Special Tax Lien recorded March 13, 1987 as Instrument No. 87-82713 of Official Records, and filed in Book 41, pages 75 and 76 of Maps of Assessment and Community Facilities Districts.

6. Rights of the public in and to that portion of the land lying within the boundaries of any road, street or highway.
7. Abutter's rights of ingress and egress to or from Milliken Avenue have been relinquished in the document recorded November 28, 1952 as Book 3063, Page 16 of Official Records, except as provided for therein.

(Affects Parcel No. 2)

8. An easement for grading and drainage purposes and incidental purposes, recorded June 5, 1980 as Instrument No. 80-129233 of Official Records.

In Favor of: Nordstrom, Inc.

Affects: The land

(Affects Parcel No. 1)

9. Covenants, conditions, restrictions, easements, assessments, liens, charges, terms and provisions in the document recorded September 8, 1982 as Instrument No. 82-178734 of Official Records, which provide that a violation thereof shall not defeat or render invalid the lien of any first mortgage or deed of trust made in good faith and for value, but deleting any covenant, condition or restriction indicating a preference, limitation or discrimination based on race, color, religion, sex, sexual orientation, marital status, ancestry, disability, handicap, familial status, national origin, source of income (as defined in California Government Code 12955(p)), to the extent such covenants, conditions or restrictions violate Title 42, Section 3604(c), of the United States Codes. Lawful restrictions under state and federal law on the age of occupants in senior housing or housing for older persons shall not be construed as restrictions based on familial status. Note: You may wish to contact the homeowners association referred to in the above document for information regarding assessments, transfer requirements or other matters.

(Affects Parcel No. 2)

10. An easement for pipe lines or manholes, meters and flow control structures and incidental purposes, recorded February 23, 1984 as Instrument No. 84-42311 of Official Records.

In Favor of: Chino Basin Municipal Water District

Affects: The land

(Affects Parcel No. 1)

11. An acceptance of surface waters from Phase II-Tentative Parcel Map 8776 and permission to grade upon adjacent property, recorded July 24, 1985, Instrument No. 85-177831, Official Records.

(Affects Parcel No. 1)

Reference is hereby made to the record of said document for further and other particulars.

12. The Construction Notice of Parcel Map No. 8776, recites:

1. The dedication and improvements of Haven Avenue, Jurupa Street, Commerce Parkway, and Airport Drive adjacent to the remainder Parcel, as shown on this Map, is not required at this time, however, prior to further subdivision or other grant of approval of the remainder Parcel as shown

hereon, the remainder Parcel will be subject to conditions of approval which will require improvements of Haven Avenue, Airport Drive, Jurupa Street and Commerce Parkway, and the improvements of frontage adjacent to the subdivision as well as reasonable off-sites and other appurtenant public construction requirements. The improvements mentioned herein include all appurtenant improvements such as storm drains, utilities, street lighting, etc.

2. All other provisions of the adopted Ontario Industrial Partners, development specific plan and amendments thereto to date shall also be applicable for development of the property within this Map.

3. Portions of the remainder parcel are within a flood hazard area as determined by the National Flood Insurance Program. Prior to the issuance of a building permit in said parcel the developer shall comply with all requirements of that program and City Ordinance 2103.
(Affects Parcel No. 1)

13. An easement for pipe lines, mains and/or surface structures and incidental purposes, recorded February 6, 1986 as Instrument No. 86-32432 of Official Records.

In Favor of: Chino Basin Municipal Water District
Affects: The land

(Affects Parcel No. 1)

14. An easement for sewer purposes and incidental purposes, recorded March 31, 1986 as Instrument No. 86-82777 of Official Records.

In Favor of: City of Ontario
Affects: The land

(Affects Parcel No. 1)

15. An easement for street and utility purposes and incidental purposes, recorded March 31, 1986 as Instrument No. 86-82778 of Official Records.

In Favor of: City of Ontario, a Municipal Corporation
Affects: The land

(Affects Parcel No. 1)

16. An easement for storm drain purposes and incidental purposes, recorded October 9, 1987 as Instrument No. 87-364547 of Official Records.

In Favor of: City of Ontario
Affects: The land

(Affects Parcel No. 1)

17. The terms and provisions contained in the document entitled "Terms and Conditions of that Certain Final Order of Condemnation Case No. OCV 32492" recorded March 17, 1988 as Instrument No. 88-80226 of Official Records.

An easement as contained in the above document.

For: sewer facilities and incidental purposes.

(Affects Parcel No. 2)

18. An easement for road, public utilities and temporary construction purposes and incidental purposes, recorded October 30, 1989 as Instrument No. 89-408301 of Official Records.

In Favor of: City of Ontario, a Municipal Corporation

Affects: The land

(Affects Parcel No. 1)

19. An easement for waste water pipeline improvements and incidental purposes as disclosed by Lis Penders, recorded March 15, 1990 as Instrument No. 90-098878 of Official Records.

In Favor of: Chino Basin Municipal Water District, a public entity

20. A Grant Deed executed by Lusk Ontario Industrial Partners II, a California limited partnership, in favor of the County of San Bernardino, a body corporate and politic of the State of California recorded August 21, 1991, Instrument No. 91-318330, Official Records, recites, in part:

Reserving unto the Grantor, their heirs and assigns the right to dedicate to the City of Ontario the Southerly one-half of future Francis Street as depicted on tentative Parcel Map No. 13072, and more particularly shown on Exhibit "B", attached hereto and made a part hereof. In addition said future dedication shall also include a property return located at the Southwest corner of Dupont Street and future Francis Street, as shown on said Exhibit "B".

The Grantor also hereby reserves the right to grant certain nonexclusive strip easements for public utilities and for private landscape purposes along street frontages, and certain areas encompassed by a given radius as said strips and areas are also depicted on Exhibit "B" attached hereto and made a part hereof.

Said dedications will be made as a part of finalization of the condition for tentative Parcel Map No. 13072 and are shown on Exhibit "B" attached thereto and made a part hereof.

(Affects Parcel No. 1)

21. An easement for public utilities and incidental purposes, recorded October 12, 1993 as Instrument No. 93-433542 of Official Records.

In Favor of: Southern California Edison Company, a Corporation, its successors and assigns

Affects: The land

22. An easement for sewer purposes and incidental purposes, recorded October 25, 1996 as Instrument No. 96-395401 of Official Records.

In Favor of: Chino Basin Municipal Water District, a Municipal Water District

Affects: The land

(Affects Parcel No. 1)

23. An easement for temporary construction easement and incidental purposes, recorded July 24, 1998 as Instrument No. 98-289836 of Official Records.
In Favor of: Majestic-CCC IV L.L.C., a Delaware Limited Liability Company
Affects: The land

(Affects Parcel No. 1)
24. An easement for public utilities and incidental purposes, recorded July 24, 1998 as Instrument No. 98-289837 of Official Records.
In Favor of: Majestic-CCC IV L.L.C., a Delaware Limited Liability Company
Affects: The land

(Affects Parcel No. 1)
25. An easement for public utility purposes and incidental purposes, recorded October 29, 1998 as Instrument No. 98-463096 of Official Records.
In Favor of: City of Ontario, a Municipal Corporation
Affects: The land

(Affects Parcel No. 1)
26. A lien for unsecured property taxes, evidenced by a certificate recorded by the tax collector of San Bernardino County, recorded December 6, 2005, as Instrument No. 20050922102 of Official Records.
Debtor: County of San Bernardino
Year & No.: 1982/368726
Amount: \$154.61, and any other amounts due thereunder.
27. A lien for unsecured property taxes, evidenced by a certificate recorded by the tax collector of San Bernardino County, recorded December 6, 2005, as Instrument No. 20050922103 of Official Records.
Debtor: County of San Bernardino
Year & No.: 1983/368727
Amount: \$161.12, and any other amounts due thereunder.
28. A lien for unsecured property taxes, evidenced by a certificate recorded by the tax collector of San Bernardino County, recorded December 6, 2005, as Instrument No. 20050922104 of Official Records.
Debtor: County of San Bernardino
Year & No.: 1984/368728
Amount: \$155.26, and any other amounts due thereunder.
29. A lien for unsecured property taxes, evidenced by a certificate recorded by the tax collector of San Bernardino County, recorded December 6, 2005, as Instrument No. 20050922105 of Official Records.
Debtor: County of San Bernardino
Year & No.: 1985/368729

Amount: \$156.69, and any other amounts due thereunder.

30. Water rights, claims or title to water, whether or not shown by the public records.
31. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
32. Any rights, interests, or claims of parties in possession of the land not shown by the public records.

Prior to the issuance of any policy of title insurance, the Company will require:

33. Full copies of all unrecorded leases affecting the land.

INFORMATIONAL NOTES

The map attached, if any, may or may not be a survey of the land depicted hereon. First American expressly disclaims any liability for loss or damage which may result from reliance on this map except to the extent coverage for such loss or damage is expressly provided by the terms and provisions of the title insurance policy, if any, to which this map is attached.

1. General and special taxes and assessments for the fiscal year 2005-2006 are exempt.
2. The property covered by this report is vacant land.
3. According to the public records, there has been no conveyance of the land within a period of twenty-four months prior to the date of this report, except as follows:

None

WIRE INSTRUCTIONS

for

**First American Title Company, Sub-Escrow Deposits
San Bernardino County, California**

First American Trust Company

Santa Ana Branch
421 North Main Street
Santa Ana, California 92701

ABA 122241255

**Credit to First American Title Company Special Trust Account
Account No. 17004**

Reference Title Order Number 0623-2232091, and Title Officer Gary R. Chaffin

Please wire the day before recording. Also, notify the Title Officer of your intent to wire.

LEGAL DESCRIPTION

Real property in the City of Ontario, County of San Bernardino, State of California, described as follows:

PARCEL NO. 1:

THAT PORTION OF LOT 1, BLOCK 36 OF TRACT NO. 2244, IN THE CITY OF ONTARIO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, AS PER PLAT RECORDED IN BOOK 35 OF MAPS, PAGES 50 THROUGH 56, INCLUSIVE, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, TOGETHER WITH THAT PORTION OF THE SOUTHWEST 1/4 OF THE NORTHEAST 1/4 OF SECTION 36, TOWNSHIP 1 SOUTH, RANGE 7 WEST, SAN BERNARDINO BASE AND MERIDIAN, ACCORDING TO THE OFFICIAL GOVERNMENT PLAT THEREOF, IN THE CITY OF ONTARIO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF SAID LOT 1, BLOCK 36, SAID CORNER ALSO BEING THE SOUTHWEST CORNER OF THE REMAINDER PARCEL AS SHOWN ON PARCEL MAP NO. 10112, FILED IN BOOK 138 OF PARCEL MAPS, PAGES 88 THROUGH 106, INCLUSIVE, IN THE OFFICE OF SAID COUNTY RECORDER; THENCE NORTH 0 DEG. 06' 42" EAST, 556.39 FEET ALONG THE WEST LINE OF SAID REMAINDER PARCEL, SAID WEST LINE ALSO BEING THE CENTER LINE OF HAVEN AVENUE, TO THE CENTER LINE OF PROPOSED FRANCIS STREET, AS DESCRIBED AND SHOWN IN THAT CERTAIN EASEMENT DEED FOR ROAD, PUBLIC UTILITY AND TEMPORARY CONSTRUCTION PURPOSES TO THE CITY OF ONTARIO RECORDED OCTOBER 30, 1989, INSTRUMENT NO. 89-408301, OFFICIAL RECORDS, IN THE OFFICE OF SAID COUNTY RECORDER; THENCE SOUTH 89 DEG. 26' 00" EAST, 99.64 FEET ALONG SAID CENTER LINE OF PROPOSED FRANCIS STREET TO THE BEGINNING OF A TANGENT CURVE CONCAVE NORTHWESTERLY, HAVING A RADIUS OF 600.00 FEET; THENCE NORTHEASTERLY 467.14 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 44 DEG. 36' 31"; THENCE NORTH 45 DEG. 57' 29" EAST, 100.00 FEET TO THE BEGINNING OF A TANGENT CURVE CONCAVE SOUTHERLY, HAVING A RADIUS OF 600.00 FEET; THENCE NORTHEASTERLY 468.16 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 44 DEG. 42' 20", TO A LINE PARALLEL WITH AND NORTHERLY 974.00 FEET FROM THAT CERTAIN COURSE SHOWN AS "N 89 DEG. 20' 11" W 2647.60" FOR A PORTION OF THE SOUTHERLY LINE OF SAID REMAINDER PARCEL; THENCE SOUTH 89 DEG. 20' 11" EAST, 2957.73 FEET ALONG SAID PARALLEL LINE TO THE EASTERLY LINE SAID REMAINDER PARCEL; THENCE ALONG SAID EASTERLY LINE AND SAID SOUTHERLY LINE THE FOLLOWING COURSES: SOUTH 0 DEG. 21' 36" WEST 973.55 FEET; NORTH 89 DEG. 21' 23" WEST, 1323.78 FEET; AND NORTH 89 DEG. 20' 11" WEST, 2647.60 FEET TO THE POINT OF BEGINNING.

EXCEPT THEREFROM ALL OIL, PETROLEUM, HYDROCARBONS, GAS, BREA, ASPHALTUM AND ALL KINDRED SUBSTANCES, AND OTHER MINERALS LYING BELOW A DEPTH OF 500 FEET FROM THE SURFACE, BUT WITHOUT THE RIGHT OF SURFACE ENTRY, AS CONVEYED TO ACTION TRADING COMPANY, A NEVADA CORPORATION, BY DEED RECORDED JULY 30, 1968, IN BOOK 7068, PAGE 672, OFFICIAL RECORDS OF SAID COUNTY.

PARCEL NO. 2:

THE SOUTH 1/2 OF THE SOUTHEAST 1/4 OF THE NORTHEAST 1/4 OF SECTION 36, TOWNSHIP 1 SOUTH, RANGE 7 WEST, SAN BERNARDINO BASE AND MERIDIAN, IN THE CITY OF ONTARIO, COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL GOVERNMENT SURVEY THEREOF.

SAVING AND EXCEPTING THE EAST 30 FEET AS CONVEYED TO THE COUNTY OF SAN BERNARDINO BY DEED DATED NOVEMBER 20, 1952 AND RECORDED NOVEMBER 28, 1952, IN BOOK 3063, PAGE 16, OFFICIAL RECORDS.

APN: 0211-281-21-0-000 and 0211-281-23-0-000 and 0211-281-04-0-000

NOTICE

Section 12413.1 of the California Insurance Code, effective January 1, 1990, requires that any title insurance company, underwritten title company, or controlled escrow company handling funds in an escrow or sub-escrow capacity, wait a specified number of days after depositing funds, before recording any documents in connection with the transaction or disbursing funds. This statute allows for funds deposited by wire transfer to be disbursed the same day as deposit. In the case of cashier's checks or certified checks, funds may be disbursed the next day after deposit. In order to avoid unnecessary delays of three to seven days, or more, please use wire transfer, cashier's checks, or certified checks whenever possible.

If you have any questions about the effect of this new law, please contact your local First American Office for more details.

**EXHIBIT A
LIST OF PRINTED EXCEPTIONS AND EXCLUSIONS (BY POLICY TYPE)**

**1. CALIFORNIA LAND TITLE ASSOCIATION STANDARD COVERAGE POLICY - 1990
SCHEDULE B**

EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records. Proceedings by a public agency which may result in taxes or assessments, or notice of such proceedings, whether or not shown by the records of such agency or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of the land or which may be asserted by persons in possession thereof.
3. Easements, liens or encumbrances, or claims thereof, which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by the public records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the public records.

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating to (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
(b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims or other matters:
 - (a) whether or not recorded in the public records at Date of Policy, but created, suffered, assumed or agreed to by the insured claimant;
 - (b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;
 - (c) resulting in no loss or damage to the insured claimant;
 - (d) attaching or created subsequent to Date of Policy; or
 - (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the insured mortgage or for the estate or interest insured by this policy.
4. Unenforceability of the lien of the insured mortgage because of the inability or failure of the insured at Date of Policy, or the inability or failure of any subsequent owner of the indebtedness, to comply with applicable "doing business" laws of the state in which the land is situated.
5. Invalidity or unenforceability of the lien of the insured mortgage, or claim thereof, which arises out of the transaction evidenced by the insured mortgage and is based upon usury or any consumer credit protection or truth in lending law.
6. Any claim, which arises out of the transaction vesting in the insured the estate or interest insured by their policy or the transaction creating the interest of the insured lender, by reason of the operation of federal bankruptcy, state insolvency or similar creditors' rights laws.

**2. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY FORM B - 1970
SCHEDULE OF EXCLUSIONS FROM COVERAGE**

1. Any law, ordinance or governmental regulation (including but not limited to building and zoning ordinances) restricting or regulating or prohibiting the occupancy, use or enjoyment of the land, or regulating the character, dimensions or location of any improvement now or hereafter erected on the land, or prohibiting a separation in ownership or a reduction in the dimensions of area of the land, or the effect of any violation of any such law, ordinance or governmental regulation.
2. Rights of eminent domain or governmental rights of police power unless notice of the exercise of such rights appears in the public records at Date of Policy.
3. Defects, liens, encumbrances, adverse claims, or other matters (a) created, suffered, assumed or agreed to by the insured claimant; (b) not known to the Company and not shown by the public records but known to the insured claimant either at Date of Policy or at the date such claimant acquired an estate or interest insured by this policy and not disclosed in writing by the insured claimant to the Company prior to the date such insured claimant became an insured hereunder; (c) resulting in no loss or damage to the insured claimant; (d) attaching or

created subsequent to Date of Policy; or (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the estate or interest insured by this policy.

**3. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY FORM B - 1970
WITH REGIONAL EXCEPTIONS**

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 2 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage by reason of the matters shown in parts one and two following:

Part One

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
6. Any lien, or right to a lien, for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the public records.

**4. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1970
WITH A.L.T.A. ENDORSEMENT FORM 1 COVERAGE
SCHEDULE OF EXCLUSIONS FROM COVERAGE**

1. Any law, ordinance or governmental regulation (including but not limited to building and zoning ordinances) restricting or regulating or prohibiting the occupancy, use or enjoyment of the land, or regulating the character, dimensions or location of any improvement now or hereafter erected on the land, or prohibiting a separation in ownership or a reduction in the dimensions or area of the land, or the effect of any violation of any such law ordinance or governmental regulation.
2. Rights of eminent domain or governmental rights of police power unless notice of the exercise of such rights appears in the public records at Date of Policy.
3. Defects, liens, encumbrances, adverse claims, or other matters (a) created, suffered, assumed or agreed to by the insured claimant, (b) not known to the Company and not shown by the public records but known to the insured claimant either at Date of Policy or at the date such claimant acquired an estate or interest insured by this policy or acquired the insured mortgage and not disclosed in writing by the insured claimant to the Company prior to the date such insured claimant became an insured hereunder, (c) resulting in no loss or damage to the insured claimant; (d) attaching or created subsequent to Date of Policy (except to the extent insurance is afforded herein as to any statutory lien for labor or material or to the extent insurance is afforded herein as to assessments for street improvements under construction or completed at Date of Policy).
4. Unenforceability of the lien of the insured mortgage because of failure of the insured at Date of Policy or of any subsequent owner of the indebtedness to comply with applicable "doing business" laws of the state in which the land is situated.

**5. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1970
WITH REGIONAL EXCEPTIONS**

When the American Land Title Association Lenders Policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy, the exclusions set forth in paragraph 4 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage by reason of the matters shown in parts one and two following:

Part One

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
6. Any lien, or right to a lien, for services, labor or material theretofore or hereafter furnished, imposed by law and not shown by the public records.

**6. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1992
WITH A.L.T.A. ENDORSEMENT FORM 1 COVERAGE
EXCLUSIONS FROM COVERAGE**

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating to (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy;
(b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims, or other matters:
 - (a) whether or not recorded in the public records at Date of Policy, but created, suffered, assumed or agreed to by the insured claimant;
 - (b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;
 - (c) resulting in no loss or damage to the insured claimant;
 - (d) attaching or created subsequent to Date of Policy (except to the extent that this policy insures the priority of the lien of the insured mortgage over any statutory lien for services, labor or material or the extent insurance is afforded herein as to assessments for street improvements under construction or completed at date of policy); or
 - (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the insured mortgage.
4. Unenforceability of the lien of the insured mortgage because of the inability or failure of the insured at Date of Policy, or the inability or failure of any subsequent owner of the indebtedness, to comply with the applicable "doing business" laws of the state in which the land is situated.
5. Invalidity or unenforceability of the lien of the insured mortgage, or claim thereof, which arises out of the transaction evidenced by the insured mortgage and is based upon usury or any consumer credit protection or truth in lending law.
6. Any statutory lien for services, labor or materials (or the claim of priority of any statutory lien for services, labor or materials over the lien of the insured mortgage) arising from an improvement or work related to the land which is contracted for and commenced subsequent to Date of Policy and is not financed in whole or in part by proceeds of the indebtedness secured by the insured mortgage which at Date of Policy the insured has advanced or is obligated to advance.
7. Any claim, which arises out of the transaction creating the interest of the mortgagee insured by this policy, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that is based on:
 - (i) the transaction creating the interest of the insured mortgagee being deemed a fraudulent conveyance or fraudulent transfer; or
 - (ii) the subordination of the interest of the insured mortgagee as a result of the application of the doctrine of equitable subordination; or
 - (iii) the transaction creating the interest of the insured mortgagee being deemed a preferential transfer except where the preferential transfer results from the failure:
 - (a) to timely record the instrument of transfer; or
 - (b) of such recordation to impart notice to a purchaser for value or a judgment or lien creditor.

**7. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1992
WITH REGIONAL EXCEPTIONS**

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 6 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
6. Any lien, or right to a lien, for services, labor or material theretofore or hereafter furnished, imposed by law and not shown by the public records.

8. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY - 1992

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating to (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
(b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims, or other matters:
 - (a) created, suffered, assumed or agreed to by the insured claimant;
 - (b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;
 - (c) resulting in no loss or damage to the insured claimant;
 - (d) attaching or created subsequent to Date of Policy; or
 - (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the estate or interest insured by this policy.
4. Any claim, which arises out of the transaction vesting in the insured the estate or interest insured by this policy, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that is based on:
 - (i) the transaction creating the estate or interest insured by this policy being deemed a fraudulent conveyance or fraudulent transfer; or
 - (ii) the transaction creating the estate or interest insured by this policy being deemed a preferential transfer except where the preferential transfer results from the failure:
 - (a) to timely record the instrument of transfer; or
 - (b) of such recordation to impart notice to a purchaser for value or a judgment or lien creditor.

**9. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY - 1992
WITH REGIONAL EXCEPTIONS**

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 8 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

Part One:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
6. Any lien, or right to a lien, for services, labor or material theretofore or hereafter furnished, imposed by law and not shown by the public records.

**10. AMERICAN LAND TITLE ASSOCIATION RESIDENTIAL
TITLE INSURANCE POLICY - 1987
EXCLUSIONS**

In addition to the Exceptions in Schedule B, you are not insured against loss, costs, attorneys' fees and expenses resulting from:

1. Governmental police power, and the existence or violation of any law or government regulation. This includes building and zoning ordinances and also laws and regulations concerning:

* land use

* land division

* improvements on the land

* environmental protection

This exclusion does not apply to violations or the enforcement of these matters which appear in the public records at Policy Date.

This exclusion does not limit the zoning coverage described in items 12 and 13 of Covered Title Risks.

2. The right to take the land by condemning it, unless:
 - * a notice of exercising the right appears in the public records on the Policy Date
 - * the taking happened prior to the Policy Date and is binding on you if you bought the land without knowing of the taking.
3. Title Risks:
 - * that are created, allowed, or agreed to by you
 - * that are known to you, but not to us, on the Policy Date - unless they appeared in the public records
 - * that result in no loss to you
 - * that first affect your title after the Policy Date - this does not limit the labor and material lien coverage in Item 8 of Covered Title Risks
4. Failure to pay value for your title.
5. Lack of a right:
 - * to any land outside the area specifically described and referred to in Item 3 of Schedule A, or
 - * in streets, alleys, or waterways that touch your land

This exclusion does not limit the access coverage in Item 5 of Covered Title Risks.

11. EAGLE PROTECTION OWNER'S POLICY

**CLTA HOMEOWNER'S POLICY OF TITLE INSURANCE - 1998
ALTA HOMEOWNER'S POLICY OF TITLE INSURANCE - 1998**

Covered Risks 14 (Subdivision Law Violation), 15 (Building Permit), 16 (Zoning) and 18 (Encroachment of boundary walls or fences) are subject to Deductible Amounts and Maximum Dollar Limits of Liability

EXCLUSIONS

In addition to the Exceptions in Schedule B, you are not insured against loss, costs, attorneys' fees, and expenses resulting from:

1. Governmental police power, and the existence or violation of any law or government regulation. This includes ordinances, laws and regulations concerning:

a. building	b. zoning
c. land use	d. improvements on the land
e. land division	f. environmental protection

This exclusion does not apply to violations or the enforcement of these matters if notice of the violation or enforcement appears in the Public Records at the Policy Date.

This exclusion does not limit the coverage described in Covered Risk 14, 15, 16, 17 or 24.

2. The failure of Your existing structures, or any part of them, to be constructed in accordance with applicable building codes. This Exclusion does not apply to violations of building codes if notice of the violation appears in the Public Records at the Policy Date.
3. The right to take the Land by condemning it, unless:
 - a. a notice of exercising the right appears in the Public Records at the Policy Date; or
 - b. the taking happened before the Policy Date and is binding on You if You bought the Land without Knowing of the taking.
4. Risks:
 - a. that are created, allowed, or agreed to by You, whether or not they appear in the Public Records;
 - b. that are Known to You at the Policy Date, but not to Us, unless they appear in the Public Records at the Policy Date;
 - c. that result in no loss to You; or
 - d. that first occur after the Policy Date - this does not limit the coverage described in Covered Risk 7, 8.d, 22, 23, 24 or 25.
5. Failure to pay value for Your Title.
6. Lack of a right:
 - a. to any Land outside the area specifically described and referred to in paragraph 3 of Schedule A; and
 - b. in streets, alleys, or waterways that touch the Land.

This exclusion does not limit the coverage described in Covered Risk 11 or 18.

12. SECOND GENERATION EAGLE LOAN POLICY AMERICAN LAND TITLE ASSOCIATION EXPANDED COVERAGE RESIDENTIAL LOAN POLICY (10/13/01)

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating to (i) the occupancy, use, or enjoyment of the Land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the Land; (iii) a separation in ownership or a change in the dimensions or area of the Land or any parcel of which the Land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the Land has been recorded in the Public Records at Date of Policy. This exclusion

does not limit the coverage provided under Covered Risks 12, 13, 14 and 16 of this policy.

- (b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the Public Records at Date of Policy. This exclusion does not limit the coverage provided under Covered Risks 12, 13, 14 and 16 of this policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the Public Records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without Knowledge.
 3. Defects, liens, encumbrances, adverse claims or other matters:
 - (a) created, suffered, assumed or agreed to by the Insured Claimant;
 - (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
 - (c) resulting in no loss or damage to the Insured Claimant;
 - (d) attaching or created subsequent to Date of Policy (this paragraph does not limit the coverage provided under Covered Risks 8, 16, 18, 19, 20, 21, 22, 23, 24, 25 and 26); or
 - (e) resulting in loss or damage which would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
 4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of the Insured at Date of Policy, or the inability or failure of any subsequent owner of the indebtedness, to comply with applicable doing business laws of the state in which the Land is situated.
 5. Invalidity or unenforceability of the lien of the Insured Mortgage, or claim thereof, which arises out of the transaction evidenced by the Insured Mortgage and is based upon usury, except as provided in Covered Risk 27, or any consumer credit protection or truth in lending law.
 6. Real property taxes or assessments of any governmental authority which become a lien on the Land subsequent to Date of Policy. This exclusion does not limit the coverage provided under Covered Risks 7, 8 (e) and 26.
 7. Any claim of invalidity, unenforceability or lack of priority of the lien of the Insured Mortgage as to advances or modifications made after the Insured has Knowledge that the vestee shown in Schedule A is no longer the owner of the estate or interest covered by this policy. This exclusion does not limit the coverage provided in Covered Risk 8.
 8. Lack of priority of the lien of the Insured Mortgage as to each and every advance made after Date of Policy, and all interest charged thereon, over liens, encumbrances and other matters affecting title, the existence of which are Known to the Insured at:
 - (a) The time of the advance; or
 - (b) The time a modification is made to the terms of the Insured Mortgage which changes the rate of interest charged, if the rate of interest is greater as a result of the modification than it would have been before the modification.
 This exclusion does not limit the coverage provided in Covered Risk 8.
 9. The failure of the residential structure, or any portion thereof to have been constructed before, on or after Date of Policy in accordance with applicable building codes. This exclusion does not apply to violations of building codes if notice of the violation appears in the Public Records at Date of Policy.

SCHEDULE B

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. The following existing statutes, reference to which are made part of the ALTA 8.1 Environmental Protection Lien Endorsement incorporated into this Policy following item 28 of Covered Risks: NONE.

13. SECOND GENERATION EAGLE LOAN POLICY AMERICAN LAND TITLE ASSOCIATION EXPANDED COVERAGE RESIDENTIAL LOAN POLICY (10/13/01) WITH REGIONAL EXCEPTIONS

When the American Land Title Association loan policy with EAGLE Protection Added is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 12 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

Part One:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in acts authorizing the issuance thereof; water rights, claims or title to water.
6. Any lien, or right to a lien, for services, labor or material theretofore or hereafter furnished, imposed by law and not shown by the public records.

Part Two:

1. The following existing statutes, reference to which are made part of the ALTA 8.1 Environmental Protection Lien Endorsement incorporated into this Policy following item 28 of Covered Risks: None.

PRIVACY POLICY

We Are Committed to Safeguarding Customer Information

In order to better serve your needs now and in the future, we may ask you to provide us with certain information. We understand that you may be concerned about what we will do with such information – particularly any personal or financial information. We agree that you have a right to know how we will utilize the personal information you provide to us. Therefore, together with our parent company, The First American Corporation, we have adopted this Privacy Policy to govern the use and handling of your personal information.

Applicability

This Privacy Policy governs our use of the information which you provide to us. It does not govern the manner in which we may use information we have obtained from any other source, such as information obtained from a public record or from another person or entity. First American has also adopted broader guidelines that govern our use of personal information regardless of its source. First American calls these guidelines its *Fair Information Values*, a copy of which can be found on our website at www.firstam.com.

Types of Information

Depending upon which of our services you are utilizing, the types of nonpublic personal information that we may collect include:

- Information we receive from you on applications, forms and in other communications to us, whether in writing, in person, by telephone or any other means;
- Information about your transactions with us, our affiliated companies, or others; and
- Information we receive from a consumer reporting agency.

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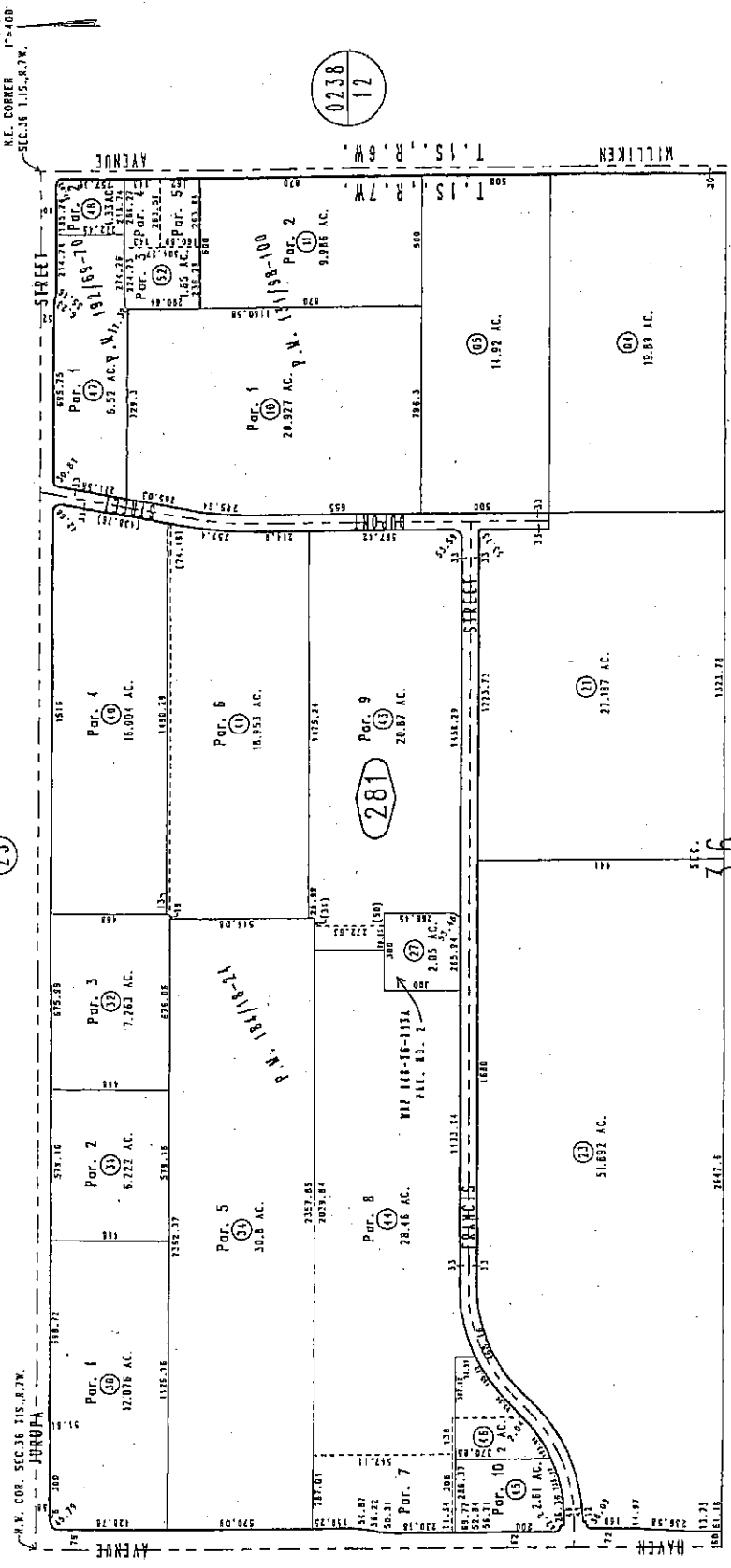
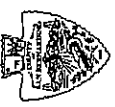
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THIS MAP IS FOR THE PURPOSE
OF AD VALOREM TAXATION ONLY.



FEB 0 4 2005

REVISED

Assessor's Map 28
Book 0211 Page 28
San Bernardino County

Parcel Map No. 15423, P.M. 192766-70
Parcel Map No. 13072, P.M. 18718-24
Parcel Map No. 10903, P.M. 131798-100

October 2004



ADDITIONAL OFFICES
SAN DIEGO
BAKERSFIELD
VENTURA COUNTY

MOORE & TABER GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
1290 NORTH HANCOCK STREET • P.O. BOX 19079 • ANAHEIM, CA 92817
TELEPHONE: (714) 779-2591 • FAX: (714) 779-8377

**PHASE I
PRELIMINARY SITE ASSESSMENT**

20-Acre Site
Adjacent to Milliken Landfill
Ontario, California

CLIENT

Solid Waste Management Department
Public Works Group
County of San Bernardino
Garden Office No. 1, Building B
621 East Carnegie Drive, Suite 270
San Bernardino, California 92415-0017

June 6, 1991

Job No. 191-024

PHASE I
PRELIMINARY SITE ASSESSMENT PLAN

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Solid Waste Management Department
Public Works Group
County of San Bernardino
Garden Office No. 1, Building B
621 East Carnegie Drive, Suite 270
San Bernardino, California 92415-0017

Attention: Mr. Lester L. Peake, P.E.
Project Engineer
Solid Waste Management

**PRELIMINARY SITE ASSESSMENT
20-ACRE SITE ADJACENT TO MILLIKEN LANDFILL
ONTARIO, CALIFORNIA**

Moore & Taber (M&T) is pleased to submit this Phase I Preliminary Site Assessment (PSA) for the above referenced property. It is understood that this assessment is needed by the County of San Bernardino to properly evaluate the subject property for possible acquisition. M&T services were performed in accordance with our proposal dated February 15, 1991, as authorized by your Purchase Order No. T10443, dated March 8, 1991.

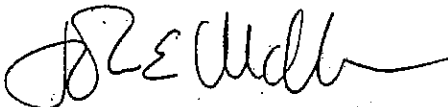
The primary purpose of this PSA was to reveal or discover obvious evidence or other information relative to the presence, or likely presence, of a release or potential release of hazardous substances at the site. In general, these services included a site reconnaissance, interviews, review of available historical records, and preparation of this report. This PSA did not include a visual asbestos survey nor on-site sampling. No structures currently exist on this property.

The site has remained essentially undeveloped and used for agricultural purposes for at least 50 years. There was no evidence of previously disposed hazardous waste, above-ground storage tanks, or underground storage tanks noted at the site based on our site reconnaissance and search of pertinent governmental agency records. There was no evidence of underground storage tanks or other potentially hazardous conditions noted on the predominantly agricultural properties surrounding the site. The Milliken Landfill is located adjacent to the site on the southwest. Consultants working at the (Milliken Landfill) site concluded that groundwater quality has been impacted in the vicinity of the landfill and additional remedial investigative work approved by the Regional Water Quality Control Board (RWQCB) is currently underway. A Landfill Gas (LFG) extraction system has been installed which is designed to stop off-site migration of gases. Additional data acquisition and limited near-surface soil sampling and chemical analyses may be appropriate based on the Phase I findings, depending on the intended land use among other factors.

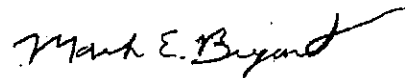
This report has been prepared solely for use by the County of San Bernardino, Public Works Group, Solid Waste Management Department, and its representatives for their evaluation as to the potential for the presence of hazardous material on the site. This report may not contain sufficient information for other uses or for the purposes of other parties.

Should you have any questions, please contact the undersigned.

MOORE & TABER



John E. McNamara
Project Geologist
RG 4863
JEM/MEB/lkr



Mark E. Bryant
Principal Geologist
CEG 1046, REA 613

Distribution: (2) Addressee

1.0 INTRODUCTION

This report presents the results of a Phase I Preliminary Site Assessment (PSA) performed prior to procurement of the subject property. This assessment was performed to provide information concerning possible hazardous substances that may be present on this property or located nearby that might impact the subject property.

1.1 Workslope

In general, this PSA involved review of available records, a site reconnaissance, and documenting our findings. Our services focused on the possible presence of known or reported hazardous materials and wastes that could be associated with, for example, underground storage tanks, landfills, treatment facilities, etc. This PSA did not include subsurface exploration, sampling, laboratory (chemical) testing, on-site radon testing, or material analyses for the presence of asbestos.

The specific tasks conducted for this Phase I PSA included the following:

- ▶ Review of available geotechnical reports, and published geologic and geohydrologic data;
- ▶ Review of available parcel maps, plot plans, and topographic maps;
- ▶ Review of published governmental underground tank, landfill and hazardous waste site lists, including Federal, State and County database lists such as: BEP list, NPL, CERCLIS list, Cortese List, SWQCB list, SWIS list, ASPIS list, FID list, and LUST lists;
- ▶ Review of available old aerial photographs, and old topographic maps;
- ▶ Consultation with appropriate environmental regulatory agencies, including Water Quality Control Board, building department, planning department, Division of Oil and Gas, and local health department;

- ▶ Review of information obtained from regulatory agencies relating to underground tanks, above-ground tanks, chemical spill incidents, permit violations, chemical storage records, hazardous waste records, and other applicable records;
- ▶ Interviews with appropriate off-site personnel regarding current and past land use as well as facility operations and related activities;
- ▶ Site reconnaissance to check for visible evidence of potential environmental concerns, including underground tanks, surface contamination, chemical storage, hazardous substances, wells, landfills, ponds, electrical transformers, and treatment facilities at the site and adjacent properties; and
- ▶ Preparation of this assessment report including a summary of findings, discussion of site conditions, illustrations (e.g., maps and photographs), documentation, and appropriate recommendations as needed.

1.2 Site Description

The subject site is owned by Milliken Company and is described as Assessors Parcel Number (APN) 211-281-04, in the City of Ontario, San Bernardino County, California by the County Recorder. It is our understanding, based on conversations with personnel from the City of Ontario Planning Department, that the site is zoned as Specific Plan (SP) and is part of the California Commerce Center. Development plans were unavailable at the time of this report.

In general, the subject property is situated to the north of the Pomona (60) Freeway and west of the Devore (15) Freeway as shown on the Location Map, Figure I. The site encompasses about 20 acres and is bounded on the east by Milliken Avenue. A distribution center for Nordstrom clothing retailers is located to the north. Undeveloped abandoned grape vineyards border the site to the south and west. The Milliken Solid Waste Disposal Site is located to the southwest of the site with a 200 foot portion of the property boundary in common with the site. The general ground surface in the area slopes to the southwest at approximately 60 feet per mile.

2.0 DATA ACQUISITION

2.1 Field Reconnaissance

The subject property was visited by a geologist from our office on April 3, 1991 for the purpose of observing site conditions and viewing adjacent properties (see Figure II and attached photographs). During the site reconnaissance, M&T focused its attention on evidence of possible surface contamination, evidence of previously disposed hazardous waste and evidence of underground storage tanks. Locations identified in databases and from discussions with environmental regulatory agencies as potential sources of contamination were visited as needed.

2.2 Site History

Our understanding of the historical uses of the subject site and adjacent properties is based on review of historical aerial photographs, topographic maps, interviews with knowledgeable people, review of two reports dated December 1987 and October 1988 prepared by IT Corporation for the adjacent Milliken Landfill, and review of a M&T geotechnical report for the property to the north dated April 29, 1985.

According to available records and personal accounts, the immediate area was used for agricultural purposes until after the early 1980s when surrounding sites were developed and the subject site was no longer used for agricultural purposes. Aerial photographs from 1938 to present show the same agricultural crop occupying the site for over 50 years, with a farm house or fruit stand located on the southeast corner from the early 1950s through the late 1960s. In addition, topographic maps indicate the site has historically been occupied by vineyards (since at least 1938). The San Bernardino County Agricultural Commissioner's staff (personal communication) reported that much of the area north of Mission Avenue was covered by grape vineyards up until the mid 1980s when it was common for speculators to purchase the land and not maintain the crops. Geotechnical reports by IT and M&T described conditions similar to what was found during our site reconnaissance on April 3, 1991.

2.3 Geologic Data

Local geologic data from published geologic maps and unpublished consultants' reports were reviewed. The site is underlain by Holocene alluvium consisting primarily of outwash deposits from the San Gabriel and San Bernardino Mountains north of the site. In the local area these deposits are reportedly in excess of 900 feet thick and are composed of predominantly coarse material ranging in size from sands to cobbles. The site is located in the Chino Hydrologic Substrata of the Middle Santa Ana River Hydrologic Area in the Santa Ana Basin. There are no known faults crossing or projecting toward the site, which could act as groundwater barriers.

No records were found to indicate that geotechnical exploration was performed previously on the subject site. M&T performed a soil exploration program on parcels adjacent to, and north of, the site. Numerous studies involving drilling geotechnical borings and installing monitoring wells have been completed to the south at the Milliken Landfill by M&T and other consulting firms. The predominantly coarse material encountered during these studies is consistent with information contained in published reports. Clayey silt and silt layers were encountered at depths of 80 and 200 feet below the ground at the Milliken Landfill.

2.4 Groundwater Data

Groundwater data for the region was reviewed. Groundwater was encountered in borings on the landfill site at approximately a 250-foot depth. Groundwater flow is reportedly in a southwesterly direction roughly parallel to the ground surface. We expect that conditions similar to those encountered during previous studies would be found underlying the subject site to the depths explored.

Based on our conversations with the San Bernardino County Solid Waste Management Department, data base search and reference to previous hydrogeologic studies we found that solvents (tetrachloroethene and trichloroethene) were detected in water samples from downgradient wells (M1 and M2B) from the landfill. A mitigation program is apparently in its initial stage of implementation.

There are seven known production water wells within one-mile of the subject property. The following is a listing of the well numbers and owners, respectively:

Well Number/Well Owner

Well Number/Well Owner

2S7W1N1 Charles Heinrich
209 West Broadway
Anaheim, California

2SYW1R2 San Antonio Winery
737 Lamar
Los Angeles, California

2S7W1R1 Lucretia Martinez
5177 138th Street
Hawthorne, California

1S6W31N1 Jack Guidera
12737 Foothill Boulevard
Etiwanda, California

1S6W31D1 City of Ontario
303 East B Street
Ontario, California

2S7W2R1 American National Housing
22957 La Cadena
Laguna Hills, California

The closest known production wells are Well Nos. 1S6W31D1 and 1S6W31N1, which are located approximately 1/2 mile away and are used for industrial and agricultural purposes, respectively.

2.5 Agency and Database Search

Available public records (databases) were reviewed to determine if hazardous substance/waste sites are known to be within one-mile, or more if necessary, of the site. When appropriate, we contacted specific governmental agencies to obtain additional information. Our findings are summarized below.

2.5.1 United States Environmental Protection Agency (EPA)

The EPA "*National Priorities List (NPL) Supplementary Lists and Supporting Materials, August, 1990*" was reviewed. This list identifies and prioritizes hazardous waste sites for remedial action under the Superfund program. Neither listed sites nor sites proposed for listing lie within a one-mile radius of the subject site. Sites outside the one-mile radius but nearest the subject property appearing on the NPL include: March Air Force Base in Riverside County; and National Semiconductor Corporation site and Newmark Groundwater Contamination Site, in San Bernardino County.

2.5.2 State of California Office of Planning and Research

The "*Hazardous Waste and Substances Site List*" also referred to as the Cortese list, dated November, 1990, was searched. This document is a listing of potential and confirmed hazardous waste and substance sites throughout California. The Milliken Landfill is the only site listed within a one-mile radius of the subject site.

2.5.3 California Department of Health Services (DHS)

Under the California Hazardous Substance Bond Act of 1984, the DHS has developed a listing of those hazardous waste sites subject to a site-specific plan for appropriation and expenditure of funds for clean-up under the Bond Expenditure Plan. Review of the "*1989 Bond Expenditure Plan*" (BEP list) indicates no sites within a one-mile radius of the subject site. BEP listed sites nearest the subject site include: North San Bernardino Area; Crofton Redlands Areas and Newmark Groundwater Contamination in San Bernardino County; and March Air Force Base and Stringfellow Hazardous Waste Site in Riverside County.

2.5.4 California Environmental Affairs Agency

This agency maintains a database entitled the "*Facility Inventory Database*" (FID) which is compiled from the following Federal and State databases:

- ▶ EPA Facility Index System (FINDS) list;
- ▶ EPA Comprehensive Environmental Responsibility, Compensation and Liability Act (CERCLA) list;
- ▶ California Air Resources Board "Toxic Hotspots" database;
- ▶ California State Water Resources Control Board, Leaking Underground Storage Tank (LUST) list;
- ▶ Department of Health Services, Toxics Division, Hazardous Waste Information System (HWIS) list ;

- ▶ Department of Health Services, Toxics Division, Abandoned Sites Program Information System (ASPIS) list;
- ▶ SARA Title III, Section 313 (Toxic Chemical Release Inventory) lists;
- ▶ Facilities reporting to the California Environmental Affairs Agency for reporting years 1987, 1988, and 1989 list; and
- ▶ California State Water Resources Control Board, Waste Discharge System (SWRCB) list.

Review of this database, current to March 1991, revealed seven facilities located within one-mile of the site. These specific sites are:

<u>FACILITY/ADDRESS</u>	<u>FACILITY/ADDRESS</u>
INLAND CONTAINER CORPORATION 5100 Jurupa Avenue Ontario, California	AMERICAN METAL RECYCLING, INC. 2202 South Milliken Avenue Ontario, California
CROWN TOYOTA 1201 Kettering Drive Ontario, California	PICK-A-PART AUTO DISMANTLING 2025-A South Milliken Avenue Ontario, California
ROMERO BIRCH DAIHATSU 1307 Kettering Loop Ontario, California	MILLIKEN SANITARY LANDFILL 2050 South Milliken Avenue Ontario, California
SUPERIOR PONTIAC 1356 Auto Center Drive Ontario, California	

In addition, several sites within one to one and a half miles of the subject site have appeared on the ASPIS database but at present are designated "no further action required on the site". These sites include:

FACILITY/ADDRESS

BROWN COMPANY STEEL CORPORATION
Milliken Avenue and Airport Drive
Ontario, California

AMERICAN METAL REDUCTION COMPANY
Mission Boulevard and Milliken Avenue
Ontario, California

FACILITY/ADDRESS

CHEVRON CHEMICAL COMPANY
1106 South Milliken Avenue
Ontario, California

The above referenced sites are not expected to impact the subject property, particularly considering their relative locations.

2.5.5 California Integrated Waste Management Board

The "Solid Waste Information System (SWIS)" database maintained by the board lists active and inactive solid waste disposal sites, as well as transfer stations, within the state. Information including the land owner, the facility operator, and the type and quantity of waste received is provided. Review of the listings current through October 1990 revealed no site within one-mile of the property. The closest facility to the site listed is the Western Refuse Hauling Company in Chino, California.

2.5.6 California Water Quality Control Board (SWQCB)

The SWQCB "Report on Releases of Hazardous Substances from Underground Storage Tanks, January 1990 (90-2CWP)" was reviewed. Our review indicates that no sites currently under investigation for the release of hazardous materials from underground storage tanks lie within a one-mile radius of the site. The nearest sites within the City of Ontario currently under investigation include Union Carbide Corporation at 54705 East Airport Drive and Unocal Service Station #5281 at 705 North Archibald Avenue, which leaked solvents and gasoline, respectively.

2.5.7 California Regional Water Quality Control Board (RWQCB)

The "Solid Waste Assessment Test (SWAT) List" dated April 13, 1990, the "Leaking Underground Tank List" dated November 28, 1990, and the "Toxic Pits Cleanup Act List" dated August 1989, maintained by the RWQCB, were reviewed.

The SWAT Program Site List identifies by rank, according to potential threat to water quality, active and inactive solid waste disposal sites scheduled for testing within California. The Milliken Solid Waste Disposal Site is the only one listed within a one-mile radius and is known to be directly adjacent to the site. The nearest site on the list outside of the one-mile radius is the March Air Force Base Landfill in Riverside County.

The Leaking Underground Tank List tabulates leaking underground tanks in the state, the remediation efforts underway, and the agency taking the lead in those efforts. No sites on this list are within a one-mile radius of the subject property.

The Toxic Pits List is a compilation of facilities that are at present subject to remediation under the Toxic Pits Cleanup Act. No site listed was in the vicinity of the subject property.

The nontank cases lists sites that are presently in varying phases of characterization or remediation of soil and/or groundwater impacted by materials such as solvents or acids. Case management is conducted by the DHS, the RWQCB or other regulatory agencies. "Nontank Cases" within one-mile of the subject site include the Inland Container Corporation at 5100 Jurupa Avenue, Ontario, California and the Milliken Sanitary Landfill at 2050 South Milliken Avenue, Ontario, California.

The "List of Polluted Wells" database does not contain any wells within one-mile of the site.

2.5.8 San Bernardino County Department of Environmental Health Services

Information monitored by the Hazardous Materials Division of the Department of Environmental Health Services was searched. Information including the facility operator, hazardous materials handled or stored on site, hazardous material releases, contamination, clean-up action, and related activities is provided. A review of this database revealed 5 sites within one-mile. These specific sites are:

FACILITY/ADDRESS

PICK-A-PART & OTHERS
2025 South Milliken
Ontario, California

MILLIKEN TRUCK
2175 South Milliken
Ontario, California

FACILITY/ADDRESS

AMERICAN METAL REDUCTION
2202 South Milliken
Ontario, California

PETERSON MANUFACTURING
2107 South Milliken
Ontario, California

The above referenced sites are not expected to impact the subject property, particularly considering their relative locations. In addition, the Inland Container Corporation at 5100 Jurupa Avenue, Ontario, California, is within the one-mile radius. However, at present it is designated as having no hazardous materials contamination, and their underground storage tank was apparently removed.

2.5.9 Division of Oil and Gas (DOG)

Maps on file at the State of California Department of Conservation, Division of Oil and Gas (DOG) indicate no oil or gas wells within a mile radius of the subject site. Our review of Map W1-4 indicates that two (dry) wells located in closest proximity to the subject site are Well No. 23-1410 owned by Italian Vineyard Company and Well No. 54-1455 owned by Argyle Campbell and Company. They are located approximately 2¼ miles and 2 miles, respectively, to the north and west of the site.

2.5.10 San Bernardino County Agricultural Commissioner

According to conversations with staff at the San Bernardino County Agricultural Commissioner's office, there are no reported health problems in the area as a result of residual effects of chemicals used for agriculture. Among chemicals generally used in the past in this area, the hydrocarbon-based pesticides such as dieldrin, chlordane, and DDT are considered the most persistent. Even these hydrocarbon-based chemicals are said to decompose with time when exposed to sunlight.

2.6 AERIAL PHOTOGRAPHIC DATA

Aerial photographs maintained by the San Bernardino County Flood Control District for the site and surrounding areas were reviewed. Earliest available photos are dated 1938. Subsequent available photos for the years 1955, 1965, 1973, and 1986 were also reviewed.

The 1938 photos showed vineyards on the site and the surrounding properties. No structures or other improvements were apparent. A large sand dune was present on the northeast corner of the site and appeared to have developed there recently.

Photos from 1955 showed a small building and a large tree on the southeast corner of the site. A number of buildings to the south along Milliken which are present today appeared in these photos. Conditions on the site were otherwise unchanged.

The 1965 photos showed the beginning of the Milliken Landfill. No other additional improvements were apparent. Photos from 1973 showed the building on the southeast corner to be removed. Otherwise, surrounding terrain conditions remained visually similar to what was noted on the 1965 photographs.

The 1986 photos showed the building to the immediate north of the site and Dupont Street. Interstate 15 was under construction to the east. The surrounding conditions appeared similar to those noted in the 1973 photographs and to the conditions recently observed in the area.

2.7 SITE RECONNAISSANCE

2.7.1 Subject Site

Rows of grape vines cover most of the site except within closed depressions to the east near Milliken Avenue (see Appendix A, Photos 1-5). No evidence of previously disposed hazardous waste or underground tanks was observed at the site. No evidence of drums or other containers that might have contained hazardous materials was observed.

Minor amounts of wind-blown trash (papers, plastic bags, etc.) were observed scattered across the site. A few piles of asphalt probably used for resurfacing Milliken Avenue were observed near the southeastern corner of the site. A dark brown to black oily unidentified substance was observed coating a two by twenty foot section of ground and the

fence along the northern property boundary. It appears that the source of the unidentified substance was from the northern property. It is our understanding that the Solid Waste Management Department reported this situation to the County Hazardous Waste Officer on May 15, 1991. Apparently, the adjacent property owner (Nordstrom) plans to clean up the waste material.

Surface drainage crosses the northeast corner of the Milliken Landfill property and the southwest portion of the site. Surface (water) runoff also ponds in a closed depression at the end of Dupont Avenue near the northwestern corner. No odor or visual contamination was observed. In general, overall site drainage is to the southwest.

There were no power poles observed on the subject site. No transformers were observed on or adjacent to the site. High power transmission lines were observed approximately 1,000 feet to the south of the site crossing Milliken Avenue.

No evidence of utilities above or below ground were observed on the site, except within easements along the western and southern property boundaries. Four manhole covers labeled as sewer with square concrete bases are located along the southern property boundary. Two of the four appear to be abandoned and the other two appear to have been installed recently, possibly replacing the others. They appeared in alignment with other manhole covers projecting off-site to the east and west. Based on available maps, a 50-foot wide sewer easement exists along the southern boundary, and a 50-foot wide sewer and storm drain easement is on the west boundary.

2.7.2 Adjoining Properties

An in-person interview was conducted on April 3, 1991 with an employee of the Nordstrom Distribution Center on the property to the north (see Photo 1). Reportedly, there are no hazardous materials stored or used on the premises, and, therefore, no business plan or Material Safety Data Sheets (MSDs) were available at the facility.

The Milliken Landfill (Photo 4) is generating landfill gas (LFG). The LFG migration control system was observed around the perimeter of the landfill. Fifty extraction wells have reportedly been installed around the landfill ranging in depth from 20 to 100 feet. Three well heads were observed along the 200 foot common property boundary at the southwest corner of the subject site. Above ground storage tanks were observed on the east side of the landfill and are likely used to store LFG collected.

Commercial businesses are located south of the site along the Pomona Freeway (State Highway 60) and adjacent to Ontario International Airport, northwest of the site. Various industries use the land east and north of the site. A storage tank recycling company is located to the south along Mission Avenue and is proposed for use as an automobile waste disposal site. An automobile junkyard is across Milliken Avenue approximately 1,000 feet southeast from the site.

The San Bernardino County Flood Control District maintains Deer Creek Channel in the residential area southwest of the landfill site. The Wineville Basin groundwater spreading grounds and associated drainage ditches are located east of the site near the intersection of Jurupa Street and Interstate 15. Inactive sewage disposal ponds are located west of the landfill site at the intersection of Patton Road and Haven Avenue.

3.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the information obtained during this PSA, the potential for contamination as a result of hazardous substance/waste discharge to the site is considered moderate to low. There was no direct evidence found indicating that this site was used for anything other than for agricultural purposes. The pesticides or other chemicals associated with agricultural activities on the site would not be expected to affect its future use. There may be residual levels of pesticides in the near-surface soils as a result of normal application. The stained soil and black oily substance observed along the northern property boundary should be properly cleaned up prior to site development.

A LFG collection system has been installed at the Milliken Landfill. Groundwater monitoring has been conducted at the landfill since 1987. The landfill is reportedly leaking solvents to the local groundwater. There is no known evidence that such contamination has affected groundwater quality beneath the subject property, primarily due to its relative (up gradient) location. We observed evidence of surface flow along the edge of the landfill and subject property. It is understood that certain drainage improvements, in conjunction with other closure requirements, will be constructed at the Milliken Landfill. There is no direct evidence to suggest that the subject property has been affected by the documented contamination associated with the landfill. However, based on our review of the referenced documents and our site reconnaissance, more extensive data acquisition and limited site sampling and analyses of near-surface soils may be required.

A number of other sites were found within one mile of the site with reported on-site contamination. The majority are to the south and therefore down (groundwater) gradient from the subject site. Subsurface soil conditions and groundwater quality beneath the site should not be significantly affected by those properties which were found and listed in the various agency databases. The decision to perform additional assessment activities should be based on several factors, including but not limited to: known conditions in the area; intended land use for the subject property; and, the level of acceptable environmental risk.

4.0 CLOSURE

This report is based on the information obtained from the site reconnaissance and research of appropriate records and available databases. It is anticipated that this report adequately satisfies the intended purpose. The discussion of the various topics should be taken as very general. No detailed investigation, including subsurface exploration, or field and laboratory testing or detailed analyses have been performed. The information provided should be considered in light of the services conducted and is intended to serve in the decision making process.

It should be recognized that certain limitations exist with the (Phase I) environmental assessment completed. Moore & Taber cannot be responsible or liable for the accuracy of the information provided by others. This assessment should not preclude the possibility that hazardous substances are present at this time. Furthermore, our services should not be regarded as a guarantee that no such hazardous substances will be encountered in the foreseeable future at the subject site.

This report has been prepared for the exclusive use of San Bernardino County Solid Waste Management Department of the Public Works Group as it pertains to the subject site. It may not contain sufficient information for other parties or other purposes. It has been prepared in accordance with generally recognized geotechnical and environmental consulting practices and makes no other warranties, either express or implied, as to the professional advice or data included.

DOCUMENTS AND CONTACTS

- Baird, Tom - San Bernardino County Deputy Agricultural Commissioner - personal communication, on March 28, 1991.
- Brown, Dennis - San Bernardino County Solid Waste Management Department - personal communication, on April 10, 1991.
- California Department of Health Services, Expenditure Plan for the Hazardous Substance Cleanup Bond Act of 1984, revised January 1989.
- California Division of Mines and Geology, Geologic Map of California, Santa Ana Sheet, Scale 1:250,000, 1965
- California Division of Oil and Gas, Regional Wildcat Map W1-4, Orange, Riverside and San Bernardino Counties dated May 10, 1990.
- California Environmental Affairs Agency, Facility Inventory Database, dated March 1991.
- California Office of Planning and Research, Hazardous Waste and Substances Sites List, dated March 1990.
- California Regional Water Quality Control Board, Toxic Pits Cleanup Act, Santa Ana Region List, dated August 1989.
- California Regional Water Quality Control Board, Solid Waste Assessment Test List - Santa Ana Region, dated April 13, 1990.
- California State Water Quality Control Board, Report on Releases of Hazardous Substances from Underground Storage Tanks, 90-2CWP, dated January 1990.
- IT, Solid Waste Assessment Test (SWAT), Milliken Sanitary Landfill, Ontario, California, dated December 1987.
- IT, Five-Year Periodic Site Review and RDSI Report, Milliken Sanitary Landfill, Ontario, California, dated October 1988.

DOCUMENTS AND CONTRACTS

(continued)

Moore & Taber, Geotechnical Investigation, California Commerce Center, Phase II, Ontario, California, Consultants Job No. 185-32, dated April 29, 1985.

_____, Slope Stability Analysis, Milliken Landfill, San Bernardino County, California, Consultants Job No. 190-080, dated February 7, 1991.

Nordstrom Distribution Center - front desk secretary, personal communication on April 3, 1991.

San Bernardino County Aerial Photographs dated 1938-W-71 #E-2-1; November 8, 1955 - F-34 #286 and #287; November 29, 1965 - C-138, #26; June 8, 1973 and February 25, 1986 - C450, #62.

San Bernardino County Refuse Disposal Division, Photo Map, dated April 20, 1976; and Topographic Map dated 1990.

San Bernardino County Assessors' office for the current owner and APN.

United States Environmental Protection Agency, National Priorities List, Supplementary List and Supporting Materials, dated August 1990.

United States Geological Survey, 7.5 minute topographic quadrangle map, Guasti, California photo revised 1981.

SETTLEMENT AGREEMENT AND RELEASE

This Settlement Agreement and Release (the "Agreement") is made effective as of August __, 1991, by and between Lusk Ontario Industrial Partners II ("OIP") and the County of San Bernardino (the "County") (collectively, the "Parties"), who mutually covenant and agree as follows:

RECITALS

WHEREAS, OIP is the plaintiff and the County is a defendant in a civil action entitled Ontario Industrial Partners v. The County of San Bernardino, et al, San Bernardino Superior Court, Case No. OCV-38850 (the "Action"), in which OIP alleges that the County is civilly liable for the migration of hazardous gases from the Milliken Avenue Landfill, owned by the County, onto certain property adjacent to the Milliken Avenue Landfill belonging to OIP;

AND WHEREAS, the County, while denying any alleged liability or fault, has agreed to settle the Action by purchasing approximately 83.49 acres of OIP's property directly abutting the Milliken Avenue Landfill (the "Subject Property"), more particularly described in the form of Purchase Agreement and Escrow Instructions attached hereto as Exhibit "A" (the "Purchase Agreement"), in consideration for which OIP has agreed to release the County from liability for negligence, nuisance, or any other such claim related to the Action as provided herein;

AGREEMENT

NOW, THEREFORE, the Parties agree as follows:

1. Purchase Price. OIP agrees to sell the Subject Property to the County and the County agrees to purchase the Subject Property from OIP on the terms and conditions and at the price specified in the Purchase Agreement.

2. Use of Existing Property. Except as otherwise provided herein, the County shall not use the Subject Property for the storage or disposal of solid or hazardous waste. The County may, however, establish a household hazardous waste collection center at or near the Milliken Avenue Landfill, including the Subject Property, for offsite disposal and/or may establish a facility for the recycling, transfer, treatment, storage and/or processing of municipal solid waste for offsite sale, use, storage and/or disposal. Further, the County shall not use the approximately twenty-six (26) acre "borrow" pit located west of the operating portion of the Milliken Avenue Landfill as a solid or hazardous waste disposal facility. However, the County may, in the exercise of its sole discretion, use this 26-acre area to store or dispose of inert materials, including, without limitation, construction debris, soil, rock, aggregate, finished municipal solid waste or yard waste compost product, and similar materials. The County shall not permit the unenclosed processing of municipal solid waste at any such facilities.

3. Retention of Expert Consultant. The Parties shall retain, at the County's sole expense, a mutually acceptable expert consultant (the "Consultant") who will evaluate the

Subject Property, as well as additional OIP property within a two thousand foot (2000') radius from the landfill face, to determine the extent, if any, to which that property has been or has the potential to be adversely affected by the migration of landfill gas. Should the Consultant determine that such potential exists, the Consultant shall recommend remediation or mitigation measures to the extent required under applicable law and regulations or as a matter of reasonable engineering practices. The Parties agree to share any reports or other work product of the Consultant, and to deem the final recommendations of the Consultant "reasonable" as between each other. The County shall be responsible for the implementation of or reimbursement to OIP for such measures, if any, as may be recommended by the Consultant or proposed, required or deemed advisable by the County Department of Environmental Health Services ("EHS") with respect to the land uses presently proposed by OIP, based on the Consultant's report. OIP shall bear the cost of any additional measures, if any, required by the City of Ontario to the extent such measures exceed those recommended or required by the Consultant and EHS, to the extent such measures are based on presently available information, including without limitation the Consultant's report.

4. Vina Vista Venture Lawsuit. OIP and each of its partners hereby assign to the County any right, title or interest OIP might otherwise have against the County or the plaintiff in the civil action entitled Vina Vista Venture - New Joint Venture v. The County of San Bernardino, et al, San Bernardino Superior

Court, Case No. OCV 39879 (the "VVV Lawsuit"); provided, however, OIP makes no representation or warranty as to any right, title or interest it may have in the VVV Lawsuit. OIP further agrees to share with the County all business records, appraisals, correspondence, and related documents in OIP's possession, custody, or control regarding the VVV Lawsuit or the facts, circumstances, and transactions underlying such action. OIP further agrees that its partners, employees, agents, representatives and all persons acting by, through, under or in concert with them, will cooperate with the County and its representatives in connection with the County's litigation of the Vina Vista Venture Lawsuit. Upon reasonable request of the County, such cooperation will include, but will not be limited to, signing appropriate declarations and affidavits, submitting to interviews with representatives of the County regarding the Vina Vista Venture Lawsuit, and providing testimony or documents at depositions, trial, or as otherwise required by the County, without service of a witness or documentary subpoena. Nothing in this Section 4 shall obligate OIP to provide documents or testimony beyond that which would be required pursuant to a subpoena or other discovery request. OIP's agreement to provide such documents or testimony is done solely to eliminate the necessity that the County serve subpoenas or other discovery requests.

5. Railroad Improvements. The Parties hereby agree to construct railway improvements, commencing from existing rail spurs located south of the Milliken Landfill, which may traverse

the Milliken Avenue Landfill, the Subject Property, and/or the property belonging to OIP abutting the Subject Property, pursuant to the terms of an agreement to be drafted by the Parties at a later date.

6. Cost of Railroad Improvements. The Parties agree to cooperate in establishing an assessment district for the purpose of paying the costs associated with these railway improvements. However, should one party desire to construct the improvements prior to establishment of an assessment district, the party that first performs rail improvements (the "first party") shall initially pay all costs associated with these improvements and thereafter, the other party (the "second party") shall pay in full the costs for these additional improvements, and shall reimburse the first party for fifty percent (50%) of the first party's construction costs associated with all track, switches or other equipment commonly used by the Parties or any rail entity thereafter. The Parties shall each pay fifty percent (50%) of the costs associated with any switches or other equipment installed by the second party to enable shared use of existing track. All payments made by the second party as provided above shall be made from time to time to the first party within thirty (30) days of the second party's receipt of documented out-of-pocket expenses incurred by the first party.

7. Road Improvements. The Parties hereby agree to construct a road abutting the northern boundary of the Subject Property and the southern boundary of the property belonging to

OIP abutting the Subject Property, pursuant to the terms of an agreement to be drafted by the Parties at a later date.

8. Cost of Road Improvements. The Parties agree to cooperate in establishing an assessment district for the purpose of paying the costs associated with these road improvements. However, should one party desire to construct these improvements prior to establishment of an assessment district, the party that first performs road improvements (the "first party") shall initially pay all costs associated with these improvements and thereafter, the other party (the "second party") shall pay in full the costs for these additional improvements, and shall reimburse the first party for fifty percent (50%) of the first party's construction costs associated with all road improvements commonly used by the Parties thereafter. This reimbursement shall be made from time to time by the second party to the first party within thirty (30) days of the second party's receipt of documented out-of-pocket expenses incurred by the first party.

9. Assessment District. The Parties agree to cooperate in establishing an assessment district for the purpose of paying the costs associated with certain public improvements, such as streets, curbs, gutters, utilities and railroad lines and associated equipment, including without limitation granting easements or other interests as may be required to provide such improvements. The boundaries of such assessment district shall be encompassed by the following roadways: Jurupa, Milliken, Haven and Mission, but such assessment district shall exclude the Milliken Avenue Landfill. The amount of assessment to be levied

shall be based on the actual benefit derived from the property owners within such district. If formed, the levies of such district shall supersede the provisions of paragraphs 5-8 hereof, inclusive.

10. MRF/Transfer Station. OIP hereby agrees that it will not oppose by litigation or otherwise, the entitlements process for the development, including construction, by the County of an enclosed materials recovery facility and/or an enclosed refuse transfer station on the Milliken Avenue Landfill or the Subject Property. OIP further agrees to use reasonable efforts to support the County in obtaining discretionary approvals from the City of Ontario for the development of such a refuse transfer station or materials recovery facility.

11. Assessment District 106. OIP hereby agrees to use reasonable efforts to support the County in resolving all outstanding issues with the City of Ontario concerning that portion of the funding for the proposed Assessment District 106 to be provided by the County.

12. The County shall use its reasonable efforts to assist OIP in obtaining the City of Ontario's approval of Tentative Parcel Map No. 13072 filed by OIP with the City of Ontario, and other development entitlements with respect to matters addressed by the Consultant's report and EHS.

13. In addition to the purchase price specified in the Purchase Agreement, the County shall pay to OIP the amount of \$480,223.94, in reimbursement of legal and consulting fees and

expenses incurred by OIP in connection with prosecuting the Action.

14. Release.

(a) Subject to the performance by each party to this Agreement and the performance by each party to the Purchase Agreement, and subject to the closing of the escrow created pursuant to the Purchase Agreement, OIP hereby releases and forever discharges the County and each of its respective past, present and future assigns, agents, directors, officers, employees, predecessors, successors, insurers, representatives and all persons acting by, through, under or in concert with them, or any of them, of and from any and all manner of action or actions, cause or causes of action in law or in equity, suits, debts, liens, contracts, agreements, promises, liabilities, claims, demands, damages, losses, costs or expenses, of any nature whatsoever, known or unknown, fixed or contingent (collectively, "Claims") that OIP now has, by reason of any matter, cause, or thing whatsoever from the beginning of time to the date hereof, including, without limiting the generality of the foregoing, Claims arising out of, based on, or relating to the Action as well as any matters, causes, or things whatsoever that were, or have been, or could in any way have been, alleged in the pleadings in the Action. The release set forth herein shall become effective on the date the escrow closes.

(b) THE PARTIES EACH ACKNOWLEDGE THEY HAVE BEEN ADVISED BY LEGAL COUNSEL AND ARE FAMILIAR WITH THE PROVISIONS OF CALIFORNIA CIVIL CODE SECTION 1542, WHICH PROVIDES AS FOLLOWS:

A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS WHICH THE CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN HIS FAVOR AT THE TIME OF EXECUTING THE RELEASE, WHICH IF KNOWN BY HIM MUST HAVE MATERIALLY AFFECTED HIS SETTLEMENT WITH THE DEBTOR.

OIP, TO THE GREATEST EXTENT PERMISSIBLE BY LAW, EXPRESSLY WAIVES THE PROVISIONS OF CALIFORNIA CIVIL CODE SECTION 1542, AS WELL AS ANY RIGHTS IT MIGHT HAVE UNDER OTHER STATUTES OR COMMON LAW PRINCIPLES OF SIMILAR EFFECT, AND ACKNOWLEDGES THAT IT INTENDS THE RELEASE GRANTED HEREIN TO EXTEND TO ALL CLAIMS, KNOWN OR UNKNOWN, THAT OIP HAD, HAS, OR MAY HAVE IN THE FUTURE AGAINST THE COUNTY, WHICH ARISE OUT OF OR MAY BE RELATED TO THIS ACTION.

(c) OIP represents and warrants that there has been no assignment or other transfer of any interest in any Claim which OIP had, has or may have against the County, save and except for the express reservation of rights by Vina Vista Venture to have the sole right to recover any damages from the County (and its agents and contractors) for the additional consideration, if any, that would have been received by Vina Vista Venture at the time of the Subject Property's sale to OIP had Vina Vista Venture and OIP not believed the Subject Property to have been affected by the presence or migration of certain substances from the Milliken Avenue Landfill, and agrees to indemnify and hold the County harmless from any liability, claims, demands, damages, costs, expenses, and attorneys' fees incurred by the County as a result of any person, except for Vina Vista Venture as provided herein, asserting any such assignment or transfer, or rights in connection with such assignment or transfer. The Parties intend

that this indemnity not require payment as a condition precedent to recovery by the County against OIP under this indemnity.

(d) With respect to claims or causes of action that the Parties may have in the future against each other, the Parties intend the release provisions in this Section 14 to have the same effect as if a judgment had been rendered in the Action after a full and fair trial on the merits regarding all matters encompassed by the pleadings. The Parties expressly reserve any claim or cause of action to which these release provisions do not apply.

15. Dismissal of Lawsuit. Concurrently with the closing of escrow pursuant to the Purchase Agreement, OIP shall dismiss the Action with prejudice and without further costs to any party by filing a Request for Dismissal substantially in the form attached hereto as Exhibit "B."

16. Nonadmission of Liability. Nothing in this Agreement shall constitute or be construed as an admission of any liability by the County to any person respecting the Action or any matters alleged therein.

17. Enforceability. This Agreement shall not be subject to attack on the ground that any or all of the legal theories or factual assumptions used for negotiating purposes are for any reason inaccurate or inappropriate.

18. Enforcement of Agreement. If either party to this Agreement brings an action to enforce its rights hereunder, the prevailing party shall be entitled to recover from the other its

costs and expenses, including court costs and attorneys' fees, if any, incurred in connection with such suit. ✓

19. Construction of Agreement. This Agreement shall be construed as a whole in accordance with its fair meaning and in accordance with the laws of the State of California. The language of this Agreement shall not be construed for or against any particular party. The headings used herein are for reference only and shall not alter the construction of this Agreement.

20. Authorization. Each party hereto represents and warrants that he, she, or it is authorized to enter into this Agreement.

21. Entire Agreement. This Agreement, including all exhibits, agreements, conditions and requirements set forth herein, attached hereto or contemplated hereby, constitutes the entire agreement between the Parties with respect to the subject matter hereof. No claimed additions to or modifications or amendments of this Agreement, or any claimed waiver of any of its terms or conditions, shall be effective unless in writing and signed by the party against whom the same may be asserted.

22. Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties and their respective heirs, executors, administrators, agents, representatives, successors, and assigns. ✓

23. Invalidity of Terms. In the event that any term, covenant, condition, provision, or agreement contained herein is held to be invalid, void, or otherwise unenforceable by any court of competent jurisdiction, the fact that such term, covenant,

condition, provision, or agreement, is invalid, void, or otherwise unenforceable shall in no way affect the validity or enforceability of any other term, covenant, condition, provision, or agreement contained in this Agreement.

24. Miscellaneous. The singular number, when used in this Agreement, shall include the plural, and vice versa, as the context may require. The masculine, feminine, and neuter genders shall include such other genders as are appropriate.

IN WITNESS WHEREOF, OIP and the County have caused this Settlement Agreement and Release to be executed on the day and year first above written.

DATED: August , 1991

LUSK ONTARIO INDUSTRIAL PARTNERS II, a California limited partnership

By: The Lusk Company, a California corporation, as Managing General Partner

By: [Signature]
VICE PRESIDENT

By: [Signature]
Secretary

DATED: August 19, 1991

THE COUNTY OF SAN BERNARDINO

By: [Signature]
Assistant Administrator Office - Public Works Group

APPROVED AS TO FORM AND CONTENT:

GIBSON, DUNN & CRUTCHER

By: [Signature]
JAMES BUCKLEY, Esq., Attorneys
for Lusk Ontario Industrial Partners II

LATHAM & WATKINS

By: [Signature]
JOEL H. MACK, Esq., Attorneys
for The County of San Bernardino

CONFIDENTIAL
ATTORNEY WORK PRODUCT
ONTARIO INDUSTRIAL PARTNERS V.
COUNTY OF SAN BERNARDINO
Report of Preliminary Evaluation;
Landfill Gas Impacts on Property
Adjacent to Milliken Landfill

PREPARED FOR:

LATHAM & WATKINS, ATTORNEYS AT LAW
701 "B" STREET, SUITE 2100 SAN DIEGO,
CALIFORNIA 92101-8197

CCIE PROJECT NO. 91-16-232-01

OCTOBER 8, 1991

A Wholly Owned Subsidiary of
The Converse Professional
Group

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1.0 INTRODUCTION

The County of San Bernardino Solid Waste Management Department is involved in a lawsuit with the owner of the land parcel on the north side of Milliken Landfill. The land owner has sued the County for damages related to delays in his schedule for the commercial development of the property and for extra costs that may be incurred in providing protective measures against methane and other landfill gases that may be necessary to provide safe occupancy for buildings developed on the property.

The issue affecting the settlement of the case appears to be a question of the potential for migration of significant quantities of landfill gas in the subsurface to distances of up to and beyond 1000 feet from the Milliken Landfill. In this instance, significant refers to concentrations of gas, which may provide a potential for explosion or asphyxiation. If sufficient potential for significant migration exists at and beyond a 1000-foot distance, then mitigation measures to limit explosion hazards may be necessary.

The Los Angeles County Building Code requires that mitigation measures be addressed for buildings proposed within 1000 feet of a municipal solid waste landfill. San Bernardino County has no similar code or ordinance. The Uniform Building Code (usually adopted when a governmental jurisdiction does not have its own set of building codes) does not address this issue at all. Regulations, which address landfill gas migration from active landfills include California Code of Regulations Title 14, Division 7, Chapter 3, Article 7, Section 17705 and South Coast Air Quality Management District Rule 1150.1 (Control of gaseous emissions from active landfills). Neither of these regulations specifically addresses distances from landfills within which subsurface landfill gas migration is considered a potential problem. However, in a letter on the subject by an employee of the San Bernardino County Department of Environmental Health Services (DEHS), several vague statements were presented which have contributed to confusion as to what is applicable for the case at the Milliken Landfill.

The purpose of this project was to provide technical support to counsel for the San Bernardino County Solid Waste Management Department and the County Counsel in assessing the potential for significant migration of landfill gas from the Milliken landfill on the plaintiff's property. This support involved both straightforward technical issues and professional judgment.

2.0 SCOPE OF INVESTIGATION

The scope of the investigation and evaluation of the potential for significant migration of landfill gas from Milliken landfill involved the tasks listed below.

Task 1: Gather and Review Data and Determine Standard of Practice

The project team assembled and reviewed data available, including data from the County and the plaintiff. An evaluation of the relative presence of landfill gas in the zone from 1000 feet to 2000 feet from the landfill property boundary was performed. The project team researched the standard of practice applicable to the development of property adjacent to a landfill in San Bernardino County.

Task 2: Site Visit

Members of the project team visited the site to develop a context for the issues.

Task 3: Recommend Additional Data Collection

As deficiencies in the data were found, recommendations have been developed for future data collection.

Task 4: Discussion Meeting

The leader of the project team met with the Solid Waste Management Department and the County Counsel on three occasions to discuss the technical issues of the case and to contribute to discussions on how the case may be settled in the best interests of the County.

Task 5: Further Technical Tasks: As Needed

The project team will perform additional technical tasks, as needed, upon separate authorization by the Client.

Task 6: Provide Support to County

The project team will provide the needed support to the County in terms of expert testimony, a technical report, or other means necessary to help the County arrive at a settlement of the case.

At this time, tasks 1 through 4, plus portions of task 6 (this Report) have been performed.

3.0 AVAILABLE DATA

Data reviewed by members of the project team included the following:

- Text of proposed legislation: AB 1388, May 15, 1991 and July 14 amendments.
- California Code of Regulations Title 14, Division 7, Chapter 3, Article 7.6 and Title 23, Chapter 3, Subchapter 15, Article 9.
- South Coast Air Quality Management District, Rule 1150.1 and Guidelines for Implementation of Rule 1150.1.
- I.T. Corporation, Final Report: Solid Waste Assessment Test, Milliken Sanitary Landfill, June 1989.
- Quarterly Reports, prepared by STRATA Technologies Inc. of landfill gas monitoring in support of AQMD Rule 1150.1. Reports included four quarters of 1989 and 1990..
- Status Report, dated May 14, 1991, prepared by SCS Field Services, of the operation, monitoring and maintenance of the landfill gas collection and migration control system at Milliken landfill.
- Raw data of landfill gas sample analyses collected from County subsurface gas migration monitoring probes by Dames & Moore. laboratory analysis was performed on these samples in February, 1991.
- An assortment of raw data of direct landfill gas monitoring probe measurements and laboratory analysis of gas samples, apparently collected by Dames & Moore and BCI Associates. These data encompass a period from April 1986 through July 1990.

The quarterly reports prepared by STRATA Technologies Inc. are assembled packages of landfill monitoring results to detect the presence of significant migration of landfill gas away from the in-place municipal solid wastes. The monitoring includes Integrated (composited over an area) Surface Emission Samples (ISS) collected directly above the soil covering the waste, landfill gas collection system sampling and perimeter (outside waste boundaries) probe monitoring. These data suggest that the landfill is generating significant quantities of combustible gases; however, limited concentrations of combustible gases were measured emitting through intermediate landfill cover and through the subsurface adjacent to the landfill. In 1989, the County installed a gas collection system within the landfill, which encompassed most of the perimeter of the landfill except the northeast corner. By the end of 1990, the gas collection system was extended fully around the perimeter, and an interior gas collection system had been installed. In early 1989, significant combustible gas concentrations (up to 50% methane) were reported in perimeter probes adjacent to the northeast corner (no gas control system) of the landfill. By the last quarter of 1990, the perimeter probe combustible gas measurements were reported

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Converse Environmental West

not to exceed 2 percent methane.

The SCS Field Services status report measured the relative effectiveness of the landfill gas collection system as a function of combustible gas concentration produced from the landfill and combustible gases detected in the subsurface soil adjacent to the landfill. The reported results of measuring the perimeter probes used to monitor, subsurface migration of landfill gas indicated no detectable concentrations of combustible gas (inferred detection limit of 0.1 % methane by volume.) There is, however, neither procedural information pertaining to the methods of data collection nor quality control procedures documentation associated with the data.

The remaining data are considered raw. These "raw" data were supplied to the project team by plaintiff's counsel and intentionally included only raw measurements without procedural documentation or data evaluation. The "raw" data include measurements of combustible gas apparently made by both field instruments and/or through the collection of gas samples and subsequent laboratory analysis. These measurements were apparently made at subsurface probe locations along the northern and eastern landfill boundaries and at distances from those boundaries of 200, 400, 800, 1200, 1625 and 2000 feet from the landfill.

These "raw" measurements were also made along the Fontana Interceptor sewer manholes. The Fontana Interceptor is a sanitary sewer which carries sewage from the City of Fontana to the Chino Basin Municipal Water District's Regional Wastewater Treatment Plant No.1 in Ontario. This sewer line runs east-west along the northern landfill boundary.

The reported results presented based on this "raw" data suggest that in early 1985, prior to the installation to the landfill gas collections system, concentrations of combustible (landfill) gas up to 400 parts per million were noted (presumably from the subsurface) at distances of up to 400 feet beyond the landfill. Measurements from the more distant probe locations (800 feet and further) were reported as "no readable amounts of landfill gas" (letter to Mr. Dave Ariss, California Commerce Center from BCL Associates, July 1, 1986). Also, significant concentrations of combustible gas (up to 50%) were reported as emanating from a few of the sewer man holes, especially those nearest landfill perimeter probes which had exhibited measurable combustible gases.

Geologic information obtained from the IT Corporation Solid Waste Assessment Test (SWAT) Report indicates geologic conditions in the area of the landfill consist of horizontally stratified sand and mixture of gravel, sand, silt and clay. This report does not provide geologic information to the north of the property; however, the sediments comprising the subsurface at distances of 1000 to 2000 feet could reasonably be expected to be similar to conditions adjacent to the landfill. The information from the SWAT report indicates that, in general, the subsurface materials, to depths of approximately 250 feet, are relatively permeable. However, there are indications that thin layers of lower permeability sediments (containing appreciable silt and clay) exist in this interval. The degree to which these low permeability layers exhibit continuity to the north of the landfill is not known.

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4.0 DISCUSSION OF AVAILABLE INFORMATION

The data available have been qualified relative to our understanding of the procedures and protocols used in their collection. As little is known regarding the quality control and data collection protocol, the ability to derive definitive conclusions based upon, these data is limited.

From the "raw" data available it is evident that significant off-site migration of landfill gas from the Milliken Landfill has occurred in the past. The available data suggest that this migration extended to distances of at least 400 feet. These data also suggest that landfill gas was not measurable in the subsurface beyond 800 feet from the landfill. The presence of significant concentrations of combustible gas measured at a few of the manholes along the Fontana Interceptor (which runs along the north landfill boundary) suggests that landfill gas may be entering the sewer. This implies that the sewer and/or sewer backfill may provide a conduit for the entrance, and transmission of landfill gas to the north.

The data collected by STRATA Technologies provide some substantiation that the landfill gas collection system is limiting migration from the landfill. The reduction in combustible gas concentrations in the northeast corner probe measurements between early 1989 and late 1990 (which cover the period under which that portion of the collection system was installed) provide this substantiation. As the pneumatic characteristics of the probes measured are not defined in the data, a direct evaluation of the effectiveness of the collection system cannot be made from these data.

There is evidence, presented in the SW AT Report, that landfill gas may be present at significant concentrations directly beneath the landfill at the water table (approximately 250 feet below ground). The extent to which this "deep" gas may migrate to the north cannot be determined from the existing data.

5.0 DISCUSSION OF EXPERIENCE AND OPINION

The project team believes the following statements are applicable to the Milliken Landfill, based upon previous experience at other landfills.

- Landfill gas moves by pressure gradient and concentration gradient (diffusion) through the soil, the pressure gradient being a potentially greater driving force.
- Landfill gas moves rather easily through permeable alluvial soil.
- Landfill gas will not build up great pressures in permeable soils if there is an escape route or "path of least resistance" to the atmosphere.
- Landfill gas will readily vent itself through silty sandy soil, provided that the soil is not overly wet, paved over or otherwise capped against the movements of the gas, and provided that there are not subsurface features, such as clay or other impermeable layers, which trap and force gases laterally. Constructed utility lines provide such subsurface features and are conduits for the lateral transmission of landfill gas.
- Los Angeles County has had good success in preventing landfill gas related problems by enforcing its Building Code Section 30SC, which requires gas investigations and mitigation for all development within 1,000 feet of sanitary landfills.
- Only in rare cases has landfill gas migrated more than 1000 feet, although there are documented cases of migration over much greater distances.
- The subsurface alluvial materials present around the Milliken Landfill site would not appear to harbor anomalies, which could send landfill gas migrating great distances.

These statements should be considered applicable only to current (i.e. undeveloped) site conditions. As the landfill ages, more refuse will accumulate, and the potential for increased gas production may be enhanced. Development within the area north of the landfill can create conditions, which can increase the rate and distance of subsurface migration. Of particular significance are the utility lines (conduits for migration) and paving and landscaping (capping) of the ground surface.

6.0 CONCLUSION AND RECOMMENDATIONS

The opinion of the project team, based upon the available data reviewed and previous experience is that significant landfill gas migration beyond 1000 feet north of the landfill is not likely under the current site conditions. Based upon the team's experience with similar sites, it is believed that a 1000-foot buffer zone surrounding the landfill for gas control and monitoring will be adequate and precludes the necessity of landfill gas control measures beyond the 1000-foot buffer, given the following assumptions.

- The sewer line adjacent to the landfill may provide a conduit for the migration of landfill gas and should be investigated for this possibility.

- All development in the buffer zone should incorporate parking lot vent piping systems, and building subslab vent piping systems. This is to also include subsurface utility lines and other facilities which may provide conduits to gas migration.

- Subslab gas barrier membranes should be used in some zone around the landfill, possibly a narrower zone than the full 1000-foot buffer area.

- Following development of the buffer strip, the existing monitoring probe system should be monitored at some prescribed frequencies, with data reviewed by the County to insure that methane migration is not a problem.

- All soils/geologic investigations for new construction within and adjacent to the 1000 foot buffer zone should include a study of methane gas potential by measuring gas and logging soils strata a sufficient depth below grade.

- The site conditions, regarding the potential for subsurface methane gas migration, may create disclosure obligations for the County in future land transactions associated with this buffer zone. The County should consult with its attorney regarding these disclosure issues.

To provide certainty to the opinions presented within this report, the following testing is recommended within the 1000-foot buffer zone.

- Install monitoring probes at various depths up to approximately 100 feet, and at various distances from the landfill, such as 100 feet, 250 feet, 500 feet and 1000 feet. Installation and monitoring of deeper (200 feet deep) probes adjacent to the landfill should be considered to characterize the potential for deeper gas migration.

- Log all borings and especially identify impermeable layers. Modify the probe design depths if necessary to put probes under significant clay layers.

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- Evaluate the efficiency of the installed probes relative to subsurface pneumatic characteristics.
- Monitor the probes several times for combustible gas content, pressure, record time of day, etc. with the gas extraction systems running.
- Then monitor the probes repeatedly during a period of time when the gas extraction system is shut down for several days.
- Evaluate data collected above to determine farthest gas migration, gas migration travel time, and other parameters.

COUNTY OF SAN BERNARDINO WATER QUALITY MONITORING REPORT

FIRST QUARTER (WINTER) 2005 / ANNUAL

VOLUME I

SANTA ANA REGION

Cajon Disposal Site, Colton Sanitary Landfill, Crestmore Disposal Site,
Mid-Valley Sanitary Landfill, Milliken Sanitary Landfill, San Timoteo Sanitary Landfill,
And Yucaipa Disposal Site - San Bernardino County, California

April 2005

SUBMITTED TO:

California Regional Water Quality Control Board
Santa Ana Region
3737 Main Street, Suite 500
Riverside, California 92501-3339

SUBMITTED BY:

County of San Bernardino Solid Waste Management Division
222 W. Hospitality Lane, 2nd Floor
San Bernardino, California 92415-0017

PREPARED BY:

GeoLogic Associates
1831 Commercenter East
San Bernardino, California 92408



COUNTY OF SAN BERNARDINO
WATER QUALITY MONITORING REPORT
FIRST QUARTER (WINTER) 2005
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LIST OF ACRONYMS AND ABBREVIATIONS

1,1-DCA	1,1-dichloroethane
1,1-DCB	1,1-dichlorobenzene
1,1,1-TCA	1,1,1-trichloroethane
1,2-DCB	1,2-dichlorobenzene
1,3-DCB	1,3-dichlorobenzene
1,4-DCB	1,4-dichlorobenzene
1,1-DCE	1,1-dichloroethene
1,2-DCE	1,2-dichloroethene
1,2-DCP	1,2-dichloropropane
µg/L	micrograms per liter
µmhos/cm	micromhos per centimeter
%	percent
§	section (CCR Title 27 designation)
AA	atomic absorption spectrometry
ANOVA	analysis of variance
ARAR	applicable or relevant and appropriate requirement
ASTM	American Society for Testing and Materials
BAS	Bryan A. Stirrat & Associates
BD	borehole diameter
BDCM	bromodichloromethane
BV	borehole volume
CAP	Corrective Action Program
CCR	California Code of Regulations
CD	casing diameter
cDCE	cis-1,2-dichloroethene
CFR	Code of Federal Regulations
CHF	Crafton Hills Fault

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LIST OF ACRONYMS AND ABBREVIATIONS (CONT'D)

CKF	Chicken Hill Fault
CN	cyanide
COCs	constituents of concern
CV/AA	cold vapor/atomic adsorption spectrometry
DBCM	dibromochloromethane
DCDFM	dichlorodifluoromethane
DMP	Detection Monitoring Program
EC	electrical conductivity
EFS	Engineering Feasibility Study
EMP	Evaluation Monitoring Program
EPA	United States Environmental Protection Agency
ft	foot
GC-ECD	gas chromatography - electron capture detector
GC-ELCD	gas chromatography - electrolytic conductivity detector
GC-FID	gas chromatography - flame ionization detector
GC/MS	gas chromatography/mass spectrometry
GLA	GeoLogic Associates
HCl	hydrochloric acid
HW	height of water column within well
ICP	inductively coupled plasma spectrometry
J	trace concentration
MBAS	methylene blue active substances
MCL	maximum contaminant level
MDL	method detection limit
mg/L	milligrams per liter
msl	mean sea level
MRP	Monitoring and Reporting Program

COUNTY OF SAN BERNARDINO
WATER QUALITY MONITORING REPORT
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LIST OF ACRONYMS AND ABBREVIATIONS (CONT'D)

N or N ₂	nitrogen
NA	not analyzed
NaOH	sodium hydroxide
NC	not calculated
ND	not detected
NP	no pump
NR	not recorded
NV	no value available
P	porosity
PCBs	polychlorinated biphenyls
PCE	tetrachloroethene
ppb V/V	parts per billion volume per volume
PQL	practical quantitation limit
PS	Pilot System
QA/QC	quality assurance/quality control
RWQCB	California Regional Water Quality Control Board, Santa Ana Region
SAC_APP	GLA's In-House Statistical Applications Program
SVOC	semi-volatile organic compound
SWMD	County of San Bernardino Solid Waste Management Division
TCE	trichloroethene
TCFM	trichlorofluoromethane
tDCE	trans-1,2-dichloroethene
TDS	total dissolved solids
VOC	volatile organic compound
ZnAc	zinc acetate

COUNTY OF SAN BERNARDINO
WATER QUALITY MONITORING REPORT
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LIST OF DEFINITIONS

- Action Level – Non-enforceable, health-based guidance numbers provided as interim guidance for "safe" levels of contaminants in drinking water where no maximum contaminant levels (MCLs) have been established.
- Active – "The period when waste is being accepted for disposal at a disposal site" (California Code of Regulations [CCR], Title 27, Article 2, §20164).
- Alluvium – A general term for detrital deposits made by streams on riverbeds, flood plains, and alluvial fans.
- Aquifer – Rock or sediment in a formation, group of formations, or part of a formation that is saturated and sufficiently permeable to transmit economic quantities of water to a well or spring.
- Basin Objective – "The limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area," as established by the Regional Water Quality Control Board, Lahontan Region (RWQCB).
- Bedrock – A general term for the consolidated (solid) rock that underlies soils or other unconsolidated surficial material.
- Compliance Monitoring Well - Located downgradient of the landfill.
- Condensate – A liquid condensed from a gas or vapor.
- Confined Aquifer – An aquifer bounded above and below by impermeable beds, or by beds of distinctly lower permeability than that of the aquifer itself.
- Constituents of Concern (COC) – "Any waste constituent(s), reaction product(s), and hazardous constituent(s) that is reasonably expected to be in or derived from waste contained in a waste management unit" (CCR, Title 27, Chapter 2, Article 2, §20164).
- Corrective Action Program (CAP) – "the discharger shall take corrective action to achieve the following goals: to remediate releases from the (waste management) unit; to ensure the discharger achieves compliance with the Water Standard adopted under Section 20390 for that unit" (CCR, Title 27, Chapter 3, §20430).
- Degradation – The process by which a chemical is reduced to a less complex form.

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LIST OF DEFINITIONS (CONT'D)

Detection Monitoring Program (DMP) – “Water quality monitoring systems that are appropriate for detecting, at the earliest possible time, a release from the (waste management) unit” (CCR, Title 27 Section 20420).

Equipotential Line – A contour line on the potentiometric surface; a line along which the pressure head of groundwater in an aquifer is the same. Fluid flow is normal to these lines in the direction of decreasing fluid potential.

Evaluation Monitoring Program (EMP) – “Used to assess the nature and extent of the release from the (waste management) unit and to design a corrective action program” (CCR, Title 27, Chapter 3, §20425).

Flow Regime – A subdivision of an aquifer with generally similar groundwater flow characteristics.

Historical Intrawell Maximum Concentration – The maximum concentration of a constituent in the historical database for a particular well.

Holding Time – The time period between sample collection and analysis.

Hydraulic Gradient – Change in head per unit of distance measured in the direction of the steepest change.

Inactive – “A temporary status of a waste management unit (Unit), following the initial receipt of waste, in which the Unit is no longer receiving waste” (CCR, Title 27, Article 2, §20164).

Interwell Analysis – A statistical comparison of water quality data for samples from upgradient (background) wells and downgradient (compliance) wells.

Intrawell Analysis – A statistical comparison that compares changes within samples from a particular well over time.

Leachate – Liquid passing through refuse deposits.

Lysimeter – A sampling device used to collect soil-pore liquid using suction in the unsaturated zone.

Maximum Contaminant Level (MCL) – Federal drinking water standard: “the maximum permissible level of a contaminant in water which is delivered to any user of a public water system” (Code of Federal Regulations [CFR], Title 40, Part 141.2).

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LIST OF DEFINITIONS (CONT'D)

Method Detection Limit (MDL) – The minimum concentration that a laboratory can detect (but not quantify) the presence of a given analyte. The value is variable between laboratories and analytical methods.

Organic Vapor Meter (OVM) – A photo-ionizing device used in the field to detect the presence of VOCs.

Piezometer – A non-pumping well, generally of small diameter, that is used to measure the elevation of the water table or potentiometric surface.

Point of Compliance (POC) – “A vertical surface located at the hydraulically downgradient limit of a waste management unit and that extends through the uppermost aquifer underlying the unit” (CCR, Title 27, Chapter 2, Article 2, §20164).

Porosity – The voids or openings in a rock or soil. Porosity may be expressed quantitatively as the ratio of the volume of openings in a rock or soil to the total volume of rock.

Potentiometric Surface – A surface that represents the level to which water will rise in tightly cased wells. If the head varies significantly with depth in the aquifer, then there may be more than one potentiometric surface. The water table is a particular potentiometric surface for an unconfined aquifer.

Practical Quantitation Limit (PQL) – The minimum concentration that a laboratory can detect and quantify the presence of a given analyte. The value is variable between laboratories and analytical methods.

Regional Aquifer – Water-bearing layers of rock or soil that will yield water in usable quantity over a region.

Release – An unauthorized discharge of waste constituents from a landfill, in either liquid or gaseous phase, that results in the degradation of any present or potential future use of groundwater or surface water.

Soil-Pore Gas Monitoring Station – a site containing a cluster of two or more soil-pore gas monitoring probes.

Static Water Level – The level of water in a well that is not being affected by withdrawal of groundwater.

COUNTY OF SAN BERNARDINO
WATER QUALITY MONITORING REPORT
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LIST OF DEFINITIONS (CONT'D)

Statistical Hit – A statistical finding of a significant difference in constituent concentrations either between wells (interwell analysis) or within a single well over time (intra-well analysis).

Storativity – The volume of water an aquifer releases from or takes into storage per unit surface area of the aquifer per unit change in head.

Transmissivity – The rate at which water of a prevailing density and viscosity is transmitted through a unit width of an aquifer under a unit hydraulic gradient. It equals the hydraulic conductivity multiplied by the aquifer thickness.

Unconfined Aquifer – Groundwater that has a free water table, i.e., is not confined under pressure beneath relatively impermeable rocks.

Vadose Zone – The unsaturated subsurface zone, usually starting at the land surface, that contains both water and air.

Water Quality Protection Standard (WQPS) – "For each Unit, the RWQCB shall establish a water quality protection standard (Water Standard) in the WDRs. This Water Standard shall consist of the list of constituents of concern (under §20395), the concentration limits (under §20400), and the Point of Compliance and all Monitoring Points (under §20405). This Water Standard shall apply during the active life of the Unit, the closure period, the post-closure maintenance period, and during any compliance period (under §20410)" (CCR, Title 27, Chapter 3, §20390).

Water Table – The level in the saturated zone at which the pressure is equal to atmospheric pressure.

2.0 SAMPLING AND ANALYSIS PLAN

Monitoring and sampling for the three disposal sites and four sanitary landfills owned by the County of San Bernardino and located within the Santa Ana RWQCB Region was conducted by Bryan A. Stirrat & Associates (BAS, an affiliate of GeoLogic Associates [GLA]). Sampling and analyses were performed at six of the seven sites in January 2005 and at the San Timoteo Sanitary Landfill in March 2005. Sampling was conducted in general accordance with the sampling and analytical procedures included in the existing CCR, Title 27 monitoring programs established for the sites. A brief summary of the protocols for sample collection is presented below.

Groundwater and surface water samples collected during the first quarter 2005 monitoring period were analyzed for three metals parameters (calcium, magnesium, and sodium); five general chemistry parameters (chloride, nitrate [as nitrogen], pH, sulfate, and total dissolved solids [TDS]); and VOCs. The groundwater and surface water samples collected at the Colton Sanitary Landfill were also analyzed for manganese, and the samples collected from all DMP and CAP wells at the Mid-Valley Sanitary Landfill were analyzed for perchlorate. In addition, upgradient (background) surface water samples where fewer than four samples have been collected, were analyzed for a full suite of constituents of concern (COCs) as defined by federal regulation 40 CFR Part 258 and site specific Waste Discharge Requirements (WDRs) issued by the RWQCB. U.S. Environmental Protection Agency (EPA) Method 8260 was used for analysis of VOCs in the groundwater and surface water samples collected during the current monitoring period.

The landfill gas condensate samples collected from the four sanitary landfills (Colton, Mid-Valley, Milliken, and San Timoteo) were analyzed for VOCs, SVOCs, three metals (calcium, magnesium, and sodium), and general chemistry parameters (pH, specific conductance, sulfate, TDS, and total organic carbon [TOC]) in accordance with the RWQCB-approved letter dated October 8, 1999, which modified the condensate monitoring program parameters. In a letter dated June 6, 2002, the RWQCB approved a request by the County to modify soil-pore gas monitoring to a semi-annual frequency using a methane field screening protocol at all sites equipped with soil-pore gas probes except for the Yucaipa Disposal Site. At the Yucaipa Disposal Site, a sample was collected from each soil-pore gas monitoring probe and submitted to the analytical laboratory to be analyzed for VOCs (by method TO-15), methane, nitrogen, oxygen, and carbon dioxide.

Table 2-1 presents the type of sample container and preservative used for sample collection, as well as the analytical methods and techniques the laboratory used during the current monitoring period for the routine sampling program. Copies of the certificates of analyses and Chain-of-Custody records for the samples collected this quarter are included in Appendix A.

Groundwater Sampling

The sampling protocols listed below were generally followed during groundwater sampling operations:

- Upon arrival at the wellhead, each monitoring point was inspected for evidence of tampering and/or vandalism, and the well identification (I.D.) was recorded.
- For wells equipped with a dedicated water level measuring device, the water level was measured directly from the water level meter. For wells without a dedicated water level measuring device, prior to sounding each well, a weighted water-level indicator (sounder) was decontaminated using an Alconox[®] soap solution, followed by two rinses with deionized water. The wells were then sounded and the initial water level and the total depth of the well (if obtainable) were recorded on a Well Data Sheet.

Groundwater Sampling Using Non-Dedicated Equipment

- For wells with non-dedicated sampling equipment, up to three well borehole volumes (under optimal conditions) of water were purged prior to sampling. Based on the measured depth to water, the total depth of the well, and the known casing diameter, a well borehole volume was calculated using the following equation:

$$BV = (7.48\pi/4) [CD^2 + P (BD^2 - CD^2)] (HW)$$

where:

BV	=	well borehole volume (gallons)
P	=	porosity of filter pack (percent; e.g., for 20% use 0.20)
BD	=	borehole diameter (feet)
CD	=	casing diameter (feet)
HW	=	height of water column within well (feet)
7.48	=	conversion from cubic feet to gallons.

- Purged water was evacuated from the wells using a decontaminated, two-inch electric submersible pump, then sampled with a new (factory-sealed) disposable bailer. For low-volume, slow-recharge wells, the well was purged using a decontaminated bailer, then sampled using a new (factory-sealed) disposable bailer.
- Each well with sufficient recharge was purged of a minimum of 1.5 borehole volumes and allowed to recover to 80 percent of the original well volume prior to sampling. Slow-recharge wells were purged of a minimum of one well volume and also allowed to recover sufficiently (for a period of no more than two hours) prior to sampling.
- To assess the presence of fresh water coming into the well, electrical conductivity (EC), pH, dissolved oxygen (DO), turbidity, and temperature were monitored after approximately every five or ten gallons of purging, depending on the well and total estimated purge volume requirements. Sampling was performed when the DO, EC, pH, turbidity, and temperature stabilized to within 10% between consecutive readings, and the total estimated purge volume was reached.
- Where a bailer was used for sample collection, a bottom-emptying device was inserted into the bailer, and the sample was transferred directly from the bailer to the container.

Groundwater Sampling Using Low-Flow Purging Methods

- Groundwater monitoring wells that are equipped with dedicated sampling equipment were purged and sampled using low-flow purging methods.
- With the weighted water-level meter or the dedicated water level measuring device (pressure transducer/bubbler) in the well, submersible pumps were operated at a discharge rate that would minimize the decline in water level.
- Discharged water was routed through a sampling chamber equipped with probes for measuring DO, EC, pH, turbidity, and temperature. When three consecutive readings of these field parameters had stabilized to within 10% of each other, with no discernable upward or downward trend, the water quality was determined to be stable and samples were collected.

Groundwater Sampling: Collection and Preparation

- Samples, including field and equipment blanks, were collected in approved sample containers (Table 2-1), and each container was filled completely and immediately capped, labeled, and placed in a cooler with ice. Samples for VOC analysis were filled by pouring the sample down the sides of the container to minimize aeration and capped with no airspace.
- Collected samples, accompanied by a trip blank, were placed immediately in an ice-filled cooler for transport to a state-certified testing laboratory. Samples were kept chilled (at about 4°C) until delivery.
- A completed Chain-of-Custody form, detailing the sample I.D. numbers, date and time collected, analyses requested, and other project information, accompanied each sample to the laboratory. The Chain-of-Custody forms were signed and dated by all personnel retaining custody of the samples (Appendix A).

Monitoring Well Purge Water (MWPW) Disposal

- The waste discharge requirements (WDRs) for the discharge of MWPW at the seven landfills and disposal sites were waived under RWQCB Resolution No. R8-2002-0044 that was adopted on September 6, 2003.
- Purge water from monitoring well sampling procedures is used for dust control at all seven landfills/disposal sites. During wet weather, the MWPW is stored in 55-gallon DOT drums on-site until it is needed for dust control.

Surface-Water Sampling

The sampling protocols listed below were generally followed during surface water sampling operations.

- Surface-water sampling was performed by submerging laboratory-supplied sample containers, or a decontaminated dipper, in a slow moving portion of the surface water channel at the designated sampling station.
- Sample preservation, order of collection, and Chain-of-Custody procedures described above for groundwater sampling were also adhered to for surface water sample collection.

Soil-Pore Gas Field Screening

Field screening of soil-pore probes was performed at the Cajon and Crestmore Disposal Sites and the Colton, Mid-Valley, Milliken, and San Timoteo Sanitary Landfills, and was completed as follows:

- Field screening was completed using a Landtec GEM 500 that was calibrated daily with methane (10%), carbon dioxide (35%), and oxygen (5.29%).
- Each soil-pore gas probe was purged of at least one casing volume prior to recording the measured gas concentrations.
- Methane, carbon dioxide, and oxygen was measured and recorded in volumetric percent at each monitoring probe.
- In accordance with the approved field screening methodology, if a field measurement of 5% methane is obtained (10% for the Crestmore Disposal Site), a soil-pore gas sample is collected in accordance with the procedures outlined below.

Soil-Pore Gas Sampling

Soil-pore gas sampling is performed quarterly at the Yucaipa Disposal Site. For the remaining landfills and disposal sites, samples are only collected if the field screening indicates that methane concentrations exceed established limits, as discussed above. Where samples were collected, the following procedures were used:

- Gas extraction was performed using a stainless steel gas-sampling pump with a non-lubricated Viton[®] diaphragm and a maximum no-load flow rate of 34.8 liters per minute.
- Clean, new laboratory-prepared 10-liter Tedlar[®] sample bags, fitted with aluminum or stainless steel tube fittings for sampling, were placed into light-sealed receptacles (to prevent photochemical reactions) during transport.

- For purging and sampling, the gas-sampling pump was attached with Teflon[®] tubing to a sample port located at the top of the monitoring probe. After attaching the sample train to the probe, the probe was purged for 30 to 50 seconds to flush out the probe and sample train. After the probe and train were flushed, the pump and tubing were attached to the Tedlar sample bag. All gas samples were pumped directly from the gas-monitoring probe via the stainless steel sampling pump and through new factory-cleaned Teflon[®] tubing into the Tedlar[®] bags. After sampling, a 30- to 50-second post-purge of the probe and sampling train were also conducted.
- Chain-of-Custody procedures described above for groundwater samples were also adhered to for both the soil-pore gas and landfill gas samples, and the analytical records and chain-of-custody forms are included in Appendix A.

Landfill Gas Condensate Sampling

Landfill gas condensate sampling was performed at the Colton, Mid-Valley, Milliken, and San Timoteo Landfills and was completed as follows:

- Condensate generated by the landfill gas extraction system at each of these sites is collected in field sumps and then transferred to a central condensate holding tank at the site flare station. Condensate is transferred either manually by pumping the liquids from the sumps into a truck/trailer and then pumping liquids from the truck into the storage tank or, for the majority of the sumps, by pumping condensate through an automated collection system from the field sumps directly into the central condensate holding tank. In addition, flow from the leachate collection systems at the sites is currently, or is planned to be, combined with the condensate collection system at the flare station prior to entering the holding tank. Therefore, in order to obtain the most representative composite sample of the condensate generated by the landfill gas collection system, sampling ports were installed at each site in the automated condensate collection line upstream from the leachate collection system. Sample ports were constructed using the same materials and methods used to construct the condensate collection system.
- Upon arrival at the sampling location, the sample port was inspected for evidence of tampering and/or vandalism.
- The sample port was then checked for flow by cracking open the sample collection valve to allow flow into the first sample container. If flow was present, sample containers were filled in decreasing order of volatility.
- Sample preservation, order of collection, and Chain-of-Custody procedures described above for groundwater sampling were also adhered to for landfill gas condensate sample collection.

TABLE 2-1
COUNTY OF SAN BERNARDINO
ANALYTICAL METHODS
FIRST QUARTER (WINTER) 2005

GROUNDWATER, SURFACE WATER AND CONDENSATE				
PARAMETER	TEST METHOD	TECHNIQUE	CONTAINER	PRESERVATIVE
GENERAL CHEMISTRY				
Chloride	EPA 9056	Ion Chromatography	Plastic	Cool, 4° C
Nitrate (N)	EPA 300.0	Ion Chromatography	Plastic	Cool, 4° C
Perchlorate	EPA 300.0	Ion Chromatography	Plastic	Cool, 4° C
Sulfate	EPA 300.0	Ion Chromatography	Plastic	Cool, 4° C
Total Dissolved Solids	EPA 160.1	Gravimetric	Plastic	Cool, 4° C
Total Organic Carbon	EPA 415.1	Combustion	VOA-Glass	Sulfuric Acid, 4° C
METALS				
Calcium	EPA 6010	ICP	Plastic	Nitric Acid - 4° C
Magnesium	EPA 6010	ICP	Plastic	Nitric Acid - 4° C
Manganese	EPA 6010/6020	ICP/MS	Plastic	Nitric Acid - 4° C
Sodium	EPA 6010	ICP	Plastic	Nitric Acid - 4° C
ORGANIC COMPOUNDS				
Volatile Organics	EPA 8260	GC/MS	VOA-Glass	HCl - Cool, 4° C
Semivolatile Organics	EPA 8270	GC/MS	Glass	Cool, 4° C
SOIL-PORE GAS				
PARAMETER	TEST METHOD	TECHNIQUE	CONTAINER	STORAGE
FIXED GASES				
Carbon Dioxide	EPA 3	GC/FID	Tedlar Bag	Light-Sealed
Methane	EPA 3	GC/FID	Tedlar Bag	Light-Sealed
Nitrogen	EPA 3	GC/FID	Tedlar Bag	Light-Sealed
Oxygen	EPA 3	GC/FID	Tedlar Bag	Light-Sealed
VOLATILE ORGANIC COMPOUNDS				
Volatile Organic Compounds	EPA TO14	GC/MS	Tedlar Bag	Light-Sealed

Notes:

ICP - Inductively Coupled Plasma Spectrometry
MS - Mass Spectrometry
GC - Gas Chromatograph

GC/FID - Gas Chromatograph - Flame Ionization Detector
EPA - U.S. Environmental Protection Agency

TABLE 4-1
COUNTY OF SAN BERNARDINO
STATE AND FEDERAL ARAR STANDARDS AND SANTA ANA BASIN OBJECTIVES
FIRST QUARTER (WINTER) 2005

COMPOUND	California ^(a) Primary Drinking Water Standards	California ^(a) Secondary Drinking Water Standards	Federal ^(a) MCLs	Basin Objectives*
INORGANICS (mg/L)				
Aluminum	1.0			
Antimony	0.006		0.006	
Arsenic	0.05		0.05	0.05
Barium	1.0		2.0	1
Beryllium	0.004		0.004	0.01
Boron				0.75
Cadmium	0.005		0.005	0.01
Chloride		250 - 500		10-35
Chromium	0.05		0.1	0.050
Cobalt				0.2
Copper		1	1.3**	1
Cyanide (as CN)	0.2		0.2	0.2
Fluoride (allowable concentration is temperature dependent)	1.4 - 2.4		4.0	1
Hardness				95-240
Iron		0.3		0.3
Lead			0.015**	0.05
Manganese		0.05		0.05
Mercury	0.002		0.002	0.002
Nickel	0.1		0.1	
Nitrate (as Nitrogen)	10		10	1-6
Nitrite (as Nitrogen)	1.0		1.0	1-6
Perchlorate	0.006†			
pH				6-9
Total Nitrate and Nitrite (as Nitrogen)	10		10	
Selenium	0.05		0.05	
Silver	0.05	0.1	0.05	0.05
Sodium				15-45
Specific Conductance		900 - 1600		
Sulfate		250 - 500		35-64
Thallium	0.002		0.002	
Total Dissolved Solids (TDS)		500 - 1000		200-400
Zinc		5.0		

TABLE 4-1 (CONT'D)
 COUNTY OF SAN BERNARDINO
 STATE AND FEDERAL ARAR STANDARDS AND SANTA ANA BASIN OBJECTIVES
 FIRST QUARTER (WINTER) 2005

COMPOUND	California ^(a) Primary Drinking Water Standards	California ^(a) Secondary Drinking Water Standards	Federal ^(a) MCLs	Basin Objectives*
VOLATILE ORGANIC COMPOUNDS (µg/L)				
1,1,1-Trichloroethane	200		200	
1,1,2,2-Tetrachloroethane	1.0		1.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	1200			
1,1,2-Trichloroethane	5.0		5.0	
1,1-Dichloroethane	5.0			
1,1-Dichloroethene	6.0		7.0	
1,2,4-Trichlorobenzene	70		70	
1,2-Dichlorobenzene	600		600	
1,2-Dichloroethane	0.5		5	
1,2-Dichloropropane	5.0		5.0	
1,3-Dichloropropene	0.5			
1,4-Dichlorobenzene	5.0		75	
Benzene	1.0		5.0	
Bromodichloromethane	100		100	
Bromoform	100		100	
Carbon Tetrachloride	0.5		5.0	
Chlordane	0.1		2.0	
Chlorobenzene	70		100	
Chloroform	100		100	
cis-1,2-Dichloroethene	6.0		70	
Ethylbenzene	700		700	
Methylene Chloride	5.0		5.0	
Styrene	100		100	
Tetrachloroethene	5.0		5.0	
Toluene	150		1000	
Total Trihalomethanes	100		100	
trans-1,2-Dichloroethene	10		100	
Trichloroethene	5.0		5.0	
Trichlorofluoromethane	150			
Vinyl Chloride	0.5		2.0	
Xylenes (MCL for single isomer or sum of isomers)	1750		10000	

^(a) Standards summarized in "A Compilation of Water Quality Goals" (RWQCB, Central Valley Region, 1995).

* Santa Ana River Basin Objectives - May change according to Groundwater Subbasin (RWQCB, 1995).

** Federal Action Limit.

† State Department of Health Services Action Limit.

SECTION 9.0

MILLIKEN SANITARY LANDFILL

9.0 MILLIKEN SANITARY LANDFILL

This report addresses the analyses of groundwater flow, groundwater quality, and landfill gas condensate chemistry at the Milliken Sanitary Landfill during the first quarter (Winter) 2005 monitoring period and also includes a summary of trends in groundwater over the past monitoring year. This report was prepared to comply with quarterly Detection Monitoring Program (DMP) and Corrective Action Program (CAP) monitoring requirements identified in RWQCB Order Nos. 98-99-03, 94-17, and 93-57 for all landfills within the Santa Ana region, and Order No. 81-003, which was issued specifically for the Milliken Sanitary Landfill.

9.1 WATER AND SOIL-PORE GAS MONITORING ACTIVITIES

The DMP network at the Milliken Sanitary Landfill includes 14 groundwater monitoring wells, 14 piezometers, five soil-pore gas monitoring probes, four surface water monitoring stations, and one landfill gas condensate station (Figures 9-1a and 9-1b). The detection monitoring program at the site is summarized in the following table.

**Milliken Sanitary Landfill
Detection Monitoring Program**

Monitoring Point	Monitoring Point I.D.
Groundwater Monitoring Well – Compliance	M-2B, M-2D, M-3, M-6B, M-7A*, M-7B, M-8A*, M-9, M-10, M-15A, M-17, and M-19
Groundwater Monitoring Well – Background	M-1 and M-4
Piezometer	M-5A, M-5B, M-6A, M-8B, M-12A, M-12B, M-13A, M-14A, M-14B, M-15B, M-16, M-18, PZ-1A, and PZ-1B
Soil-Pore Gas Probe	MPG-4*, MPG-31*, MPG-35*, MPG-46*, and MPG-57*
Surface Water Station	MSW-1, MSW-2, MSW-3, and MSW-4
Landfill Gas Condensate Station	M-Condensate

*Semiannual sampling (during the second [Spring] and fourth [Fall] quarters) and quarterly water-level measurements (monitoring wells).

During the first quarter 2005 monitoring period, depths to groundwater were measured on January 13, 2005, and groundwater samples were collected from the monitoring wells at the Milliken Sanitary Landfill on January 13 and 18, 2005. At the time of sampling, groundwater samples could not be collected from wells M-1, M-2B, M-4, M-5A, M-15A, and M-17 because there was insufficient water in these wells to collect a sample. Surface water samples were not obtained during the current monitoring period because no surface water was present at the monitoring stations during the sampling event. A condensate sample (Milliken Condensate) was collected from the landfill gas condensate station on January 7, 2005.

9.2 GROUNDWATER POTENTIOMETRIC-SURFACE ELEVATIONS

Prior to purging and sampling, each well was sounded for water depth using a weighted electronic sounder, and the static water level was recorded on a Well Data Sheet. The groundwater potentiometric-surface elevations were calculated for each well by subtracting the depth-to-water measurement from the reference elevation. The current and historical groundwater elevation data for the Milliken Sanitary Landfill are summarized in Table 9-1. It should be noted that the surface completions were modified for wells M-8A, M-8B, M-15A, and M-15B. These modifications were required because of construction activities in the vicinity of these wells. The modifications included removing the upper section of the well casings to lower them to the new ground level. Additional modifications will be required after final improvements are completed in the vicinity of the wells. Because the current top of casing elevations had not been surveyed at the time of this report, the groundwater elevation data could not be incorporated into contour maps for these wells.

Two groundwater-bearing zones have been identified beneath the Milliken Sanitary Landfill - an upper, unconfined aquifer, and a lower, partially confined aquifer. Since the lower aquifer is only partially confined, its potentiometric surface occurs at a similar elevation to the upper aquifer. Wells M-2B, M-6A, M-7A, M-8A, M-9, M-12A, M-14A, M-15A, M-18, and M-19 are screened in the upper aquifer. Wells M-1, M-2D, M-3, M-4, M-5A, M-5B, M-10, M-12B, M-13A, M-14B, M-15B, M-16, and M-17 are screened in the partially confined aquifer.

Between October 5, 2004, and January 13, 2005, the following changes in the groundwater potentiometric surface elevation were measured:

Well or Piezometer	Change in Groundwater Elevation (feet)
M-1	Dry
M-2B	Dry
M-2D	-0.29
M-3	+0.28
M-4	Dry
M-5A	Dry
M-5B	-1.32
M-6A	Dry
M-6B	+1.34
M-7A	+0.23
M-7B	+0.22
M-8A	+3.09
M-8B	+0.49
M-9	-0.09

Well or Piezometer	Change in Groundwater Elevation (feet)
M-10	No change
M-12A	+2.00
M-12B	-2.63
M-13A	-1.12
M-14A	+4.44 (approx.)
M-14B	Unknown
M-15A	-1.58
M-15B	+0.07
M-16	Dry
M-17	Dry
M-18	-2.76
M-19	-0.66
PZ-1A	Dry
PZ-1B	+0.23

Notes: Approximate changes indicate that the well was formerly dry, but has recovered. The value provided is the height of the water column in the well.

The groundwater potentiometric-surface elevation data obtained during the first quarter 2005 monitoring period were used to generate the groundwater equipotential maps shown on Figures 9-1a and 9-1b. As can be seen, although groundwater levels beneath the Milliken Sanitary Landfill have increased in a few wells after a long-term decline, until the groundwater levels

have recovered further, only limited data are available in the disposal cells area. During the first quarter 2005 monitoring period, groundwater flowed to the south-southwest at an average hydraulic gradient of approximately 0.003 ft/ft in both the lower and upper zones. In general, groundwater equipotential lines developed using the first quarter 2005 water levels are similar to contours developed historically.

9.3 FIRST QUARTER 2005 ANALYTICAL RESULTS

9.3.1 Groundwater

Tables 9-2 through 9-32 summarize the analytical results for groundwater samples obtained from all site monitoring wells during current and past sampling rounds at the Milliken Sanitary Landfill. Table 9-33 compares the groundwater chemistry of samples collected from background and compliance wells during the current monitoring period.

New Historical Intrawell Maximum Values

The groundwater chemistry results obtained during the first quarter 2005 monitoring event at the Milliken Sanitary Landfill were generally consistent with historical intrawell values. As summarized in the table below, one analyte was measured at a new historical intrawell maximum concentration, slightly exceeding the previous historical intrawell maximum concentration.

**New Historical Intrawell Maximum Values – Groundwater Samples
First Quarter (Winter) 2005**

Well	Analyte	New Maximum Result	Previous Maximum Result
M-19	Dichlorodifluoromethane	0.61 µg/L	0.6 µg/L

Statistical Analysis of Water Quality Data

The results of statistical analyses of the water quality data obtained at the Milliken Sanitary Landfill are summarized in Tables 9-34 through 9-36. For statistical analyses, the groundwater monitoring wells at the Milliken Sanitary Landfill have been grouped into two data sets. Tables 9-34a, 9-35a, and 9-36a summarize the statistical analyses for dataset 1, and Tables 9-34b, 9-35b, and 9-36b summarize the statistical analyses for dataset 2. In Tables 9-34 and 9-35 (for general chemistry and metals parameters), the following equivalencies are used between the sequential numeric designation for each well (as used by the SAC_APP program and its output) and the formal well name:

SAC_APP NO.	DATASET 1	DATASET 2
	WELL NO.	WELL NO.
1	M-4	M-4
2	M-1	M-9
3	M-2B	M-10
4	M-2D	M-15A
5	M-3	M-17
6	M-6B	M-19
7	M-7A	
8	M-7B	
9	M-8A	

On the basis of the historical groundwater elevation data for the Milliken Sanitary Landfill, well M-4 is the upgradient (background) well against which the compliance wells are compared. It should be noted that upgradient well M-1 has been grouped with the compliance wells based on the proximity of this well to the landfill and the apparent influence of the landfill on the groundwater sampled at this location. Analytes not reported on Tables 9-34 to 9-36 had more than 90 percent "not detected" or more than 85 percent "not analyzed" database entries, and were thus not amenable to statistical analysis. The charts that accompany the summary tables show the historical concentrations for each constituent calculated by the SAC_APP program as an intrawell statistical hit.

General Chemistry – As shown in Tables 9-34a and 9-34b, background-to-compliance well statistical anomalies were calculated for chloride in samples from wells M-2B, M-7A, and M-17; for pH in samples from wells M-2D, M-3, M-7A, and M-19; for sulfate in samples from well M-8A; and for total dissolved solids (TDS) in samples from well M-2B. These results are consistent with historical statistical conclusions. Although wells M-2B, M-7A, M-8A, and M-17 were not sampled this quarter (either the wells were dry, or in the case of wells M-7A and M-8A, the wells are only sampled semiannually during the second and fourth quarters), interwell statistical anomalies continue to be calculated for the historical data from these wells because the data remain elevated when compared to the pooled, historical background data.

As shown in Tables 9-34a and 9-34b, intrawell statistical anomalies were calculated for the nitrate as nitrogen and TDS concentrations measured in the sample from well M-10. Review of the historical tables and the charts that accompany Tables 9-34b indicates that these intrawell statistical anomalies are not the result of new historical intrawell maximum concentrations, but rather are the result of increases in concentration following periods of decreasing or relatively static concentrations for these constituents.

Metals – As shown in Tables 9-35a and 9-35b, interwell statistical anomalies were calculated for calcium, magnesium, and sodium in the sample collected from well M-2B. As stated above, even though a sample could not be collected from well M-2B during the current monitoring period, the historical metals data for samples from this well remain elevated when compared to the historical background data, resulting in the calculation of interwell anomalies during the current monitoring period.

As shown on Table 9-35a, intrawell statistical anomalies were calculated for magnesium in the sample from well M-2D, and for sodium in the sample from well M-7B. Neither of the sample results represents a new historical intrawell maximum concentration, but result from increases in concentrations following a decreasing trend or static conditions for these metal constituents.

Volatile Organic Compounds – Since a VOC release has been recognized at the Milliken Sanitary Landfill and an EMP has been implemented, it was concluded that intrawell statistical methods are more appropriate for evaluating water quality conditions for organic constituents. Specifically, intrawell statistical analyses of commonly detected VOCs were performed to identify any significant deviations from historical trends. These “indicator” VOCs include: 1,1-dichloroethane (1,1-DCA), cis-1,2-dichloroethene (cis-1,2-DCE), dichlorodifluoromethane (DCDFM), tetrachloroethene (PCE), trichloroethene (TCE), trichlorofluoromethane (TCFM), and vinyl chloride. In Tables 9-36a and 9-36b, the following equivalencies are used between the sequential numeric designation for each well (as used by the SAC_APP program and its output) and the formal well name:

SAC_APP NO.	DATASET 1 WELL NO.	DATASET 2 WELL NO.
1	Intrawell Dataset	Intrawell Dataset
2	M-4	M-9
3	M-1	M-10
4	M-2B	M-15A
5	M-2D	M-17
6	M-3	M-19
7	M-6B	
8	M-7A	
9	M-7B	
10	M-8A	

The intrawell dataset associated with SAC_APP No. 1 is the data from well M-2B and is entered to allow the statistical program to evaluate each of the “indicator” VOCs (i.e., SAC_APP will not perform the intrawell test if the particular analyte is not present in samples from the background well).

As shown in Tables 9-36a and 9-36b, no intrawell statistical anomalies were calculated for the groundwater samples collected during the first quarter 2005 monitoring period.

ARARs and Basin Objectives

During the current monitoring period, concentrations of the following analytes equaled or exceeded a currently established ARAR or basin objective (Tables 4-1 and 9-33):

CONSTITUENT	STANDARD	DOWNGRAIDENT WELLS							
		M-2D	M-3	M-6B	M-7B	M-9	M-10	M-15A	M-19
GENERAL CHEMISTRY (mg/L)									
Chloride	18 ⁽⁴⁾ - 500 ⁽²⁾		25	25		20		NA	22
Total Dissolved Solids	330 ⁽⁴⁾ - 1000 ⁽²⁾		346			340	354	NA	
METALS (mg/L)									
Sodium	18 ⁽⁴⁾	27	33	30	26	27	24	NA	31

NOTES: 1. California Primary Drinking Water Standard. 4. Basin Objective.
2. California Secondary Drinking Water Standard. 5. NA = Not Analyzed.
3. Federal Maximum Contaminant Limit.

No other ARARs or basin objectives were equaled or exceeded during the first quarter 2005 monitoring period.

Statistical comparison of the historical data with currently established ARARs indicates that the mean concentrations of 1,1-dichloroethane in samples from well M-1; tetrachloroethene (PCE) in samples from wells M-1 and M-2B; and trichloroethene (TCE) in samples from wells M-2B and M-8A equal or exceed their respective ARAR at a 95 percent confidence level. Although not all of these wells were sampled this quarter, the statistical conclusions described above are based on a comparison of the historical data with the ARARs.

9.3.2 Surface Water

No free water was observed at surface water monitoring stations MSW-1, MSW-2, MSW-3, and MSW-4 during the first quarter 2005 monitoring period, and as a result, no surface water samples were obtained.

9.3.3 Landfill Gas Condensate

A landfill-gas condensate sample was collected at the Milliken Sanitary Landfill on January 7, 2005. As shown in Table 9-37, twenty-eight VOCs and 11 SVOCs were detected at trace or quantifiable concentrations during the first quarter 2005 monitoring period. As shown below, 17 new historical maximum concentrations were measured.

**New Historical Maximum Values - Landfill Gas Condensate
First Quarter (Winter) 2005**

Analyte	New Max. Result	Previous Max. Result
Total Organic Carbon	5300 mg/L	5250 mg/L
Magnesium	3.4 mg/L	2 mg/L
Sodium	14 mg/L	4.1
1,2,4-Trimethylbenzene	84 µg/L	21 µg/L
1,3,5-Trimethylbenzene	26 µg/L	24 µg/L
1,2-Dichloroethane	6.6 µg/L	4.2 µg/L
2-Butanone (MEK)	80,000 µg/L	44,800 µg/L
4-Methyl-2-Pentanone (MIBK)	6100 µg/L	3700 µg/L
Acetone	83,000 µg/L	58,000 µg/L
Chlorobenzene	8.5 µg/L	7.1 µg/L
Dichlorodifluoromethane	1.2 µg/L	0.58 µg/L
Methyl Methacrylate	11 µg/L	6.9j µg/L
trans-1,2-Dichloroethene	0.73 µg/L	0.62 µg/L
Naphthalene (as VOC, concentration by EPA 8260)	290 µg/L	200 µg/L
Total Xylenes	380 µg/L	300 µg/L
Isophorone	1100 µg/L	1000 µg/L
o-Cresol (2-methylphenol)	580 µg/L	499 µg/L

Notes: j = Trace Value (between MDL and PQL).

9.3.4 Soil-Pore Gas

Field screening of soil-pore gas probes is conducted during the second and fourth quarters of each year, therefore, no further discussion of soil-pore gas sampling is provided herein.

9.4 ANNUAL SUMMARY

9.4.1 Annual Groundwater Data Trends

During the 2004-2005 monitoring year, groundwater elevations were measured on a quarterly basis, and groundwater sampling was performed on a quarterly to semiannual (selected wells) basis at the Milliken Sanitary Landfill. The groundwater samples were monitored for indicator general chemistry constituents [chloride, nitrate as nitrogen (N), pH, sulfate, and total dissolved solids (TDS)], indicator metals (calcium, magnesium, and sodium), and volatile organic compounds (VOCs).

Time-series plots, depicting long-term and annual trends in groundwater elevations and constituent concentrations of the indicator parameters (chloride, nitrate-N, pH, sulfate, TDS, calcium, magnesium, sodium, and VOCs) are presented on Figures 9-2 through 9-25 for the Milliken Sanitary Landfill. On those figures that compare upgradient well constituent data to downgradient well constituent data (interwell trends), the upgradient wells are indicated with dashed lines and downgradient wells are presented with solid lines. As noted on figures showing a single constituent, non-detected values (NDs) are plotted at one half of the method detection

limit (MDL) and an MDL line is plotted. Data gaps (i.e., a constituent that was not analyzed) are represented by a break in the trend line. Wells and analytes not discussed below either do not show significant trends (rising or falling) or have too few data points (three or less in the past year) to establish meaningful trends.

9.4.2 Groundwater Elevations

As shown on Figures 9-2A and 9-2B, during the 2004-2005 monitoring year, groundwater elevations have decreased in all wells at the Milliken Sanitary Landfill. Over the long-term period, groundwater elevations have declined steadily since the second quarter 1999 monitoring period and reached historical lows during the past year. Of note, groundwater monitoring wells M-1, M-2B, M-4, and M-17, and piezometers M-5A, M-6A, M-8B, and M-16 have been dry for the past year.

9.4.3 Groundwater Data Trends

In order to evaluate changes in water quality, observed constituent trends were evaluated qualitatively to determine if statistically significant increasing or decreasing trends were evident. The groundwater quality constituent trends shown on Figures 9-3 through 9-25 were differentiated between "Recent" (over the last two years) and "Long-Term" (over the history of the well) increasing or decreasing trends and are summarized on the following tables.

Recent Groundwater Data Trends

Well No.	Increasing Trends	Decreasing Trends
M-1	Insufficient Data	Insufficient Data
M-2B	Insufficient Data	Insufficient Data
M-2D	Chloride, Nitrate-N, Calcium, Magnesium, Sodium	pH
M-3	Sulfate, Magnesium, Sodium	TDS, DCDFM
M-4	Insufficient Data	Insufficient Data
M-6B	Sulfate, Calcium, Magnesium, Sodium, PCE, TCE	None Apparent
M-7A	Insufficient Data	Insufficient Data
M-7B	Chloride, Sodium	pH, Sulfate, DCDFM, PCE, TCE
M-8A	Insufficient Data	Insufficient Data
M-9	Chloride, Nitrate-N, Sulfate, Calcium, Sodium	pH, DCDFM
M-10	pH, TDS, Sodium, DCDFM	Sulfate, Calcium, PCE, TCE
M-15A	Sulfate	Nitrate-N, pH, Calcium, 1,1-DCA, DCDFM, PCE
M-17	Insufficient Data	Insufficient Data
M-19	Sodium	Nitrate-N, pH, TDS, 1,1-DCA, cis-1,2-DCE, PCE, TCE

As summarized above, indicator general chemistry, metal and VOC constituents have exhibited increasing and decreasing trends that generally remained within historical ranges. However, several general chemistry, metal, and VOC constituents have displayed significant decreasing trends over the past two years, particularly in samples from wells M-7B, M-10, M-15A and M-19.

Long-Term Groundwater Data Trends

Well No.	Increasing Trends	Decreasing Trends
M-1	1,1-DCA, DCDFM	TDS, Calcium
M-2B	TCE	Chloride, Nitrate-N, cis-1,2-DCE
M-2D	Nitrate-N, Sodium	Chloride
M-3	Magnesium, Sodium, DCDFM, PCE	Chloride, pH, TCFM
M-4	Sulfate, TDS, Sodium	Chloride, pH, Calcium
M-6B	Nitrate-N, Sodium, DCDFM, PCE	Chloride, pH
M-7A	None Apparent	Nitrate-N, Sulfate, TDS, Calcium, cis-1,2-DCE, TCE
M-7B	None Apparent	Chloride, Nitrate-N, pH, Sulfate, TDS, Calcium, Magnesium, Sodium, DCDFM, TCFM
M-8A	Nitrate-N, 1,1-DCA, cis-1,2-DCE	Calcium, PCE, TCE, DCDFM, TCFM
M-9	None Apparent	Chloride, Nitrate-N, pH, Sulfate, Calcium, Magnesium
M-10	TDS	Chloride, Nitrate-N, pH, Sulfate, Sodium
M-15A	None Apparent	Chloride, Nitrate-N, pH, Sulfate, Calcium, 1,1-DCA, DCDFM, PCE, TCE
M-17	None Apparent	Chloride, Sulfate, TDS, Magnesium, Sodium
M-19	Sodium	Chloride, Nitrate-N, Sulfate, 1,1-DCA, cis-1,2-DCE, PCE, TCE

As summarized above, several indicator general chemistry, metal, and VOC constituents have displayed increasing and decreasing long-term trends. Of the long-term trends summarized above, the time-series plots for wells M-7A, M-7B, M-8A, M-15A, and M-19 indicate significant decreasing trends for VOCs, while significant increasing VOC trends are noted for wells M-1, M-2B, M-3, M-6B, and M-8A.

9.4.4 Surface Water

No free water was observed at surface water sampling stations MSW-1, MSW-2, MSW-3, and MSW-4 during the 2004-2005 monitoring year and, as a result, no trend analysis could be performed.

9.4.5 Soil-Pore Gas

In accordance with a newly adopted protocol, the soil-pore gas probes were field-screened for methane with a calibrated field instrument during the second (Spring) and fourth quarter (Fall) 2004 monitoring periods. Results of the field screening conducted on soil-pore gas probes at the Milliken Sanitary Landfill during the past year indicated no measurable concentrations of methane, therefore, no soil-pore gas samples were collected for laboratory analyses. Historical soil-pore gas results are summarized in Table 9-37 through 9-41.

9.5 SUMMARY

The results of the water quality analyses completed for the first quarter 2005 monitoring period are generally consistent with historical results. Of the samples that were collected during the current monitoring period, one new historical intrawell maximum value was measured.

Statistical analyses of inorganic constituent values were generally similar with past results, and there were no intrawell statistical anomalies for VOCs. As has been the case historically, elevated concentrations of VOCs continue to be measured in samples from groundwater monitoring wells at the Milliken Sanitary Landfill. However, none of the VOC concentrations measured during the first quarter 2005 monitoring period exceeded a federal or state ARAR.

Generally, groundwater elevations in the site monitoring wells continue to decline in response to regional long-term drought conditions, and many of the monitoring wells remain dry or contain insufficient water for sampling. However, the groundwater level recovered in piezometers M-14A and M-14B, which were dry during the previous monitoring period.

Review of the time-series charts for the groundwater quality monitoring parameters for the Milliken Sanitary Landfill indicates that although recent and long-term increasing and decreasing trends are noted, significant recent decreasing VOC constituent trends are depicted for samples from wells M-7B, M-9, M-10, M-15A, and M-19. Similarly over the sampling history, significant decreasing VOC trends are noted for samples from wells M-7A, M-7B, M-8A, M-15A, and M-19.

The results of landfill gas condensate sampling completed at the Milliken Sanitary Landfill during the first quarter 2005 monitoring period indicate that 28 VOCs and 11 SVOCs were measured at quantifiable or estimated trace concentrations in the samples collected during the current monitoring period. In addition, 17 new historical maximum concentrations were measured during the first quarter 2005 monitoring period.

9.6 CORRECTIVE ACTION PROGRAM TESTING

In response to the detection of VOCs in groundwater near the Milliken Sanitary Landfill, SWMD conducted an EMP that characterized the nature and extent of groundwater impacts (GLA, 1998e). Based on the data developed for the EMP, SWMD also completed an Engineering Feasibility Study (EFS) to determine the most appropriate response to groundwater impacts near the facility (GLA, 1998f). After evaluating the merits and limitations of a number of remedial alternatives, the EFS concluded that an ex-situ aeration channel treatment system would be the most effective means of mitigating impacted groundwater conditions along the point of compliance (GLA, 1998f).

Treatment System Description

The treatment system is designed to remove VOCs from the upper, unconfined aquifer beneath the Milliken Sanitary Landfill, and to contain groundwater impacted by VOCs at the point of compliance (POC). The treatment system includes two major elements:

- 1) A groundwater extraction and collection system that is designed to contain VOC-impacted groundwater at the POC and to transfer extracted groundwater to the ex situ (aeration channel) treatment area. The groundwater extraction system includes 13 wells spaced at intervals of approximately 150 feet. Each well is

1) equipped with an electrical submersible pump, and each pump is calibrated to extract groundwater at approximately 2 gallons per minute.

- 2) An aeration channel system that removes VOCs from groundwater to yield effluent with no measurable concentrations of VOCs. The aeration channel takes advantage of site topography by allowing extracted groundwater to flow under the force of gravity into a borrow pit located immediately west of the landfill. The aeration channel is constructed of corrugated, high-density polyethylene (HDPE) pipe that induces turbulent flow in the extracted groundwater as it flows into the borrow pit. Treated water is discharged onto the pit floor, where it either infiltrates or evaporates.

The treatment system became operational on March 26, 1999. However, it was noted that the extraction wells were capable of extracting groundwater at rates that could dry the upper aquifer or exceed the infiltration capacity of the borrow pit. Therefore, a series of long-term aquifer pumping tests was performed to determine the optimum pumping rate for the treatment system to maintain effective capture of impacted groundwater along the point of compliance. The results of the aquifer testing indicated that a pumping rate of 2 gallons per minute should be maintained for each extraction well (GLA, 1999c). The pumps were calibrated to extract groundwater at this rate on April 26, 1999.

1) Treatment system monitoring is performed under a separate contract by TRC Geoscience. During the first quarter 2005 monitoring period, approximately 0.46 million gallons of groundwater were treated and the treatment system removed approximately 0.01 pounds of VOCs. To date, the treatment system has treated approximately 43.56 million gallons of groundwater and has removed approximately 24.4 pounds of VOCs.

SECTION 9.0





**MILLIKEN SANITARY LANDFILL
TABLES**

COUNTY OF SAN BERNARDINO
 SANTA ANA REGION
 MILLIKEN SANITARY LANDFILL
 EXPLANATION FOR TABLES
 FIRST QUARTER (WINTER) 2005

Site Monitoring Well Information

- Not measured.
- * Based on the historical trends, this datum appears to be an anomalous depth/elevation.
- ** Change in depth to water after this date due to well-head modification.
- (r) Well has been extended and re-surveyed; pumps removed from wells M-2, M-2B, and M-10.
- NP Well does not have a dedicated pump.
- (**) Well numbers for wells M-14A and M-14B reversed on well data sheets, sample bottles, and certificates of analysis for January 1998 results.
- † Well monuments have been raised. Survey data is currently unavailable, therefore, no elevation can be calculated.

Historical Tables

-  - Sample was not analyzed for these parameters during the specified sampling round.
-  - Indicates not detected above Practical Quantitation Limit (PQL). Value listed is Method Detection Limit (MDL) or estimated trace concentration (BOLDED).
-  - Data not recorded for this analyte.
-  - Total anion/cation calculation was not performed. Not calculated; minimum of three data points required.
- * Metals concentrations for the July 1992 sampling round were elevated due to the analyses being performed on unfiltered samples.
- ** Suspected laboratory/field contaminant.
- (*) General chemistry & metals bottles for wells M-2B & M-2D may have been switched during the fourth quarter (Fall) 1997 monitoring period.

Dissolved Oxygen and Turbidity (in wells with dedicated pumps), Temperature, pH, and Conductivity are measured in the field. All other parameters are determined in the laboratory.

MED., AVG., STD. DEV., MIN., and MAX. values are calculated from data measured at or above the laboratory MDL.

Comparison Tables


-  - Indicates not detected above Practical Quantitation Limit (PQL). Value listed is MDL or estimated trace concentration (BOLDED).
- NA - Not analyzed (in data columns).
- NV - No value available (in ARAR or Basin Objectives column). ARAR = Applicable or Relevant and Appropriate Requirement.
- ** Value shown is the upper maximum contaminant limit.
- † Well abandoned.
- ‡ Not sampled this monitoring period (semi-annual sampling).
- ‡‡ Piezometer (no longer sampled).
- (1) California Primary Drinking Water Standards.
- (2) California Secondary Drinking Water Standards.
- (3) Federal Maximum Contaminant Levels (MCLs).
- (4) Santa Ana River Basin Objective - Chino II Groundwater Subbasin.
- (5) Suspected laboratory/field contaminant.

TABLE 9-1A
SITE MONITORING WELL INFORMATION
MILLIKEN SANITARY LANDFILL

WELL INFORMATION	WELL NUMBER		
	M-1 ^(a)	M-2B ^(a)	M-2D
Date well completed:	11/23/87	5/2/88	5/5/94
Coordinates of well:			
Northing	1837536.66	1835765.76	1835721.65
Easting	6691553.80	6692634.26	6692423.28
Current (after 11/96) elevation of well (ft above msl):			
Top of well monument	876.06	870.18	849.28
Ground surface	-	869.09	-
Top of well casing/seal	873.96	869.43	848.67
Original elevation of well (ft above msl):			
Top of well monument	872.16	855.61	849.28
Ground surface	870.30	854.78	-
Top of well casing/seal	871.63	855.22	848.67
Original total depth of well (ft):	262.00	250.00	304.00
Original depth of screened interval (ft):	241.5-261.5	206-250	284-304
Estimated depth of pump (ft):	257.00	243.00	280.00
Depth to water from top of well casing/seal (ft):			
12/4/87	248.90	-	-
6/24/88	-	234.20	-
11/7/88	249.60	236.20	-
1/16/89	249.90	-	-
3/2/89	-	235.40	-
4/28/89	249.40	235.30	-
03/2,5,7/90	251.30	237.20	-
4/6/90	250.90	236.70	-
5/11/90	250.40	236.35	-
7/12/90	250.66	236.72	-
8/2/90	251.30	237.10	-
8/15/90	251.10	237.30	-
9/4/90	251.04	237.33	-
10/8/90	251.50	237.85	-
10/9/90	251.70	238.05	-
11/8/90	251.63	238.05	-
12/3/90	251.75	238.10	-
12/11/90	251.70	238.00	-
1/10/91	251.90	238.00	-
2/5/91	251.77	237.90	-
3/7/91	251.68	237.65	-
4/1/91	251.80	237.55	-
5/1/91	251.19	236.86	-
6/4/91	250.92	-	-
7/3/91	250.80	236.45	-
8/1/91	250.73	236.55	-
9/6/91	251.13	236.95	-
10/7/91	251.21	237.26	-
11/4/91	250.82	236.86	-
12/2/91	251.89	-	-
1/2/92	251.55	237.34	-
2/4/92	251.42	-	-
3/12/92	251.04	236.42	-
6/26/92	249.00	234.65	-
8/17/92	248.95	234.67	-
9/23/92	249.13	234.94	-
10/16/92	249.45	235.28	-
11/19/92	249.50	235.38	-
12/11/92	249.53	235.34	-
1/26/93	248.94	234.81	-
2/5/93	248.76	234.76	-
3/22/93	247.84	233.88	-
4/12/93	246.70	233.37	-
5/6,7/93	246.85	232.90	-
6/21/93	246.40	232.22	-
7/14/93	246.52	232.24	-
8/11/93	246.55	232.29	-
9/22/93	246.88	232.54	-
10/15/93	246.94	233.60	-
11/9/93	247.13	232.51	-
12/22/93	246.82	232.37	-
1/6/94	246.44	231.96	-
2/17,24/94	245.78	231.35	-
3/21/94	245.53	213.03*	-
4/20/94	246.14	231.60	-
5/25/94	246.84	223.26*	-
6/23/94	245.20	230.60	-
7/20/94	245.84	223.26*	-
8/25/94	246.52	221.84*	-

TABLE 9-1A (CONT'D)
 SITE MONITORING WELL INFORMATION
 MILLIKEN SANITARY LANDFILL

WELL INFORMATION	WELL NUMBER		
	M-1 ^(c)	M-2B ^(c)	M-2D
9/28/94	246.21	232.12	-
11/29/94	247.08	-	-
12/28/94	247.15	232.64	-
1/26/95	247.00	232.40	-
2/9-27/95	246.27	232.10	225.40
3/17,30/95	245.35	231.58	224.80
4/18/95	245.25	231.20	224.60
5/3,4/95	245.20	231.08	224.30
6/9/95	245.10	230.68	224.01
7/17-25/95	245.10	230.55	224.16
8/9/95	235.35*	230.65	224.50
9/20/95	245.90	231.20	225.30
10/9,30/95	245.96	231.15	225.18
11/7/95	246.20	231.40	225.08
12/15/95	246.20	231.42	225.05
1/15,16,22/96	246.02	231.21	224.50
2/8/96	245.11	232.37	225.80
3/18/96	-	233.26	223.90
4/11-22/96	246.38	231.75	225.11
5/21/96	245.15	230.48	224.15
6/4/96	245.05	230.30	224.25
7/12/96	245.40	230.70	226.31
8/23/96	246.72	232.05	224.20
9/25/96	247.71	231.68	227.51
10/1/96	-	232.02	226.40
11/25/96	-	248.96**	228.87
12/19/96	-	248.16	229.00
1/7/97	247.96	248.50	227.50
2/28/97	246.60	247.00	225.24
3/19/97	246.75	245.85	225.80
4/1/97	246.80	245.80	225.15
5/23/97	246.40	246.90	225.10
6/16/97	247.04	246.16	226.30
7/25/97	247.95	246.84	226.70
8/18/97	247.68	247.00	227.67
9/29/97	-	247.77	227.95
10/7/97	248.72	247.10	228.58
11/25/97	248.80	248.40	228.59
12/16/97	249.02**	248.17	228.00
1/5/98	252.52	248.11	228.21
2/17/98	251.46	247.99	227.83
3/20/98	251.40	247.91	226.93
4/6/98	251.09	247.40	227.94
7/30/98	250.44	246.17	225.75
10/21/98	250.93	246.91	226.06
1/18/99	250.38	246.03	225.73
4/27/99	249.91	246.84	225.61
7/13/99	245.90	248.53	226.07
10/21/99	251.98	250.48	228.67
1/6/00	253.45	251.00	229.70
4/11/00	253.34	251.02	229.64
7/6/00	254.11	251.90	230.52
10/5/00	255.90	252.10	231.85
1/5/01	255.67	251.80	231.40
4/26/01	254.90	251.25	231.05
7/3/01	255.72	251.93	231.94
10/3/01	256.60	253.15	233.35
1/14/02	257.10	254.08	233.98
4/29/02	258.37	255.30	234.08
7/15/02	258.45	254.97	235.36
10/11/02	-	-	237.30
1/8/03	-	-	237.54
4/1/03	-	-	237.26
7/1/03	-	-	237.52
10/2/03	-	-	237.62
1/5/04	-	-	238.51
4/2/04	-	-	238.60
7/9/04	-	-	239.30
10/5/04	-	-	241.20
1/13/05	-	-	241.49
Elevation of water surface (ft above msl):			
12/4/87	622.73	-	-
6/24/88	-	621.02	-
11/7/88	622.03	619.02	-
1/16/89	621.73	-	-

TABLE 9-1A (CONT'D)
 SITE MONITORING WELL INFORMATION
 MILLIKEN SANITARY LANDFILL

WELL INFORMATION	WELL NUMBER		
	M-1 ^(a)	M-2B ^(a)	M-2D
3/2/89	-	619.82	-
4/28/89	622.23	619.92	-
03/2.5.7/90	620.33	618.02	-
4/6/90	620.73	618.52	-
5/11/90	621.23	618.87	-
7/12/90	620.97	618.50	-
8/2/90	620.33	618.12	-
8/15/90	620.53	617.92	-
9/4/90	620.59	617.89	-
10/8/90	620.13	617.37	-
10/9/90	619.93	617.17	-
11/8/90	620.00	617.17	-
12/3/90	619.88	617.12	-
12/11/90	619.93	617.22	-
1/10/91	619.73	617.22	-
2/5/91	619.86	617.32	-
3/7/91	619.95	617.57	-
4/1/91	619.83	617.67	-
5/1/91	620.44	618.36	-
6/4/91	620.71	-	-
7/3/91	620.83	618.77	-
8/1/91	620.90	618.67	-
9/6/91	620.50	618.27	-
10/7/91	620.42	617.96	-
11/4/91	620.81	618.36	-
12/2/91	619.74	-	-
1/2/92	620.08	617.88	-
2/4/92	620.21	-	-
3/12/92	620.59	618.80	-
6/26/92	622.63	620.57	-
8/17/92	622.68	620.55	-
9/23/92	622.50	620.28	-
10/16/92	622.18	619.94	-
11/19/92	622.13	619.84	-
12/11/92	622.10	619.88	-
1/26/93	622.69	620.41	-
2/5/93	622.87	620.46	-
3/22/93	623.79	621.34	-
4/12/93	624.93	621.85	-
5/6.7/93	624.78	622.32	-
6/21/93	625.23	623.00	-
7/14/93	625.11	622.98	-
8/11/93	625.08	622.93	-
9/22/93	624.75	622.68	-
10/15/93	624.69	621.62	-
11/9/93	624.50	622.71	-
12/22/93	624.81	622.85	-
1/6/94	625.19	623.26	-
2/17.24/94	625.85	623.87	-
3/21/94	626.10	642.19*	-
4/20/94	625.49	623.62	-
5/25/94	624.79	631.96*	-
6/23/94	626.43	624.62	-
7/20/94	625.79	631.96*	-
8/25/94	625.11	633.38*	-
9/28/94	625.42	623.10	-
11/29/94	624.55	-	-
12/28/94	624.48	622.58	-
1/26/95	624.63	622.82	-
2/9-27/95	625.36	623.12	623.27
3/17.30/95	626.28	623.64	623.87
4/18/95	626.38	624.02	624.07
5/3.4/95	626.43	624.14	624.37
6/9/95	626.53	624.54	624.66
7/17-25/95	626.53	624.67	624.51
8/9/95	636.28*	624.57	624.17
9/20/95	625.73	624.02	623.37
10/9.30/95	625.67	624.07	623.49
11/7/95	625.43	623.82	623.59
12/15/95	625.43	623.80	623.62
1/15.16.22/96	625.61	624.01	624.17
2/8/96	626.52	622.85	622.87
3/18/96	-	621.96	624.77
4/11-22/96	625.25	623.47	623.56
5/21/96	626.48	624.74	624.52

TABLE 9-1A (CONT'D)
 SITE MONITORING WELL INFORMATION
 MILLIKEN SANITARY LANDFILL

WELL INFORMATION	WELL NUMBER		
	M-1 ^(a)	M-2B ^(a)	M-2D
6/4/96	626.58	624.92	624.42
7/12/96	626.23	624.52	622.36
8/23/96	624.91	623.17	624.47
9/25/96	623.92	623.54	621.16
10/1/96	-	623.20	622.27
11/25/96	-	620.47**	619.80
12/19/96	-	621.27	619.67
1/7/97	626.00	620.93	621.17
2/28/97	627.36	622.43	623.43
3/19/97	627.21	623.58	622.87
4/1/97	627.16	623.63	623.52
5/23/97	627.56	622.53	623.57
6/16/97	626.92	623.27	622.37
7/25/97	626.01	622.59	621.97
8/18/97	626.28	622.43	621.00
9/29/97	-	621.66	620.72
10/7/97	625.24	622.33	620.09
11/25/97	625.16	621.03	620.08
12/16/97	621.61**	621.26	620.67
1/5/98	621.44	621.32	620.46
2/17/98	622.50	621.44	620.84
3/20/98	622.56	621.52	621.74
4/6/98	622.87	622.03	620.73
7/30/98	623.52	623.26	622.92
10/21/98	623.03	622.52	622.61
1/18/99	623.58	623.40	622.94
4/27/99	624.05	622.59	623.06
7/13/99	628.06	620.90	622.60
10/21/99	621.98	618.95	620.00
1/6/00	620.51	618.43	618.97
4/11/00	620.62	618.41	619.03
7/6/00	619.85	617.53	618.15
10/5/00	618.06	617.33	616.82
1/5/01	618.29	617.63	617.27
4/26/01	619.06	618.18	617.62
7/3/01	618.24	617.50	616.73
10/3/01	617.36	616.28	615.32
1/14/02	616.86	615.35	614.69
4/29/02	615.59	614.13	614.59
7/15/02	615.51	614.46	613.31
10/11/02	-	-	611.37
1/8/03	-	-	611.13
4/1/03	-	-	611.41
7/1/03	-	-	611.15
10/2/03	-	-	611.05
1/5/04	-	-	610.16
4/2/04	-	-	610.07
7/9/04	-	-	609.37
10/5/04	-	-	607.47
1/13/05	-	-	607.18

**TABLE 9-1B
SITE MONITORING WELL INFORMATION
MILLIKEN SANITARY LANDFILL**

WELL INFORMATION	WELL NUMBER					
	M-3	M-4	M-5A	M-5B	M-6A	M-6B
Date well completed:	11/21/87	5/4/88	2/4/93	2/12/93	2/27/93	3/1/93
Coordinates of well:						
Northing	1835477.49	1837517.28	1840146.75	1840146.11	1834836.99	1834812.53
Easting	6694800.16	6694053.78	6695045.49	6695085.67	6692934.06	6692908.10
Current (after 11/96) elevation of well (ft above msl):						
Top of well monument	858.64	872.15	903.47	903.46	845.11	844.98
Ground surface	856.62	871.14	-	-	842.32	842.55
Top of well casing/seal	858.39	871.48	902.83	903.32	844.54	844.50
Original elevation of well (ft above msl):						
Top of well monument	858.64	872.15	903.47	903.46	845.11	844.98
Ground surface	856.62	871.14	-	-	842.32	842.55
Top of well casing/seal	858.39	871.48	902.83	903.32	844.54	844.50
Original total depth of well (ft):	262.00	260.00	272.00	310.00	234.00	275.00
Original depth of screened interval (ft):	242.5-262.5	207.5-259.5	242-272	290-310	204-234	255-275
Estimated depth of pump (ft):	245	252	NP	267	235	234
Depth to water from top of well casing/seal (ft):						
12/4/87	236.80	-	-	-	-	-
6/24/88	-	243.00	-	-	-	-
11/7/88	237.70	244.70	-	-	-	-
1/16/89	237.70	244.80	-	-	-	-
3/2/89	-	-	-	-	-	-
4/28/89	236.30	244.00	-	-	-	-
03/2.5.7/90	237.85	245.70	-	-	-	-
4/6/90	237.60	245.25	-	-	-	-
5/11/90	237.40	245.05	-	-	-	-
7/12/90	238.30	245.43	-	-	-	-
8/2/90	238.80	245.70	-	-	-	-
8/15/90	238.97	246.03	-	-	-	-
9/4/90	239.16	246.03	-	-	-	-
10/8/90	239.61	246.55	-	-	-	-
10/9/90	239.90	246.85	-	-	-	-
11/8/90	239.65	246.61	-	-	-	-
12/3/90	239.55	246.55	-	-	-	-
12/11/90	239.35	246.40	-	-	-	-
1/10/91	239.10	246.39	-	-	-	-
2/5/91	238.98	246.20	-	-	-	-
3/7/91	238.61	242.09	-	-	-	-
4/1/91	238.30	246.00	-	-	-	-
5/1/91	237.16	245.37	-	-	-	-
6/4/91	237.27	245.11	-	-	-	-
7/3/91	237.40	245.05	-	-	-	-
8/1/91	237.69	245.24	-	-	-	-
9/6/91	238.21	245.73	-	-	-	-
10/7/91	238.60	245.97	-	-	-	-
11/4/91	237.96	245.51	-	-	-	-
12/2/91	238.93	246.49	-	-	-	-
1/2/92	238.10	245.90	-	-	-	-
2/4/92	237.57	242.45	-	-	-	-
3/12/92	236.93	245.10	-	-	-	-
6/26/92	234.90	244.61	-	-	-	-
8/17/92	235.78	243.76	-	-	-	-
9/23/92	236.13	244.10	-	-	-	-
10/16/92	236.55	244.38	-	-	-	-
11/19/92	236.38	244.27	-	-	-	-
12/11/92	236.61	244.42	-	-	-	-
1/26/93	235.46	243.61	-	-	-	-
2/5/93	235.56	243.61	-	-	-	-
3/22/93	233.89	242.76	-	-	-	-
4/12/93	233.14	242.22	-	-	-	-
5/6, 7/93	232.62	242.02	-	-	-	-
6/21/93	232.28	241.15	-	-	-	-
7/14/93	233.03	241.43	-	-	-	-
8/11/93	233.25	241.46	-	-	-	-
9/22/93	233.69	241.69	-	-	-	-
10/15/93	233.76	241.69	-	-	-	-
11/9/93	233.75	241.75	-	-	-	-
12/22/93	232.92	241.26	-	-	-	-
1/6/94	232.82	241.00	-	-	-	-
2/17, 24/94	231.45	240.11	-	-	-	-
3/21/94	231.20	239.81	-	-	-	-
4/20/94	231.75	240.34	-	254.62	221.30	221.35
5/25/94	231.76	240.28	-	255.02	221.88	221.64
6/23/94	231.52	239.84	-	254.82	221.34	221.38
7/20/94	231.76	240.28	-	255.02	221.68	221.64

TABLE 9-1B (CONT'D)
 SITE MONITORING WELL INFORMATION
 MILLIKEN SANITARY LANDFILL

WELL INFORMATION	WELL NUMBER					
	M-3	M-4	M-5A	M-5B	M-6A	M-6B
8/25/94	233.52	241.40	-	258.08	223.02	223.19
9/28/94	235.12	241.11	-	262.45	223.52	223.08
11/29/94	233.72	-	-	-	223.55	223.55
12/28/94	233.68	241.63	-	258.30	223.60	223.60
1/26/95	233.50	241.50	-	257.70	225.10	223.10
2/9-27/95	231.53	240.89	255.46	257.44	222.80	222.72
3/17,30/95	231.38	240.20	254.80	256.40	-	221.90
4/18/95	231.27	240.20	254.50	256.50	221.50	221.31
5/3,4/95	231.20	240.05	254.50	255.95	225.45	220.95
6/9/95	230.69	239.72	254.36	256.12	220.91	220.77
7/17-25/95	230.95	239.78	255.07	256.95	221.00	220.77
8/9/95	231.30	239.90	255.73	257.08	221.17	221.17
9/20/95	232.36	240.53	256.37	257.72	221.85	221.87
10/9,30/95	232.36	240.41	256.50	257.74	221.99	222.06
11/7/95	232.40	240.50	256.49	257.87	222.15	222.17
12/15/95	232.06	240.43	256.14	257.48	221.97	221.89
1/15,16,22/96	232.08	240.26	256.07	257.28	221.92	221.90
2/8/96	232.56	241.15	256.96	258.14	221.61	222.40
3/18/96	230.66	238.45	255.05	256.28	222.16	220.60
4/11-22/96	231.75	240.50	254.53	257.24	220.50	221.90
5/21/96	231.02	239.63	255.46	256.77	222.26	222.26
6/4/96	231.08	239.45	255.53	256.85	220.95	220.95
7/12/96	231.61	239.96	257.56	257.51	221.30	221.31
8/23/96	234.41	241.86	257.45	257.40	224.05	224.10
9/25/96	-	241.63	258.63	258.47	222.16	222.10
10/1/96	-	242.69	258.00	259.00	223.17	223.22
11/25/96	235.06	243.06	259.50	259.36	223.46	223.30
12/19/96	-	243.00	259.00	258.80	223.40	223.36
1/7/97	234.13	242.60	258.00	259.20	224.70	224.60
2/28/97	233.80	242.20	258.00	258.90	222.00	221.92
3/19/97	231.00	242.00	256.95	257.70	222.55	222.50
4/1/97	230.15	240.25	257.95	257.48	222.15	222.00
5/23/97	233.60	242.20	258.20	258.80	221.70	221.60
6/16/97	231.70	241.76	257.60	258.91	224.36	224.39
7/25/97	233.13	240.65	258.00	258.35	223.90	223.90
8/18/97	233.00	241.03	258.60	260.30	222.38	222.15
9/29/97	233.81	242.15	259.06	260.35	225.05	225.06
10/7/97	234.38	242.45	259.20	261.12	225.05	225.05
11/25/97	234.17	249.70	259.50	260.80	225.46	225.45
12/16/97	233.67	242.57	258.92	260.02	225.07	225.13
1/5/98	235.32	242.37	258.93	260.53	225.37	225.01
2/17/98	-	242.11	257.61	259.14	223.84	223.95
3/20/98	-	241.39	258.20	259.51	223.78	223.61
4/6/98	231.45	240.33	257.75	261.11	223.28	223.10
7/30/98	231.25	238.94	-	-	222.52	222.40
10/21/98	232.36	237.87	228.34*	235.47*	223.72	223.33
1/18/99	231.68	237.24	227.88*	234.59*	222.68	222.32
4/27/99	230.85	239.93	258.07	259.31	222.21	222.16
7/13/99	232.04	240.90	259.31	260.82	223.08	223.08
10/21/99	234.65	243.98	261.27	262.78	225.35	225.53
1/6/00	236.08	244.38	261.86	262.99	226.90	227.00
4/11/00	235.45	244.79	261.91	262.88	226.92	226.34
7/6/00	236.45	244.90	261.99	262.96	227.89	227.58
10/5/00	238.00	244.96	261.93	262.89	228.53	228.55
1/5/01	237.34	246.66	264.76	265.12	228.28	228.20
4/26/01	236.85	243.60	264.30	265.88	227.75	227.72
7/3/01	237.93	245.60	265.64	267.00	228.70	228.62
10/3/01	239.60	247.30	265.76	268.20	229.93	230.10
1/14/02	240.13	248.85	-	268.97	230.10	230.40
4/29/02	240.27	249.91	-	266.90	230.75	230.86
7/15/02	241.42	250.78	-	270.60	231.75	232.12
10/11/02	243.98	252.94	-	272.20	234.05	234.25
1/8/03	243.93	253.20	-	272.27	234.40	234.44
4/1/03	243.33	253.62	-	272.72	233.95	233.97
7/1/03	244.08	252.08	-	273.32	234.96	235.02
10/2/03	245.20	253.67	-	273.86	228.74*	235.60
1/5/04	245.65	254.55	-	274.29	-	235.71
4/2/04	245.59	-	-	274.40	-	235.51
7/9/04	246.30	-	-	274.42	-	236.51
10/5/04	248.18	-	-	274.48	-	238.25
1/13/05	247.90	-	-	275.80	-	236.91
Elevation of water surface (ft above msl):						
12/4/87	621.59	-	-	-	-	-
6/24/88	-	627.82	-	-	-	-

TABLE 9-1B (CONT'D)
 SITE MONITORING WELL INFORMATION
 MILLIKEN SANITARY LANDFILL

WELL INFORMATION	WELL NUMBER					
	M-3	M-4	M-5A	M-5B	M-6A	M-6B
11/7/88	620.69	626.12	-	-	-	-
1/16/89	620.69	626.02	-	-	-	-
3/2/89	-	-	-	-	-	-
4/28/89	622.09	626.82	-	-	-	-
03/2,5,7/90	620.54	625.12	-	-	-	-
4/6/90	620.79	625.57	-	-	-	-
5/11/90	620.99	625.77	-	-	-	-
7/12/90	620.09	625.39	-	-	-	-
8/2/90	619.59	625.12	-	-	-	-
8/15/90	619.42	624.79	-	-	-	-
9/4/90	619.23	624.79	-	-	-	-
10/8/90	618.78	624.27	-	-	-	-
10/9/90	618.49	623.97	-	-	-	-
11/8/90	618.74	624.21	-	-	-	-
12/3/90	618.84	624.27	-	-	-	-
12/11/90	619.04	624.42	-	-	-	-
1/10/91	619.29	624.43	-	-	-	-
2/5/91	619.41	624.62	-	-	-	-
3/7/91	619.78	628.73	-	-	-	-
4/1/91	620.09	624.82	-	-	-	-
5/1/91	621.23	625.45	-	-	-	-
6/4/91	621.12	625.71	-	-	-	-
7/3/91	620.99	625.77	-	-	-	-
8/1/91	620.70	625.58	-	-	-	-
9/6/91	620.18	625.09	-	-	-	-
10/7/91	619.79	624.85	-	-	-	-
11/4/91	620.43	625.31	-	-	-	-
12/2/91	619.46	624.33	-	-	-	-
1/2/92	620.29	624.92	-	-	-	-
2/4/92	620.82	628.37	-	-	-	-
3/12/92	621.46	625.72	-	-	-	-
6/26/92	623.49	626.21	-	-	-	-
8/17/92	622.61	627.06	-	-	-	-
9/23/92	622.26	626.72	-	-	-	-
10/16/92	621.84	626.44	-	-	-	-
11/19/92	622.01	626.55	-	-	-	-
12/11/92	621.78	626.40	-	-	-	-
1/26/93	622.93	627.21	-	-	-	-
2/5/93	622.83	627.21	-	-	-	-
3/22/93	624.50	628.06	-	-	-	-
4/12/93	625.25	628.60	-	-	-	-
5/6,7/93	625.77	628.80	-	-	-	-
6/21/93	626.11	629.67	-	-	-	-
7/14/93	625.36	629.39	-	-	-	-
8/11/93	625.14	629.36	-	-	-	-
9/22/93	624.70	629.13	-	-	-	-
10/15/93	624.63	629.13	-	-	-	-
11/9/93	624.64	629.07	-	-	-	-
12/22/93	625.47	629.56	-	-	-	-
1/6/94	625.57	629.82	-	-	-	-
2/17,24/94	626.94	630.71	-	-	-	-
3/21/94	627.19	631.01	-	-	-	-
4/20/94	626.64	630.48	-	648.70	623.24	623.15
5/25/94	626.63	630.54	-	648.30	622.66	622.86
6/23/94	626.87	630.98	-	648.50	623.20	623.12
7/20/94	626.63	630.54	-	648.30	622.86	622.86
8/25/94	624.87	629.42	-	645.24	621.52	621.31
9/28/94	623.27	629.71	-	640.87	621.02	621.42
11/29/94	624.67	-	-	-	620.99	620.95
12/28/94	624.71	629.85	-	645.02	620.94	620.90
1/26/95	624.89	629.32	-	645.62	619.44	621.40
2/9-27/95	626.86	629.93	647.37	645.88	621.74	621.78
3/17,30/95	627.01	630.62	648.03	646.92	-	622.60
4/18/95	627.12	630.62	648.33	646.82	623.04	623.19
5/3,4/95	627.19	630.77	648.33	647.37	619.09	623.55
6/9/95	627.70	631.10	648.47	647.20	623.63	623.73
7/17-25/95	627.44	631.04	647.76	646.37	623.54	623.73
8/9/95	627.09	630.92	647.10	646.24	623.37	623.33
9/20/95	626.03	630.29	646.46	645.60	622.69	622.63
10/9,30/95	626.03	630.41	646.33	645.58	622.55	622.44
11/7/95	625.99	630.32	646.34	645.45	622.39	622.33
12/15/95	626.33	630.39	646.69	645.84	622.57	622.61
1/15,16,22/96	626.31	630.56	646.76	646.04	622.62	622.60
2/8/96	625.83	629.67	645.87	645.18	622.93	622.10

TABLE 9-1B (CONT'D)
 SITE MONITORING WELL INFORMATION
 MILLIKEN SANITARY LANDFILL

WELL INFORMATION	WELL NUMBER					
	M-3	M-4	M-5A	M-5B	M-6A	M-6B
3/18/96	627.73	632.37	647.78	647.04	622.38	623.90
4/11-22/96	626.64	630.32	648.30	646.08	624.04	622.60
5/21/96	627.37	631.19	647.37	646.55	622.28	622.24
6/4/96	627.31	631.37	647.30	646.47	623.59	623.55
7/12/96	626.78	630.86	645.27	645.81	623.24	623.19
8/23/96	623.98	628.96	645.38	645.92	620.49	620.40
9/25/96	-	629.19	644.20	644.85	622.38	622.40
10/1/96	-	628.13	644.83	644.32	621.37	621.28
11/25/96	623.33	627.76	643.33	643.96	621.08	621.20
12/19/96	-	627.82	643.83	644.52	621.14	621.14
1/7/97	624.26	628.22	644.83	644.12	619.84	619.90
2/28/97	624.59	628.62	644.83	644.42	622.54	622.58
3/19/97	627.39	628.82	645.88	645.62	621.99	622.00
4/1/97	628.24	630.57	644.88	645.84	622.39	622.50
5/23/97	624.79	628.62	644.63	644.52	622.84	622.90
6/16/97	626.69	629.06	645.23	644.41	620.18	620.11
7/25/97	625.26	630.17	644.83	644.97	620.64	620.60
8/18/97	625.39	629.79	644.23	643.02	622.16	622.35
9/29/97	624.58	628.67	643.77	642.97	619.49	619.44
10/7/97	624.01	628.37	643.63	642.20	619.49	619.45
11/25/97	624.22	621.12	643.33	642.52	619.08	619.05
12/16/97	624.72	628.25	643.91	643.30	619.47	619.37
1/5/98	623.07	628.45	643.90	642.79	619.17	619.49
2/17/98	-	628.71	645.22	644.18	620.70	620.55
3/20/98	-	629.43	644.63	643.81	620.76	620.89
4/6/98	626.94	630.49	645.08	642.21	621.26	621.40
7/30/98	627.14	631.88	-	-	622.02	622.10
10/21/98	626.03	632.95	674.49*	667.85*	620.82	621.17
1/18/99	626.71	633.58	674.95*	668.73*	621.86	622.18
4/27/99	627.54	630.89	644.76	644.01	622.33	622.34
7/13/99	626.35	629.92	643.52	642.50	621.46	621.42
10/21/99	623.74	626.84	641.56	640.54	619.19	618.97
1/6/00	622.31	626.44	640.97	640.33	617.64	617.50
4/11/00	622.94	626.03	640.92	640.44	617.62	618.16
7/6/00	621.94	625.92	640.84	640.36	616.65	616.92
10/5/00	620.39	625.86	640.90	640.43	616.01	615.95
1/5/01	621.05	624.16	638.07	638.20	616.26	616.30
4/26/01	621.54	627.22	638.53	637.44	616.79	616.78
7/3/01	620.46	625.22	637.19	636.32	615.84	615.88
10/3/01	618.79	623.52	637.07	635.12	614.61	614.40
1/14/02	618.26	621.97	-	634.35	614.44	614.10
4/29/02	618.12	620.91	-	636.42	613.79	613.64
7/15/02	616.97	620.04	-	632.72	612.79	612.38
10/11/02	614.41	617.88	-	631.12	610.49	610.25
1/8/03	614.46	617.62	-	631.05	610.14	610.06
4/1/03	615.06	617.20	-	630.60	610.59	610.53
7/1/03	614.31	618.74	-	630.00	609.58	609.48
10/2/03	613.19	617.15	-	629.46	615.80*	608.90
1/5/04	612.74	616.27	-	629.03	-	608.79
4/2/04	612.80	-	-	628.92	-	608.99
7/9/04	612.09	-	-	628.90	-	607.99
10/5/04	610.21	-	-	628.84	-	606.25
1/13/05	610.49	-	-	627.52	-	607.59

TABLE 9-2 (CONT'D)
MILLIKEN SANITARY LANDFILL
HISTORICAL SUMMARY - MONITORING WELL M-1

ANALYTE	UNITS	Nov 1993	Feb 1994	May 1994	Sep 1994	Dec 1994	Feb 1995	May 1995	Jul 1995	Oct 1995	Jan 1996
GENERAL CHEMISTRY											
Alkalinity	mg/L	189	208	234	192	195	191.0	191	192	NA	NA
Anions	meq/L	5.18	5	5.43	5.21	4.96	4.58	4.63	4.58	NA	NA
Bicarbonate	mg/L	231	208	234	234	195	191.0	191	192	NA	NA
Carbonate	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cations	meq/L	5.26	5.6	5.59	5.86	7.35	6.50	4.95	5.29	NA	NA
Chemical Oxygen Demand (COD)	mg/L	NA	25	NA	NA	NA	NA	NA	8.71	NA	NA
Chloride	mg/L	26.0	26	26	26	23.5	26	27.0	27.0	28.0	25
Cyanide	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Oxygen (DO)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoride	mg/L	0.2	NA	0.246	0.4	0.109	0.0136	NA	NA	NA	NA
Hardness	mg/L	202	180	222	223	211	237	208	206	250	224
Hydroxide	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate (as N)	mg/L	6.42	6.85	7.87	5.5	2.48	5.55	6.60	5.47	6.47	6.1
Ortho Phosphate Phosphorus	mg/L	0.05	NA	NA	0.09	0.06	0.06	0.08	0.080	NA	NA
pH	units	7.34	7.7	7.88	NA	7.65	7.39	7.33	7.60	7.27	7.58
Specific Conductance	µmhos/cm	508	517	567	NA	507	527	518	519	546	514
Sulfate	mg/L	11	18	14.5	12	15	14.8	13.0	13.0	13.0	11
Sulfide	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Temperature	C°	NA	14.6	20.3	NA	20	20	16	18	15	NA
Total Dissolved Solids (TDS)	mg/L	332	350	390	342	324	358	326	322	330	321
Total Organic Carbon (TOC)	mg/L	0.52	5.4	3.69	1	0.06	0.05	1.00	1.00	NA	NA
Total Organic Halides (TOX)	mg/L	0.023	0.04	0.012	0.03	0.012	0.05	0.05	0.05	0.05	NA
Turbidity	NTU	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS											
Aluminum	mg/L	NA	NA	41.2	NA	0.047	0.082	0.021	0.689	NA	NA
Antimony	mg/L	NA	NA	0.017	NA	0.006	0.005	0.005	0.005	NA	NA
Arsenic	mg/L	NA	NA	0.031	NA	0.002	0.002	0.002	0.0058	NA	NA
Barium	mg/L	NA	NA	0.906	NA	0.814	0.0105	0.01	0.01	NA	NA
Beryllium	mg/L	NA	NA	0.002	NA	0.005	0.005	0.005	0.005	NA	NA
Boron	mg/L	0.1	0.2	0.28	0.2	0.02	NA	0.290	0.060	NA	NA
Cadmium	mg/L	NA	NA	0.003	NA	0.001	0.0001	0.0001	0.0003	NA	NA
Calcium	mg/L	62.6	68	55.7	69	93.3	75.7	78.2	63.6	86.0	63
Chromium-Hexavalent	mg/L	NA	NA	0.02	NA	0.01	0.01	0.01	0.01	NA	NA
Chromium-Total	mg/L	NA	NA	1.91	NA	0.028	0.020	0.0004	0.090	NA	NA
Cobalt	mg/L	NA	NA	0.028	NA	0.001	0.004	0.003	0.004	NA	NA
Copper	mg/L	NA	NA	0.052	NA	0.00	0.05	0.03	0.03	NA	NA
Iron	mg/L	0.09	3.12	44	0.16	0.09	0.07	0.090	0.07	0.220	0.806
Lead	mg/L	NA	NA	0.016	NA	0.001	0.0004	0.080	0.001	NA	NA
Magnesium	mg/L	11.2	11.8	18.1	13	16.4	12.7	12.0	10.8	12.3	12
Manganese	mg/L	0.067	0.107	0.542	0.025	0.05	0.050	0.05	0.05	0.05	0.0012
Mercury	mg/L	NA	NA	0.002	NA	0.002	0.0006	0.0002	0.0008	NA	NA
Molybdenum	mg/L	NA	NA	0.016	NA	0.0053	0.0034	0.007	0.009	NA	NA
Nickel	mg/L	NA	NA	0.488	NA	0.031	0.051	0.020	0.024	NA	NA
Phosphorous	mg/L	0.06	1	0.03	NA	0.12	NA	0.06	0.170	NA	NA
Potassium	mg/L	1.77	2.03	8.01	1.5	1.5	2.40	1.52	1.69	1.75	1.7
Selenium	mg/L	NA	NA	0.05	NA	0.004	0.00	0.004	0.004	NA	NA
Silver	mg/L	NA	NA	0.009	NA	0.003	0.003	0.003	0.005	NA	NA
Sodium	mg/L	26.9	26.4	25.2	30	29.4	28.6	0.05	26.8	28.0	29
Thallium	mg/L	NA	NA	0.025	NA	0.00	0.001	0.001	0.001	NA	NA
Tin	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	mg/L	NA	NA	0.084	NA	0.032	0.021	0.090	0.034	NA	NA
Zinc	mg/L	0.003	0.035	0.653	0.02	0.01	0.01	0.01	0.01	0.016	0.010
VOLATILE ORGANIC COMPOUNDS											
1,1-Dichloroethane	µg/L	5	8.03	10.8	6.0	3.4	3.0	6.8	2.0	22.4	12
1,1-Dichloroethene	µg/L	0.5	0.135	0.04	0.2	0.49	0.49	0.49	0.49	0.6	0.3
Acetone	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	µg/L	0.5	0.05	0.05	0.2	0.10	0.10	0.10	0.10	0.26	0.26
Bromomethane	µg/L	0.5	0.2	0.3	0.35	0.43	0.43	0.43	0.43	0.43	0.43
Chloroethane	µg/L	0.5	0.2	0.3	0.3	0.37	0.37	0.37	0.37	0.37	0.37
Chloroform	µg/L	NR	NR	0.381	0.2	0.26	0.26	0.26	0.26	0.33	0.33
Chloromethane	µg/L	0.5	0.2	0.3	0.5	0.34	0.34	0.34	0.34	0.34	0.34
cis-1,2-Dichloroethene	µg/L	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Dichlorodifluoromethane	µg/L	3	5.58	0.8	5	3.5	3.3	6.5	7.0	15.2	6
Methylene Chloride	µg/L	0.5	0.7	0.7	0.2	0.17	0.17	0.33	0.17	0.17	0.17
Tetrachloroethene	µg/L	5.8	4.4	7.94	7.3	1.9	3.4	6.7	3.7	13.4	9
Toluene	µg/L	0.5	0.29	4.07	0.2	0.5	0.8	0.7	0.10	0.10	0.7
Trichloroethene	µg/L	1.7	1.99	2.82	2.1	1.2	1.3	2.4	2.4	4.3	2
Trichlorofluoromethane	µg/L	0.5	0.308	0.05	0.35	0.23	0.23	0.23	0.23	0.39	0.39
Vinyl Chloride	µg/L	0.5	0.2	0.2	0.35	0.38	0.38	0.38	0.38	0.38	0.38
Xylenes (total)	µg/L	0.5	0.14	0.14	0.2	NA	NA	NA	NA	0.4	0.4
SEMI-VOLATILE ORGANIC COMPOUNDS											
bis(2-Ethylhexyl) Phthalate	µg/L	NA	NA	5	NA	1.2	1.2	1.2	1.2	NA	NA
di-n-Butylphthalate	µg/L	NA	NA	2.5	NA	0.8	0.8	0.8	0.8	0.8	NA
Phenol	µg/L	NA	NA	4	2	0.8	0.8	15	0.8	0.8	NA
HERBICIDES, PESTICIDES & PCBs (µg/L): ND											

TABLE 9-2 (CONT'D)
 MILLIKEN SANITARY LANDFILL
 HISTORICAL SUMMARY - MONITORING WELL M-1

ANALYTE	UNITS	Apr 1996	Jul 1996	Jan 1997	Jan 1997	Apr 1997	Jul 1997	Oct 1997	Jan 1998	Apr 1998	Jul 1998
GENERAL CHEMISTRY											
Alkalinity	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anions	meq/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bicarbonate	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cations	meq/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand (COD)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	mg/L	24	30.0	40	60	22.2	25	30	23	21	27
Cyanide	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Oxygen (DO)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoride	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness	mg/L	208	220	208	198	203	NA	NA	NA	NA	NA
Hydroxide	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate (as N)	mg/L	7.6	6.18	5.8	5.2	2.6	8.4	6.28	4.76	3.8	4.0
Ortho Phosphate Phosphorus	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH	units	7.12	7.36	7.15	6.9	7.34	7.09	7.61	7.98	7.5	7.4
Specific Conductance	umhos/cm	529	510	499	492	500	505	NA	NA	NA	NA
Sulfate	mg/L	12	10.7	12.5	10	10.3	12	12.2	10.4	13	11
Sulfide	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Temperature	C°	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids (TDS)	mg/L	324	358	378	316	332	316	304	314	302	346
Total Organic Carbon (TOC)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Halides (TOX)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Turbidity	NTU	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS											
Aluminum	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	67.0	70.1	66.6	61.9	66	69	85	55	74	94
Chromium-Hexavalent	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium-Total	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.006	0.250	0.160	0.11	0.06	NA	NA	NA	NA	NA
Lead	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	12.0	11.7	11.1	11.7	12	12	16	9.9	12	13
Manganese	mg/L	0.012	0.0021	0.033	0.03	0.02	NA	NA	NA	NA	NA
Mercury	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorous	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	1.9	1.79	1.41	1.64	1.1	NA	NA	NA	NA	NA
Selenium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	22.0	26.7	27.9	26.6	27	32	31	31	28	21
Thallium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tin	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	mg/L	0.019	0.064	0.113	0.0337	0.022	NA	NA	NA	NA	NA
VOLATILE ORGANIC COMPOUNDS											
1,1-Dichloroethane	ug/L	11	8.6	2.7	2.9	0.13	4.5	4.4	5.5	5.4	3.4
1,1-Dichloroethene	ug/L	0.3	0.22	0.22	0.22	0.22	0.17	0.16	0.16	0.16	0.16
Acetone	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/L	0.2	0.24	0.24	0.24	0.24	0.16	0.16	0.16	0.16	0.16
Bromomethane	ug/L	0.2	0.21	0.21	0.21	0.21	0.10	0.10	0.10	0.10	0.10
Chloroethane	ug/L	0.2	0.23	0.23	0.23	0.23	0.12	0.12	0.12	0.12	0.12
Chloroform	ug/L	0.5	0.19	0.18	0.18	0.18	0.12	0.12	0.12	0.12	0.12
Chloromethane	ug/L	0.2	0.29	0.29	0.29	0.29	0.23	0.23	0.23	0.23	0.5
cis-1,2-Dichloroethene	ug/L	NR	NR	NR	NR	NR	0.12	0.12	0.12	0.12	0.12
Dichlorodifluoromethane	ug/L	9	10.7	3.6	3.2	5.0	5.7	3.8	4.3	4.5	4.6
Methylene Chloride	ug/L	0.2	0.28	0.28	0.28	0.28	0.21	0.21	0.21	0.21	0.21
Tetrachloroethene	ug/L	11	7.2	5.5	3.3	4.5	6.9	8.6	6.5	11.9	7.6
Toluene	ug/L	0.7	0.27	0.5	0.27	0.27	0.12	0.12	0.12	0.12	0.12
Trichloroethene	ug/L	3	2.1	1.3	1.2	0.19	1.4	2.3	1.6	2.9	1.6
Trichlorofluoromethane	ug/L	0.2	0.30	0.30	0.30	0.30	0.25	0.25	0.25	0.25	0.25
Vinyl Chloride	ug/L	0.2	0.35	0.35	0.35	0.35	0.24	0.24	0.7	0.2	0.24
Xylenes (total)	ug/L	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEMI-VOLATILE ORGANIC COMPOUNDS											
bis(2-Ethylhexyl) Phthalate	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
di-n-Butylphthalate	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HERBICIDES, PESTICIDES & PCBs (ug/L): ND											

TABLE 9-2 (CONT'D)
MILLIKEN SANITARY LANDFILL
HISTORICAL SUMMARY - MONITORING WELL M-1

ANALYTE	UNITS	Oct 1998	Jan 1999	Apr 1999	Jul 1999	Oct 1999	Jan 2000	Apr 2000	Jul 2000	Oct 2000	Jan 2001
GENERAL CHEMISTRY											
Alkalinity	mg/L									200	
Anions	meq/L									5.14	
Bicarbonate	mg/L									240	
Carbonate	mg/L										
Cations	meq/L									5.13	
Chemical Oxygen Demand (COD)	mg/L										
Chloride	mg/L	24	25	24	21	20	20	21	20	18	20
Cyanide	mg/L										
Dissolved Oxygen (DO)	mg/L		3.8	4.8	4.8	4.8	5.6	5.7	4.9	4.3	4.8
Fluoride	mg/L									0.2	
Hardness	mg/L									200	
Hydroxide	mg/L										
Nitrate (as N)	mg/L	5.8	6.5	4.2	6.3	7.7	7.1	7.3	7.6	7.2	8.0
Ortho Phosphate Phosphorus	mg/L										
pH	units	7.5	7.54	7.8	7.8	7.7	7.9	8.0	7.5	7.0	8.0
Specific Conductance	umhos/cm							310	350	520	470
Sulfate	mg/L	12	9.1	10	11	9.6	9.7	9.8	8.0	8.6	9.0
Sulfide	mg/L										
Temperature	C°		22	22	23	25	22	22	23	22	22
Total Dissolved Solids (TDS)	mg/L	350	326	344	350	330	320	320	320	320	350
Total Organic Carbon (TOC)	mg/L									18	
Total Organic Halides (TOX)	mg/L									0.02	
Turbidity	NTU							0	0	0	2
METALS											
Aluminum	mg/L										
Antimony	mg/L									0.0001	
Arsenic	mg/L									0.0016	
Barium	mg/L									0.110	
Beryllium	mg/L									0.0004	
Boron	mg/L									0.0092	
Cadmium	mg/L									0.0001	
Calcium	mg/L	67	72	71	61	65	65	59	66	60	61
Chromium-Hexavalent	mg/L										
Chromium-Total	mg/L									0.024	
Cobalt	mg/L									0.00037	
Copper	mg/L									0.0002	
Iron	mg/L									0.010	
Lead	mg/L									0.001	
Magnesium	mg/L	12	13	15	11	12	12	11	11	11	11
Manganese	mg/L									0.0029	
Mercury	mg/L									0.0004	
Molybdenum	mg/L										
Nickel	mg/L									0.0095	
Phosphorous	mg/L									0.06	
Potassium	mg/L									1	
Selenium	mg/L									0.0026	
Silver	mg/L									0.0001	
Sodium	mg/L	22	25	22	27	28	29	25	28	27	27
Thallium	mg/L									0.00006	
Tin	mg/L									0.0008	
Vanadium	mg/L									0.014	
Zinc	mg/L									0.002	
VOLATILE ORGANIC COMPOUNDS											
1,1-Dichloroethane	ug/L	3.8	11.8	11	10	14	10	9.0	13	12	13
1,1-Dichloroethene	ug/L	0.17	0.17	0.17	0.19	0.19	0.19	0.17	0.22	0.34	0.39
Acetone	ug/L	NA	NA	NA	3.9	3.9	3.9	8.6	7.9	4.2	4.2
Benzene	ug/L	0.05	0.16	0.16	0.15	0.15	0.15	0.24	0.16	0.18	0.18
Bromomethane	ug/L	0.10	0.10	0.10	0.47	0.47	0.47	0.44	0.24	0.56	0.56
Chloroethane	ug/L	0.12	0.12	0.12	0.48	0.48	0.48	0.25	0.26	0.21	0.21
Chloroform	ug/L	0.17	0.28	0.17	0.2	0.39	0.47	0.30	0.28	0.32	0.41
Chloromethane	ug/L	0.23	0.23	0.23	0.48	0.48	0.48	0.45	0.45	0.30	0.30
cis-1,2-Dichloroethene	ug/L	0.12	0.29	0.12	0.4	0.8	0.23	0.46	0.46	0.33	0.21
Dichlorodifluoromethane	ug/L	4.8	12.2	0.22	3.9	11	5.8	6.2	9.3	6.0	7.9
Methylene Chloride	ug/L	0.21	0.21	0.21	0.27	0.27	0.27	0.42	0.24	0.27	0.27
Tetrachloroethene	ug/L	5.2	9.6	36	5.9	9.8	10	9.3	12	11	11
Toluene	ug/L	0.12	0.12	0.12	0.14	0.14	0.14	0.24	0.14	0.22	0.22
Trichloroethene	ug/L	1.7	2.8	6.4	2.9	4.3	3.0	2.8	3.2	2.8	2.5
Trichlorofluoromethane	ug/L	0.25	0.27	1.1	0.43	0.43	0.43	0.34	0.99	0.39	0.39
Vinyl Chloride	ug/L	0.24	0.24	0.24	0.38	0.38	0.38	0.40	0.15	0.25	0.25
Xylenes (total)	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEMI-VOLATILE ORGANIC COMPOUNDS											
bis(2-Ethylhexyl) Phthalate	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	2.5	NA
di-n-Butylphthalate	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	1.2	NA
Phenol	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	2.0	NA
HERBICIDES, PESTICIDES & PCBs (ug/L): ND											

TABLE 9-2 (CONT'D)
MILLIKEN SANITARY LANDFILL
HISTORICAL SUMMARY - MONITORING WELL M-1

ANALYTE	UNITS	Apr 2001	Jul 2001	Oct 2001	Jan 2002	Apr 2002	Jul 2002	Oct 2002	Jan 2003	Apr 2003	Jul 2003
GENERAL CHEMISTRY											
Alkalinity	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anions	meq/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bicarbonate	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cations	meq/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand (COD)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	mg/L	19	18	22	NA	NA	NA	NA	NA	NA	NA
Cyanide	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Oxygen (DO)	mg/L	3.1	3.8	4.2	NA	NA	NA	NA	NA	NA	NA
Fluoride	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydroxide	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate (as N)	mg/L	7.5	7.8	8.2	NA	NA	NA	NA	NA	NA	NA
Ortho Phosphate Phosphorus	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH	units	6.8	7.4	7.4	NA	NA	NA	NA	NA	NA	NA
Specific Conductance	umhos/cm	470	410	470	NA	NA	NA	NA	NA	NA	NA
Sulfate	mg/L	11	9.1	7.9	NA	NA	NA	NA	NA	NA	NA
Sulfide	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Temperature	C°	21	24	22	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids (TDS)	mg/L	320	320	350	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (TOC)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Halides (TOX)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Turbidity	NTU	3	0	0	NA	NA	NA	NA	NA	NA	NA
METALS											
Aluminum	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	61	61	60	NA	NA	NA	NA	NA	NA	NA
Chromium-Hexavalent	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium-Total	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	11	11	10	NA	NA	NA	NA	NA	NA	NA
Manganese	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorous	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	29	27	29	NA	NA	NA	NA	NA	NA	NA
Thallium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tin	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOLATILE ORGANIC COMPOUNDS											
1,1-Dichloroethane	ug/L	13	11	11	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene	ug/L	0.34	0.34	0.34	NA	NA	NA	NA	NA	NA	NA
Acetone	ug/L	6.6	4.2	4.2	NA	NA	NA	NA	NA	NA	NA
Benzene	ug/L	0.18	0.18	0.18	NA	NA	NA	NA	NA	NA	NA
Bromomethane	ug/L	0.56	0.36	0.36	NA	NA	NA	NA	NA	NA	NA
Chloroethane	ug/L	0.21	0.21	0.21	NA	NA	NA	NA	NA	NA	NA
Chloroform	ug/L	0.29	0.28	0.28	NA	NA	NA	NA	NA	NA	NA
Chloromethane	ug/L	0.30	0.30	0.30	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	ug/L	0.34	0.18	0.18	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/L	8.1	7.8	7.2	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	ug/L	0.27	0.27	0.27	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	ug/L	12	10	6.4	NA	NA	NA	NA	NA	NA	NA
Toluene	ug/L	0.22	0.22	0.22	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	ug/L	2.9	2.5	2.7	NA	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	ug/L	0.38	0.25	0.32	NA	NA	NA	NA	NA	NA	NA
Vinyl Chloride	ug/L	0.25	0.25	0.6	NA	NA	NA	NA	NA	NA	NA
Xylenes (total)	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEMI-VOLATILE ORGANIC COMPOUNDS											
bis(2-Ethylhexyl) Phthalate	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
di-n-Butylphthalate	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HERBICIDES, PESTICIDES & PCBs (ug/L): ND											

TABLE 9-2 (CONT'D)
MILLIKEN SANITARY LANDFILL
HISTORICAL SUMMARY - MONITORING WELL M-1

ANALYTE	UNITS	Oct	Jan	Apr	Jul	Oct	Jan	MED.	AVG.	STD. DEV.	MIN.	MAX.
		2003	2004	2004	2004	2004	2005					
GENERAL CHEMISTRY												
Alkalinity	mg/L	NA	NA	NA	NA	NA	NA	195	196	10	174	234
Anions	meq/L	NA	NA	NA	NA	NA	NA	5.20	5.11	0.36	4.4	5.7
Bicarbonate	mg/L	NA	NA	NA	NA	NA	NA	235	229	18	191	245
Carbonate	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Cations	meq/L	NA	NA	NA	NA	NA	NA	5.56	5.66	0.59	4.95	7.35
Chemical Oxygen Demand (COD)	mg/L	NA	NA	NA	NA	NA	NA	12	14.3	8.3	5	30
Chloride	mg/L	NA	NA	NA	NA	NA	NA	24.5	25.9	11.7	18	102
Cyanide	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Dissolved Oxygen (DO)	mg/L	NA	NA	NA	NA	NA	NA	4.8	4.6	0.8	3.1	5.7
Fluoride	mg/L	NA	NA	NA	NA	NA	NA	0.2	0.21	0.08	0.1	0.4
Hardness	mg/L	NA	NA	NA	NA	NA	NA	208	214	26	164	320
Hydroxide	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Nitrate (as N)	mg/L	NA	NA	NA	NA	NA	NA	6.55	6.42	1.59	2.48	9.03
Ortho Phosphate Phosphorus	mg/L	NA	NA	NA	NA	NA	NA	0.08	0.38	0.47	0.02	1.17
pH	units	NA	NA	NA	NA	NA	NA	7.52	7.53	0.29	6.8	8.0
Specific Conductance	µmhos/cm	NA	NA	NA	NA	NA	NA	519	513	76	310	745
Sulfate	mg/L	NA	NA	NA	NA	NA	NA	10.6	10.7	3.5	4	26
Sulfide	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Temperature	C°	NA	NA	NA	NA	NA	NA	22	20.7	2.9	14.6	25
Total Dissolved Solids (TDS)	mg/L	NA	NA	NA	NA	NA	NA	324	329	25	273	420
Total Organic Carbon (TOC)	mg/L	NA	NA	NA	NA	NA	NA	3.0	4.08	4.2	0.8	18
Total Organic Halides (TOX)	mg/L	NA	NA	NA	NA	NA	NA	0.022	0.026	0.016	0.01	0.085
Turbidity	NTU	NA	NA	NA	NA	NA	NA	0	1	1	0	3
METALS												
Aluminum	mg/L	NA	NA	NA	NA	NA	NA	0.082	8.408	18.33	0.021	41.2
Antimony	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Arsenic	mg/L	NA	NA	NA	NA	NA	NA	0.0037	0.0098	0.0143	0.0006	0.031
Barium	mg/L	NA	NA	NA	NA	NA	NA	0.135	0.363	0.387	0.08	0.906
Beryllium	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Boron	mg/L	NA	NA	NA	NA	NA	NA	0.20	0.163	0.109	0.0092	0.29
Cadmium	mg/L	NA	NA	NA	NA	NA	NA	0.00065	0.0007	0.0004	0.0003	0.0011
Calcium	mg/L	NA	NA	NA	NA	NA	NA	65.6	69.5	20	55	197
Chromium-Hexavalent	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Chromium-Total	mg/L	NA	NA	NA	NA	NA	NA	0.026	0.225	0.593	0.02	1.91
Cobalt	mg/L	NA	NA	NA	NA	NA	NA	0.0033	0.0067	0.0106	0.00037	0.028
Copper	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Iron	mg/L	NA	NA	NA	NA	NA	NA	0.16	3.479	11.69	0.01	44
Lead	mg/L	NA	NA	NA	NA	NA	NA	0.011	0.026	0.037	0.0014	0.08
Magnesium	mg/L	NA	NA	NA	NA	NA	NA	12	12.1	1.55	9.9	18.1
Manganese	mg/L	NA	NA	NA	NA	NA	NA	0.04	0.09	0.134	0.0021	0.542
Mercury	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Molybdenum	mg/L	NA	NA	NA	NA	NA	NA	0.007	0.0081	0.0049	0.0034	0.016
Nickel	mg/L	NA	NA	NA	NA	NA	NA	0.0305	0.0853	0.1358	0.0095	0.488
Phosphorous	mg/L	NA	NA	NA	NA	NA	NA	0.12	0.222	0.300	0.06	1
Potassium	mg/L	NA	NA	NA	NA	NA	NA	1.76	2.10	1.43	1	8.01
Selenium	mg/L	NA	NA	NA	NA	NA	NA	0.0014	0.0016	0.0010	0.0007	0.0026
Silver	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Sodium	mg/L	NA	NA	NA	NA	NA	NA	28.1	28.9	7.3	21	76
Thallium	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Tin	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Vanadium	mg/L	NA	NA	NA	NA	NA	NA	0.033	0.046	0.033	0.014	0.09
Zinc	mg/L	NA	NA	NA	NA	NA	NA	0.041	0.099	0.150	0.01	0.653
VOLATILE ORGANIC COMPOUNDS												
1,1-Dichloroethane	µg/L	NA	NA	NA	NA	NA	NA	7.9	8.0	4.1	2.0	22.4
1,1-Dichloroethene	µg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Acetone	µg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Benzene	µg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Bromomethane	µg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Chloroethane	µg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Chloroform	µg/L	NA	NA	NA	NA	NA	NA	0.29	0.30	0.08	0.19	0.41
Chloromethane	µg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
cis-1,2-Dichloroethene	µg/L	NA	NA	NA	NA	NA	NA	0.29	0.32	0.20	0.13	0.8
Dichlorodifluoromethane	µg/L	NA	NA	NA	NA	NA	NA	5.8	6.4	3.8	0.7	23
Methylene Chloride	µg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Tetrachloroethene	µg/L	NA	NA	NA	NA	NA	NA	7.3	8.3	4.9	1.9	36
Toluene	µg/L	NA	NA	NA	NA	NA	NA	0.55	0.97	1.26	0.29	4.07
Trichloroethene	µg/L	NA	NA	NA	NA	NA	NA	2.4	2.5	1.1	1.2	6.4
Trichlorofluoromethane	µg/L	NA	NA	NA	NA	NA	NA	0.39	1.8	3.3	0.27	10
Vinyl Chloride	µg/L	NA	NA	NA	NA	NA	NA	0.7	0.8	0.5	0.36	1.6
Xylenes (total)	µg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
SEMI-VOLATILE ORGANIC COMPOUNDS												
bis(2-Ethylhexyl) Phthalate	µg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
di-n-Butylphthalate	µg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Phenol	µg/L	NA	NA	NA	NA	NA	NA	4	7	7	2.0	15
HERBICIDES, PESTICIDES & PCBs (µg/L): ND												

TABLE 9-8
MILLIKEN SANITARY LANDFILL
HISTORICAL SUMMARY - MONITORING WELL M-4

ANALYTE	UNITS	Dec 1987	Jun 1988	Oct 1988	Jan 1989	Mar 1989	Apr 1989	Mar 1990	Aug 1990	Oct 1990	Dec 1990
GENERAL CHEMISTRY											
Alkalinity	mg/L	NA	NA	205	205	NA	210	190	190	190	200
Anions	meq/L	NA	NA	5.63	5.55	NA	5.71	NA	NA	NA	NA
Bicarbonate	mg/L	NA	NA	250	250	NA	256	232	232	232	244
Carbonate	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cations	meq/L	NA	NA	5.57	5.74	NA	5.86	NA	NA	NA	NA
Chemical Oxygen Demand (COD)	mg/L	NA	15	NA	NA	NA	NA	11	31	5	NA
Chloride	mg/L	NA	9	11	9	NA	29	31	28	30	31
Cyanide	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Oxygen (DO)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoride	mg/L	NA	NA	NA	NA	NA	NA	0.1	0.2	NA	0.1
Hardness	mg/L	NA	212	209	222	NA	221	380	280	240	214
Hydroxide	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate (as N)	mg/L	NA	6.77	6.77	6.76	NA	7.22	4.4	7.5	7.3	7.7
Ortho Phosphate Phosphorus	mg/L	NA	0.65	NA	NA	NA	0.23	NA	0.54	NA	0.07
pH	units	NA	7.6	7.9	7.8	NA	7.7	7.67	7.48	7.6	8.1
Specific Conductance	µmhos/cm	NA	540	510	515	NA	540	668	658	530	550
Sulfate	mg/L	NA	9	11	9	NA	8	9	8.6	9	8
Sulfide	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Temperature	C°	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids (TDS)	mg/L	NA	320	305	365	NA	320	300	360	350	285
Total Organic Carbon (TOC)	mg/L	NA	NA	NA	NA	NA	NA	NA	3	4.9	NA
Total Organic Halides (TOX)	mg/L	NA	NA	0.01	0.017	NA	0.02	0.05	0.05	0.05	0.02
Turbidity	NTU	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS											
Aluminum	mg/L	NA	100	NA	NA	NA	NA	NA	0.2	NA	NA
Antimony	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	mg/L	NA	0.01	0.01	0.01	NA	0.01	NA	0.01	NA	NA
Barium	mg/L	NA	0.40	0.40	0.40	NA	0.40	0.40	0.40	0.40	0.40
Beryllium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	mg/L	NA	0.1	NA	NA	NA	0.2	0.2	0.2	0.2	0.2
Cadmium	mg/L	NA	0.01	0.001	0.001	NA	0.001	NA	0.001	0.001	0.001
Calcium	mg/L	NA	58	60	67	NA	65	66	58	68	71
Chromium-Hexavalent	mg/L	NA	NA	NA	NA	NA	NA	0.02	NA	NA	NA
Chromium-Total	mg/L	NA	0.02	0.01	0.01	NA	0.01	0.03	0.03	0.03	0.03
Cobalt	mg/L	NA	NA	NA	NA	NA	NA	0.05	0.05	0.05	0.05
Copper	mg/L	NA	0.01	0.01	0.01	NA	0.01	0.03	0.03	0.03	0.03
Iron	mg/L	NA	0.05	0.01	0.03	NA	0.09	0.1	0.1	0.1	0.1
Lead	mg/L	NA	0.04	0.01	0.005	NA	0.005	0.003	0.003	0.003	0.003
Magnesium	mg/L	NA	16	14	13	NA	14	13	15	14	14
Manganese	mg/L	NA	0.03	0.01	0.01	NA	0.01	0.02	0.02	0.02	0.02
Mercury	mg/L	NA	0.001	0.001	0.001	NA	0.001	0.001	0.001	0.001	0.001
Molybdenum	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	mg/L	NA	0.02	0.01	0.01	NA	0.01	0.02	0.02	0.02	0.02
Phosphorous	mg/L	NA	0.65	NA	NA	NA	NA	0.65	0.65	0.65	0.65
Potassium	mg/L	NA	2	2	2	NA	2	2	2	2	2
Selenium	mg/L	NA	0.005	0.005	0.005	NA	0.005	0.005	0.005	0.005	0.005
Silver	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NA	34	31	29	NA	32	30	39	30	31
Thallium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tin	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	mg/L	NA	0.1	0.1	0.1	NA	0.1	0.1	0.1	0.1	0.1
Zinc	mg/L	NA	0.03	0.01	0.01	NA	0.01	0.02	0.02	0.02	0.02
VOLATILE ORGANIC COMPOUNDS											
1,1,1-Trichloroethane	µg/L	NA	1.5	0.5	0.5	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	µg/L	NA	0.5	0.5	0.5	NA	0.5	0.5	0.5	0.5	0.5
Acetone	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon Disulfide	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	µg/L	NA	0.5	0.5	0.5	NA	0.5	0.5	0.5	0.5	0.5
o-Xylene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p+m-Xylenes	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	µg/L	NA	NR	NR	NR	NA	NR	NR	NR	NR	NR
Toluene	µg/L	NA	NR	NR	NR	NA	NR	NR	NR	NR	NR
Trichlorofluoromethane	µg/L	NA	0.5	0.5	0.5	NA	2.1	0.5	0.5	0.5	0.5
Vinyl Chloride	µg/L	NA	0.5	0.5	1.0	NA	1.2	0.5	0.5	0.5	0.5
SEMI-VOLATILE ORGANIC COMPOUNDS											
bis(2-Ethylhexyl) Phthalate	µg/L	NA	NR	NR	NR	NA	NR	NR	NR	NR	NR
di-n-Butylphthalate	µg/L	NA	NR	NR	NR	NA	NR	NR	NR	NR	NR
Dimethylphthalate	µg/L	NA	NR	NR	NR	NA	NR	NR	NR	NR	NR
Phenol	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HERBICIDES, PESTICIDES & PCBs (µg/L): ND											

TABLE 9-8 (CONT'D)
MILLIKEN SANITARY LANDFILL
HISTORICAL SUMMARY - MONITORING WELL M-4

ANALYTE	UNITS	Feb	May	Aug	Nov	Jul	Aug	Nov	Feb	May	Aug
		1991	1991	1991	1991	1992	1992	1992	1993	1993	1993
GENERAL CHEMISTRY											
Alkalinity	mg/L	193	200	188	203	181	180	136	200	195	195
Anions	meq/L	NA	NA	NA	NA	5.1	5.04	4.2	5.58	5.45	5.5
Bicarbonate	mg/L	235	244	229	247	221	220	166	244	238	238
Carbonate	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cations	meq/L	NA	NA	NA	NA	6.2	4.66	5.79	5.73	5.74	5.89
Chemical Oxygen Demand (COD)	mg/L	10	15	5	20	NA	NA	13	8	9	NA
Chloride	mg/L	29	32	29	31	28	29	33	36	26	36
Cyanide	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Oxygen (DO)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoride	mg/L	0.3	0.2	0.2	0.2	NA	0.2	0.2	NA	NA	NA
Hardness	mg/L	220	303	220	235	212	231	215	217	216	219
Hydroxide	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate (as N)	mg/L	8.4	7.99	4.7	8.6	7.96	7.36	5.39	NA	8.46	8.51
Ortho Phosphate Phosphorus	mg/L	0.05	0.07	0.04	0.29	0.54	0.04	NA	0.36	0.65	1.8
pH	units	7.7	7.56	9.21	8.3	NA	NA	7.73	7.41	7.56	7.65
Specific Conductance	umhos/cm	503	585	598	669	NA	NA	518	539	537	546
Sulfate	mg/L	7	9	10	11	11	5	8	NA	11.1	10
Sulfide	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Temperature	C°	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids (TDS)	mg/L	315	295	300	340	304	310	302	314	324	328
Total Organic Carbon (TOC)	mg/L	2.8	1.4	NA	1.8	4.4	1.6	7.1	4.9	1.4	2.1
Total Organic Halides (TOX)	mg/L	0.01	0.01	0.01	0.01	0.014	0.008	0.006	0.008	0.008	0.008
Turbidity	NTU	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS											
Aluminum	mg/L	NA	0.2	NA	NA	30*	NA	0.09	NA	0.28	NA
Antimony	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	mg/L	NA	0.01	NA	NA	0.004*	NA	0.0007	NA	0.002	NA
Barium	mg/L	NA	0.2	NA	NA	0.09	NA	0.09	NA	0.1	NA
Beryllium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	mg/L	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.03	0.1
Cadmium	mg/L	NA	0.004	NA	NA	0.006*	NA	0.002	NA	0.003	NA
Calcium	mg/L	66	69	67	66	54	49.5	68.2	64.6	64.1	65
Chromium-Hexavalent	mg/L	NA	0.01	NA	NA	0.1*	NA	0.01	NA	0.091	NA
Chromium-Total	mg/L	NA	0.01	NA	NA	0.1*	NA	0.01	NA	0.02	NA
Cobalt	mg/L	NA	0.05	NA	NA	0.046*	NA	0.02	NA	0.01	NA
Copper	mg/L	NA	0.03	NA	NA	0.036*	NA	0.004	NA	0.01	NA
Iron	mg/L	0.1	0.1	0.1	0.1	41*	0.22	0.01	0.06	0.01	0.01
Lead	mg/L	NA	0.2	NA	NA	0.085*	NA	0.03	NA	0.002	NA
Magnesium	mg/L	15	14	14	13	27*	10.4	12.5	13.6	13.6	13.7
Manganese	mg/L	0.02	0.02	0.02	0.02	0.14*	0.05	0.007	0.01	0.01	0.01
Mercury	mg/L	NA	0.002	NA	NA	0.028*	NA	0.0004	NA	0.0005	NA
Molybdenum	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	mg/L	NA	0.04	NA	NA	0.07*	NA	0.02	NA	0.01	NA
Phosphorous	mg/L	0.06	0.06	0.06	0.06	0.6*	0.04	0.01	0.01	0.01	0.01
Potassium	mg/L	5	5	5	5	2.2*	1.82	1.78	1.7	1.7	1.8
Selenium	mg/L	NA	0.005	NA	NA	0.0007	NA	0.002	NA	0.02	NA
Silver	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	35	30	30	31	29	29.5	30.0	31	31.8	33.7
Thallium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tin	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	mg/L	NA	0.05	NA	NA	NA	NA	NA	NA	0.01	NA
Zinc	mg/L	0.09	0.02	0.02	0.02	0.17*	0.05	0.01	0.05	0.05	0.05
VOLATILE ORGANIC COMPOUNDS											
1,1,1-Trichloroethane	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	0.5	0.5
1,1-Dichloroethane	ug/L	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Acetone	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon Disulfide	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	ug/L	0.5	0.5	0.5	0.5	0.5	6.6**	1.4	NA	NA	NA
o-Xylene	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p+m-Xylenes	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	ug/L	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Toluene	ug/L	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Trichlorofluoromethane	ug/L	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Vinyl Chloride	ug/L	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
SEMI-VOLATILE ORGANIC COMPOUNDS											
bis(2-Ethylhexyl) Phthalate	ug/L	NR	NR	NR	NR	7**	NA	NA	NA	10	NA
di-n-Butylphthalate	ug/L	NR	NR	NR	NR	161**	NA	NA	NA	10	NA
Dimethylphthalate	ug/L	NR	NR	NR	NR	NA	NA	NA	NA	10	NA
Phenol	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HERBICIDES, PESTICIDES & PCBs (ug/L): ND											

TABLE 9-8 (CONT'D)
MILLIKEN SANITARY LANDFILL
HISTORICAL SUMMARY - MONITORING WELL M-4

ANALYTE	UNITS	Nov 1993	Mar 1994	Jun 1994	Sep 1994	Dec 1994	Feb 1995	May 1995	Jul 1995	Oct 1995	Jan 1996
GENERAL CHEMISTRY											
Alkalinity	mg/L	183	185	186	190	193	188.8	189	189		
Anions	meq/L	5.36	5	5.06	5.42	5.04	4.96	4.75	4.80		
Bicarbonate	mg/L	224	185	186	232	193	188.8	189	189		
Carbonate	mg/L										
Cations	meq/L	5.50	5.44	5.03	6.39	8.22	7.12	5.36	6.23		
Chemical Oxygen Demand (COD)	mg/L			9.4							
Chloride	mg/L	37	34	38	33	30.5	33	31.0	31.0	37.0	34
Cyanide	mg/L										
Dissolved Oxygen (DO)	mg/L										
Fluoride	mg/L	0.20		0.358	0.3	0.165	0.152	0.111	0.150		
Hardness	mg/L	208	222	202	219	216	237	252	252	230	212
Hydroxide	mg/L										
Nitrate (as N)	mg/L	7.15	7.68	9.29	6.21	2.71	9.46	7.57	8.33	6.90	7.7
Ortho Phosphate Phosphorus	mg/L	0.07				0.06	0.06	0.06	0.06		
pH	units	7.49	7.68	7.63		7.69	7.51	7.50	7.49	7.55	7.81
Specific Conductance	umhos/cm	534	557	541		534	555	546	544	554	551
Sulfate	mg/L	7.00	22	13.5	12	7.0	12.3	11.1	10.7	10.7	9
Sulfide	mg/L										
Temperature	C°		20.6	23.8		20	20	16	23	19	
Total Dissolved Solids (TDS)	mg/L	308	410	360	326	332	354	350	350	336	344
Total Organic Carbon (TOC)	mg/L	1.0		2.47	0.95						
Total Organic Halides (TOX)	mg/L	0.011	0.003	0.004	0.005	0.005	0.003	0.003	0.003		
Turbidity	NTU										
METALS											
Aluminum	mg/L			0.423		0.049	0.144	0.034	0.050		
Antimony	mg/L			0.009		0.005	0.005	0.005	0.005		
Arsenic	mg/L			0.03		0.002	0.002	0.002	0.002		
Barium	mg/L			0.308							
Beryllium	mg/L			0.002		0.0005	0.0005	0.0005	0.0005		
Boron	mg/L	0.1	0.28	0.24	0.04	0.02		0.300	0.075		
Cadmium	mg/L			0.003		0.0006	0.0006	0.0006	0.0006		
Calcium	mg/L	64	63.1	56.4	71	104	74.7	80.6	78.5	63.8	65
Chromium-Hexavalent	mg/L			0.02		0.01	0.01	0.01	0.01		
Chromium-Total	mg/L			0.196		0.021	0.013	0.0004	0.016		
Cobalt	mg/L			0.002		0.001	0.00028	0.0002	0.0004		
Copper	mg/L			0.002		0.03	0.03	0.03	0.03		
Iron	mg/L	0.09	0.026	0.28	0.11	0.07	0.07	0.100	0.02	0.216	0.03
Lead	mg/L			0.01		0.001	0.001	0.001	0.001		
Magnesium	mg/L	12.6	12.3	11.9	14	20.5	13.6	15.3	13.1	13.6	13
Manganese	mg/L	0.007	0.004	0.004	0.001	0.05	0.050	0.05	0.05	0.05	0.008
Mercury	mg/L			0.0002		0.0002	0.0002	0.0002	0.0002		
Molybdenum	mg/L			0.01		0.0063	0.0044	0.008	0.0044		
Nickel	mg/L			0.004		0.021	0.026	0.050	0.120		
Phosphorous	mg/L	0.07	0.11	0.03	0.31	0.18			0.11		
Potassium	mg/L	1.72	1.71	1.94	1.5	1.48	2.07	1.73	0.72	1.49	1.5
Selenium	mg/L			0.01		0.004	0.004	0.004	0.004		
Silver	mg/L			0.009		0.003	0.003	0.003	0.003		
Sodium	mg/L	28	28.4	27.7	38	29.4	29.0	27.8	23.9	30	
Thallium	mg/L			0.02		0.001	0.001	0.001	0.001		
Tin	mg/L			0.02		0.001	0.001	0.001	0.001		
Vanadium	mg/L			0.002		0.034	0.015	0.090	0.017		
Zinc	mg/L	0.003	0.028	0.023	0.005	0.001	0.000	0.001	0.230	0.011	0.005
VOLATILE ORGANIC COMPOUNDS											
1,1,1-Trichloroethane	ug/L	0.54	0.02	0.02	0.2	0.20	0.20	0.20	0.20	0.20	0.20
1,1-Dichloroethane	ug/L	0.5	0.03	0.03	0.35	0.19	0.19	0.19	0.19	0.19	0.3
Acetone	ug/L										
Bromodichloromethane	ug/L										
Carbon Disulfide	ug/L										
Chloroform	ug/L										
Dibromochloromethane	ug/L										
Dichlorodifluoromethane	ug/L	0.5	0.08	0.08	0.35	0.29	0.29	0.29	0.29	0.29	0.35
o-Xylene	ug/L										
p+m-Xylenes	ug/L										
Styrene	ug/L										
Tetrachloroethene	ug/L										
Toluene	ug/L			1.3	0.23	0.6	0.23	0.16	0.16	0.16	0.23
Trichlorofluoromethane	ug/L	0.5	0.05	0.05	0.35	0.23	0.23	0.23	0.23	0.23	0.3
Vinyl Chloride	ug/L	0.5	0.2	0.2	0.35	0.38	0.38	0.38	0.38	0.38	0.2
SEMI-VOLATILE ORGANIC COMPOUNDS											
bis(2-Ethylhexyl) Phthalate	ug/L			3.0		1.2	1.2	1.2	1.2		
di-n-Butylphthalate	ug/L			2.5		0.8	0.8	1.6	0.8		
Dimethylphthalate	ug/L			2.5		0.8	0.8	0.8	0.8		
Phenol	ug/L					0.8	0.8	0.8	0.8		
HERBICIDES, PESTICIDES & PCBs (ug/L): ND											

TABLE 9-8 (CONT'D)
MILLIKEN SANITARY LANDFILL
HISTORICAL SUMMARY - MONITORING WELL M-4

ANALYTE	UNITS	Apr 1996	Jul 1996	Jul-96 Retest	Oct 1996	Jan 1997	Apr 1997	Aug 1997	Oct 1997	Jan 1998	Apr 1998
GENERAL CHEMISTRY											
Alkalinity	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anions	meq/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bicarbonate	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cations	meq/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand (COD)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	mg/L	32	40.0	NA	32.5	30	28.0	50	37.5	40	39
Cyanide	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Oxygen (DO)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoride	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness	mg/L	215	220	NA	271	220	211	NA	NA	NA	NA
Hydroxide	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate (as N)	mg/L	7.9	6.85	NA	8.37	8.50	3.13	10.6	4.43	5.58	11
Ortho Phosphate Phosphorus	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH	units	7.70	7.15	NA	7.20	7.44	7.02	7.74	7.53	7.53	7.4
Specific Conductance	umhos/cm	558	534	NA	557	512	550	588	NA	NA	NA
Sulfate	mg/L	9	7.90	NA	11.8	8.86	7.81	7.7	8.44	6.8	13
Sulfide	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Temperature	C°	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids (TDS)	mg/L	318	352	NA	320	326	352	362	356	382	416
Total Organic Carbon (TOC)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Halides (TOX)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Turbidity	NTU	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS											
Aluminum	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	70.0	70.5	NA	59.4	65.5	56	75	90	56	94
Chromium-Hexavalent	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium-Total	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	0.008	0.189	NA	0.01	0.04	0.06	NA	NA	NA	NA
Lead	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	13.0	13.4	NA	12.1	12.3	12	17	20	58	19
Manganese	mg/L	0.0012	0.0022	NA	0.002	0.03	0.02	NA	NA	NA	NA
Mercury	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorous	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	1.6	1.75	NA	1.47	1.31	1.2	NA	NA	NA	NA
Selenium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	29.0	29.0	NA	28.8	14.1	26	33	33	29	38
Thallium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tin	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	mg/L	0.008	0.024	NA	0.019	0.02670	0.034	NA	NA	NA	NA
VOLATILE ORGANIC COMPOUNDS											
1,1,1-Trichloroethane	ug/L	0.6	0.22	0.27	0.27	0.27	0.22	0.27	0.27	0.27	0.45
1,1-Dichloroethane	ug/L	0.3	0.18	0.18	0.18	0.18	0.13	0.10	0.30	0.30	0.30
Acetone	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	ug/L	2	0.20	0.20	0.20	0.20	0.20	0.21	0.21	0.21	0.21
Carbon Disulfide	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	ug/L	3	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Dibromochloromethane	ug/L	0.04	0.2	0.2	0.2	0.2	0.2	NA	NA	NA	NA
Dichlorodifluoromethane	ug/L	0.3	0.29	0.29	0.29	0.29	0.29	0.34	0.22	0.23	2.9
o-Xylene	ug/L	NA	0.50	0.50	0.6	0.50	0.50	0.30	0.10	0.10	0.10
p,m-Xylenes	ug/L	NA	0.96	0.96	0.92	0.76	0.76	0.28	0.28	0.28	0.28
Styrene	ug/L	NA	0.2	0.2	0.2	0.2	0.2	0.29	0.29	0.29	0.29
Tetrachloroethene	ug/L	0.3	0.17	0.17	0.17	0.17	0.17	0.32	0.32	0.32	0.7
Toluene	ug/L	0.7	0.27	0.27	1.5	0.27	0.27	0.12	0.12	0.12	0.12
Trichlorofluoromethane	ug/L	0.2	0.30	0.30	0.33	0.30	0.30	0.25	0.25	0.25	1.3
Vinyl Chloride	ug/L	0.2	0.35	0.35	0.35	0.35	0.35	0.24	0.24	0.24	0.24
SEMI-VOLATILE ORGANIC COMPOUNDS											
bis(2-Ethylhexyl) Phthalate	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
di-n-Butylphthalate	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethylphthalate	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HERBICIDES, PESTICIDES & PCBs (ug/L): ND											

TABLE 9-8 (CONT'D)
MILLIKEN SANITARY LANDFILL
HISTORICAL SUMMARY - MONITORING WELL M-4

ANALYTE	UNITS	Jul 1998	Oct 1998	Jan 1999	Apr 1999	Jul 1999	Oct 1999	Jan 2000	Apr 2000	Jul 2000	Oct 2000
GENERAL CHEMISTRY											
Alkalinity	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	270
Anions	meq/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.61
Bicarbonate	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	330
Carbonate	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.53
Cations	meq/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	18
Chemical Oxygen Demand (COD)	mg/L	34	25	27	24	24	25	20	23	19	18
Chloride	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.5
Cyanide	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.2
Dissolved Oxygen (DO)	mg/L	NA	NA	6.4	7.5	7.4	6.8	7.6	6.5	6.5	0.2
Fluoride	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	250
Hardness	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.7
Hydroxide	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.7
Nitrate (as N)	mg/L	6.7	6.8	9.0	7.4	8.9	9.3	7.8	7.0	5.1	5.3
Ortho Phosphate Phosphorus	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.08
pH	units	7.4	7.3	7.49	7.2	7.8	7.8	7.7	7.6	7.4	6.7
Specific Conductance	umhos/cm	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.7
Sulfate	mg/L	20	24	14	17	18	18	20	16	17	19
Sulfide	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	19
Temperature	C°	NA	NA	18	23	25	24	22	21	21	20
Total Dissolved Solids (TDS)	mg/L	494	442	434	380	410	360	350	370	400	410
Total Organic Carbon (TOC)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.9
Total Organic Halides (TOX)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.008
Turbidity	NTU	NA	NA	NA	NA	NA	NA	NA	NA	NA	0
METALS											
Aluminum	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0
Antimony	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.001
Arsenic	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.002
Barium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.150
Beryllium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0004
Boron	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.005
Cadmium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0001
Calcium	mg/L	143	98	95	82	70	72	80	65	84	73
Chromium-Hexavalent	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.026
Chromium-Total	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0021
Cobalt	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.00044
Copper	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.032
Iron	mg/L	25	23	22	20	16	15	17	14	18	17
Lead	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0061
Magnesium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.004
Manganese	mg/L	25	23	22	20	16	15	17	14	18	17
Mercury	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0001
Molybdenum	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.012
Nickel	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.08
Phosphorous	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	1
Potassium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0026
Selenium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0001
Silver	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0003
Sodium	mg/L	29	31	34	28	33	33	38	30	35	33
Thallium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0003
Tin	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0008
Vanadium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.013
Zinc	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0028
VOLATILE ORGANIC COMPOUNDS											
1,1,1-Trichloroethane	µg/L	0.14	0.29	0.56	0.27	0.24	0.24	0.24	0.32	0.16	0.33
1,1-Dichloroethane	µg/L	0.30	0.40	0.30	0.30	0.31	0.31	0.31	0.39	0.28	0.35
Acetone	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	µg/L	0.22	0.21	0.21	0.21	0.17	0.17	0.17	0.17	0.17	0.17
Carbon Disulfide	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform	µg/L	0.75	0.75	0.75	0.42	0.42	0.42	1.0	0.42	0.30	0.26
Dibromochloromethane	µg/L	NA	NA	0.18	0.18	0.20	0.20	0.20	0.20	0.19	0.28
Dichlorodifluoromethane	µg/L	11	5.6	3.4	2.2	1.3	3.6	2.4	1.4	4.1	2.4
o-Xylene	µg/L	0.10	0.10	0.10	0.10	0.22	0.22	0.22	0.24	0.14	0.13
p+m-Xylenes	µg/L	0.28	0.28	0.28	0.28	0.50	0.50	0.50	0.50	0.38	0.33
Styrene	µg/L	0.29	0.29	0.29	0.29	0.10	0.10	0.10	0.10	0.17	0.19
Tetrachloroethene	µg/L	0.8	0.34	0.6	0.35	0.34	0.34	0.34	0.34	0.14	0.19
Toluene	µg/L	0.12	0.12	0.16	0.12	0.14	0.14	0.14	0.14	0.14	0.12
Trichlorofluoromethane	µg/L	2.3	1.5	1.3	0.25	0.25	0.25	0.25	0.24	0.14	0.22
Vinyl Chloride	µg/L	0.24	0.24	0.24	0.24	0.38	0.38	0.38	0.40	0.15	0.23
SEMI-VOLATILE ORGANIC COMPOUNDS											
bis(2-Ethylhexyl) Phthalate	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.50
di-n-Butylphthalate	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.2
Dimethylphthalate	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.0
Phenol	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.95
HERBICIDES, PESTICIDES & PCBs (µg/L): ND											

TABLE 9-8 (CONT'D)
MILLIKEN SANITARY LANDFILL
HISTORICAL SUMMARY - MONITORING WELL M-4

ANALYTE	UNITS	Jan 2001	Apr 2001	Jul 2001	Oct 2001	Jan 2002	Apr 2002	Jul 2002	Oct 2002	Jan 2003	Apr 2003	Jul 2003
GENERAL CHEMISTRY												
Alkalinity	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anions	meq/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bicarbonate	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cations	meq/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand (COD)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	mg/L	23	15	17	15	18	22	24	28	25	25	14
Cyanide	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Oxygen (DO)	mg/L	6.3	4.3	5.7	6.3	8.2	6.2	8.9	9.6	8.6	8.7	10.9
Fluoride	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydroxide	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate (as N)	mg/L	8.5	4.8	6.0	6.4	8.7	6.7	7.3	5.7	6.3	6.3	5.35
Ortho Phosphate Phosphorus	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH	units	7.8	6.6	7.4	7.4	7.1	7.7	7.0	7.2	7.4	7.2	7.3
Specific Conductance	umhos/cm	600	590	540	590	600	780	570	480	550	500	650
Sulfate	mg/L	21	17	17	17	22	15	11	8.0	11	10	17
Sulfide	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Temperature	C°	20	20	22	22	22.5	21	21	20.7	22	20.1	20.3
Total Dissolved Solids (TDS)	mg/L	420	380	410	380	340	360	390	320	320	310	562
Total Organic Carbon (TOC)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Halides (TOX)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Turbidity	NTU	0	0	0	0	0	0	0	0	0	0	0
METALS												
Aluminum	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	73	75	78	75	76	67	60	53	55	56	65
Chromium-Hexavalent	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium-Total	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	16	17	18	16	15	14	13	12	12	11	19
Manganese	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorous	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	33	38	34	36	36	34	31	28	27	27	41
Thallium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tin	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOLATILE ORGANIC COMPOUNDS												
1,1,1-Trichloroethane	ug/L	0.38	0.38	0.38	0.38	0.38	0.28	0.29	0.29	0.12	0.12	0.15
1,1-Dichloroethane	ug/L	0.35	0.35	0.35	0.35	0.35	0.20	0.20	0.20	0.09	0.09	0.09
Acetone	ug/L	0.2	0.2	0.2	0.2	0.2	0.5	0.5	0.5	0.3	0.3	0.2
Bromodichloromethane	ug/L	0.32	0.32	0.32	0.32	0.32	0.18	0.18	0.18	0.50	0.60	0.06
Carbon Disulfide	ug/L	0.26	0.26	0.26	0.26	0.26	0.16	0.16	0.16	0.16	0.16	0.89
Chloroform	ug/L	0.28	0.28	0.28	0.28	0.28	0.6	0.6	0.6	0.19	0.19	0.049
Dibromochloromethane	ug/L	0.24	0.24	0.24	0.24	0.24	0.28	0.28	0.28	0.37	0.37	0.098
Dichlorodifluoromethane	ug/L	2.8	4.2	6.7	2.3	3.8	1.3	0.56	0.86	0.18	0.18	0.65
o-Xylene	ug/L	0.13	0.13	0.13	0.13	0.13	0.19	0.19	0.19	0.24	0.24	0.074
p+m-Xylenes	ug/L	0.30	0.30	0.30	0.30	0.30	0.59	0.59	0.59	0.36	0.36	0.23
Styrene	ug/L	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.22	0.22	0.040
Tetrachloroethene	ug/L	0.039	0.039	0.039	0.039	0.039	0.6	0.2	0.2	0.2	0.2	0.16
Toluene	ug/L	0.22	0.22	0.22	0.22	0.22	0.2	0.2	0.2	0.2	0.2	0.085
Trichlorofluoromethane	ug/L	0.87	1.4	0.23	0.66	1.0	0.54	0.54	0.54	0.16	0.16	0.23
Vinyl Chloride	ug/L	0.25	0.25	0.25	0.25	0.25	0.32	0.32	0.32	0.19	0.19	0.19
SEMI-VOLATILE ORGANIC COMPOUNDS												
bis(2-Ethylhexyl) Phthalate	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
di-n-Butylphthalate	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethylphthalate	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HERBICIDES, PESTICIDES & PCBs (ug/L): ND												

TABLE 9-8 (CONT'D)
MILLIKEN SANITARY LANDFILL
HISTORICAL SUMMARY - MONITORING WELL M-4

ANALYTE	UNITS	Oct 2003	Jan 2004	Apr 2004	Jul 2004	Oct 2004	Jan 2005	MED.	AVG.	STD. DEV.	MIN.	MAX.
GENERAL CHEMISTRY												
Alkalinity	mg/L	NA	NA	NA	NA	NA	NA	190	193.6	20.6	136	270
Anions	meq/L	NA	NA	NA	NA	NA	NA	5.23	5.26	0.51	4.2	6.61
Bicarbonate	mg/L	NA	NA	NA	NA	NA	NA	232	226.7	32.8	166	330
Carbonate	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Cations	meq/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Chemical Oxygen Demand (COD)	mg/L	NA	NA	NA	NA	NA	NA	5.77	5.94	0.80	4.66	8.22
Chloride	mg/L	9.7	NA	NA	NA	NA	NA	10.5	12.6	7.2	5	31
Cyanide	mg/L	NA	NA	NA	NA	NA	NA	29	27.6	8.5	9	50
Dissolved Oxygen (DO)	mg/L	11.4	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Fluoride	mg/L	NA	NA	NA	NA	NA	NA	7.3	7.6	1.7	4.3	11.4
Hardness	mg/L	NA	NA	NA	NA	NA	NA	0.2	0.2	0.07	0.1	0.358
Hydroxide	mg/L	NA	NA	NA	NA	NA	NA	220	232	34	202	380
Nitrate (as N)	mg/L	3.99	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Ortho Phosphate Phosphorus	mg/L	NA	NA	NA	NA	NA	NA	7.3	7.1	1.69	2.71	11
pH	units	7.0	NA	NA	NA	NA	NA	0.07	0.35	0.47	0.012	1.8
Specific Conductance	umhos/cm	410	NA	NA	NA	NA	NA	7.53	7.53	0.38	6.6	9.21
Sulfate	mg/L	18	NA	NA	NA	NA	NA	548	555	68	370	780
Sulfide	mg/L	NA	NA	NA	NA	NA	NA	11	12.4	4.8	5	24
Temperature	C°	21	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Total Dissolved Solids (TDS)	mg/L	268	NA	NA	NA	NA	NA	21	21.1	1.9	16	25
Total Organic Carbon (TOC)	mg/L	NA	NA	NA	NA	NA	NA	350	354	52	268	562
Total Organic Halides (TOX)	mg/L	NA	NA	NA	NA	NA	NA	2.1	2.68	1.87	0.5	7.1
Turbidity	NTU	0	NA	NA	NA	NA	NA	0.01	0.011	0.005	0.004	0.02
METALS												
Aluminum	mg/L	NA	NA	NA	NA	NA	NA	0.050	0.140	0.164	0.034	0.423
Antimony	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Arsenic	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Barium	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Beryllium	mg/L	NA	NA	NA	NA	NA	NA	0.150	0.238	0.162	0.1	0.49
Boron	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Cadmium	mg/L	NA	NA	NA	NA	NA	NA	0.10	0.161	0.109	0.03	0.3
Calcium	mg/L	34	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Chromium-Hexavalent	mg/L	NA	NA	NA	NA	NA	NA	67	70.1	15.5	34	143
Chromium-Total	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Cobalt	mg/L	NA	NA	NA	NA	NA	NA	0.016	0.033	0.055	0.01	0.196
Copper	mg/L	NA	NA	NA	NA	NA	NA	0.0025	0.0027	0.0009	0.002	0.004
Iron	mg/L	NA	NA	NA	NA	NA	NA	0.01	0.007	0.0055	0.00044	0.01
Lead	mg/L	NA	NA	NA	NA	NA	NA	0.090	0.102	0.079	0.01	0.28
Magnesium	mg/L	15	NA	NA	NA	NA	NA	0.006	0.0121	0.0158	0.00019	0.03
Manganese	mg/L	NA	NA	NA	NA	NA	NA	14	15.8	6.4	10.4	58
Mercury	mg/L	NA	NA	NA	NA	NA	NA	0.008	0.0158	0.0177	0.0022	0.05
Molybdenum	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Nickel	mg/L	NA	NA	NA	NA	NA	NA	0.0063	0.0066	0.0024	0.0044	0.01
Phosphorous	mg/L	NA	NA	NA	NA	NA	NA	0.016	0.028	0.035	0.004	0.12
Potassium	mg/L	NA	NA	NA	NA	NA	NA	0.10	0.17	0.186	0.04	0.65
Selenium	mg/L	NA	NA	NA	NA	NA	NA	1.71	1.64	0.33	0.72	2.07
Silver	mg/L	NA	NA	NA	NA	NA	NA	0.0020	0.0018	0.0010	0.0007	0.0026
Sodium	mg/L	36	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Thallium	mg/L	NA	NA	NA	NA	NA	NA	31	31.3	4.2	14.1	41
Tin	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Vanadium	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Zinc	mg/L	NA	NA	NA	NA	NA	NA	0.016	0.030	0.031	0.01	0.09
VOLATILE ORGANIC COMPOUNDS												
1,1,1-Trichloroethane	ug/L	0.072	NA	NA	NA	NA	NA	0.4	0.38	0.08	0.28	0.45
1,1-Dichloroethane	ug/L	0.061	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Acetone	ug/L	0.96	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Bromodichloromethane	ug/L	0.087	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Carbon Disulfide	ug/L	0.050	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Chloroform	ug/L	0.048	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Dibromochloromethane	ug/L	0.12	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Dichlorodifluoromethane	ug/L	0.042	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
o-Xylene	ug/L	0.049	NA	NA	NA	NA	NA	2.4	3.0	2.5	0.23	11
p+m-Xylenes	ug/L	0.038	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Styrene	ug/L	0.068	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Tetrachloroethene	ug/L	0.049	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Toluene	ug/L	0.042	NA	NA	NA	NA	NA	0.39	0.47	0.21	0.23	0.8
Trichlorofluoromethane	ug/L	0.050	NA	NA	NA	NA	NA	0.55	3.05	6.02	0.16	15.3
Vinyl Chloride	ug/L	0.002	NA	NA	NA	NA	NA	1.2	1.14	0.55	0.23	2.3
SEMI-VOLATILE ORGANIC COMPOUNDS												
bis(2-Ethylhexyl) Phthalate	ug/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
di-n-Butylphthalate	ug/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Dimethylphthalate	ug/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Phenol	ug/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
HERBICIDES, PESTICIDES & PCBs (ug/L): ND												

TABLE 9-37
 MILLIKEN SANITARY LANDFILL
 HISTORICAL SUMMARY - LANDFILL GAS CONDENSATE

ANALYTE	UNITS	Dec 1998	Jan 1999	Apr 1999	Jul 1999	Nov 1999	Jan 2000	Apr 2000	Jul 2000	Oct 2000	Jan 2001
GENERAL CHEMISTRY											
Alkalinity	mg/L										
Anions	meq/L	0.055	0.039		0.13						
Bicarbonate	mg/L										
Carbonate	mg/L										
Cations	meq/L	0.15	0.27		0.13						
Chemical Oxygen Demand (COD)	mg/L	36,308	26,446	27,400	9700					10,000	
Chloride	mg/L			8	0.22					1	
Cyanide	mg/L										
Fluoride	mg/L				0.02						
Hardness	mg/L		6.8	8.0	5						
Hydroxide	mg/L										
Nitrate (as N)	mg/L		0.04		0.08						
Ortho Phosphate Phosphorus	mg/L	0.18	0.95		0.15						
pH	units	3.7	3.69	3.7	3.9	3.8	3.7		3.8	4.3	3.6
Phenol (Colorimetric)	mg/L			7.0							
Specific Conductance	umhos/cm	376	366	398	580	830	520	870	680	1060	430
Sulfate	mg/L			14	6.2	6.3		0.6	0.5	0.5	0.5
Sulfide	mg/L										
Total Dissolved Solids (TDS)	mg/L	24	14	260	36	260	83	43	22	70	22
Total Organic Carbon (TOC)	mg/L	3540	4020	3910	2200	2000	3300	1400	2200	3300	5250
Total Organic Halides (TOX)	mg/L	0.12	45	122	0.09					0.08	
METALS											
Aluminum	mg/L		0.15	0.26	0.18	0.45					
Antimony	mg/L	0.032	0.022	0.038	0.03					0.110	
Arsenic	mg/L	0.013	0.012	0.012	0.027					0.041	
Barium	mg/L	0.018	0.041	0.37						0.0044	
Beryllium	mg/L	0.00040	0.0005	0.0005	0.001					0.0003	
Boron	mg/L		0.098	0.025	0.002					0.0016	
Cadmium	mg/L	0.0010	0.00070	0.0003	0.0003					0.0002	
Calcium	mg/L	1.6	2.5	1.6	2	9		5	1	0.23	0.24
Chromium, Hexavalent	mg/L	0.0005	0.0004	0.004	0.027						
Chromium, Total	mg/L	0.005	0.005	0.005	0.1					0.0036	
Cobalt	mg/L	0.00032	0.00030	0.00032	0.002					0.0002	
Copper	mg/L	0.0062	0.053	0.002	0.009					0.0010	
Iron	mg/L		0.46	0.64	0.6	1.9				0.530	
Lead	mg/L	0.01	0.01	0.01	0.01					0.00065	
Magnesium	mg/L	0.27	0.24	0.30		2	0.07	2	10.95	0.026	0.063
Manganese	mg/L		0.011	0.016	0.03	0.16				0.0073	
Mercury	mg/L	0.0004	0.0004	0.0004	0.001					0.00037	
Molybdenum	mg/L	0.001	0.001	0.001	0.002						
Nickel	mg/L	0.02	0.02	0.02	0.0006					0.0005	
Phosphorus	mg/L			0.14	0.22					0.0010	
Potassium	mg/L		0.12	0.081	0.03	3				0.20	
Selenium	mg/L	0.0090	0.002	0.013	0.003					0.0010	
Silver	mg/L	0.0067	0.005	0.005	0.003					0.0020	
Sodium	mg/L	2.2	4.1	1.6	0.4	2	0.08	3	0.08	0.049	0.085
Thallium	mg/L	0.002	0.027	0.002	0.007					0.001	
Tin	mg/L					0.02	0.002	0.0042	0.012	0.010	0.0065
Vanadium	mg/L	0.0052	0.003	0.003	0.03					0.0052	
Zinc	mg/L	0.23	0.36	0.37	0.23					0.031	

TABLE 9-37 (CONT'D)
MILLIKEN SANITARY LANDFILL
HISTORICAL SUMMARY - LANDFILL GAS CONDENSATE

ANALYTE	UNITS	May 2001	Jul 2001	Oct 2001	Jan 2002	Apr 2002	Jul 2002	Oct 2002	Jan 2003	Apr 2003	Jul 2003
GENERAL CHEMISTRY											
Alkalinity	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anions	meq/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bicarbonate	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cations	meq/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand (COD)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoride	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hardness	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydroxide	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate (as N)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ortho Phosphate Phosphorus	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH	units	3.6	3.9	3.7	4.0	3.9	3.6	4.2	3.7	4.0	4.1
Phenol (Colorimetric)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Specific Conductance	µmhos/cm	690	370	460	440	390	420	810	460	830	780
Sulfate	mg/L	1.7	1.2	1.3	1.4	1.0	0.70	1.0	1.2	1.0	1.0
Sulfide	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Dissolved Solids (TDS)	mg/L	61	52	67	120	10	22	37	64	22	30
Total Organic Carbon (TOC)	mg/L	2830	2700	3440	2700	3900	2600	2300	3800	2300	1800
Total Organic Halides (TOX)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METALS											
Aluminum	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Antimony	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Boron	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	1	2	10	0.511	0.511	0.65	0.20	0.068	0.45	0.51
Chromium, Hexavalent	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium, Total	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	0.53	0.48	1	0.960	0.660	0.31	0.19	0.60	0.14	0.24
Manganese	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Molybdenum	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phosphorus	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	mg/L	2.62	0.23	0.48	0.070	0.670	0.25	0.092	0.24	0.24	0.17
Thallium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tin	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vanadium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 9-37 (CONT'D)
MILLIKEN SANITARY LANDFILL
HISTORICAL SUMMARY - LANDFILL GAS CONDENSATE

ANALYTE	UNITS	Oct 2003	Jan 2004	Apr 2004	Jul 2004	Oct 2004	Jan 2005	MED.	AVG.	STD. DEV.	MIN.	MAX.
GENERAL CHEMISTRY												
Alkalinity	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Anions	meq/L	NA	NA	NA	NA	NA	NA	0.06	0.07	0.05	0.039	0.13
Bicarbonate	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Carbonate	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Cations	meq/L	NA	NA	NA	NA	NA	NA	0.15	0.18	0.08	0.13	0.27
Chemical Oxygen Demand (COD)	mg/L	NA	NA	NA	NA	NA	NA	26,446	21,971	11,715	9700	36,308
Chloride	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Cyanide	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Fluoride	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Hardness	mg/L	NA	NA	NA	NA	NA	NA	5.9	5.9	1.9	3.8	8.0
Hydroxide	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Nitrate (as N)	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Ortho Phosphate Phosphorus	mg/L	NA	NA	NA	NA	NA	NA	0.17	0.32	0.43	0.01	0.95
pH	units	3.7	3.7	3.9	3.9	4.0	3.9	3.8	3.8	0.2	3.5	4.3
Phenol (Colorimetric)	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Specific Conductance	umhos/cm	570	430	450	670	800	780	545	595	199	366	1060
Sulfate	mg/L	1.1	0.9	0.4	1.4	0.5	0.8	1.1	2.3	3.2	0.41	14
Sulfide	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Total Dissolved Solids (TDS)	mg/L	NA	NA	NA	NA	NA	NA	45	40	62	10	260
Total Organic Carbon (TOC)	mg/L	3300	3500	2600	2800	2900	5300	2865	3073	946	1400	5300
Total Organic Halides (TOX)	mg/L	NA	NA	NA	NA	NA	NA	0.12	33.5	53.2	0.08	122
METALS												
Aluminum	mg/L	NA	NA	NA	NA	NA	NA	0.22	0.26	0.13	0.15	0.45
Antimony	mg/L	NA	NA	NA	NA	NA	NA	0.032	0.046	0.036	0.022	0.110
Arsenic	mg/L	NA	NA	NA	NA	NA	NA	0.027	0.027	0.015	0.012	0.041
Barium	mg/L	NA	NA	NA	NA	NA	NA	0.0295	0.108	0.175	0.0044	0.37
Beryllium	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Boron	mg/L	NA	NA	NA	NA	NA	NA	0.027	0.04	0.04	0.007	0.098
Cadmium	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Calcium	mg/L	0.42	0.13	0.23	0.1	0.16	9.4	0.48	1.9	3.0	0.068	10
Chromium, Hexavalent	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Chromium, Total	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Cobalt	mg/L	NA	NA	NA	NA	NA	NA	0.0012	0.0017	0.0013	0.00021	0.0032
Copper	mg/L	NA	NA	NA	NA	NA	NA	0.0062	0.0201	0.029	0.0010	0.053
Iron	mg/L	NA	NA	NA	NA	NA	NA	0.6	0.8	0.60	0.46	1.9
Lead	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Magnesium	mg/L	0.17	0.07	0.11	0.038	0.063	3.4	0.24	0.54	0.83	0.031	3.4
Manganese	mg/L	NA	NA	NA	NA	NA	NA	0.016	0.045	0.065	0.0073	0.16
Mercury	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Molybdenum	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Nickel	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Phosphorus	mg/L	NA	NA	NA	NA	NA	NA	0.14	0.127	0.101	0.02	0.22
Potassium	mg/L	NA	NA	NA	NA	NA	NA	0.21	0.88	1.42	0.081	3
Selenium	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Silver	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Sodium	mg/L	0.42	0.02	0.27	0.03	0.12	14	0.4	1.6	3.2	0.049	14
Thallium	mg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Tin	mg/L	NA	NA	NA	NA	NA	NA	0.01	0.0113	0.0053	0.0065	0.02
Vanadium	mg/L	NA	NA	NA	NA	NA	NA	0.0052	0.0135	0.014	0.0052	0.03
Zinc	mg/L	NA	NA	NA	NA	NA	NA	0.23	0.25	0.13	0.051	0.37

TABLE 9-37 (CONT'D)
MILLIKEN SANITARY LANDFILL
HISTORICAL SUMMARY - LANDFILL GAS CONDENSATE

ANALYTE	UNITS	Dec 1998	Jan 1999	Apr 1999	Jul 1999	Nov 1999	Jan 2000	Apr 2000	Jul 2000	Oct 2000	Jan 2001
VOLATILE ORGANIC COMPOUNDS											
1,1,2,2-Tetrachloroethane	µg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
1,2,3-Trichlorobenzene	µg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
1,2,4-Trichlorobenzene	µg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
1,2,4-Trimethylbenzene	µg/L	29	41	71	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	µg/L	0.2	0.2	24	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	µg/L	0.2	0.2	1.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2
1,2-Dichlorobenzene	µg/L	0.2	0.2	4.7	0.2	0.2	0.2	0.2	0.2	0.2	5.6
1,2-Dichloroethane	µg/L	0.2	0.2	4.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
1,2-Dichloropropane	µg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	5.4
1,3-Dichlorobenzene	µg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
1,4-Dichlorobenzene	µg/L	23.5	28	38	21	24	30	40	50	18	56
1,4-Dichloro-2-Butene	µg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
2-Butanone (MEK)	µg/L	NA	44,800	18,380	21,000	25,000	19,000	24,000	43,000	24,000	33,000
2-Hexanone	µg/L	NA	4100	NA	NA	NA	NA	NA	NA	NA	NA
4-Isopropyltoluene	µg/L	28.5	32	90	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone (MIBK)	µg/L	NA	3560	3328	660	1200	1500	840	1600	1800	3200
Acetone	µg/L	NA	45,200	15,478	34,000	39,000	28,000	53,000	57,000	38,000	37,000
Acetonitrile	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	µg/L	18.5	39	112	40	40	84	84	84	25	25
Bromoform	µg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Carbon Disulfide	µg/L	NA	21	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	µg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Chloroethane	µg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Chloromethane	µg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
cis-1,2-Dichloroethane	µg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Dichlorodifluoromethane	µg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	12
Ethylbenzene	µg/L	71	96	140	75	336	74	78	20	53	150
Isopropylbenzene	µg/L	9.5	13	37	NA	NA	NA	NA	NA	NA	NA
Methyl Methacrylate	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	µg/L	145.5	133	93	60	49	90	42	24	17	68
MTBE	µg/L	NA	108	51	NA	NA	NA	NA	NA	NA	NA
Naphthalene	µg/L	88	107	103	72	28	160	87	54	71	200
n-Propylbenzene	µg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
o-Xylene	µg/L	71.5	85	130	50	53	86	88	24	54	140
p-m-Xylenes	µg/L	159	201	159	120	97	160	150	40	100	290
sec-Butylbenzene	µg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Styrene	µg/L	59.5	72	74	74	106	45	46	11	32	65
Tetrachloroethene	µg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Toluene	µg/L	457	500	363	410	290	520	560	160	220	650
trans-1,2-Dichloroethene	µg/L	0.2	0.2	0.63	20	20	20	35	30	20	20
Trichloroethene	µg/L	9.5	12	19	17	17	35	42	27	27	27
Trichlorofluoromethane	µg/L	0.2	0.2	0.93	43	43	42	44	99	20	23
Vinyl Chloride	µg/L	0.2	0.2	0.2	38	38	38	40	45	25	25
Xylenes (Total)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEMI-VOLATILE ORGANIC COMPOUNDS											
2,4-Dimethylphenol	µg/L	0.2	0.2	0.2	24	120	470	330	350	420	280
2-Picoline	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	100	450
4-Aminobiphenyl	µg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	90	6
Acenaphthene	µg/L	0.2	0.2	0.2	82	41	82	41	15	35	30
Acetophenone	µg/L	128	87	0.2	1100	810	900	590	710	880	820
Aniline	µg/L	0.2	0.2	0.2	NA	NA	NA	NA	NA	75	37
Anthracene	µg/L	0.2	0.2	0.2	612	312	62	31	62	60	24
Benzo[a]pyrene	µg/L	15	0.6	0.6	705	35	70	35	89	45	178
Benzo[b]fluoranthene	µg/L	18	0.4	0.4	61	40	80	40	65	65	65
Benzoic Acid	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzyl Alcohol	µg/L	833	1750	6900	3700	3600	3600	2200	5500	2900	1700
bis(2-chloroethoxy)methane	µg/L	0.2	0.2	0.2	84	42	84	42	16	80	42
bis(2-ethylhexyl)phthalate	µg/L	20	20	20	5.6	28	28	28	51	125	50
Di-n-butyl Phthalate	µg/L	20	20	20	29	31	62	31	62	62	27
Dibenzofuran	µg/L	0.2	0.2	0.2	6.0	30	90	30	15	75	30
Diethylphthalate	µg/L	42	44	0.2	390	390	270	130	570	250	280
Dimethylphthalate	µg/L	34	42	0.2	640	770	330	250	1000	550	350
Fluoranthene	µg/L	0.2	0.2	0.2	6.6	33	66	33	NR	85	34
Fluorene	µg/L	0.2	0.2	0.2	37	74	37	37	16	80	30
Isophorone	µg/L	0.2	0.2	810	520	560	640	290	290	330	34
m+p-Cresol	µg/L	27	1960	4300	3000	1800	3000	1900	2000	1500	2900
N-Nitrosodiphenylamine	µg/L	0.2	0.2	0.2	64	32	64	32	NR	35	35
N-Nitrosopiperidine	µg/L	0.2	0.2	0.2	82	41	82	41	NR	45	50
Naphthalene	µg/L	28	35	0.6	31	140	80	130	65	84	84
Nitrobenzene	µg/L	0.3	0.3	0.3	76	38	76	38	14	70	28
o-Cresol	µg/L	212	499	0.2	66	240	280	33	18	90	8
Pentachlorophenol	µg/L	0.5	0.5	0.5	37	17	34	17	NR	95	38
Phenanthrene	µg/L	0.2	0.2	0.2	2.2	36	72	36	17	35	22
Phenol	µg/L	0.3	0.3	5400	5500	5100	6900	3600	6500	3200	2600
Pyrene	µg/L	0.16	0.16	0.16	6.9	35	66	35	13	90	36
Pyridine	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	300
Safrrole	µg/L	NA	NA	NA	NA	240	90	45	78	90	36
ORGANOCHLORINE PESTICIDES & PCBs											
4,4'-DDE	µg/L	0.4	0.004	0.10	0.01	NA	NA	NA	NA	0.004	NA
b-BHC	µg/L	0.6	0.006	0.15	0.03	NA	NA	NA	NA	0.006	NA
Lindane (Gamma BHC)	µg/L	0.4	0.004	0.10	0.02	NA	NA	NA	NA	0.004	NA
ORGANOCHLORINE HERBICIDES (µg/L): ND											

TABLE 9-37 (CONT'D)
MILLIKEN SANITARY LANDFILL
HISTORICAL SUMMARY - LANDFILL GAS CONDENSATE

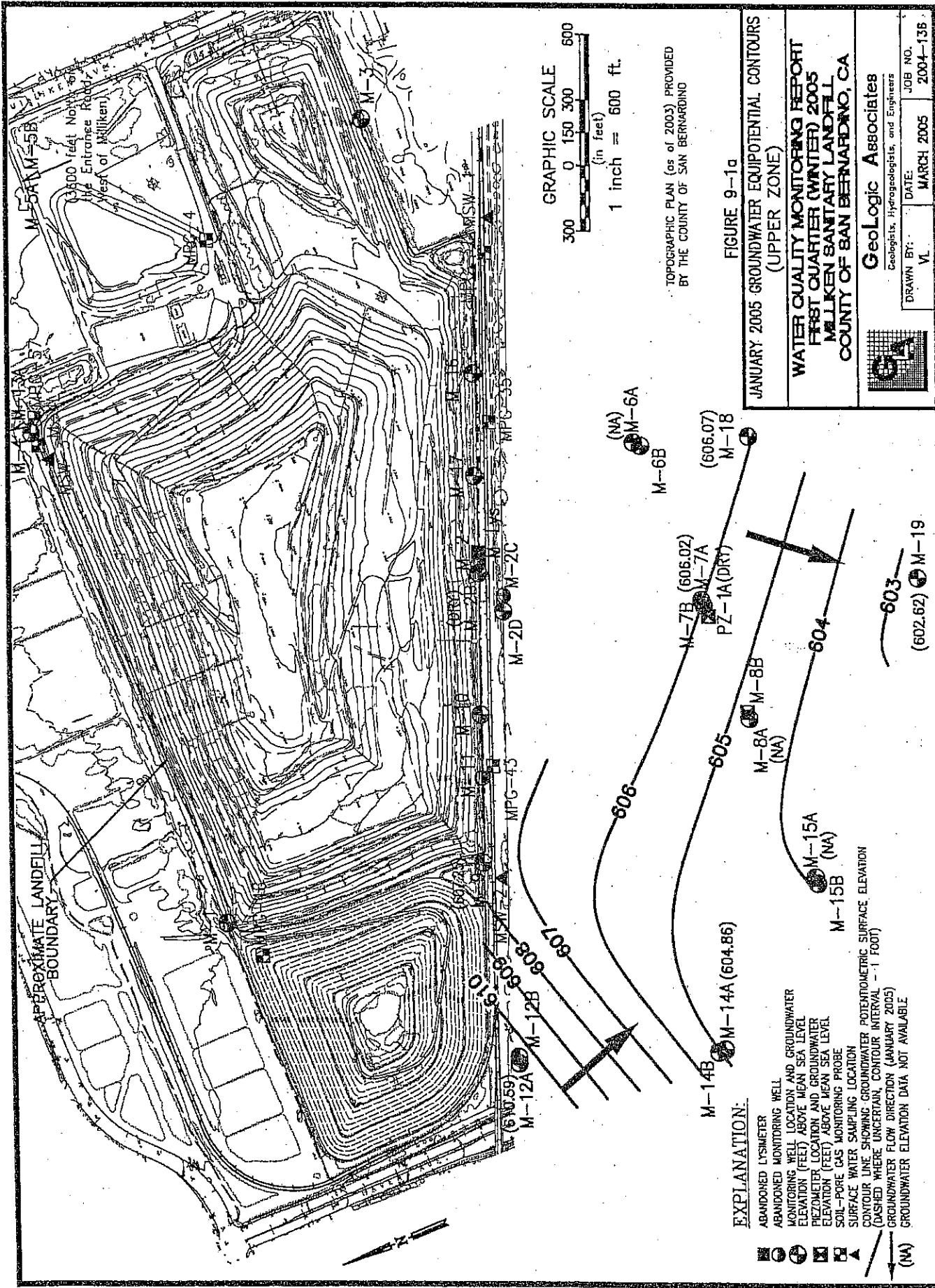
ANALYTE	UNITS	May 2001	Jul 2001	Oct 2001	Jan 2002	Apr 2002	Jul 2002	Oct 2002	Jan 2003	Apr 2003	Jul 2003
VOLATILE ORGANIC COMPOUNDS											
1,1,2,2-Tetrachloroethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	µg/L	6.4	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	µg/L	8.5	9.7	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	µg/L	44	18	21	NA	NA	NA	NA	NA	NA	NA
1,4-Dichloro-2-Butene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Butanone (MEK)	µg/L	20,000	43,000	25,000	22,000	23,000	18,000	19,000	12,000	20,000	23,000
2-Hexanone	µg/L	310	400	390	NA	NA	NA	NA	NA	NA	NA
4-Isopropyltoluene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methyl-2-pentanone (MIBK)	µg/L	2100	710	660	3700	2400	840	1800	2500	1600	2900
Acetone	µg/L	34,000	58,000	56,000	42,000	43,000	25,000	41,000	34,000	47,000	52,000
Acetonitrile	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	µg/L	45	5.7	NA	NA	NA	NA	NA	NA	NA	NA
Bromoform	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon Disulfide	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chlorobenzene	µg/L	7.1	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloromethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	µg/L	21	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	µg/L	150	25	34	98	71	53	52	85	99	46
Isopropylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl Methacrylate	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MTBE	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	130
Naphthalene	µg/L	140	120	100	190	130	110	40	NA	120	140
n-Propylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Xylene	µg/L	130	32	40	100	100	79	58	120	100	45
p-m-Xylenes	µg/L	280	51	70	170	150	98	94	140	200	94
sec-Butylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene	µg/L	40	18	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	µg/L	6.2	0.86	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	µg/L	490	73	110	520	290	140	220	420	380	170
trans-1,2-Dichloroethene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl Chloride	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylenes (Total)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	140
SEMI-VOLATILE ORGANIC COMPOUNDS											
2,4-Dimethylphenol	µg/L	200	150	180	220	180	160	360	180	330	230
2-Picoline	µg/L	47	NA	630	860	1300	NA	NA	71	NA	NA
4-Aminobiphenyl	µg/L	27	27	27	27	27	27	27	27	27	27
Acenaphthene	µg/L	29	29	29	29	29	29	29	29	29	29
Acetophenone	µg/L	460	290	590	1300	1100	1100	920	1500	1100	680
Aniline	µg/L	27	27	27	27	27	27	27	27	27	27
Anthracene	µg/L	23	23	23	23	23	23	23	23	23	23
Benzo[a]pyrene	µg/L	26	26	26	26	26	26	26	26	26	26
Benzo[b]fluoranthene	µg/L	50	50	50	50	50	50	50	50	50	50
Benzoic Acid	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzyl Alcohol	µg/L	980	2300	2000	3700	2100	4500	2600	2000	1900	1700
bis(2-chloroethoxy)methane	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Ethylhexyl) Phthalate	µg/L	30	26	20	20	20	20	20	20	350	82
Di-n-butylphthalate	µg/L	26	26	26	26	26	26	26	26	26	26
Dibenzofuran	µg/L	23	23	23	23	23	23	23	23	23	23
Diethylphthalate	µg/L	160	250	360	570	690	370	240	350	560	970
Dimethylphthalate	µg/L	24	320	310	340	350	690	540	200	360	140
Fluoranthene	µg/L	24	24	24	24	24	24	24	24	24	24
Fluorene	µg/L	23	23	23	23	23	23	23	23	23	23
Isophorone	µg/L	270	210	310	1000	610	730	470	390	410	240
m+p-Cresol	µg/L	2900	2400	3700	4500	3400	3200	2200	2700	5000	3600
N-Nitrosodiphenylamine	µg/L	21	21	21	21	21	21	21	21	21	21
N-Nitrosopiperidine	µg/L	16	16	16	16	16	16	16	16	16	16
Naphthalene	µg/L	61	35	25	120	NA	NA	NA	NA	NA	NA
Nitrobenzene	µg/L	34	34	300	34	NA	NA	NA	NA	NA	NA
o-Cresol	µg/L	100	320	230	NA	170	300	250	150	160	130
Pentachlorophenol	µg/L	51	51	51	51	51	51	51	51	51	51
Phenanthrene	µg/L	26	26	26	26	26	26	26	26	26	26
Phenol	µg/L	1700	3400	1700	5700	2300	5900	3500	3100	4000	3400
Pyrene	µg/L	17	17	17	17	17	17	17	17	17	17
Pyridine	µg/L	29	29	29	29	29	29	29	29	29	29
Safrole	µg/L	25	25	25	25	25	1500	310	120	NA	NA
ORGANOCHLORINE PESTICIDES & PCBs											
4,4'-DDE	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	30
o-BHC	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	47
Lindane (Gamma BHC)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	38
ORGANOCHLORINE HERBICIDES (µg/L): ND											

TABLE 9-37 (CONT'D)
MILLIKEN SANITARY LANDFILL
HISTORICAL SUMMARY - LANDFILL GAS CONDENSATE

ANALYTE	UNITS	Oct 2003	Jan 2004	Apr 2004	Jul 2004	Oct 2004	Jan 2005	MED.	AVG.	STD. DEV.	MIN.	MAX.
VOLATILE ORGANIC COMPOUNDS												
1,1,2,2-Tetrachloroethane	µg/L	26	1.3	0.99	2.1	0.99	1.3	NC	NC	NC	NC	NC
1,2,3-Trichlorobenzene	µg/L	0.34	0.66	0.56	0.33	1.3	0.34	0.66	0.56	0.33	1.3	1.3
1,2,4-Trichlorobenzene	µg/L	2.1	0.99	0.99	2.1	0.99	2.1	0.99	0.99	0.99	0.99	0.99
1,2,4-Trimethylbenzene	µg/L	54	45	24	23	84	38	43	21	23	84	84
1,3,5-Trimethylbenzene	µg/L	17	11	6.2	26	11	14.1	8.3	6.2	26	26	26
1,1-Dichloroethane	µg/L	9.9	4.5	3.4	4.5	5.1	3.3	1.3	9.9	9.9	9.9	9.9
1,2-Dichlorobenzene	µg/L	6.1	6.5	3.5	14	6.1	7.5	4.0	2.8	15	15	15
1,2-Dichloroethane	µg/L	4.2	2.7	6.6	3.9	3.9	1.5	2.4	6.6	6.6	6.6	6.6
1,2-Dichloropropane	µg/L	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
1,3-Dichlorobenzene	µg/L	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
1,4-Dichlorobenzene	µg/L	42	39	17	18	30	31.1	11	17	56	56	56
1,4-Dichloro-2-Butene	µg/L	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
2-Butanone (MEK)	µg/L	30,000	38,000	23,000	21,000	30,000	80,000	23,000	27,967	13,794	12,000	80,000
2-Hexanone	µg/L	1200	400	787	1133	170	4100	4100	4100	4100	4100	4100
4-Isopropyltoluene	µg/L	32	50.2	34.5	28.5	90	90	90	90	90	90	90
4-Methyl-2-pentanone (MIBK)	µg/L	2100	3600	1700	1900	3200	6100	1800	2142	1286	660	6100
Acetone	µg/L	35,000	49,000	37,000	37,000	40,000	83,000	40,500	42,612	13,456	15,478	83,000
Acetonitrile	µg/L	1000	19	32	37	36.7	23.4	5.7	112	112	112	112
Benzene	µg/L	56	39	13	19	32	37	36.7	23.4	5.7	112	112
Bromoform	µg/L	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062
Carbon Disulfide	µg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Chlorobenzene	µg/L	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Chloroethane	µg/L	2.6	8.5	5.2	5.4	2.9	2.6	8.5	8.5	8.5	8.5	8.5
Chloromethane	µg/L	0.75	0.75	2.86	4.02	0.34	7.5	7.5	7.5	7.5	7.5	7.5
cis-1,2-Dichloroethene	µg/L	27	20	5.6	20	16.2	8.3	4.7	27	27	27	27
Dichlorodifluoromethane	µg/L	0.58	0.50	1.2	0.54	0.67	0.36	0.41	1.2	1.2	1.2	1.2
Ethylbenzene	µg/L	87	130	91	45	48	120	75	80	36	25	150
Isopropylbenzene	µg/L	17	14	6.7	24	13	15.1	9.9	6.7	37	37	37
Methyl Methacrylate	µg/L	380	0.43	0.43	85	11	NC	NC	NC	NC	NC	NC
Methylene Chloride	µg/L	230	23	11	20	60	70.1	63	9.5	230	230	230
MTBE	µg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Naphthalene	µg/L	110	200	190	94	130	290	120	135	55	40	290
n-Propylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
o-Xylene	µg/L	79	99	86	43	43	120	82	79	33	24	140
p+m-Xylenes	µg/L	160	200	170	87	86	250	150	145	65	40	290
sec-Butylbenzene	µg/L	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC
Styrene	µg/L	21	43	36	14	16	51	37	39	18	14	74
Tetrachloroethene	µg/L	4.2	2.8	1.9	1.4	7.9	5.2	7.1	6.7	1.4	22	22
Toluene	µg/L	380	450	340	150	210	470	372	344	158	73	650
trans-1,2-Dichloroethene	µg/L	0.081	0.081	0.081	0.19	0.73	NC	NC	NC	NC	NC	NC
Trichloroethene	µg/L	3.5	2.2	3.0	5.0	4.6	7.3	5.8	2.2	19	19	19
Trichlorofluoromethane	µg/L	0.060	0.060	0.060	0.20	0.20	NC	NC	NC	NC	NC	NC
Vinyl Chloride	µg/L	24	0.88	0.62	0.16	0.54	0.62	0.68	0.18	0.54	0.88	0.88
Xylenes (Total)	µg/L	240	300	260	130	130	380	240	226	97	130	380
SEMI-VOLATILE ORGANIC COMPOUNDS												
2,4-Dimethylphenol	µg/L	15	48	48	29	55	11	220	251	95	150	470
2-Picoline	µg/L	60	48	48	29	55	11	630	644	471	71	1300
4-Aminobiphenyl	µg/L	26	20	6.0	1.4	6.2	12	NC	NC	NC	NC	NC
Acenaphthene	µg/L	15	23	35	26	24	24	24	28	18	12	68
Acetophenone	µg/L	1000	1200	1200	940	810	760	900	879	323	128	1500
Aniline	µg/L	18	14	42	16	30	15	NC	NC	NC	NC	NC
Anthracene	µg/L	48	42	42	30	30	57	NC	NC	NC	NC	NC
Benzo[a]pyrene	µg/L	27	21	63	23	23	44	NC	NC	NC	NC	NC
Benzo[b]fluoranthene	µg/L	29	23	69	20	20	30	NC	NC	NC	NC	NC
Benzoic Acid	µg/L	240	170	500	29	600	28	NC	NC	NC	NC	NC
Benzyl Alcohol	µg/L	3100	1800	3100	4100	1400	2450	2832	1445	833	6900	6900
bis(2-chloroethoxy)methane	µg/L	20	20	20	20	20	20	NC	NC	NC	NC	NC
bis(2-Ethylhexyl) Phthalate	µg/L	28	18	120	29	20	20	20	88.2	147.3	8.9	350
Di-n-butylphthalate	µg/L	23	24	54	49	24	21	29	42	37	21	150
Dibenzofuran	µg/L	18	14	42	17	17	17	17	21.5	15.7	8.6	39
Diethylphthalate	µg/L	180	100	180	330	170	230	270	323	215	42	970
Dimethylphthalate	µg/L	150	140	160	330	78	100	325	339	249	14	1000
Fluoranthene	µg/L	14	14	40	14	14	59	NC	NC	NC	NC	NC
Fluorene	µg/L	19	15	45	16	16	57	NC	NC	NC	NC	NC
Isophorone	µg/L	1000	1000	650	350	1100	470	523	280	130	1100	1100
m+p-Cresol (3-&4-Methylphenol)	µg/L	4000	3700	5200	7600	2900	2800	2950	3161	1453	27	7600
N-Nitrosodiphenylamine	µg/L	20	16	47	16	16	50	NC	NC	NC	NC	NC
N-Nitrosopiperidine	µg/L	33	28	79	27	27	65	NC	NC	NC	NC	NC
Naphthalene	µg/L	150	210	190	96	86	120	107	106	57	28	210
Nitrobenzene	µg/L	18	14	43	17	17	53	NC	NC	NC	NC	NC
o-Cresol (2-Methylphenol)	µg/L	19	260	44	29	36	580	250	269	138	100	580
Pentachlorophenol	µg/L	240	190	560	92	92	63	NC	NC	NC	NC	NC
Phenanthrene	µg/L	17	15	40	14	14	53	21.5	38.9	45.8	9.6	130
Phenol	µg/L	4500	3700	4800	9200	3400	7600	4000	4565	1825	1700	9200
Pyrene	µg/L	22	18	53	18	18	62	NC	NC	NC	NC	NC
Pyridine	µg/L	NA	NA	NA	NA	NA	NA	230	412	541	81	1500
Safrole	µg/L	38	38	93	53	53	75	NC	NC	NC	NC	NC
ORGANOCHLORINE PESTICIDES & PCBs												
4,4'-DDE	µg/L	18	14	42	17	17	55	NC	NC	NC	NC	NC
b-BHC	µg/L	28	22	65	22	22	55	NC	NC	NC	NC	NC
Lindane (Gamma BHC)	µg/L	22	17	52	19	19	50	NC	NC	NC	NC	NC
ORGANOCHLORINE HERBICIDES (µg/L): ND												

SECTION 9.0

**MILLIKEN SANITARY LANDFILL
FIGURES**



GRAPHIC SCALE
 300 0 150 300 600
 (in feet)
 1 inch = 600 ft.

TOPOGRAPHIC PLAN (as of 2003) PROVIDED BY THE COUNTY OF SAN BERNARDINO

FIGURE 9-1a

JANUARY 2005 GROUNDWATER EQUIPOTENTIAL CONTOURS (UPPER ZONE)

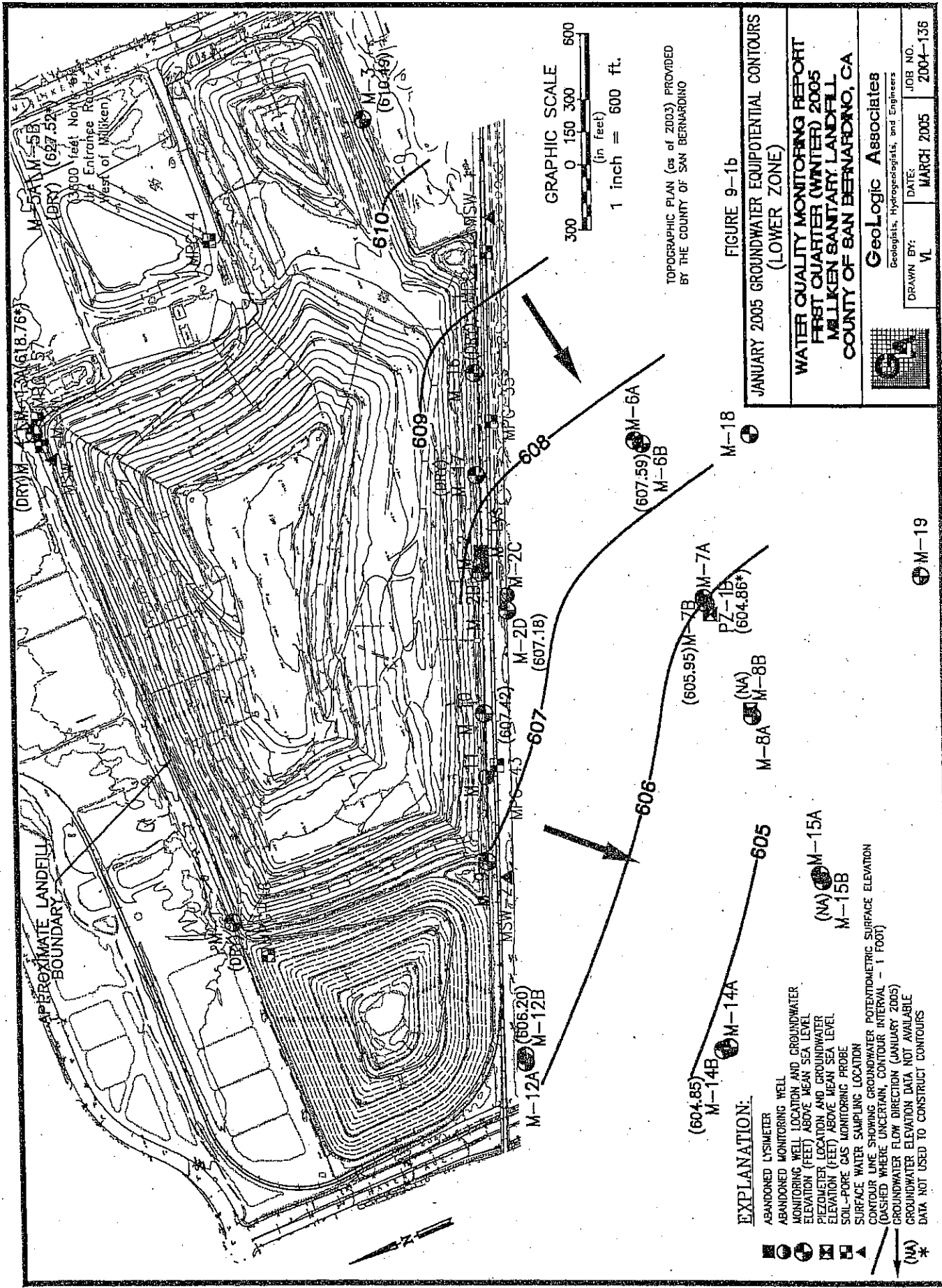
WATER QUALITY MONITORING REPORT
FIRST QUARTER (WINTER) 2005
MILLIKEN SANITARY LANDFILL
COUNTY OF SAN BERNARDINO, CA

Geologic Associates
 Geologists, Hydrogeologists, and Engineers

DRAWN BY: _____ DATE: MARCH 2005 JOB NO. 2004-13B
 V. _____

EXPLANATION:

- ABANDONED LYSIMETER
- MONITORING WELL LOCATION AND GROUNDWATER ELEVATION (FEET) ABOVE MEAN SEA LEVEL
- Piezometer Location and Groundwater Elevation (Feet) Above Mean Sea Level
- SOIL-POROUS GAS MONITORING PROBE
- SURFACE WATER SAMPLING LOCATION
- CONTOUR LINE SHOWING GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION (DASHED WHERE UNCERTAIN, CONTOUR INTERVAL - 1 FOOT)
- GROUNDWATER FLOW DIRECTION (JANUARY 2005)
- GROUNDWATER ELEVATION DATA NOT AVAILABLE (NA)



TOPOGRAPHIC PLAN (as of 2003) PROVIDED BY THE COUNTY OF SAN BERNARDINO

FIGURE 9-1b
 JANUARY 2005 GROUNDWATER EQUIPOTENTIAL CONTOURS (LOWER ZONE)

WATER QUALITY MONITORING REPORT
 FIRST QUARTER (WINTER) 2005
 MILKEN SANITARY LANDFILL
 COUNTY OF SAN BERNARDINO, CA

GeoLogic Associates
 Geologists, Hydrogeologists, and Engineers

DRAWN BY: VL DATE: MARCH 2005 JOB NO. 2004-136



EXPLANATION:

- ABANDONED LYSIMETER
- MONITORING WELL LOCATION AND GROUNDWATER ELEVATION (FEET) ABOVE MEAN SEA LEVEL
- PIEZOMETER LOCATION AND GROUNDWATER ELEVATION (FEET) ABOVE MEAN SEA LEVEL
- SOIL-PORE GAS MONITORING PROBE
- SURFACE WATER SAMPLING LOCATION
- CONTOUR LINE SHOWING GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION (DASHED WHERE UNCERTAIN, CONTOUR INTERVAL = 1 FOOT)
- GROUNDWATER FLOW DIRECTION (JANUARY 2005)
- GROUNDWATER ELEVATION DATA NOT AVAILABLE
- DATA NOT USED TO CONSTRUCT CONTOURS

M-19

Landfill Gas Impacts on the Adjacent Northern Property

County of San Bernardino Milliken Sanitary Landfill

November 2005



Prepared For:

County of San Bernardino Solid Waste Management Division
222 W. Hospitality Lane, Second Floor
San Bernardino, California 92415

Prepared By:



BRYAN A. STIRRAT & ASSOCIATES
1360 Valley Vista Drive
Diamond Bar, California 91765

COUNTY OF SAN BERNARDINO
MILLIKEN SANITARY LANDFILL

LANDFILL GAS IMPACTS ON THE
ADJACENT NORTHERN PROPERTY

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LIST OF FIGURES

Figure 1: Conceptual Gas System Plan Modifications

LIST OF ATTACHMENTS

Attachment A: Report of Preliminary Evaluation Landfill Gas Impacts on Property
Adjacent to Milliken Landfill

SECTION 1.0

1.0 INTRODUCTION

The Milliken Sanitary Landfill (MSL) is an inactive municipal solid waste disposal facility owned and operated by the County of San Bernardino Solid Waste Management Division (SWMD). The County of San Bernardino SWMD is evaluating the possible sale of the property north of the existing main mound of the MSL; an area encompassing approximately 98.77 acres. A 50 foot utility easement (sewer) exists on which the County will retain an overlying easement in order to have access for maintenance of the landfill site.

The site is located at 2050 S. Milliken Avenue Ontario, California. Industrial businesses are located along the northern property boundary. Prior to purchasing the adjacent northern property, the County was involved in a legal dispute with the site's previous owner. The owner intended to construct a commercial development at the site and sued the County for damage relating to perceived scheduling delays and the added costs involved in constructing the necessary systems to protect proposed site buildings from methane migration.

Subsequent to the lawsuit an investigation was performed by "Converse Environmental West" on behalf of Latham & Watkins, Attorneys at Law who provided counsel to the SWMD. The results of this investigation are summarized in a report titled "Report of Preliminary Evaluation; Landfill Gas Impacts on Property Adjacent to Milliken Landfill" (see Attachment A). As mentioned in the report, in early 1989, concentrations of methane gas up to 50% were reported in perimeter probes adjacent to the Northeast Corner. After the completion of the installation of a landfill gas (LFG) extraction system in 1990 the probes were reported not to exceed 2% methane. The LFG extraction system has been upgraded in subsequent years with the construction of additional wells.

As previously stated, the landfill is an "inactive" landfill that stopped receiving waste in year 1999 and has gone through the closure process. Because of County budget constraints, the landfill was "closed" in two steps. Partial closure of the north and east sides of the landfill including the "East Mound" was performed in 1999. The remaining portions of the landfill comprised of the southern, western, and top deck areas were closed in years 2004 and 2005. An active LFG extraction system encompasses the entire site, however the extraction system on the northern perimeter of the landfill was designed and constructed with the understanding that the adjacent northern property would be vacant. The existing LFG system in its current state will not be adequate to ensure compliance with Rule 1150.1 if a development is located within 1,000 feet of the limits of waste. In order to be in compliance with Rule 1150.1 and to

significantly reduce the potential for migration of LFG the SWMD will make substantial improvements to the LFG extraction system prior to any construction as outlined in Section 4.0 of this report. After the LFG is extracted, it is routed to a flare station where it is combusted, and to a power generation facility owned and operated by Algonquin Power Systems, Inc.

SECTION 2.0

2.0 REGULATIONS

Enforcement of regulatory compliance for LFG emissions and migration control at the MSL is the responsibility of the South Coast Air Quality Management District (SCAQMD) who monitors and enforces Rule 1150.1 "Control of Gaseous Emissions from Solid Waste Landfills". The requirements of this rule incorporate State and many Federal requirements included under the Federal "New Source Performance Standards", 40 CFR, Part 60, Section 60.759.

The SCAQMD Rules 1150.1 and 1150.2 were adopted in 1985 and were developed to limit the surface emissions and subsurface migration of LFG from municipal solid waste (MSW) landfills. When the rules were first enacted, Rule 1150.1 was designated solely for active landfills and 1150.2 was designated for inactive landfills. As of 1998, the current regulation merges the two rules into Rule 1150.1 to regulate both active and inactive landfills. Rule 1150.1 does not specifically regulate any off site construction or off site systems utilized to control subsurface LFG migration, Rule 1150.1 does, however, regulate the offsite subsurface migration and mandates that landfills which are subject to Rule 1150.1 must install and maintain subsurface refuse boundary probes to determine if LFG is migrating off site. The California Integrated Waste Management Board also requires that refuse boundary probes be installed to detect and ultimately prevent subsurface migration of LFG past the permitted landfill/disposal site property boundary, and to prevent accumulation of LFG in on-site structures.

To this end, SCAQMD stipulates that perimeter probes must be designed and installed at a spacing which is determined by the current land use within 1,320 feet (¼mile) from the adjacent refuse boundary, must be located outside the refuse boundary, and must be installed no further than 100 feet from the refuse boundary. For the northern boundary of the MSL, the SWMD has indicated that a 50 foot utility easement exists on which the County will retain an overlying easement which will also function as a buffer zone to reduce the potential of LFG migrating into the adjacent property. SWMD plans on placing perimeter probes at the edge of this boundary. Table 1 indicates the required probe spacing as dictated by the adjacent land use.

TABLE 1

LAND USE	SPACING
Commercial/Residential	100 feet
Public Access	500 feet
Undeveloped Open Space (No Public Access)	650 feet
Landfill with Liners	1,000 feet

The rule also states that each probe shall be capped, sealed, and have a sampling valve, and depending on depth of the refuse within 500 feet of proposed probe, may have a multiple depth design as shown in Table 2.

TABLE 2

First depth	10 feet below surface
Second depth	25% of refuse depth or 25 feet below surface, whichever is deeper
Third depth	50% of refuse depth or 50 feet below surface, whichever is deeper
Fourth depth	75% of refuse depth or 75 feet below surface, whichever is deeper

Second, third, or fourth depth probes may be deleted if the required depth of such probe is deeper than the depth of the refuse.

SECTION 3.0

3.0 EXISTING SITE CONDITIONS

The Milliken landfill has a landfill gas extraction system (LFGES) in place which consists of 284 wells and three flares. A Co-Gen Plant converting LFG to electricity is operated by Algonquin Power Systems at the site. Just a short time ago, 56 new wells were put in place during the recent closure of the landfill that was performed this year. The LFGES has been effective in keeping the site in compliance with SCAQMD Rule 1150.1 by controlling the migration of Landfill Gas and Emissions. The north side of the landfill has historically been prone to subsurface LFG migration. This is most likely due to the native geology. On several occasions BAS monitoring of the probes has indicated significant migration around Probes MLP0380, MLP0390, MLP0400, and MLP0410. SWMD previously installed two vertical wells near probes MLP0390 and MLP0400 to mitigate subsurface LFG migration in areas. BAS evaluates and tunes the adjacent LFG extraction wells when necessary and has been successful in mitigating LFG migration. Final cover was placed on the North and East Slopes in 1999. Several LFG wells were constructed with this project.

Additionally, many wells on the north side of the MSL have shown a tendency for aerobic composting and elevated subsurface temperatures since the initial closure of the northern portion of the site. This has been an ongoing problem in that area that has existed for many years. After the initial closure of this area, significant settlement was noted causing cracks and fissures in many areas which could have easily allowed air to be drawn into refuse increasing composting. Erosion had also played a significant role. On several occasions after heavy precipitation, erosion ruts up to two feet in depth has been noted. In both cases the SWMD was notified and the problems were immediately repaired. Drainage structures were constructed and grading of the site was performed during the recently completed final closure project which should help reduce erosion of the site. Historically, the area near the high tension power lines have also been an area of subsurface high temperatures and have existed for more than ten years. Since surface emissions have been controlled along the northern side of the landfill, wells showing a tendency for aerobic composting have been tuned down or turned off.

SECTION 4.0

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 PROBES

Due to the proximity of the future structures on the adjacent northern property, compliance with SCAQMD Rule 1150.1 will require that perimeter subsurface refuse boundary sampling probes be installed on 100 foot spacings. Although not necessary, it is recommended these probes be installed at the property boundary, but no more than 100 feet from the refuse boundary (Figure 1). The SWMD plans on installing these probes at the edge of the 50-foot easement mentioned in Sections 1.0 and 2.0 prior to any construction on the adjacent property. Currently there are seven (7) probes along the north side of the landfill. These probes should be abandoned and replaced at the property boundary. The existing probes consist of MPL0360a/b/c/d, MPL0370a/b/c/d, MPL0380 a/b/c/d, MPL0390a/b/c/d, MPL0400a/b/c/d, MPL0410a/b/c/d, and MPL0420 a/b/c/d.

4.2 LANDFILL GAS EXTRACTION SYSTEM

In addition to the monitoring probes, vertical LFG extraction wells must be installed along the entire length of the northern property boundary (Figure 1). Installation of 33 wells in trash along the lower bench of the landfill is recommended in order to provide the level of mitigation effort required for safety issues for the adjacent structures, as well as Rule 1150.1 compliance. These wells should be installed in refuse to or near the bottom of the landfill without penetrating the bottom. The wells should be fabricated with a minimum of 3" diameter HDPE or PVC pipe and incorporate a wellhead with a valve able to control the flow from each well. In addition, a sample and temperature monitoring port shall be included. Where possible, the new proposed well shall connect to the existing extraction system which will be determined during the LFG extraction system design phase. If not, new header and lateral piping may be required. A condensate handling system including condensate sumps, compressed air supply piping, and condensate conveyance piping may be required. The need for such a system will be determined during the design phase of the project. The SWMD will upgrade the LFGES per the above recommendations prior to commencement of construction on the adjacent property in order to substantially decrease the risk of offsite migration of LFG.

4.3 BUILDING PROTECTION

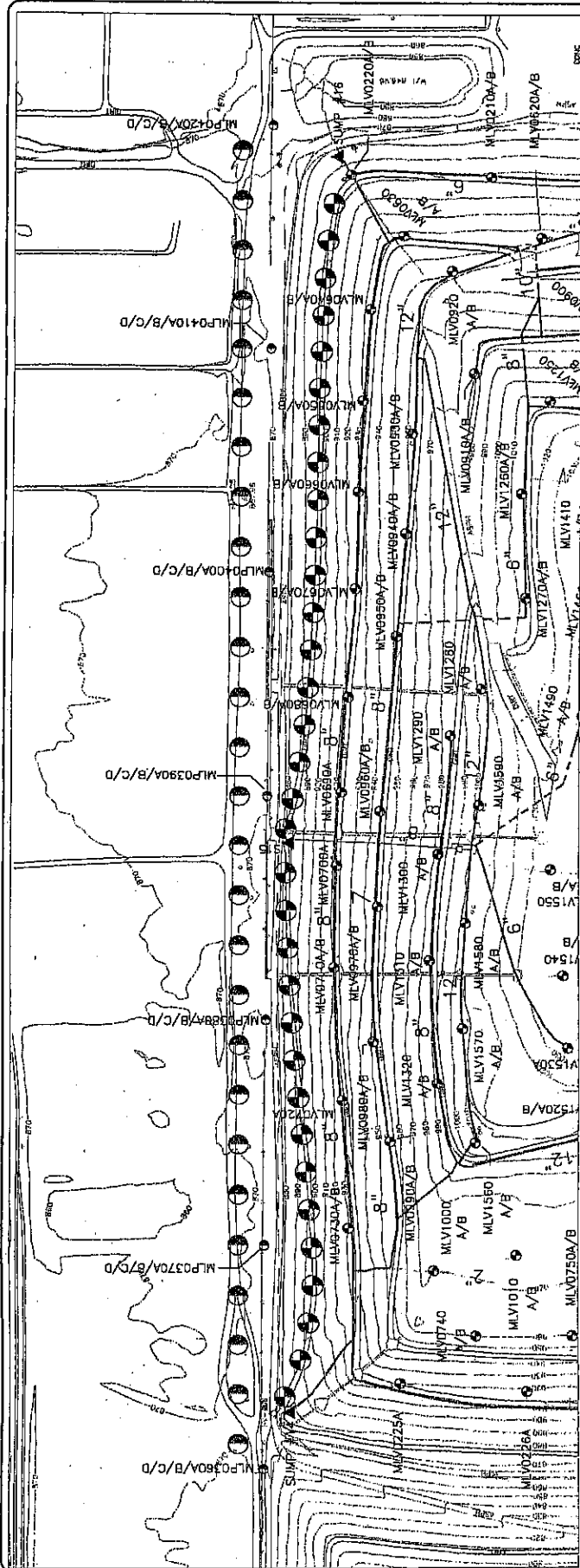
As of this report's date the San Bernardino County Building Code does not include any requirements for buildings or structures constructed near landfills. However, BAS recommends that any offsite structure within 200 feet of the refuse boundary incorporate

a passive subsurface ventilation system along with a polyethylene or PVC vapor barrier integrated into the foundation design of the building. Sub slab monitoring probes could be designed and installed beneath the foundation system. These probes could be monitored manually by OM&M personnel. In lieu of sub-slab probes, an automated network of sensors could be installed and routed to a central computer where periodic sensor status could be monitored.

4.4 MONITORING

After construction of the adjacent off-site structures, BAS recommends weekly monitoring of the subsurface refuse boundary sampling probes on the north side of the landfill. Each probe would be monitored for Total Organic Compounds (TOCs) using a portable FID or a Landtec Gem instrument. Prior to sampling, the Field Technician would take a static pressure measurement, and then evacuate the probe until the TOC concentration remains constant for a minimum of 30 seconds. The gas concentration would be recorded after the probe has been purged.

FIGURE 1



LEGEND

- PROPOSED VERTICAL GAS EXTRACTION WELL
- PROPOSED LANDFILL GAS MONITORING PROBE
- ⊙ EXISTING VERTICAL GAS EXTRACTION WELL
- ⊖ EXISTING BELOW GRADE VERTICAL GAS EXTRACTION WELL
- ⊕ EXISTING LANDFILL GAS MONITORING PROBE
- ⊗ EXISTING GAS EXTRACTION HEADBURY/LATERAL
- ⊘ EXISTING BELOW GRADE GAS EXTRACTION HEADBURY/LATERAL
- ▲ CONDENSATE TANK OR PUMP STATION
- * REDUCER
- △ VALVE

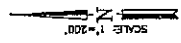


FIGURE 1

(909) 860-7777

BAS

BRYAN A. STIRRAAT & ASSOCIATES
 CIVIL AND ENVIRONMENTAL ENGINEERS
 1360 VALLEY VISTA DRIVE DAMOND BAY, CA 91765

MILLIKEN SANITARY LANDFILL

CONCEPTUAL GAS SYSTEM PLAN MODIFICATIONS

JOB NO.
2006-0085

DATE
10/2/05

DRAWN BY
SMA

CHECKED BY

H:\DWG\SSWAD\MILLIKEN_2004\FIGURES\FAS2006B.DWG

ATTACHMENT A

CONVERSE
ENVIRONMENTAL **WEST**

Inland Empire Office

630 East Brier Drive, Suite 100
San Bernardino, California 92408

Telephone 714 /889-
8004 FAX 714 889-4830

CONFIDENTIAL
ATTORNEY WORK -PRODUCT
ONTARIO INDUSTRIAL PARTNERS V.
COUNTY OF SAN BERNARDINO
Report of Preliminary Evaluation;
Landfill Gas Impacts on Property
Adjacent to Milliken Landfill

PREPARED FOR:

LATHAM & WATKINS, ATTORNEYS AT LAW
701 "B" STREET, SUITE 2100 SAN DIEGO,
CALIFORNIA 92101-8197

CCIE PROJECT NO. 91-16-232-01

OCTOBER 8, 1991

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Group

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1.0 INTRODUCTION

The County of San Bernardino Solid Waste Management Department is involved in a lawsuit with the owner of the land parcel on the north side of Milliken Landfill. The land owner has sued the County for damages related to delays in his schedule for the commercial development of the property and for extra costs that may be incurred in providing protective measures against methane and other landfill gases that may be necessary to provide safe occupancy for buildings developed on the property.

The issue affecting the settlement of the case appears to be a question of the potential for migration of significant quantities of landfill gas in the subsurface to distances of up to and beyond 1000 feet from the Milliken Landfill. In this instance, significant refers to concentrations of gas, which may provide a potential for explosion or asphyxiation. If sufficient potential for significant migration exists at and beyond a 1000-foot distance, then mitigation measures to limit explosion hazards may be necessary.

The Los Angeles County Building Code requires that mitigation measures be addressed for buildings proposed within 1000 feet of a municipal solid waste landfill. San Bernardino County has no similar code or ordinance. The Uniform Building Code (usually adopted when a governmental jurisdiction does not have its own set of building codes) does not address this issue at all. Regulations, which address landfill gas migration from active landfills include California Code of Regulations Title 14, Division 7, Chapter 3, Article 7, Section 17705 and South Coast Air Quality Management District Rule 1150.1 (Control of gaseous emissions from active landfills). Neither of these regulations specifically addresses distances from landfills within which subsurface landfill gas migration is considered a potential problem. However, in a letter on the subject by an employee of the San Bernardino County Department of Environmental Health Services (DEHS), several vague statements were presented which have contributed to confusion as to what is applicable for the case at the Milliken Landfill.

The purpose of this project was to provide technical support to counsel for the San Bernardino County Solid Waste Management Department and the County Counsel in assessing the potential for significant migration of landfill gas from the Milliken landfill on the plaintiff's property. This support involved both straightforward technical issues and professional judgment.

2.0 SCOPE OF INVESTIGATION

The scope of the investigation and evaluation of the potential for significant migration of landfill gas from Milliken landfill involved the tasks listed below.

Task 1: Gather and Review Data and Determine Standard of Practice

The project team assembled and reviewed data available, including data from the County and the plaintiff. An evaluation of the relative presence of landfill gas in the zone from 1000 feet to 2000 feet from the landfill property boundary was performed. The project team researched the standard of practice applicable to the development of property adjacent to a landfill in San Bernardino County.

Task 2: Site Visit

Members of the project team visited the site to develop a context for the issues.

Task 3: Recommend Additional Data Collection

As deficiencies in the data were found, recommendations have been developed for future data collection.

Task 4: Discussion Meeting

The leader of the project team met with the Solid Waste Management Department and the County Counsel on three occasions to discuss the technical issues of the case and to contribute to discussions on how the case may be settled in the best interests of the County.

Task 5: Further Technical Tasks. As Needed

The project team will perform additional technical tasks, as needed, upon separate authorization by the Client.

Task 6: Provide Support to County

The project team will provide the needed support to the County in terms of expert testimony, a technical report, or other means necessary to help the County arrive at a settlement of the case.

At this time, tasks 1 through 4, plus portions of task 6 (this Report) have been performed.

3.0 AVAILABLE DATA

Data reviewed by members of the project team included the following:

- Text of proposed legislation: AB 1388, May 15, 1991 and July 14 amendments.
- California Code of Regulations Title 14, Division 7, Chapter 3, Article 7.6 and Title 23, Chapter 3, Subchapter 15, Article 9.
- South Coast Air Quality Management District, Rule 1150.1 and Guidelines for Implementation of Rule 1150.1.
- I.T. Corporation, Final Report: Solid Waste Assessment Test, Milliken Sanitary Landfill, June 1989.
- Quarterly Reports, prepared by STRATA Technologies Inc. of landfill gas monitoring in support of AQMD Rule 1150.1. Reports included four quarters of 1989 and 1990.
- Status Report, dated May 14, 1991, prepared by SCS Field Services, of the operation, monitoring and maintenance of the landfill gas collection and migration control system at Milliken landfill.
- Raw data of landfill gas sample analyses collected from County subsurface gas migration monitoring probes by Dames & Moore. Laboratory analysis was performed on these samples in February, 1991.
- An assortment of raw data of direct landfill gas monitoring probe measurements and laboratory analysis of gas samples, apparently collected by Dames & Moore and BCI Associates. These data encompass a period from April 1986 through July 1990.

The quarterly reports prepared by STRATA Technologies Inc. are assembled packages of landfill monitoring results to detect the presence of significant migration of landfill gas away from the in-place municipal solid wastes. The monitoring includes Integrated (composited over an area) Surface Emission Samples (ISS) collected directly above the soil covering the waste, landfill gas collection system sampling and perimeter (outside waste boundaries) probe monitoring. These data suggest that the landfill is generating significant quantities of combustible gases; however, limited concentrations of combustible gases were measured emitting through intermediate landfill cover and through the subsurface adjacent to the landfill. In 1989, the County installed a gas collection system within the landfill, which encompassed most of the perimeter of the landfill except the northeast corner. By the end of 1990, the gas collection system was extended fully around the perimeter, and an interior gas collection system had been installed. In early 1989, significant combustible gas concentrations (up to 50% methane) were reported in perimeter probes adjacent to the northeast corner (no gas control system) of the landfill. By the last quarter of 1990, the perimeter probe combustible gas measurements were reported

91-16-232-01

not to exceed 2 percent methane.

The SCS Field Services status report measured the relative effectiveness of the landfill gas collection system as a function of combustible gas concentration produced from the landfill and combustible gases detected in the subsurface soil adjacent to the landfill. The reported results of measuring the perimeter probes used to monitor, subsurface migration of landfill gas indicated no detectable concentrations of combustible gas (inferred detection limit of 0.1 % methane by volume.) There is, however, neither procedural information pertaining to the methods of data collection nor quality control procedures documentation associated with the data.

The remaining data are considered raw. These "raw" data were supplied to the project team by plaintiff's counsel and intentionally included only raw measurements without procedural documentation or data evaluation. The "raw" data include measurements of combustible gas apparently made by both field instruments and/or through the collection of gas samples and subsequent laboratory analysis. These measurements were apparently made at subsurface probe locations along the northern and eastern landfill boundaries and at distances from those boundaries of 200, 400, 800, 1200, 1625 and 2000 feet from the landfill.

These "raw" measurements were also made along the Fontana Interceptor sewer manholes. The Fontana Interceptor is a sanitary sewer which carries sewage from the City of Fontana to the Chino Basin Municipal Water District's Regional Wastewater Treatment Plant No.1 in Ontario. This sewer line runs east-west along the northern landfill boundary.

The reported results presented based on this "raw" data suggest that in early 1985, prior to the installation to the landfill gas collections system, concentrations of combustible (landfill) gas up to 400 parts per million were noted (presumably from the subsurface) at distances of up to 400 feet beyond the landfill. Measurements from the more distant probe locations (800 feet and further) were reported as "no readable amounts of landfill gas" (letter to Mr. Dave Ariss, California Commerce Center from BCL Associates, July 1, 1986). Also, significant concentrations of combustible gas (up to 50%) were reported as emanating from a few of the sewer man holes, especially those nearest landfill perimeter probes which had exhibited measurable combustible gases.

Geologic information obtained from the IT Corporation Solid Waste Assessment Test (SWAT) Report indicates geologic conditions in the area of the landfill consist of horizontally stratified sand and mixture of gravel, sand, silt and clay. This report does not provide geologic information to the north of the property; however, the sediments comprising the subsurface at distances of 1000 to 2000 feet could reasonably be expected to be similar to conditions adjacent to the landfill. The information from the SWAT report indicates that, in general, the subsurface materials, to depths of approximately 250 feet, are relatively permeable. However, there are indications that thin layers of lower permeability sediments (containing appreciable silt and clay) exist in this interval. The degree to which these low permeability layers exhibit continuity to the north of the landfill is not known.

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4.0 DISCUSSION OF AVAILABLE INFORMATION

The data available have been qualified relative to our understanding of the procedures and protocols used in their collection. As little is known regarding the quality control and data collection protocol, the ability to derive definitive conclusions based upon, these data is limited.

From the "raw" data available it is evident that significant off-site migration of landfill gas from the Milliken Landfill has occurred in the past. The available data suggest that this migration extended to distances of at least 400 feet. These data also suggest that landfill gas was not measurable in the subsurface beyond 800 feet from the landfill. The presence of significant concentrations of combustible gas measured at a few of the manholes along the Fontana Interceptor (which runs along the north landfill boundary) suggests that landfill gas may be entering the sewer. This implies that the sewer and/or sewer backfill may provide a conduit for the entrance, and transmission of landfill gas to the north.

The data collected by STRATA Technologies provide some substantiation that the landfill gas collection system is limiting migration from the landfill. The reduction in combustible gas concentrations in the northeast corner probe measurements between early 1989 and late 1990 (which cover the period under which that portion of the collection system was installed) provide this substantiation. As the pneumatic characteristics of the probes measured are not defined in the data, a direct evaluation of the effectiveness of the collection system cannot be made from these data.

There is evidence, presented in the SW AT Report, that landfill gas may be present at significant concentrations directly beneath the landfill at the water table (approximately 250 feet below ground). The extent to which this "deep" gas may migrate to the north cannot be determined from the existing data.

5.0 DISCUSSION OF EXPERIENCE AND OPINION

The project team believes the following statements are applicable to the Milliken Landfill, based upon previous experience at other landfills.

- Landfill gas moves by pressure gradient and concentration gradient (diffusion) through the soil, the pressure gradient being a potentially greater driving force.
- Landfill gas moves rather easily through permeable alluvial soil.
- Landfill gas will not build up great pressures in permeable soils if there is an escape route or "path of least resistance" to the atmosphere.
- Landfill gas will readily vent itself through silty sandy soil, provided that the soil is not overly wet, paved over or otherwise capped against the movements of the gas, and provided that there are not subsurface features, such as clay or other impermeable layers, which trap and force gases laterally. Constructed utility lines provide such subsurface features and are conduits for the lateral transmission of landfill gas.
- Los Angeles County has had good success in preventing landfill gas related problems by enforcing its Building Code Section 30SC, which requires gas investigations and mitigation for all development within 1,000 feet of sanitary landfills.
- Only in rare cases has landfill gas migrated more than 1000 feet, although there are documented cases of migration over much greater distances.
- The subsurface alluvial materials present around the Milliken Landfill site would not appear to harbor anomalies, which could send landfill gas migrating great distances.

These statements should be considered applicable only to current (i.e. undeveloped) site conditions. As the landfill ages, more refuse will accumulate, and the potential for increased gas production may be enhanced. Development within the area north of the landfill can create conditions, which can increase the rate and distance of subsurface migration. Of particular significance are the utility lines (conduits for migration) and paving and landscaping (capping) of the ground surface.

6.0 CONCLUSION AND RECOMMENDATIONS

The opinion of the project team, based upon the available data reviewed and previous experience is that significant landfill gas migration beyond 1000 feet north of the landfill is not likely under the current site conditions. Based upon the team's experience with similar sites, it is believed that a 1000-foot buffer zone surrounding the landfill for gas control and monitoring will be adequate and precludes the necessity of landfill gas control measures beyond the 1000-foot buffer, given the following assumptions.

- The sewer line adjacent to the landfill may provide a conduit for the migration of landfill gas and should be investigated for this possibility.

- All development in the buffer zone should incorporate parking lot vent piping systems, and building subslab vent piping systems. This is to also include subsurface utility lines and other facilities which may provide conduits to gas migration.

- Subslab gas barrier membranes should be used in some zone around the landfill, possibly a narrower zone than the full 1000-foot buffer area.

- Following development of the buffer strip, the existing monitoring probe system should be monitored at some prescribed frequencies, with data reviewed by the County to insure that methane migration is not a problem.

- All soils/geologic investigations for new construction within and adjacent to the 1000 foot buffer zone should include a study of methane gas potential by measuring gas and logging soils strata a sufficient depth below grade.

- The site conditions, regarding the potential for subsurface methane gas migration, may create disclosure obligations for the County in future land transactions associated with this buffer zone. The County should consult with its attorney regarding these disclosure issues.

To provide certainty to the opinions presented within this report, the following testing is recommended within the 1000-foot buffer zone.

- Install monitoring probes at various depths up to approximately 100 feet, and at various distances from the landfill, such as 100 feet, 250 feet, 500 feet and 1000 feet. Installation and monitoring of deeper (200 feet deep) probes adjacent to the landfill should be considered to characterize the potential for deeper gas migration.

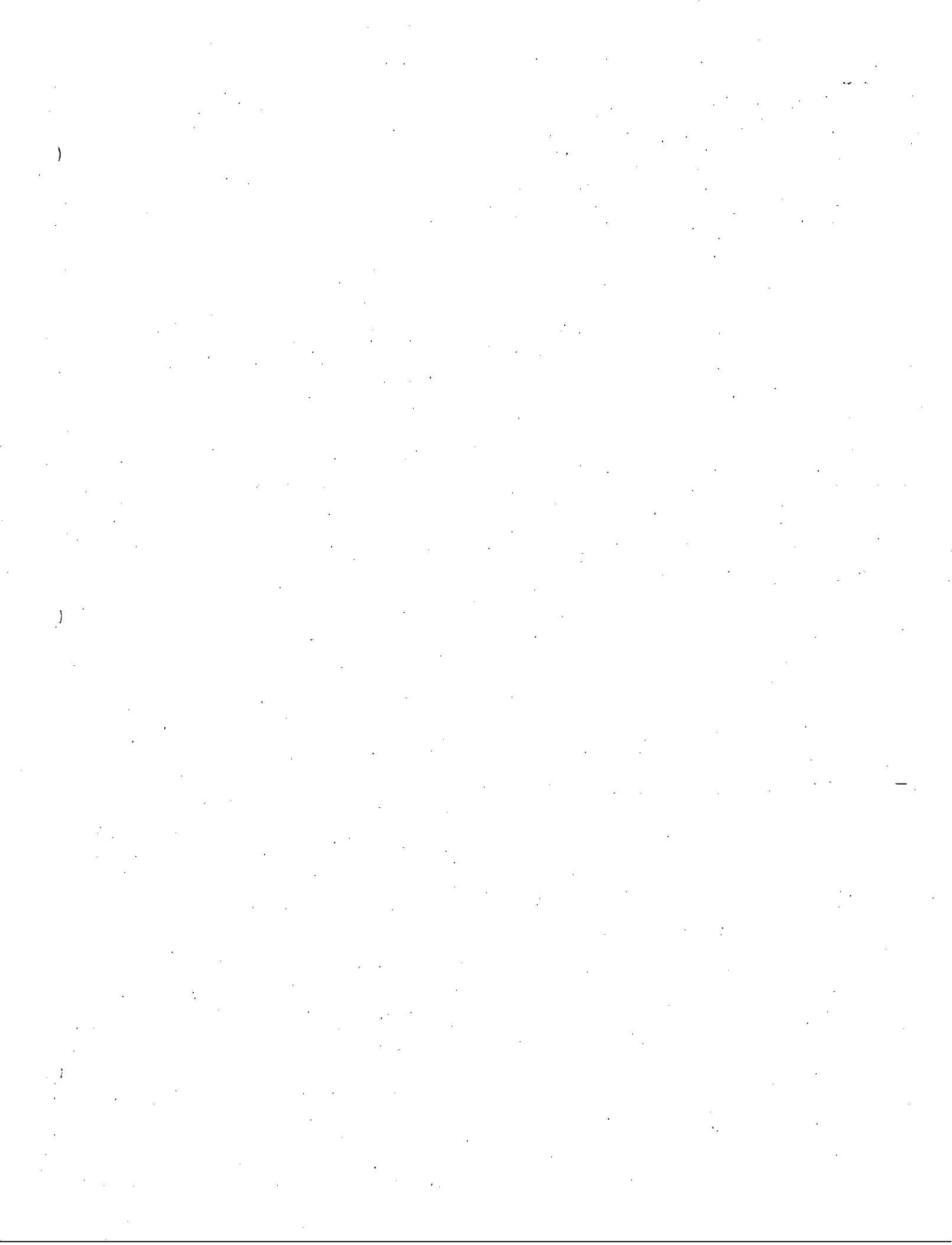
- Log all borings and especially identify impermeable layers. Modify the probe design depths if necessary to put probes under significant clay layers.

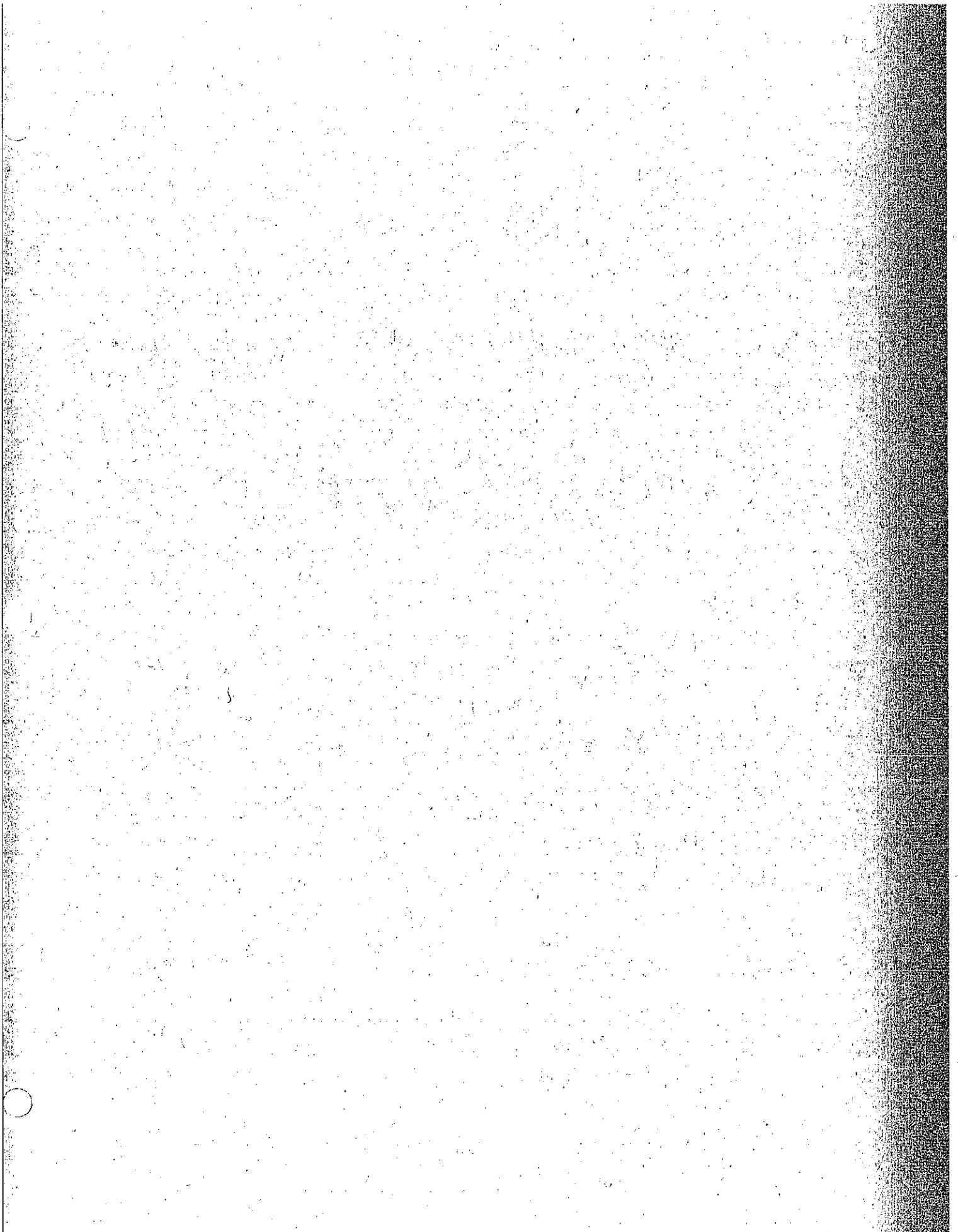
▪ Evaluate the efficiency of the installed probes relative to subsurface pneumatic characteristics.

• Monitor the probes several times for combustible gas content, pressure, record time of day, etc. with the gas extraction systems running.

• Then monitor the probes repeatedly during a period of time when the gas extraction system is shut down for several days.

• Evaluate data collected above to determine farthest gas migration, gas migration travel time, and other parameters.





Milliken Historical Landfill Gas Perimeter Probe Monitoring Data

Attached is a copy of the historical probe data for the last four years for the Milliken Sanitary Landfill. The data shows that all the probes are below the 5% by volume methane gas level set forth in rule 1150.1 for the detection and monitoring of landfill gas migration. The data on the chart is shown as parts per million by volume. To convert into a percentage you divide the number on the chart by 10,000. The probes adjacent to the parcel have been highlighted. The parcel was originally purchased as a buffer area for the migration of landfill gas. A landfill gas extraction system was installed subsequent to this purchase. There does not appear to be any migration of landfill gas offsite based on the landfill gas perimeter probe data.

**TABLE 10-2
HISTORICAL PERIMETER PROBE MONITORING DATA
MILLIKEN SANITARY LANDFILL**

Quarter	MLP0020A	MLP0020B	MLP0030A	MLP0030B	MLP0040A	MLP0040B	MLP0050A	MLP0050B	MLP0060A	MLP0060B
Methane (ppmv)										
Q3 2000	3	4	3	3	3	4	4	4	4	3
Q4 2000	4	4	4	4	4	4	4	4	3	3
Q1 2001	2	3	3	4	3	3	3	4	3	3
Q2 2001	5	6	5	5	6	5	5	5	5	5
Q3 2001	3	4	5	4	4	4	6	4	5	4
Q4 2001	3	3	3	3	3	3	2	3	2	2
Q1 2002	2	2	2	3	2	2	3	3	2	2
Q3 2002	5	6	6	6	5	4	3	4	5	6
Q1 2003	2	2	2	2	2	2	2	2	2	2
Q2 2003	5	5	6	5	5	5	5	6	6	6
Q3 2003	2	2	2	3	3	4	2	3	3	3
Q4 2003	3	3	3	4	4	5	3	3	3	3
Q1 2004	3	3	4	4	4	4	4	4	7	10
Q2 2004	5	5	5	5	5	5	5	5	5	5
Q3 2004	4	4	4	4	4	4	3	4	4	3
Q4 2004	4	4	3	4	5	4	3	2	3	2
Q1 2005	2	2	6	2	5	2	5	2	5	2
Q2 2005	2	2	2	2	2	2	2	2	2	2
Q3 2005	3	3	4	4	4	4	4	4	3	3

Notes:

ND - not detected; less than 0.1% methane by volume or less than 2 ppmv methane.

NT - Probe not monitored due to buried or damaged casing.

A,B,C,D represents multi-depth probes

**TABLE 10-2 (Cont.)
HISTORICAL PERIMETER PROBE MONITORING DATA
MILLIKEN SANITARY LANDFILL**

Quarter	MLP0070A	MLP0070B	MLP0080A	MLP0080B	MLP0090A	MLP0090B	MLP0100A	MLP0100B	MLP0110A	MLP0110B
	Methane (ppmv)									
Q3 2000	3	3	3	5	4	3	3	4	5	4
Q4 2000	4	3	4	4	3	4	4	4	4	4
Q1 2001	2	3	3	3	3	3	3	3	3	3
Q2 2001	5	5	4	6	5	5	4	5	4	5
Q3 2001	3	4	4	4	5	5	4	4	5	6
Q4 2001	3	3	3	3	3	3	3	2	3	3
Q1 2002	2	2	3	2	2	2	2	2	3	2
Q3 2002	7	6	5	4	5	5	6	5	7	6
Q1 2003	2	2	2	2	2	2	2	2	2	2
Q2 2003	5	6	5	6	6	6	5	6	6	6
Q3 2003	3	3	2	3	2	2	2	2	2	3
Q4 2003	3	3	3	3	3	3	3	3	3	3
Q1 2004	4	4	4	4	3	4	4	4	4	5
Q2 2004	5	5	5	5	5	5	4	4	5	5
Q3 2004	4	3	3	3	2	3	4	3	2	3
Q4 2004	2	3	2	2	2	2	3	2	3	3
Q1 2005	2	2	2	2	2	2	2	2	2	2
Q2 2005	2	2	2	2	2	2	3	3	3	3
Q3 2005	3	3	3	3	3	3	3	3	3	3

Notes:

ND - not detected; less than 0.1% methane by volume or less than 2 ppmv methane.

NT - Probe not monitored due to buried or damaged casing.

A,B,C,D represents multi-depth probes

**TABLE 10-2 (Cont.)
HISTORICAL PERIMETER PROBE MONITORING DATA
MILLIKEN SANITARY LANDFILL**

Quarter	MLP0170A	MLP0170B	MLP0180A	MLP0180B	MLP0190A	MLP0190B	MLP0200A	MLP0200B	MLP0210A	MLP0210B
Methane (ppmv)										
Q3 2000	5	5	4	5	2	2	2	5	4	4
Q4 2000	4	4	4	5	5	5	4	4	6	6
Q1 2001	3	3	5	10	3	2	3	3	4	3
Q2 2001	6	6	6	4	6	6	5	6	2	3
Q3 2001	5	4	6	6	7	7	8	6	6	5
Q4 2001	3	3	3	3	3	3	3	3	3	2
Q1 2002	2	2	2	2	2	3	2	2	3	3
Q3 2002	5	8	8	7	6	6	6	7	5	6
Q1 2003	2	3	2	2	2	3	3	2	2	4
Q2 2003	6	5	5	5	6	6	6	5	5	5
Q3 2003	NT	NT	3	4	3	3	3	3	3	3
Q4 2003	4	4	4	4	4	4	4	4	4	4
Q1 2004	4	6	4	4	3	4	4	4	4	4
Q2 2004	5	5	5	6	6	6	7	5	5	5
Q3 2004	2	5	3	5	3	5	3	5	3	4
Q4 2004	4	4	2	3	4	4	3	3	2	2
Q1 2005	2	2	7	2	2	2	2	2	2	2
Q2 2005	3	3	2	2	2	2	2	2	2	2
Q3 2005	3	3	3	3	3	3	3	3	3	3

Notes:
 ND - not detected; less than 0.1% methane by volume or less than 2 ppmv methane.
 NT - Probe not monitored due to buried or damaged casing.
 A,B,C,D represents multi-depth probes

**TABLE 10-2 (Cont.)
HISTORICAL PERIMETER PROBE MONITORING DATA
MILLIKEN SANITARY LANDFILL**

Quarter	MLP0220A	MLP0220B	MLP0230A	MLP0230B	MLP0240A	MLP0240B	MLP0250A	MLP0250B	MLP0260A	MLP0260B
	Methane (ppmv)									
Q3 2000	NT	NT	2	2	NT	NT	2	3	2	5
Q4 2000	NT	NT	4	6	NT	NT	5	5	4	4
Q1 2001	NT	NT	2	3	NT	NT	3	3	3	3
Q2 2001	2	3	5	5	5	5	5	3	4	4
Q3 2001	6	6	6	6	6	5	7	7	6	6
Q4 2001	3	3	4	3	3	3	3	3	3	3
Q1 2002	2	2	2	2	2	3	2	2	2	3
Q3 2002	10	9	8	9	8	8	7	8	5	5
Q1 2003	2	2	2	2	2	2	2	2	2	2
Q2 2003	5	5	5	5	5	5	5	6	5	5
Q3 2003	3	3	2	2	2	2	3	2	3	3
Q4 2003	5	3	3	3	4	4	4	4	4	4
Q1 2004	5	5	4	4	4	4	4	4	4	4
Q2 2004	5	5	5	5	5	4	3	4	5	5
Q3 2004	5	3	3	3	2	3	4	4	2	3
Q4 2004	2	2	2	2	4	4	4	3	4	4
Q1 2005	2	2	2	2	2	2	5	5	4	5
Q2 2005	2	2	2	2	2	2	2	2	4	3
Q3 2005	3	3	3	3	3	3	3	3	3	3

Notes:

ND - not detected; less than 0.1% methane by volume or less than 2 ppmv methane.

NT - Probe not monitored due to buried or damaged casing.

Multi-Depth Probes MLP0220A/B and MLP0240A/B were destroyed during field operations. They were replaced in March 2001. A,B,C,D represents multi-depth probes

TABLE 10-2 (Cont.) HISTORICAL PERIMETER PROBE MONITORING DATA MILLIKEN SANITARY LANDFILL											
Quarter	MLP0270A	MLP0270B	MLP0280A	MLP0280B	MLP0290A	MLP0290B	MLP0300A	MLP0300B	MLP0300C	Methane (ppmv)	
Q3 2000	2	3	3	2	2	3	2	2	2	4	4
Q4 2000	4	4	6	5	5	5	5	5	5	5	5
Q1 2001	3	2	3	3	2	3	5	3	3	3	3
Q2 2001	3	4	4	4	5	4	3	2	2	3	3
Q3 2001	5	5	5	5	5	6	6	6	6	5	5
Q4 2001	3	3	2	2	2	2	3	3	3	3	3
Q1 2002	2	3	2	2	2	2	3	3	3	3	3
Q3 2002	4	4	6	4	5	5	7	8	8	8	8
Q1 2003	3	4	2	2	2	2	2	2	2	2	2
Q2 2003	5	5	6	6	6	7	3	4	4	4	4
Q3 2003	3	3	2	2	4	5	2	4	4	4	4
Q4 2003	4	4	40	40	10	15	5	5	5	5	5
Q1 2004	3	3	3	4	4	4	4	3	3	4	4
Q2 2004	5	5	5	5	4	4	6	5	5	5	5
Q3 2004	3	3	3	3	4	4	2	2	2	2	2
Q4 2004	4	4	3	4	3	3	6	4	4	5	5
Q1 2005	3	3	4	5	4	4	4	4	4	4	4
Q2 2005	3	3	2	2	2	2	3	3	3	3	3
Q3 2005	3	3	2	2	2	2	3	3	3	3	3

Notes:
 ND - not detected; less than 0.1% methane by volume or less than 2 ppmv methane.
 NT - Probe not monitored due to buried or damaged casing.
 A,B,C,D represents multi-depth probes

TABLE 10-2 (Cont.) HISTORICAL PERIMETER PROBE MONITORING DATA MILLIKEN SANITARY LANDFILL											
Quarter	MLP0310A	MLP0310B	MLP0310C	MLP0320A	MLP0320B	MLP0320C	MLP0330A	MLP0330B	MLP0330C	Methane (ppmv)	
Q3 2000	5	5	15	5	5	5	NT	500	75		
Q4 2000	6	5	5	5	5	5	4	4	4		
Q1 2001	5	4	5	3	3	4	200	400	40		
Q2 2001	6	5	5	6	5	6	100	100	50		
Q3 2001	6	5	6	10	10	9	15	10	50		
Q4 2001	3	3	3	3	3	5	20	4	4		
Q1 2002	2	2	2	2	2	3	10	37,000	25		
Q3 2002	7	7	7	5	7	7	5	7	15		
Q1 2003	3	3	2	3	3	3	3	4	6		
Q2 2003	7	7	8	7	7	8	10	11	26		
Q3 2003	3	3	4	4	5	4	6	6	7		
Q4 2003	5	5	5	5	5	4	10	25	25		
Q1 2004	3	3	3	5	5	6	8	35	15		
Q2 2004	4	4	4	4	4	4	200	2,000	400		
Q3 2004	3	6	5	2	5	5	475	1,000	5,000		
Q4 2004	4	4	4	3	5	5	4	4	5		
Q1 2005	4	4	4	30	70	100	2,000	900	900		
Q2 2005	3	2	3	3	3	3	4	4	4		
Q3 2005	3	3	3	3	3	3	3	3	3		

Notes:
 ND - not detected; less than 0.1% methane by volume or less than 2 ppmv methane.
 NT - Probe not monitored due to buried or damaged casing.
 A,B,C,D represents multi-depth probes

**TABLE 10-2 (Cont.)
HISTORICAL PERIMETER PROBE MONITORING DATA
MILLIKEN SANITARY LANDFILL**

Quarter	MLP0340A	MLP0340B	MLP0340C	MLP0350A	MLP0350B	MLP0350C	MLP0360A	MLP0360B	MLP0360C	MLP0360D
	Methane (ppmv)									
Q3 2000	5	10	8	3	30	5	3	3	2	3
Q4 2000	4	4	4	4	4	4	4	4	4	4
Q1 2001	5	3	50	4	8	3	3	2	3	3
Q2 2001	2	6	25	4	6	5	5	6	6	6
Q3 2001	6	8	11	6	7	5	5	5	5	5
Q4 2001	5	3	20	3	3	3	3	3	3	3
Q1 2002	5	19,000	36,000	2	15	3	4	3	2	2
Q3 2002	4	10	6	8	7	5	6	10	7	8
Q1 2003	3	5	7	3	4	4	3	3	3	3
Q2 2003	8	8	9	7	12	8	4	5	5	6
Q3 2003	5	6	7	6	6	6	4	4	4	10
Q4 2003	10	10	85	5	6	6	5	5	5	5
Q1 2004	4	24	15	6	6	7	4	4	3	3
Q2 2004	2	2	5	10	12	15	4	4	4	5
Q3 2004	5	5	9	5	19	6	2	3	3	5
Q4 2004	4	5	4	3	4	6	3	3	3	5
Q1 2005	800	500	600	20	20	15	4	4	4	4
Q2 2005	3	3	4	4	4	4	3	3	3	3
Q3 2005	4	4	4	4	4	4	4	4	4	4

Notes:

ND - not detected; less than 0.1% methane by volume or less than 2 ppmv methane.

NT - Probe not monitored due to buried or damaged casing.

A,B,C,D represents multi-depth probes

**TABLE 10-2 (Cont.)
HISTORICAL PERIMETER PROBE MONITORING DATA
MULLIKEN SANITARY LANDFILL**

Quarter	MLP0370A	MLP0370B	MLP0370C	MLP0370D	MLP0380A	MLP0380B	MLP0380C	MLP0380D
	Methane (ppmv)							
Q3 2000	3	2	2	3	2	2	2	4
Q4 2000	4	4	4	4	5	4	4	4
Q1 2001	3	4	3	3	3	5	3	4
Q2 2001	5	6	5	6	6	6	6	5
Q3 2001	6	6	6	6	5	5	5	5
Q4 2001	4	3	3	3	3	3	3	3
Q1 2002	5	3	4	4	3	3	2	3
Q3 2002	7	7	7	8	6	7	7	7
Q1 2003	3	3	4	3	900	800	300	350
Q2 2003	6	6	5	6	4	4	4	3
Q3 2003	5	5	5	4	4	4	4	4
Q4 2003	5	5	5	5	10	10	800	25
Q1 2004	3	3	3	3	5	5	4	7
Q2 2004	5	5	4	6	7	6	6	6
Q3 2004	3	3	3	5	2	3	3	4
Q4 2004	4	2	3	3	3	3	3	2
Q1 2005	4	4	4	4	4	4	4	7
Q2 2005	3	3	3	3	3	3	3	3
Q3 2005	4	4	4	4	4	4	4	4

Notes:

ND - not detected; less than 0.1% methane by volume or less than 2 ppmv methane.

NT - Probe not monitored due to buried or damaged casing.

A,B,C,D represents multi-depth probes

**TABLE 10-2 (Cont.)
HISTORICAL PERIMETER PROBE MONITORING DATA
MILLIKEN SANITARY LANDFILL**

Quarter	MLP0390A	MLP0390B	MLP0390C	MLP0390D	MLP0400A	MLP0400B	MLP0400C	MLP0400D
	Methane (ppmv)							
Q3 2000	2	3	3	2	2	2	2	2
Q4 2000	5	5	5	5	6	4	4	5
Q1 2001	3	2	2	3	3	3	3	3
Q2 2001	5	4	4	5	5	8	9	5
Q3 2001	5	6	5	6	7	5	5	5
Q4 2001	3	3	3	3	2	2	3	3
Q1 2002	3	2	2	2	10	5	7	5
Q3 2002	7	8	8	9	9	8	8	7
Q1 2003	5	4	3	31	4	3	2	3
Q2 2003	ND	6	2	2	ND	ND	2	2
Q3 2003	4	5	4	5	5	5	5	5
Q4 2003	5	5	5	5	6	6	6	6
Q1 2004	4	3	4	4	3	3	3	3
Q2 2004	5	5	4	4	6	7	4	4
Q3 2004	3	3	4	7,000	3	3	3	5
Q4 2004	4	4	5	4	3	3	3	3
Q1 2005	4	4	20	50	4	4	4	4
Q2 2005	4	4	4	4	3	3	3	3
Q3 2005	4	4	4	4	4	4	4	3

Notes:

ND - not detected; less than 0.1% methane by volume or less than 2 ppmv methane.

NT - Probe not monitored due to buried or damaged casing.

A,B,C,D represents multi-depth probes

**TABLE 10-2 (Cont.)
HISTORICAL PERIMETER PROBE MONITORING DATA
MILLIKEN SANITARY LANDFILL**

Quarter	Methane (ppmv)										
	MLP0410A	MLP0410B	MLP0410C	MLP0410D	MLP0420A	MLP0420B	MLP0420C	MLP0420D			
Q3 2000	4	4	5	4	5	3	3	3			
Q4 2000	4	4	4	4	3	3	3	4			
Q1 2001	4	4	5,200	3	3	3	2	4			
Q2 2001	4	5	6	4	4	6	6	5			
Q3 2001	4	5	5	6	5	5	6	6			
Q4 2001	3	4	3	3	3	3	3	3			
Q1 2002	4	4	3	4	3	4	3	3			
Q3 2002	10	10	11	20	10	8	7	6			
Q1 2003	3	3	3	3	3	3	3	3			
Q2 2003	0	ND	1	2	10	10	9	10			
Q3 2003	4	5	4	4	5	5	6	5			
Q4 2003	10	10	45	50	5	6	6	5			
Q1 2004	7	10	10	10	4	4	6	6			
Q2 2004	10	300	300	2,500	6	6	6	6			
Q3 2004	4	5	4	4	4	5	5	18			
Q4 2004	4	4	4	4	2	2	2	3			
Q1 2005	15	6	30	40	4	4	4	4			
Q2 2005	3	3	3	3	4	4	4	4			
Q3 2005	4	4	4	4	4	4	4	4			

Notes:

ND - not detected; less than 0.1% methane by volume or less than 2 ppmv methane.

NT - Probe not monitored due to buried or damaged casing.

A,B,C,D represents multi-depth probes

RULE 1150.1 QUARTERLY MONITORING REPORT

**MILLIKEN SANITARY LANDFILL
FACILITY ID NO. 7371**

THIRD QUARTER 2005 (JULY, AUGUST, SEPTEMBER)

NOVEMBER 2005

Submitted To:

South Coast Air Quality Management District
21865 East Copley Drive
Diamond Bar, California 91765

Prepared For and Submitted By:

County of San Bernardino Solid Waste Management Division
222 W. Hospitality Lane, Second Floor
San Bernardino, California 92415

Prepared By:

BRYAN A. STIRRAT & ASSOCIATES
1360 Valley Vista Drive
Diamond Bar, California 91765



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**RULE 1150.1 QUARTERLY MONITORING REPORT
MILLIKEN SANITARY LANDFILL**

**THIRD QUARTER 2005
(July, August, and September)**

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MILLIKEN SANITARY LANDFILL**

**THIRD QUARTER 2005
(July, August, and September)**

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MILLIKEN SANITARY LANDFILL**

**THIRD QUARTER 2005
(July, August, and September)**

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Appendix F*	Perimeter Probe Sampling Results

* At the request of SCAQMD and other regulatory agency staff, the Appendices are maintained under separate cover by the County of San Bernardino Solid Waste Management Division (SWMD) and are available to SCAQMD upon request.

SECTION 1.0
EXECUTIVE SUMMARY

1.0 EXECUTIVE SUMMARY

The County of San Bernardino Solid Waste Management Division (SWMD) is pleased to present the Milliken Sanitary Landfill (MSL) Rule 1150.1 monitoring report for the third quarter of 2005. This report contains results of landfill gas (LFG) monitoring and sampling performed by Bryan A. Stirrat & Associates (BAS) in accordance with South Coast Air Quality Management District (SCAQMD) Rule 1150.1 Compliance Plan (*Compliance Plan*) implemented as of March 1, 2000. Monitoring and sampling procedures conducted at the landfill included:

- Instantaneous surface monitoring - conducted quarterly.
- Integrated surface sampling - conducted quarterly.
- Ambient air sampling - conducted quarterly.
- Landfill gas sampling - conducted quarterly.
- Perimeter probe sampling - conducted quarterly.

Results of the LFG emissions monitoring/sampling are summarized below:

- Instantaneous surface monitoring was conducted in September 2005. As indicated in Table 3A, four grids (J2, N1, Q2, and R2) had TOC emissions in excess of the 500 ppmv TOC standard specified in SCAQMD Rule 1150.1. The grids were re-monitored on September 15, 2005, successfully bringing each grid into compliance with the 500 ppmv SCAQMD Rule 1150.1 standard.
- Integrated surface sampling was conducted during July and September 2005. None of the integrated surface samples collected during this sampling event exhibited a TOC concentration exceeding the 50 ppmv emissions standard specified in Rule 1150.1 (see Table 4A). To meet *Compliance Plan* requirements that a minimum of two samples per event be submitted for laboratory analysis, samples were collected and analyzed from Grid Nos. E-1 and X-1 in September 2005 (see Table 4B for results).
- Ambient air sampling was conducted over two successive 12-hour periods. The first 12-hour sample began at 9:00 a.m. on July 10, 2005 and ended at 9:00 p.m. on July 10, 2005. During the second sampling period, ambient air sampling was initiated at 9:00 p.m. on July 10, 2005 and ended at 9:00 a.m. on July 11, 2005. The two consecutive samples, from each of the upwind and downwind air samplers, were collected and submitted for laboratory analysis. Tables 5A and 5B present the upwind and downwind concentrations of methane, total gaseous non-methane organic compounds, and Core Group Toxic Air Contaminants (TAC).

- Landfill gas sampling was performed September 28, 2005. One LFG sample was collected from the flare inlet gas line and submitted for laboratory analysis. As indicated in Table 6A, the methane concentration was 36.1% by volume.
- Landfill gas samples were collected on July 20, August 17, and September 28, 2005. The three samples were analyzed for reduced sulfur compounds in accordance with the requirements of SCAQMD Rule 431.1 Alternative Monitoring Plan. As indicated in Table 6B, concentrations of hydrogen sulfide for the July 20 and August 17, 2005 samples were determined to be 20 and 20 ppmv, respectively. The total reduced sulfur concentrations for the September 28, 2005 sample was determined to be 23.2 ppmv.
- Perimeter probe sampling was conducted in September 2005. As indicated on Table 7A, TOC concentrations at or above 5% by volume were not detected during this monitoring event. To fulfill *Compliance Plan* requirements, four samples were collected and submitted for laboratory analyses. As indicated by the laboratory analytical results presented in Tables 7B, 7C, 7D and 7E, the methane gas concentration that was detected during this monitoring period was well below Rule 1150.1 or State standards for methane at the landfill property boundary (5% by volume).

SECTION 2.0

RULE 1150.1 MONITORING PROGRAM SUMMARY

2.0 RULE 1150.1 MONITORING PROGRAM SUMMARY

This Rule 1150.1 quarterly monitoring report contains the results of LFG emission monitoring performed during the third calendar quarter (July, August, and September) of 2005 at MSL. Emission monitoring is conducted on a regular basis at the landfill to demonstrate ongoing compliance with SCAQMD Rule 1150.1.

2.1 GENERAL RULE 1150.1 COMPLIANCE REQUIREMENTS

Rule 1150.1 stipulates that all landfills which accepted solid waste on or after January 1, 1982, must install and operate a LFG collection and disposal system to control LFG emissions migrating through the surface of the landfill. In addition, periodic testing must be performed to evaluate the effectiveness of the LFG control system and to verify that the landfill is in compliance with the surface emission limits contained in the rule. Rule 1150.1 specifies that concentrations of TOC, measured as methane, must not exceed 500 ppmv at any single point above the landfill surface, and that integrated samples collected above the surface of the disposal site must not exceed 50 ppmv.

2.2 MILLIKEN SANITARY LANDFILL COMPLIANCE STATUS

The MSL is an inactive landfill located at 2050 South Milliken Avenue, Ontario, California. The MSL, which began landfill operations in 1957, was an active site until it ceased accepting waste on March 7, 1999. As stipulated in Rule 1150.1, a LFG collection and flaring system has been installed at the landfill to control LFG emissions. The LFG system is operated in accordance with the conditions specified in the permits granted by the SCAQMD. Rule 1150.1 monitoring has been performed regularly since 1992.

2.3 SITE MONITORING PROGRAM

On December 17, 1999, the SCAQMD revised and approved the site-specific *Compliance Plan* for the MSL (Appendix A). Effective March 1, 2000, all testing and reporting is being performed consistent with the requirements of the revised *Compliance Plan*. The test program currently being implemented under the plan includes the following components:

- Instantaneous surface monitoring - conducted quarterly.
- Integrated surface sampling - conducted quarterly.
- Ambient air sampling - conducted quarterly.
- Landfill gas sampling - conducted quarterly.
- Perimeter probe sampling - conducted quarterly.

Meteorological monitoring is conducted in conjunction with the various sampling procedures requiring validation of wind direction and/or wind speed.

Figure 1 presents Rule 1150.1 sampling locations, including the grid layout used for identifying instantaneous and integrated surface monitoring/sampling, ambient air samplers, perimeter probes, and the meteorological monitoring station.

Test protocol and quality assurance procedures that conform to specifications contained in the SCAQMD *Compliance Plan* were followed during Rule 1150.1 compliance monitoring. Results of monitoring and sampling are reported to the SCAQMD at quarterly intervals.

Field monitoring, sample collection, field data reduction, technical quality assurance review of field data and report preparation were performed by BAS and RES Environmental, Inc. Collected samples were analyzed by Atmosphere Assessment Associates, Inc. (AtmAA). Typically, remediation of exceedance areas (i.e., areas identified as exceeding Rule 1150.1 emission limits) consisted of adding and compacting cover material. In addition, LFG extraction wells were adjusted to better control LFG emissions.

Subsequent sections of this report include sampling program summaries along with field and laboratory results for each of the LFG emission sampling activities performed during the quarter. At the request of SCAQMD staff, analytical reports, field monitoring logs, and quality assurance documentation for individual sampling events are no longer being included within the body of the Rule 1150.1 quarterly monitoring reports. Copies of these appendices and data are maintained by SWMD, in the operating records library, and are available to SCAQMD upon request.

FIGURE 1
RULE 1150.1 SAMPLING LOCATION MAP

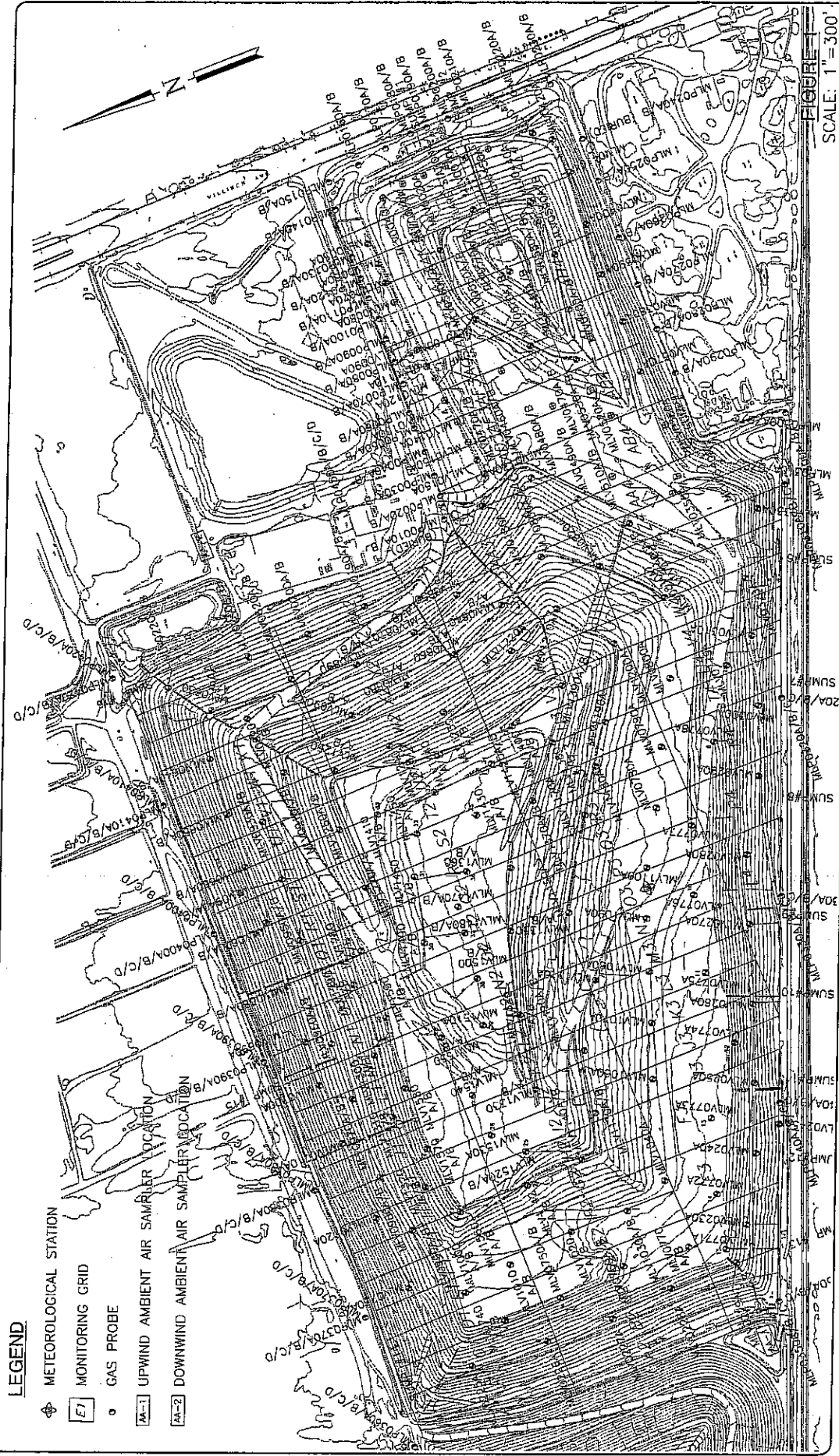


FIGURE 1
SCALE: 1"=300'

- LEGEND**
- ◆ METEOROLOGICAL STATION
 - E1 MONITORING GRID
 - GAS PROBE
 - M-1 UPWIND AMBIENT AIR SAMPLER LOCATION
 - M-2 DOWNWIND AMBIENT AIR SAMPLER LOCATION

MILLIKEN SANITARY LANDFILL

RULE 1150.1 SAMPLING LOCATION MAP

(909) 860-7777

BAS
 BRYAN A. STIRRAT & ASSOCIATES
 CIVIL AND ENVIRONMENTAL ENGINEERS
 1366 VALLEY VISTA DRIVE DRAUGHTS BAY, CA 94768

JOB NO. 2003.0005	DATE 10/00	DRAWN BY CHA	CHECKED BY
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1:DWG:SEB001150-1\MILLIKEN.MXD.DWG

SECTION 3.0

INSTANTANEOUS SURFACE EMISSION MONITORING

3.0 INSTANTANEOUS SURFACE EMISSION MONITORING

Instantaneous surface monitoring of all accessible portions of the landfill disposal area is required in order to demonstrate compliance with subparagraphs (e)(3) and (d)(6) of Rule 1150.1. Rule 1150.1 prohibits TOC concentrations greater than 500 ppmv above any point on the surface of a landfill. Instantaneous surface monitoring is conducted at the MSL on a quarterly basis, in accordance with the *Compliance Plan*.

3.1 MONITORING PROCEDURES

The entire surface of the disposal area at the MSL has been divided into 106 monitoring grids, as indicated on Figure 1. Each grid measures approximately 50,000 square feet in area. The monitoring grids are used for both instantaneous and integrated surface monitoring/sampling. Instantaneous measurements of TOC concentrations immediately above the surface of the grids were obtained using a portable flame ionization detector (FID), which meets *Compliance Plan* specifications. The probe of the FID was held within three inches of the landfill surface while traversing the monitoring grids. A surface inspection was also performed during instantaneous surface monitoring to identify cracks or fissures in the landfill cover that could be potential pathways for LFG to escape to the atmosphere.

Surface areas of the landfill at which TOC concentrations exceed 500 ppmv are marked with orange flags, identifying the areas in need of remediation. As a means of tracking remediation of exceedance areas, Instantaneous Surface Monitoring Data Sheets (Appendix B) are filled out and distributed to appropriate personnel, such as the site supervisor of the landfill, within 24 hours of identification. Remediation of exceedance areas is typically accomplished by providing additional cover material and compacting and/or adjusting LFG extraction wells to increase the extraction rate in areas adjacent to exceedance areas. Remediated areas are then re-monitored. This process is repeated until TOC concentrations are below 500 ppmv in affected areas.

3.2 MONITORING RESULTS

Instantaneous surface monitoring was conducted during September 2005. Field monitoring data sheets were completed for each monitoring grid sampled.

Exceedance areas and associated TOC concentrations were noted on the Instantaneous Surface Monitoring Data Sheets (Appendix B). For grids not exhibiting exceedance areas, the maximum TOC concentration was noted on the data sheets.

Table 3A summarizes the results of instantaneous surface monitoring conducted this quarter. During this monitoring event, four grids (J2, N1, Q2, and R2) had TOC emissions in excess of the 500 ppmv TOC standard specified in SCAQMD Rule 1150.1. The grids were re-monitored on September 15, 2005, successfully bringing each grid into compliance with the 500 ppmv SCAQMD Rule 1150.1 standard.

Bold print in Table 3A indicates grids and corresponding TOC concentrations that exceeded the 500 ppmv TOC standard during the initial monitoring. Note that TOC concentrations indicated in the table are maximum concentrations found within that particular grid; hence, a grid with a TOC concentration above 500 ppmv may have had several exceedance areas associated with it. TOC concentrations reported as being below 500 ppmv within a monitoring grid during the initial monitoring event indicate that the entire grid was in compliance with the 500 ppmv TOC standard.

TABLE 3A
INSTANTANEOUS SURFACE EMISSION MONITORING
DATA SUMMARY
SEPTEMBER 2005

Grid No.	Initial Date Monitored	Max. TOC (ppmv)	Re-Test		Grid No.	Initial Date Monitored	Max. TOC (ppmv)	Re-Test	
			Date	Results				Date	Results
A1	9/1/2005	5	-	-	O1	9/1/2005	5	-	-
A2	9/1/2005	5	-	-	O2	9/1/2005	5	-	-
A3	9/1/2005	5	-	-	O3	9/7/2005	5	-	-
B1	9/1/2005	5	-	-	P1	9/1/2005	5	-	-
B2	9/1/2005	5	-	-	P2	9/1/2005	5	-	-
C1	9/1/2005	5	-	-	P3	9/7/2005	5	-	-
C2	9/1/2005	5	-	-	P4	9/7/2005	5	-	-
C3	9/1/2005	5	-	-	Q1	9/1/2005	5	-	-
D1	9/1/2005	5	-	-	Q2	9/1/2005	1,000	9/15/2005	50
D2	9/1/2005	5	-	-	Q3	9/7/2005	5	-	-
E1	9/1/2005	5	-	-	R1	9/1/2005	5	-	-
E2	9/1/2005	5	-	-	R2	9/1/2005	1,000	9/15/2005	100
E3	9/1/2005	5	-	-	R3	9/1/2005	5	-	-
F1	9/1/2005	5	-	-	R4	9/7/2005	5	-	-
F2	9/1/2005	5	-	-	S1	9/1/2005	5	-	-
F3	9/1/2005	5	-	-	S2	9/1/2005	5	-	-
G1	9/1/2005	5	-	-	S3	9/7/2005	5	-	-
G2	9/1/2005	5	-	-	T1	9/1/2005	5	-	-
H1	9/1/2005	5	-	-	T2	9/1/2005	5	-	-
H2	9/1/2005	5	-	-	T3	9/7/2005	5	-	-
I1	9/1/2005	5	-	-	T4	9/7/2005	5	-	-
I2	9/1/2005	5	-	-	U1	9/1/2005	5	-	-
I3	9/1/2005	5	-	-	U2	9/1/2005	5	-	-
J1	9/1/2005	5	-	-	U3	9/7/2005	5	-	-
J2	9/1/2005	1,000	9/15/2005	50	U4	9/7/2005	5	-	-
J3	9/1/2005	5	-	-	V1	9/1/2005	5	-	-
K1	9/1/2005	5	-	-	V2	9/1/2005	5	-	-
K2	9/1/2005	5	-	-	V3	9/7/2005	5	-	-
K3	9/7/2005	5	-	-	V4	9/7/2005	5	-	-
L1	9/1/2005	5	-	-	W1	9/1/2005	5	-	-
L2	9/1/2005	5	-	-	W2	9/1/2005	5	-	-
L3	9/7/2005	5	-	-	W3	9/7/2005	5	-	-
L4	9/7/2005	5	-	-	W4	9/7/2005	5	-	-
M1	9/1/2005	5	-	-	X1	9/1/2005	5	-	-
M2	9/1/2005	5	-	-	X2	9/1/2005	5	-	-
M3	9/7/2005	5	-	-	X3	9/7/2005	5	-	-
N1	9/1/2005	1,000	9/15/2005	100	X4	9/7/2005	5	-	-
N2	9/1/2005	5	-	-					
N3	9/7/2005	5	-	-					

The ACTIVE notation indicates that disposal operations were occurring in this grid and, therefore, this grid was not monitored.

continued next page

TABLE 3A (continued)
 INSTANTANEOUS SURFACE EMISSION MONITORING
 DATA SUMMARY
 SEPTEMBER 2005

Grid No.	Initial Date Monitored	Max. TOC (ppmv)	Re-Test		Grid No.	Initial Date Monitored	Max. TOC (ppmv)	Re-Test	
			Date	Results				Date	Results
Y1	9/1/2005	5	-	-	AD3	9/7/2005	5	-	-
Y2	9/1/2005	5	-	-	AD4	9/7/2005	5	-	-
Y3	9/7/2005	5	-	-	AE3	9/7/2005	5	-	-
Y4	9/7/2005	5	-	-	AF3	9/7/2005	5	-	-
Z1	9/1/2005	5	-	-	AF4	9/7/2005	5	-	-
Z2	9/1/2005	5	-	-	AG3	9/7/2005	5	-	-
Z3	9/7/2005	5	-	-	AH3	9/7/2005	5	-	-
Z4	9/7/2005	5	-	-	AH4	9/7/2005	5	-	-
AA1	9/1/2005	5	-	-	AI3	9/7/2005	5	-	-
AA2	9/1/2005	5	-	-	AJ3	9/7/2005	5	-	-
AA3	9/7/2005	5	-	-	AJ4	9/7/2005	5	-	-
AA4	9/7/2005	5	-	-	AK3	9/7/2005	5	-	-
AB3	9/7/2005	5	-	-	AL3	9/7/2005	5	-	-
AB4	9/7/2005	5	-	-	AL4	9/7/2005	5	-	-
AC3	9/7/2005	5	-	-	AM3	9/7/2005	5	-	-

The ACTIVE notation indicates that disposal operations were occurring in this grid and, therefore, this grid was not monitored.

SECTION 4.0
INTEGRATED SURFACE SAMPLING

4.0 INTEGRATED SURFACE SAMPLING

Integrated surface sampling is performed above all accessible areas of the landfill to demonstrate compliance with subparagraph (d)(5) and (e)(2) of Rule 1150.1, which establishes an average TOC concentration limit of 50 ppmv in any integrated surface sample. Integrated surface sampling is conducted quarterly, in accordance with the approved *Compliance Plan* for the MSL.

4.1 SAMPLING PROCEDURES

4.1.1 SAMPLE COLLECTION

Quarterly integrated surface sampling was conducted during the months of July and September 2005. One integrated surface sample was collected from each of the 106 sampling grids (Figure 1). Each grid measures approximately 50,000 square feet in area.

Each integrated surface sample was collected over a continuous 25-minute period while a field technician walked a prescribed path over the sampling grid. The samples were collected in 10-liter Tedlar bags using a non-contaminating pump. The probe of the sampling pump was held within 3 inches of the landfill surface during sample collection. Samples were enclosed within light-proof cardboard boxes to reduce the potential for photo-degradation of air contaminants targeted for analyses.

4.1.2 SAMPLING CONDITIONS

Samples were collected only when meteorological conditions met the requirements for wind speed and precipitation found in the *Compliance Plan*. Sampling was conducted on days when there had been no rain during the preceding 72 hours. Sampling was discontinued if instantaneous wind speeds were greater than 10 miles per hour (mph), or if the average wind speed over a 15-minute period exceeded 5 mph. Average wind speeds of 1 to 3 mph were measured during the sampling dates, and are summarized in Appendix C.

4.2 FIELD TESTING RESULTS

Integrated surface samples were analyzed for concentrations of TOC using an FID. Of the integrated surface samples collected during the sampling event, none had a TOC concentration exceeding the 50 ppmv TOC standard. Table 4A summarizes the results of the integrated surface sampling conducted during the third quarter. To meet the *Compliance Plan* requirement that a minimum of two samples be submitted for laboratory analyses, samples collected from Grids E-1 and X-1 were submitted in September 2005 for specified laboratory analyses.

4.3 ANALYTICAL RESULTS

Integrated surface samples recovered during this quarter were analyzed within 72 hours of collection for the following:

- Methane;
- Total Gaseous Non-Methane Organic Compounds (TGNMO); and
- Core Group Toxic Air Contaminants.

Table 4B summarizes the laboratory data for each of the integrated surface samples collected and analyzed during this monitoring event, respectively. As indicated in Table 4B, methane gas concentrations from the samples collected from Grid Nos. E-1 and X-1 were 2.26 ppmv and 2.36 ppmv, respectively. The concentration of TGNMO (measured as methane) in samples collected from Grid Nos. E-1 and X-1 were 2.46 ppmv and 2.08 ppmv, respectively. Complete analytical reports for integrated surface samples are contained in Appendix C.

TABLE 4A
 INTEGRATED SURFACE SAMPLING
 DATA SUMMARY
 JULY 2005

Grid No.	Initial Date Monitored	Max. TOC (ppmv)	Re-Test		Grid No.	Initial Date Monitored	Max. TOC (ppmv)	Re-Test	
			Date	Results				Date	Results
A1	7/6/2005	5	-	-	O1	7/6/2005	5	-	-
A2	7/6/2005	5	-	-	O2	7/6/2005	5	-	-
A3	7/6/2005	5	-	-	O3	7/6/2005	5	-	-
B1	7/6/2005	5	-	-	P1	7/6/2005	5	-	-
B2	7/6/2005	5	-	-	P2	7/6/2005	5	-	-
C1	7/6/2005	5	-	-	P3	7/6/2005	5	-	-
C2	7/6/2005	5	-	-	P4	7/6/2005	5	-	-
C3	7/6/2005	5	-	-	Q1	7/6/2005	5	-	-
D1	7/6/2005	5	-	-	Q2	7/6/2005	5	-	-
D2	7/6/2005	5	-	-	Q3	7/6/2005	5	-	-
E1	7/6/2005	5	-	-	R1	7/6/2005	5	-	-
E2	7/6/2005	5	-	-	R2	7/6/2005	5	-	-
E3	7/6/2005	5	-	-	R3	7/6/2005	5	-	-
F1	7/6/2005	5	-	-	R4	7/6/2005	5	-	-
F2	7/6/2005	5	-	-	S1	7/6/2005	5	-	-
F3	7/6/2005	5	-	-	S2	7/6/2005	5	-	-
G1	7/6/2005	5	-	-	S3	7/6/2005	5	-	-
G2	7/6/2005	5	-	-	T1	7/6/2005	5	-	-
H1	7/6/2005	5	-	-	T2	7/6/2005	5	-	-
H2	7/6/2005	5	-	-	T3	7/6/2005	5	-	-
I1	7/6/2005	5	-	-	T4	7/6/2005	5	-	-
I2	7/6/2005	5	-	-	U1	7/6/2005	5	-	-
I3	7/6/2005	5	-	-	U2	7/6/2005	5	-	-
J1	7/6/2005	5	-	-	U3	7/6/2005	5	-	-
J2	7/6/2005	5	-	-	U4	7/6/2005	5	-	-
J3	7/6/2005	5	-	-	V1	7/6/2005	5	-	-
K1	7/6/2005	5	-	-	V2	7/6/2005	5	-	-
K2	7/6/2005	5	-	-	V3	7/6/2005	5	-	-
K3	7/6/2005	5	-	-	V4	7/6/2005	5	-	-
L1	7/6/2005	5	-	-	W1	7/6/2005	5	-	-
L2	7/6/2005	5	-	-	W2	7/6/2005	5	-	-
L3	7/6/2005	5	-	-	W3	7/6/2005	5	-	-
L4	7/6/2005	5	-	-	W4	7/6/2005	5	-	-
M1	7/6/2005	5	-	-	X1	7/6/2005	5	-	-
M2	7/6/2005	5	-	-	X2	7/6/2005	5	-	-
M3	7/6/2005	5	-	-	X3	7/6/2005	5	-	-
N1	7/6/2005	5	-	-	X4	7/6/2005	5	-	-
N2	7/6/2005	5	-	-					
N3	7/6/2005	5	-	-					

The ACTIVE notation indicates that closure construction operations were occurring in this grid and, therefore, this grid was not monitored.
 continued next page.

TABLE 4A (continued)
 INTEGRATED SURFACE SAMPLING
 DATA SUMMARY
 JULY 2005

Grid No.	Initial Date Monitored	Max. TOC (ppmv)	Re-Test		Grid No.	Initial Date Monitored	Max. TOC (ppmv)	Re-Test	
			Date	Results				Date	Results
Y1	7/6/2005	5	-	-	AD3	7/6/2005	5	-	-
Y2	7/6/2005	5	-	-	AD4	7/6/2005	5	-	-
Y3	7/6/2005	5	-	-	AE3	7/6/2005	5	-	-
Y4	7/6/2005	5	-	-	AF3	7/6/2005	5	-	-
Z1	7/6/2005	5	-	-	AF4	7/6/2005	5	-	-
Z2	7/6/2005	5	-	-	AG3	7/6/2005	5	-	-
Z3	7/6/2005	5	-	-	AH3	7/6/2005	5	-	-
Z4	7/6/2005	5	-	-	AH4	7/6/2005	5	-	-
AA1	7/6/2005	5	-	-	AI3	7/6/2005	5	-	-
AA2	7/6/2005	5	-	-	AJ3	7/6/2005	5	-	-
AA3	7/6/2005	5	-	-	AJ4	7/6/2005	5	-	-
AA4	7/6/2005	5	-	-	AK3	7/6/2005	5	-	-
AB3	7/6/2005	5	-	-	AL3	7/6/2005	5	-	-
AB4	7/6/2005	5	-	-	AL4	7/6/2005	5	-	-
AC3	7/6/2005	5	-	-	AM3	7/6/2005	5	-	-

The ACTIVE notation indicates that closure construction operations were occurring in this grid and, therefore, this grid was not monitored.

TABLE 4B
LABORATORY ANALYSIS OF
INTEGRATED SURFACE SAMPLES
SEPTEMBER 2005

Sample ID No.:	ISS E-1	ISS X-1
Sample Location:	Grid E-1	Grid X-1
Sample Collection Date:	September 15, 2005	September 15, 2005
Sample Analyses Date:	September 16, 2005	September 16, 2005

Constituent	Concentration (ppmv)	Concentration (ppmv)
Methane	2.26	2.36
TGNMO	2.46	2.08

Constituent	Concentration (ppbv)	Concentration (ppbv)
Hydrogen Sulfide	<50	<50
Benzene	1.44	1.63
Benzylchloride	<0.5	<0.5
Chlorobenzene	<0.2	<0.2
Dichlorobenzenes*	<1.1	<1.1
1,1-Dichloroethane	<0.2	<0.2
1,2-Dichloroethane	<0.2	<0.2
1,1-Dichloroethylene	<0.2	<0.2
Dichloromethane	<0.2	<0.2
1,2-Dibromoethane	<0.2	<0.2
Perchloroethene	<0.1	<0.1
Carbon Tetrachloride	0.12	0.12
Toluene	8.55	9.82
1,1,1-Trichloroethane	<0.1	<0.1
Trichloroethene	<0.1	<0.1
Chloroform	<0.1	<0.1
Vinyl Chloride	<0.2	<0.2
m + p-xylenes	4.28	4.24
o-xylene	1.57	2.44

ppmv = Parts per million by volume

TGNMO = Total gaseous non-methane organics

ppbv = Parts per billion by volume

* = Total concentration including meta, para, and ortho isomers.

SECTION 5.0
AMBIENT AIR SAMPLING

5.0 AMBIENT AIR SAMPLING

Sampling ambient air at the landfill perimeter is required by subparagraph (e)(5) of Rule 1150.1. Ambient air sampling is conducted quarterly, as specified in the approved *Compliance Plan* for MSL.

5.1 SAMPLING PROCEDURES

Ambient air sampling was conducted in accordance with the *Compliance Plan* for MSL. Ambient air samplers were positioned at the perimeter of the landfill to collect air samples representative of upwind (i.e., background) and downwind (i.e., air that has passed over the landfill surface) conditions at the site.

5.1.1 SAMPLE COLLECTION

Siting of ambient air sampler locations was based on evaluation of historical wind monitoring data collected at the landfill. Sampler locations were established to provide good meteorological exposure to the predominant offshore and onshore wind flows at the MSL. Locations of the ambient air samplers are presented on the Rule 1150.1 Sampling Locations map (Figure 1).

Ambient air samplers used at the MSL are constructed, installed, and operated to meet SCAQMD design criteria and performance specifications found in the *Compliance Plan*. Light-sealed boxes containing individual 10-liter Tedlar sample bags were housed within each weather-tight, ambient air sampler.

Two consecutive 12-hour samples were collected at each of the upwind and downwind ambient air samplers. During the first sampling period, ambient air sampling was initiated at 9:00 a.m. on July 10, 2005 and ended at 9:00 p.m. on July 10, 2005. During the second sampling period, ambient air sampling was initiated at 9:00 p.m. on July 10, 2005 and ended at 9:00 a.m. on July 11, 2005. The four 12-hour samples from the upwind air sampler (AA-1 and AA-2) and the downwind air sampler (AA-3 and AA-4) were collected for laboratory analyses. Ambient air sampling data sheets, which indicate flow meter measurements, air sampler start and stop times, and sample identification numbers are provided in Appendix D.

5.1.2 SAMPLING CONDITIONS

Ambient air sampling was conducted when weather conditions conformed to the meteorological criteria specified in the *Compliance Plan*. These include:

- No rainfall during the sampling period.
- Average wind speeds not exceeding 15 mph during any 30-minute period.
- Instantaneous wind speeds not exceeding 25 mph.

During the July 2005 ambient air-sampling event, all *Compliance Plan* criteria were attained.

5.2 ANALYTICAL RESULTS

Upwind and downwind air samples were analyzed within 72 hours of sample collection for the following constituents:

- Methane;
- Total Gaseous Non-Methane Organic Compounds (TGNMO); and
- Core Group Toxic Air Contaminants.

Results of laboratory analyses of the upwind and downwind ambient air samples are summarized in Tables 5A and 5B. As presented in Table 5A, methane was detected at a concentration of 2.36 ppmv and 2.16 ppmv in the upwind and downwind samples, respectively. Concentrations of TGNMO in the upwind and downwind samples were 3.08 ppmv and 2.73 ppmv, respectively. As presented in Table 5B, methane was detected at concentrations of 2.09 ppmv and 2.79 ppmv in upwind and downwind samples, respectively. Concentrations of TGNMO were 2.09 ppmv in the upwind sample and 1.94 ppmv in the downwind sample. Contaminants were generally similar in upwind and downwind air samples. Complete analytical reports for ambient air samples are contained in Appendix D.

**TABLE 5A
LABORATORY ANALYSIS OF
AMBIENT AIR SAMPLES
JULY 2005**

Sample ID No.:	AA-1	AA-2
Sample Collection Date:	July 10, 2005	July 10, 2005
Sample Analyses Date:	July 12-14, 2005	July 12-14, 2005
Constituent	Concentration (ppmv)	Concentration (ppmv)
Methane	2.36	2.16
TGNMO	3.08	2.73
Constituent	Concentration (ppbv)	Concentration (ppbv)
Hydrogen Sulfide.	<50	<50
Benzene	1.38	0.69
Benzylchloride	<0.5	<0.5
Chlorobenzene	<0.2	<0.2
Dichlorobenzenes*	<1.1	<1.1
1,1-Dichloroethane	<0.2	<0.2
1,2-Dichloroethane	<0.2	<0.2
1,1-Dichloroethylene	<0.2	<0.2
Dichloromethane	0.58	0.35
1,2-Dibromoethane	<0.2	<0.2
Perchloroethene	<0.1	<0.1
Carbon Tetrachloride	0.11	0.11
Toluene	12.2	6.42
1,1,1- Trichloroethane	<0.1	<0.1
Trichloroethene	<0.1	<0.1
Chloroform	<0.1	<0.1
Vinyl Chloride	<0.2	<0.2
m + p-xylenes	11.5	3.87
o-xylene	4.19	1.38

NM = Not measured. Bag sample leaked and there was not enough sample for this analysis.

ppmv = Parts per million by volume

TGNMO = Total gaseous non-methane organics

ppbv = Parts per billion by volume

* = Total concentration including meta, para, and ortho isomers.

TABLE 5B
LABORATORY ANALYSIS OF
AMBIENT AIR SAMPLES
JULY 2005

Sample ID No.:	AA-3	AA-4
Sample Collection Date:	July 10-11, 2005	July 10-11, 2005
Sample Analyses Date:	July 12-14, 2005	July 12-14, 2005

Constituent	Concentration (ppmv)	Concentration (ppmv)
Methane	2.09	2.79
TGNMO	2.09	1.94

Constituent	Concentration (ppbv)	Concentration (ppbv)
Hydrogen Sulfide	<50	<50
Benzene	0.44	0.63
Benzylchloride	<0.5	<0.5
Chlorobenzene	<0.2	<0.2
Dichlorobenzenes*	<1.1	<1.1
1,1-Dichloroethane	<0.2	<0.2
1,2-Dichloroethane	<0.2	<0.2
1,1-Dichloroethylene	<0.2	<0.2
Dichloromethane	0.29	0.29
1,2-Dibromoethane	<0.2	<0.2
Perchloroethene	<0.1	<0.1
Carbon Tetrachloride	0.11	0.11
Toluene	4.57	4.25
1,1,1-Trichloroethane	<0.1	<0.1
Trichloroethene	<0.1	1.60
Chloroform	<0.1	<0.1
Vinyl Chloride	<0.2	<0.2
m + p-xylenes	3.04	2.40
o-xylene	1.06	0.83

ppmv = Parts per million by volume

TGNMO = Total gaseous non-methane organics

ppbv = Parts per billion by volume

* = Total concentration including meta, para, and ortho isomers.

SECTION 6.0
LANDFILL GAS SAMPLING

6.0 LANDFILL GAS SAMPLING

Landfill gas sampling from the gas extraction system is required by subparagraph (e)(4) of Rule 1150.1. Landfill gas sampling for TOC and Core Group TAC's is performed quarterly, in accordance with the approved *Compliance Plan* for the MLSL. Landfill gas sampling for total and specified reduced sulfur compounds is performed on a monthly basis in compliance with SCAQMD Rule 431.1 Alternative Monitoring Plan.

6.1 SAMPLING PROCEDURES

6.1.1 SAMPLE COLLECTION

Landfill gas sampling was conducted on July 20, August 17, and September 28, 2005. The LFG samples were collected from the main LFG header entering the blower/flare station. The samples were collected in a 10-liter Tedlar bag (enclosed in a light-sealed box) over a 10-minute period utilizing a non-contaminating pump.

6.2 ANALYTICAL RESULTS

The LFG sample was collected on September 28, 2005 and submitted for laboratory analyses within 72 hours of collection for the following:

- Fixed gases (i.e., methane, carbon dioxide, oxygen, and nitrogen).
- Total Gaseous Non-Methane Organic Compounds (TGNMO).
- Total Reduced Sulfur Compounds.
- Core Group Toxic Air Contaminants.

Results of laboratory analyses are summarized in Table 6A. As indicated in Table 6A, the methane concentration was determined to be 36.1% by volume, and the TGNMO concentration was determined to be 5,640 ppmv.

To demonstrate compliance with SCAQMD Rule 431.1 Alternative Monitoring Plan, two monthly LFG samples were analyzed with colorimetric tubes for hydrogen sulfide as total sulfur and one quarterly LFG sample was analyzed for total reduced sulfur compounds using SCAQMD Method 307-91. Results of these analyses are presented in Table 6B.

Concentrations of hydrogen sulfide for the July 20 and August 17, 2005 samples were determined to be 20 and 20 ppmv, respectively. The total reduced sulfur concentrations for the September 28, 2005 sample was determined to be 23.2 ppmv. These concentrations are lower than the 100 ppm limit stated in Rule 431.1 Alternative Monitoring Plan. Complete analytical reports for LFG samples are contained in Appendix E.

TABLE 6A
LABORATORY ANALYSIS OF
LANDFILL GAS SAMPLES
SEPTEMBER 2005

Sample ID No.:	MK-RG
Sample Location:	Flare Station
Sample Collection Date:	September 28, 2005
Sample Analyses Date:	September 28 & 29, 2005

Constituent	Concentration (%v)
Nitrogen	27.6
Oxygen	2.22
Methane	36.1
Carbon Dioxide	32.7

Constituent	Concentration (ppmv)
TGNMO	5,640
Hydrogen sulfide	16.6

Constituent	Concentration (ppbv)
Benzene	2,330
Benzylchloride	<40
Chlorobenzene	217
Dichlorobenzenes*	1,070
1,1-Dichloroethane	272
1,2-Dichloroethane	22.5
1,1-Dichloroethylene	41.2
Dichloromethane	336
1,2-Dibromoethane	<30
Perchloroethene	398
Carbon Tetrachloride	<30
Toluene	31,900
1,1,1- Trichloroethane	<20
Trichloroethene	192
Chloroform	<20
Vinyl Chloride	370
m + p-xylenes	16,600
o-xylene	5,670

ppmv = Parts per million by volume

TGNMO = Total gaseous non-methane organics

ppbv = Parts per billion by volume

* = Total concentration including meta, para, and ortho isomers.

TABLE 6B
LABORATORY AND DRAGER TUBE ANALYSIS OF
LANDFILL GAS SAMPLES
REDUCED SULFUR COMPOUNDS
JULY, AUGUST and SEPTEMBER 2005

Sample ID No.:	Drager Tube	Drager Tube	MK-RG
Sample Location:	Flare Station	Flare Station	Flare Station
Sample Collection Date:	July 20, 2005	August 17, 2005	September 28, 2005
Sample Analyses Date:	July 20, 2005	August 17, 2005	September 28 & 29, 2005

Constituent	Concentration (ppmv)	Concentration (ppmv)	Concentration (ppmv)
Hydrogen Sulfide	20.0	20.0	17.7
Carbonyl Sulfide			<0.08
Methyl Mercaptan			1.92
Ethyl Mercaptan			<0.1
Dimethyl Sulfide			4.30
Carbon Disulfide			<0.06
Isopropyl Mercaptan			0.06
n-Propyl Mercaptan			<0.06
Dimethyl Disulfide			0.16
Total Reduced Sulfur			23.2

ppmv = Parts per million by volume

SECTION 7.0
PERIMETER PROBE SAMPLING

7.0 PERIMETER PROBE SAMPLING

In compliance with subparagraphs (d)(4) and (e)(1) of Rule 1150.1, subsurface probes installed at the perimeter of the MSL are monitored on a regular basis as part of the ongoing gas migration and emissions control program. For probes located greater than 1,300 feet from any receptor, monitoring is conducted on a quarterly basis. Probes located closer than 1,300 feet from any receptor or that contain methane at a concentration greater than 2% by volume, will be monitored on a monthly basis.

7.1 SAMPLING PROCEDURES

To demonstrate compliance with Rule 1150.1, all 57 LFG monitoring probes, installed at the perimeter of the MSL, were sampled this quarter. The locations of the monitoring probes are presented in Figure 1.

7.1.1 SAMPLE COLLECTION

Perimeter probe sampling was conducted in September 2005 using procedures described in the *Compliance Plan*. During probe monitoring, ambient background concentrations of TOCs, measured as methane, are monitored using an organic vapor analyzer (OVA) and recorded on field data forms (Appendix F). These readings are also reported in Table 7A. Prior to collecting a sample, each probe was evacuated until the TOC concentration remained constant for a minimum of 30 seconds, as indicated with a Foxboro OVA. Each perimeter probe sample was collected in a 10-liter Tedlar bag housed within a light-sealed box over a continuous 10-minute period utilizing a non-contaminating pump.

Results of field monitoring of perimeter probes are provided in Table 7A. As indicated in Table 7A, TOC concentrations, measured as methane, at or above 5% by volume were not detected during this sampling event. Therefore, to fulfill compliance plan requirements, one sample was collected from probe MLP0320S and submitted for laboratory analysis.

Rule 1150.1 requires that a minimum of one monthly sample from a receptor probe be submitted for determination of TOC and Core Group TACs. Therefore, to fulfill compliance plan requirements, a sample was collected from probe MLP0300S in the months of July, August and September, and submitted for laboratory analysis.

Laboratory analytical results are presented in Tables 7B, 7C, and 7D. Methane gas concentrations detected during this monitoring period are well below Rule 1150.1 or state standards for methane gas at the landfill property boundary.

7.2 ANALYTICAL RESULTS

Landfill gas samples were submitted for laboratory analyses within 72 hours of collection for the following:

- Methane;
- Total Gaseous Non-Methane Organic Compounds; and
- Core Group Toxic Air Contaminants.

Results of laboratory analyses of the samples are summarized in Tables 7B, 7C, 7D, and 7E. Complete analytical reports for perimeter probe samples are contained in Appendix F.

**TABLE 7A
FIELD MONITORING OF PERIMETER PROBES
SEPTEMBER 2005**

Probe No.	Initial Date Monitored	TOC (ppmv measured as CH ₄)	Background TOC (ppmv measured as CH ₄)	Comments	Probe No.	Initial Date Monitored	TOC (ppmv measured as CH ₄)	Background TOC (ppmv measured as CH ₄)	Comments
MLP0020	S 9/10/2005	3	4		MLP0120	S 9/10/2005	2	4	
	M 9/10/2005	3	4			M 9/10/2005	2	4	
MLP0030	S 9/10/2005	3	4		MLP0130	S 9/10/2005	2	4	
	M 9/10/2005	3	4			M 9/10/2005	2	4	
MLP0040	S 9/10/2005	3	4		MLP0140	S 9/10/2005	2	4	
	M 9/10/2005	3	4			M 9/10/2005	3	4	
MLP0050	S 9/10/2005	3	4		MLP0150	S 9/10/2005	3	4	
	M 9/10/2005	3	4			M 9/10/2005	3	4	
MLP0060	S 9/10/2005	2	4		MLP0160	S 9/10/2005	3	4	
	M 9/10/2005	3	4			M 9/10/2005	3	4	
MLP0070	S 9/10/2005	3	4		MLP0170	S 9/10/2005	3	4	
	M 9/10/2005	3	4			M 9/10/2005	3	4	
MLP0080	S 9/10/2005	2	4		MLP0180	S 9/10/2005	3	4	
	M 9/10/2005	2	4			M 9/10/2005	3	4	
MLP0090	S 9/10/2005	3	4		MLP0190	S 9/10/2005	3	4	
	M 9/10/2005	3	4			M 9/10/2005	3	4	
MLP0100	S 9/10/2005	3	4		MLP0200	S 9/10/2005	3	4	
	M 9/10/2005	3	4			M 9/10/2005	3	4	
MLP0110	S 9/10/2005	3	4		MLP0210	S 9/10/2005	3	4	
	M 9/10/2005	3	4			M 9/10/2005	3	4	

TABLE 7A
FIELD MONITORING OF PERIMETER PROBES
SEPTEMBER 2005

Probe No.	Initial Date Monitored	TOC (ppmv measured as CH ₄)	Background TOC (ppmv measured as CH ₄)	Comments	Probe No.	Initial Date Monitored	TOC (ppmv measured as CH ₄)	Background TOC (ppmv measured as CH ₄)	Comments
MLP0310	S 9/10/2005	3	4		MLP0360	A 9/10/2005	4	4	
	M 9/10/2005	3	4			B 9/10/2005	4	4	
	D 9/10/2005	3	4			C 9/10/2005	4	4	
					D 9/10/2005	4	4		
MLP0320	S 9/10/2005	4	4		MLP0370	A 9/10/2005	4	4	
	M 9/10/2005	4	4			B 9/10/2005	4	4	
	D 9/10/2005	4	4			C 9/10/2005	4	4	
					D 9/10/2005	4	4		
MLP0330	S 9/10/2005	4	4		MLP0380	A 9/10/2005	4	4	
	M 9/10/2005	4	4			B 9/10/2005	4	4	
	D 9/10/2005	4	4			C 9/10/2005	4	4	
					D 9/10/2005	4	4		
MLP0340	S 9/10/2005	4	4		MLP0390	A 9/10/2005	4	4	
	M 9/10/2005	4	4			B 9/10/2005	4	4	
	D 9/10/2005	4	4			C 9/10/2005	4	4	
					D 9/10/2005	4	4		
MLP0350	S 9/10/2005	4	4		MLP0400	A 9/10/2005	4	4	
	M 9/10/2005	4	4			B 9/10/2005	4	4	
	D 9/10/2005	4	4			C 9/10/2005	4	4	
					D 9/10/2005	4	4		
					MLP0410	A 9/10/2005	4	4	
						B 9/10/2005	4	4	
						C 9/10/2005	4	4	
					D 9/10/2005	4	4		
					MLP0420	A 9/10/2005	4	4	
						B 9/10/2005	4	4	
						C 9/10/2005	4	4	
					D 9/10/2005	4	4		

**TABLE 7B
LABORATORY ANALYSIS OF
PERIMETER PROBE SAMPLES
JULY 2005**

Sample ID No.:	MLP0300S
Sample Location:	MLP0300S
Sample Collection Date:	July 20, 2005
Sample Analyses Date:	July 20 & 21, 2005

Constituent	Concentration (ppmv)
Methane	1.02
Carbon Dioxide	32,500
TGNMO	2.95

Constituent	Concentration (ppbv)
Hydrogen Sulfide	<500
Benzene	0.80
Benzylchloride	<0.8
Chlorobenzene	<0.3
Dichlorobenzenes*	<1.1
1,1-Dichloroethane	<0.3
1,2-Dichloroethane	<0.3
1,1-Dichloroethylene	<0.3
Dichloromethane	<0.3
1,2-Dibromoethane	<0.3
Perchloroethene	33.6
Carbon Tetrachloride	0.13
Toluene	5.38
1,1,1- Trichloroethane	0.47
Trichloroethene	<0.1
Chloroform	<0.1
Vinyl Chloride	<0.3
m + p-xylenes	16.6
o-xylene	6.58

ppmv = Parts per million by volume

TGNMO = Total gaseous non-methane organics

ppbv = Parts per billion by volume

* = Total concentration including meta, para, and ortho isomers.

**TABLE 7C
LABORATORY ANALYSIS OF
PERIMETER PROBE SAMPLES
AUGUST 2005**

Sample ID No.:	MLP0300S
Sample Location:	MLP0300S
Sample Collection Date:	August 17, 2005
Sample Analyses Date:	August 17 & 18, 2005

Constituent	Concentration (ppmv)
Methane	2.64
Carbon Dioxide	40,600
TGNMO	1.14

Constituent	Concentration (ppbv)
Hydrogen Sulfide	<50
Benzene	<0.2
Benzylchloride	<0.8
Chlorobenzene	<0.3
Dichlorobenzenes*	<1.1
1,1-Dichloroethane	<0.3
1,2-Dichloroethane	<0.3
1,1-Dichloroethylene	<0.3
Dichloromethane	<0.3
1,2-Dibromoethane	<0.3
Perchloroethene	52.6
Carbon Tetrachloride	0.12
Toluene	0.80
1,1,1- Trichloroethane	0.69
Trichloroethene	<0.1
Chloroform	<0.1
Vinyl Chloride	<0.3
m + p-xylenes	2.24
o-xylene	1.10

ppmv = Parts per million by volume

TGNMO = Total gaseous non-methane organics

ppbv = Parts per billion by volume

* = Total concentration including meta, para, and ortho isomers.

**TABLE 7D
LABORATORY ANALYSIS OF
PERIMETER PROBE SAMPLES
SEPTEMBER 2005**

Sample ID No.:	MLP0320S
Sample Location:	MLP0320S
Sample Collection Date:	September 28, 2005
Sample Analyses Date:	September 28 & 29, 2005

Constituent	Concentration (ppmv)
Methane	<1
Carbon Dioxide	24,600
TGNMO	1.95

Constituent	Concentration (ppbv)
Hydrogen Sulfide	<50
Benzene	0.52
Benzylchloride	<0.5
Chlorobenzene	2.03
Dichlorobenzenes*	<1.1
1,1-Dichloroethane	<0.2
1,2-Dichloroethane	<0.2
1,1-Dichloroethylene	<0.2
Dichloromethane	<0.2
1,2-Dibromoethane	<0.2
Perchloroethene	3.0
Carbon Tetrachloride	<0.1
Toluene	2.39
1,1,1- Trichloroethane	<0.1
Trichloroethene	<0.1
Chloroform	<0.1
Vinyl Chloride	<0.2
m + p-xylenes	2.92
o-xylene	1.31

ppmv = Parts per million by volume

TGNMO = Total gaseous non-methane organics

ppbv = Parts per billion by volume

* = Total concentration including meta, para, and ortho isomers

**TABLE 7E
LABORATORY ANALYSIS OF
PERIMETER PROBE SAMPLES
SEPTEMBER 2005**

Sample ID No.:	MLP0300S
Sample Location:	MLP0300S
Sample Collection Date:	September 28, 2005
Sample Analyses Date:	September 28 & 29, 2005

Constituent	Concentration (ppmv)
Methane	<1
Carbon Dioxide	22,300
TGNMO	2.44

Constituent	Concentration (ppbv)
Hydrogen Sulfide	<50
Benzene	0.78
Benzylchloride	<0.5
Chlorobenzene	<0.2
Dichlorobenzenes*	<1.1
1,1-Dichloroethane	<0.2
1,2-Dichloroethane	0.25
1,1-Dichloroethylene	<0.2
Dichloromethane	0.22
1,2-Dibromoethane	<0.2
Perchloroethene	15.8
Carbon Tetrachloride	0.10
Toluene	2.85
1,1,1-Trichloroethane	0.16
Trichloroethene	1.07
Chloroform	1.33
Vinyl Chloride	<0.2
m + p-xylenes	3.57
o-xylene	1.84

ppmv = Parts per million by volume

TGNMO = Total gaseous non-methane organics

ppbv = Parts per billion by volume

* = Total concentration including meta, para, and ortho isomer

REPORT

As-Built Construction Quality Assurance Report for the Phase 3 Final Closure Construction at the Milliken Sanitary Landfill San Bernardino County, California

Prepared for:

**County of San Bernardino
Department of Public Works
Solid Waste Management Division
222 West Hospitality Lane, 2nd Floor
San Bernardino, California 92415-0017**

*AES Project No. 04-111
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**Advanced
Earth Sciences, Inc.**
Geotechnical and Environmental Consultants

20 Fairbanks, Suite 178
Irvine, California 92618
(949) 458-3832, Fax: (949) 458-1046
Web Site: AESciences.com
E-Mail: AES@AESciences.com

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1.0 INTRODUCTION

1.1 GENERAL

The Milliken Sanitary Landfill (MSL) is an inactive Class III Landfill located 1.2 miles southeast of the Ontario International Airport in the City of Ontario, County of San Bernardino (Figure 1-1). The landfill site occupies a total of 196 acres of which about 140 acres comprise the landfill footprint. The landfill was operated from 1956 through March 7, 1999.

This report by Advanced Earth Sciences, Inc. (AES) presents the results of Construction Quality Assurance (CQA) observations and testing performed during the Phase 3 final closure construction at the landfill. The CQA services for earthwork activities for closure, including construction of an evapotranspirative cover (monocover) were performed by GeoLogic Associates (GLA) under direct contract to County of San Bernardino, Department of Public Works, Solid Waste Management Division (SWMD) and a report of their geotechnical CQA services is included herein as Attachment I. The CQA observations for landfill gas (LFG) collection system improvements were provided by SCS Engineers (SCS), a subconsultant to AES. Verification of final cover thickness, the CQA observations for drainage structures and for miscellaneous construction for final closure were provided by AES as a part of our construction management (CM) services for closure construction. The construction of the final cover system was performed in accordance with the Plans and Specifications and the Quality Assurance/Quality Control (QA/QC) Plan prepared by Bryan A. Stirrat and Associates (BAS) in association with GLA.

1.2 PREVIOUS PHASES OF CLOSURE

The closure construction for the MSL has occurred in multiple phases due to the large size of the landfill footprint. These phases are shown on Figure 1-2. Phase 1 was completed in Spring 1997 as a demonstration project to document the performance of the 6-foot thick monolithic soil final cover, and Phase 2 closure was completed in Fall 1997. Details of Phases 1 and 2 closure construction are provided below:

Phase	Description	Completion Date
1 East Mound	Construction of all perimeter drainage systems South slope retaining wall, swale and southeast basin Borrow pit stabilization North side channel and piping, northeast detention/sedimentation basin Placement of 6-foot thick monocover, east mound (23 acres) Performance testing and CQA of monolithic cover on small mound closure Expansion of existing flare station (Interim LFG System Construction)	March 1997
2 North and East Slopes	Placement of 6-foot thick monolithic cover, north and east sides of main mound (45 acres) Installation of two "stacks" of eight (8) moisture monitoring probes Construction of AC downdrains and perimeter channels Installation of LFG extraction system	December 1997

1.3 PROJECT DESCRIPTION

The MSL Phase 3 Final Closure Construction included placing a minimum 4-foot-thick (vertical dimension) monolithic soil cover over the remaining 72 acres, including the south and west faces and the top deck (Figure 1-1). The final closure required placement of about 509,000 cu. yds. of final cover soils imported from Robertson's Ready Mix Plant from the Gypsum Canyon facility. The project specifications, prepared by the Design A-E firm (BAS), required the monocover material to have an in-place hydraulic conductivity of 1.0×10^{-5} cm/sec or less, a fines content (percent passing #200 sieve) of at least 35 percent, and a percentage finer than 0.005 mm of at least 15 percent.

In addition to the placement of the final cover soils, the MSL Phase 3 Final Closure also included demolition of the scale house, improvements to the existing LFG system, construction of final drainage improvements, erosion control measures and installation of moisture monitoring probes. The construction of LFG system improvements complied with the South Coast Air Quality Management District (SCAQMD) variance permit for the site that limited the number of wells taken out of operation at any time to a maximum of 24 wells.

Yeager Skanska, Inc. (YS) of Riverside, California, was the General Contractor for the Phase 3 final closure construction. Their major subcontractors included Shaw-EMCON-OWT (Shaw) of San Diego, California for LFG system improvement, and Pacific Restoration Group (PRG) of Corona, California for erosion control features. The construction contract was awarded by SWMD on July 20, 2004. Full notice to proceed for closure construction was issued on August 16, 2004. YS performed Phase 3 final closure construction between August 16, 2004 and July 18, 2005. Installation of the final LFG system was completed by March 31, 2005 prior to the expiration of the SCAQMD variance permit.

1.4 SCOPE OF SERVICES AND RESPONSIBLE PARTIES

As discussed above, the CQA services for earthwork elements of the Phase 3 closure construction were provided by GLA. The BAS/GLA Team also provided engineering support during final closure construction.

The AES Team provided the CM services for the entire Phase 3 closure construction and CQA services for the landfill gas improvements, roads and drainage structures. AES' key subconsultants included SCS Engineers, Inc. (SCS) for LFG CQA services and Dave Woolley and Associates (DWA) for QA surveying services. Our CM and CQA activities included the following:

- Contract administration (cost and schedule control);
- Review and approve Contractor submittals and schedule updates;
- Provide response to Contractor Requests for Information (RFIs);



- Verify Contractor compliance with applicable permits and regulations;
- Organize project progress and special meetings;
- Coordination with Design A-E and CQA Consultant;
- QA surveying during cover construction;
- Thickness verification during final cover construction;
- Monitor hauling activities and perform quantity analysis during soil import operations;
- QA services during AC paving and drainage improvements;
- QA observation during installation of erosion control features;
- QA services during LFG system improvements;

1.5 PROJECT CONSTRUCTION DOCUMENTS

The following project documents form the basis for the Phase 3 final closure construction at the MSL:

1. "Bid Documents for Phase 3 Final Closure Construction at the Milliken Sanitary Landfill" prepared by Bryan A. Stirrat & Associates, May 25, 2004, and Addenda No. 1 dated June 10, 2004 and No. 2 dated June 23, 2004.
2. "Plans for Phase 3 Final Closure Construction at the Milliken Sanitary Landfill," (31 sheets) prepared by Bryan A. Stirrat & Associates, May 24, 2004.
3. "Construction Quality Assurance Plan for Milliken Sanitary Landfill" prepared by GeoLogic Associates, April 2004.

A few field revisions to the construction drawings and Special Provisions were implemented to suit field conditions. These revisions/modifications are discussed in individual sections of the report of corresponding activities. Modifications to the construction drawings are shown on redline as-built drawings presented in Appendix A.1. and related documentation is included in Appendix C.

1.6 REPORT ORGANIZATION

This as-built CQA report is organized into the following seven (7) sections:

- 1.0 Introduction
- 2.0 Final Cover Construction

- 3.0 Landfill Gas System Modifications
- 4.0 Construction of Drainage System Improvements and Site Roads
- 5.0 Miscellaneous Civil Construction Activities
- 6.0 Hydroseeding of Final Cover
- 7.0 Closure Certification

The Geotechnical CQA Report of Final Cover Construction prepared by GLA, final as-built drawings, representative photographs, and other data are included in seven (7) appendices as detailed below.

Attachment I – Report of Geotechnical CQA for Final Closure Construction – Prepared by GLA

Appendix A – Final As-Built Drawings

Appendix B – Selected Project Photographs

Appendix C – Design and Specification Variances

Appendix D – SCAQMD Variance Permit

Appendix E – LFG Well Installation Logs and Photographs

Appendix F – Laboratory Test Results of Concrete Testing

1.7 AS-BUILT DRAWINGS

The as-built construction drawings of the MSL Phase 3 final closure construction showing design modifications and field revisions were prepared by YS as redline drawings and are included in Appendix A.1. In addition, YS also performed an aerial topo survey at the completion of construction to document the as-built conditions. These drawings, reviewed by BAS and AES Resident Engineer (RE), are included in Appendix A.2.

1.8 CONSTRUCTION PHOTOGRAPHS

Throughout the closure construction, AES documented construction activities at the MSL by taking digital photographs and maintaining a photo database. Select photographs of various construction activities are included in Appendix B and an electronic CD file of all photographs taken during the MSL Phase 3 final closure construction is also included in that appendix.

2.0 FINAL COVER CONSTRUCTION

2.1 GENERAL

The intent of the Drawings and Specifications for the project was to provide for the construction of a landfill final cover system that was to approximate the lines and grades shown on the Drawings. The control of the actual lines and grades were to be achieved by complying with the following design criteria:

- The final cover system was to consist of a minimum 4-foot thick (vertical dimension) monolithic soil cover including 3 feet of monocover placed as a part of Phase 3 construction and 1 foot of existing cover material.
- When completed, the final landfill surface had to be graded such that no slope area within the landfill footprint exceeded a ratio of 2:1 (horizontal:vertical) nor would any areas have a gradient of less than 2.5 percent, except in local areas specifically designated on the Drawings.

Thus, the key requirement was to control the final cover grades based on total required cover thickness (4-foot minimum) rather than elevations. It was recognized that due to potential landfill settlement that would take place during construction, the modifications to the lines and grades had to be anticipated to suit field conditions. The cover materials for the 3-foot thick engineered fill for final cover were imported from Robertson's Star plant in Anaheim, California and stockpiled in the northeast portion of the site.

In general, the earthwork activities for final cover construction included the following:

- Excavation of exploratory test pits for existing cover depth verification and to define limits of tie-in with the previous phases of closure construction;
- Clearing and grubbing;
- Scarification and recompaction of existing foundation layer;
- Excavating, processing, hauling, placement, and compaction of cover material;
- Excavating waste and processed green material from some areas and transporting to the reconsolidation area.

Prior to the start of final cover construction, the Contractor submitted a cover depth verification and earthwork operations plan. This plan was reviewed by the CM, Design A-E Team (BAS/GLA), and the SWMD. The Contractor revised the plan to incorporate the comments of these reviewers and the revised plan was approved for construction. In general, the sequence of final cover construction followed the sequence of the LFG work phasing plan which consisted of four phases, as shown on Figure 2-1.

Monitoring the quality of the materials from the aforementioned borrow source, and observation and testing of final cover to verify compliance with the Specifications and QA/QC Plan were performed by GLA under direct contract with SWMD. The results of their CQA observations and testing and certification of final cover quality are included in their CQA report (Attachment I). AES performed the cover thickness verification and monitored the implementation of the final cover phasing plan.

2.2 COMPLIANCE WITH SITE PERMITS

During Phase 3 closure construction, the Contractor was required to comply with the existing site permits issued by South Coast Air Quality Management District (SCAQMD) including variance, dust control and excavation, and the storm water pollution prevention plan (SWPPP) approved by the Regional Water Quality Control Board (RWQCB). The CM firm monitored the construction activities on a full-time basis to verify compliance with these permits during closure construction.

In addition, an interim erosion control plan was submitted by the Contractor and approved by the project team.

2.3 CQA OBSERVATIONS AND TESTING FOR FINAL COVER PLACEMENT

GLA performed the CQA services during the Phase 3 final cover construction at the MSL, including monitoring of borrow operations. The results of their observations and testing are included in Attachment I. Based on their observations and tests, they concluded that the existing ground was properly prepared, as required prior to construction. Also, the laboratory and field testing generally exceeded the minimum frequency identified in the Contract Documents and CQA plan, and the results of the tests indicated that the minimum project compaction and permeability requirements were satisfied.

2.4 INTERIM COVER DEPTH VERIFICATION

Prior to the start of final cover construction, the Contractor performed exploratory excavations using a rubber tired backhoe at the location of the tie-in with previous phases of closure to clearly define the limits of Phase 3 final closure construction.

In addition, the bid documents called for potholing (exploratory excavations) the landfill footprint at three locations per acre to determine the existing cover thickness and to verify existence or absence of the minimum one foot of foundation layer or otherwise. In conjunction with the recommendations of the CQA firm, the Contractor excavated exploratory test pits at 223 locations. These test pits were logged by a GLA CQA Monitor to determine existing cover thickness and depth to refuse. The data from these test pits and previous test pits excavated by GLA during preparation of the Closure Plan (GLA, 2001) were utilized to place the required thickness of final cover and to identify any areas where existing cover was less than 1 foot.

2.5 PHASING PLAN FOR PLACEMENT OF FINAL COVER

The MSL Phase 3 final closure construction was performed in four (4) phases, and in accordance with the LFG system phasing plan submitted by the Contractor and reviewed and approved by the Design A-E Team (BAS/GLA). There was a slight modification to the phasing plan and closure of parts of Phases 3 and 4 were performed prior to Phase 2 construction. This was done to facilitate cover placement on the top deck by directly hauling material from Robertson's Star plant in Anaheim using bottom dump trucks at the start of Phase 3 construction instead of hauling the material from the onsite stockpile. The Contractor's cover construction activities always complied with the requirements of the SCAQMD Variance Permit that limited the number of LFG wells taken out of service at any given time to no more than 24 wells. The cover phasing plan is illustrated on Figure 2-1.

2.6 KEYWAY EXCAVATION AND REFUSE RECONSOLIDATION

A keyway at the toe of slope along the south and west perimeter roads was excavated and backfilled with soil per the contract drawings. BAS modified the limits of the keyway excavation based on the survey data of actual site conditions obtained following clearing and grubbing of the south and west slopes. This resulted in a net reduction in slope refuse excavation and reconsolidation and a reduction in asphalt concrete (AC) roadway quantities. Documentation concerning this revision is included in Appendix C.

Refuse encountered during keyway excavation and construction of drainage structures was excavated and buried in the reconsolidation areas. Refuse excavation was minimized in most cases and additional cover material was added to provide adequate drainage to meet the specified slope gradient requirements (minimum 2.5 percent). In all cases, refuse excavation was performed in compliance with the requirements of the SCAQMD Rule 1150 excavation permit and the excavated refuse was placed in the reconsolidation area. Most of the refuse encountered during the Phase 3 final closure construction was transported and placed in Reconsolidation Area no. 2.

2.7 MODIFICATION OF RECONSOLIDATION AREA FINAL GRADES

The final grades in Reconsolidation Areas 1 through 4 shown on the original contract drawings were determined by BAS/GLA based on placement of a certain volume of refuse and construction debris in this area. During actual final cover construction, the volume of debris and refuse placed in these areas was significantly less than that estimated during preparation of the bid documents. Rather than place an excessive amount of final cover or engineered fill over debris/refuse to meet the grades shown on the contract drawings, it was decided to modify the finish grades and still comply with the requirement to achieve a minimum 4-foot thick final cover and minimum 2.5 percent gradient for drainage purposes. Correspondence related to this redesign is presented in Appendix C and final as-built drawings are included in Appendix A.

2.8 FINAL COVER THICKNESS VERIFICATION

The verification of the final cover thickness was performed by AES during the construction in various phases. After the clearing and grubbing of an area to receive final cover material, verification of existing cover thickness was performed through hand augering potholes on a 50-foot x 50-foot grid. Based on the thickness of existing material, grade stakes were set up with required fill thickness marked on them to achieve a total cover thickness of at least 4 feet. During placement and compaction of the final cover material, the Contractor continuously excavated hand auger holes and marked cover thickness on interim stakes. Finish grading was performed based on these stakes. After the placement of final cover soils was completed, hand auger holes were drilled at the same location of the initial potholes to verify the total thickness of the final cover was within the specified tolerance of +0.15 feet. Areas that were deficient or had excess cover were identified and the Contractor performed regrading, as necessary to the required cover thickness of 4 feet. The summary of final cover thickness data is plotted on Figure 2-2.

2.9 INSTALLATION OF PERMANENT SETTLEMENT MONUMENTS

Four permanent settlement monuments were constructed at the locations shown on the final as-built drawings included in Appendix A.2. The monuments consisted of 4-inch diameter steel pipe filled with concrete. A nail and tag were embedded in the concrete per the County survey requirements. Painted steel bollards were installed to protect these monuments per the detail provided in the Contract drawings. As-built survey data was recorded by the Contractor on April 5, 2005 following the installation of the permanent settlement monuments and is presented below:

Settlement Monument	Northing	Easting	Elevation
200	1836814.8147	6691570.9754	911.4766
201	1836868.4914	6691865.1878	973.2883
202	1835887.3290	6692818.0360	915.2133
203	1836714.1574	6693161.9981	1044.9764

3.0 LANDFILL GAS SYSTEM MODIFICATIONS

3.1 GENERAL

As part of the Phase 3 final closure construction project at the MSL, the existing landfill gas collection (LFG) system in the Phase 3 area was removed and replaced with a new LFG collection system of similar design. This included abandonment of existing extraction wells, drilling of new extraction wells, extensions of the existing wells, installation of headers, and construction of condensate storage systems. SCS provided QA/QC observations during the modifications to the LFG collection system. The Contractor submitted certifications for all new materials to be used for the construction of the final LFG collection system prior to the start of work. These submittals were reviewed by the Design A-E Firm (BAS) and the CM. A summary of construction activities is presented in the following sections.

3.2 LFG SYSTEM PHASING PLAN AND SCAQMD VARIANCE PERMIT

An LFG system phasing plan was included in the construction drawings to assist the Contractor with phasing the removal of the existing system and installation of the final LFG system. This phasing was required to ensure that only a limited portion of the landfill and LFG and condensate collection system was impacted at any one time and was also designed such that no more than 24 LFG extraction wells were offline at a given time as per the requirement of the SCAQMD variance permit included in Appendix D. The Contractor was required to either follow this phasing plan or submit an alternative plan for review by the Design A-E Firm. The Contractor's alternative plan is shown in Figure 2-1. The plan included performing the final closure construction in four phases and was reviewed and approved by BAS. The Contractor provided an advance 72-hour written notification prior to abandoning a phase of the existing LFG system. This notification was forwarded to SCAQMD by SWMD.

3.3 DESIGN MODIFICATIONS DURING CONSTRUCTION

A few design modifications, listed below, were implemented during the construction of the new LFG system and are listed below. Relevant correspondence for these modifications is included in Appendix C:

- The well screen used for new extraction well installation consisted of 4 rows of 0.125 inch slots instead of the 3 rows specified in the Contract drawings. A request from Shaw regarding this change was approved by the Design A-E firm (BAS) based on an examination of the pipe sample and a letter from the manufacturer.
- The gravel pack around the well screen was modified to 1½-inch material instead of the pea gravel required by the specifications. A shipment of pea gravel to the site was rejected after it was observed that the material included elongated particles and there was a potential for material to block the slots of the well screen.

- Well MLV 1130 was completed to a depth of 153 feet below ground surface (bgs) instead of the 167 feet required by the specifications due to the presence of a sand layer at that depth.
- Wells MLV 1142 & 1145 were completed to 102 feet bgs and 112 feet bgs instead of the 138 and 142 feet bgs required by the specifications due to refusal.
- LFG wells MLV 330A and 1530 were relocated to suit encountered site conditions. MLV 330A was located on a slope and was moved upslope to enable easy access, and MLV 1530 was originally staked on a slope in a reconsolidation area that was to be filled with construction generated refuse. However, the anticipated finish grades in this area were not achieved and resulted in the relocation of the well upslope to the top of the Top Deck berm.
- The lateral connection for existing LFG extraction well MLV 1190A was modified due to the well location being 20 feet below the new header line installed on the bench. A 2-inch lateral connection was installed downslope to the 4-inch lateral connection from well MLV 790A.
- A single band clamp was used on each end of the Industrial Tube Corporation (ITC) flex hoses instead of the two band clamps called for on the plans as they would not fit the ITC cuff.
- Wellheads for wells MLV 240, 250, 260, 270, 300, 310 and 1145A/B were relocated to the top of the slope to provide access for monitoring.

3.4 ABANDONMENT OF EXISTING LFG SYSTEM AND SALVAGE OF MATERIALS

After arranging a flare station shutdown with SWMD, the Contractor disconnected one phase of the existing LFG system for removal at a time. The LFG extraction wells identified to be extended after the completion of final cover placement were cut and capped a minimum of 2 feet below surface. The locations of these wells were surveyed. Salvageable piping, fittings and other LFG extraction and condensate system materials were removed and stored at the onsite yard. Some of the materials were reused during installation of temporary bypass headers and condensate collection lines.

3.5 INSTALLATION OF NEW LFG EXTRACTION WELLS

All of the existing wells in the Phase 3 closure area were either extended or abandoned and replaced with new wells. In addition to replacing abandoned wells, several new wells were added, resulting in more extraction wells at the completion of Phase 3 final closure construction. Thirty-eight (38) existing wells were extended, and 52 new wells were drilled for a total of 90 wells.

Of the 52 new wells, 30 were dual completion wells and 22 were single completion wells. Wells up to 100 feet in depth were single completion, and wells over 100 feet deep were dual completion. The upper completion of all dual completion wells consisted of 20 feet of well screen and 40 feet of blank pipe. All

well screens were factory slotted and all wells included a slip joint in the casings. A vent box was used for drilling to limit fugitive emissions of LFG during drilling.

New CES Landtec™ wellheads with sliding gate valves were installed on all well completions, including extended existing wells, and all wellheads included a temperature indicator. An additional monitoring port was also installed on all wellheads between the valve and the flex hose that connects to the lateral. Dual completion wellheads were connected together prior to connection to the lateral. The LFG Laterals were 4-inch diameter Schedule 40 PVC. Only a few of the laterals were buried underground with the remaining installed at grade.

The well installation logs are included in Appendix E. Table 3-1 provides as-built details of the new LFG extraction wells installed as part of Phase 3 final closure construction.

3.6 INSTALLATION OF LFG PIPING

The final LFG collection system consists of new Schedule 40 PVC collection piping installed above grade. Some sections of the header system were installed on strut-type supports driven into the ground with a pneumatic hammer and some sections were installed on grade. Short struts driven into the ground on both sides of the pipe restrain on-grade pipe from moving laterally although the pipes can move longitudinally.

Above-grade piping was painted for ultraviolet (UV) protection, and utilized ITC flex hoses on 3-inch and larger pipes and Kanaflex flex hoses on 2-inch pipes to allow flexibility for thermal expansion/contraction and settlement. Flex hoses are also used at high stress points such as transitions from above grade to below grade and on the branch side of tees.

At road crossings below grade sections were installed in corrugated steel pipe (CSP) sleeves. The CSP sleeves have bentonite seals at both ends to prevent LFG from concentrating inside the sleeves. Buried pipes other than at road crossings were completely backfilled with soil. Below grade piping was graded using a laser level to insure adequate grades. Collection piping ranges in size from a minimum nominal size of 2-inch diameter at the wellhead to a maximum nominal size of 12-inch diameter for the main header. Final as-built drawings of the LFG collection system are included in Appendix A.2.

3.7 CONSTRUCTION OF CONDENSATE STORAGE SYSTEM

Nine 24-inch below grade PVC condensate sumps that previously served the Phase 3 closure area were removed during construction. Six of the nine sumps were relocated and reused in the new LFG collection system (only 6 sumps were needed for the new LFG system). Low points in the header system drain to condensate sumps via a 2-inch Schedule 80 PVC drain line. The existing condensate pneumatic sump pumps were also reused. Each sump has a 2-inch Schedule 80 vacuum equalizing line connecting the sump to the header.

Condensate is conveyed from the sumps to the holding tank (located at the flare facility near the main entrance to the site) through a 2-inch HDPE SDR 11 conveyance line. Compressed air from the compressed air system (located in the flare facility) is conveyed to the sumps through a 1½-inch HDPE SDR 9 pipe. Both of these pipes run parallel with the new 12-inch diameter main header line on the south and west sides of the site. Final as-built details of the condensate storage system are included in Appendix A.1.



4.0 CONSTRUCTION OF DRAINAGE SYSTEM IMPROVEMENTS AND SITE ROADS

4.1 GENERAL

The Phase 3 final closure construction project included the construction of final site drainage improvements, including asphalt concrete (AC) downdrains, bench transitions, and construction of bench and perimeter AC access roads. The Contractor performed excavation and subgrade preparation for these improvements. GLA provided CQA during subgrade preparation and AES' CQA Monitors performed observation of concrete and AC placement operation, and performed field density tests on the compacted AC pavement.

4.2 DOWNDRAINS AND BENCH CROSSINGS

Numerous 6-inch thick AC downdrain/trapezoidal channels with a depth varying between 1 and 1½ feet along with bench transitions were constructed on the final cover slopes at locations designated in the contract drawings. The transitions to the AC downdrains on benches consisted of a 6-inch thick AC swale graded at 3 percent to the downdrain on the slope below. The downdrains were excavated using a backhoe fitted with a trapezoidal bucket conforming to the dimension shown on the contract drawings and the AC work on final cover slopes was performed manually by laborers. The location of the downdrains and bench crossings are shown on Sheets 2, 3, 5, 6 and 9 of the final as-built drawings included in Appendix A.2.

4.3 OTHER DRAINAGE IMPROVEMENTS

In addition to the drainage improvements described above, the following structures were constructed as part of the site drainage facilities and are shown on the redline as-built drawings included in Appendix A.1:

- Masonry splash walls were constructed on curves adjacent to the AC downdrains (Sheets 7, 9, and 10).
- A downdrain to pipe transition consisting of concrete inlet transition, a 36-inch diameter corrugated smooth interior wall HDPE pipe, and a concrete collar per APWA Std Plan 380-2 were constructed. This transition was installed to connect the downdrain in the southwest corner of Phase 3 area to the existing reinforced concrete pipe (RCP) that conveys runoff to the sedimentation basin (Sheets 8, 8A and Addendum 2).
- Two 8-foot x 8-foot grouted rip-rap pads were constructed at the termination of downdrains in the southeast portion of Phase 3 into the sedimentation basin (Sheet 7A). In addition, one 4-foot x 4-foot grouted rip-rap pad was constructed at the transition of downdrain from previous reconsolidation area no. 2 to the bench below (Sheet 8).

- The concrete v-ditch on the south side of the southern perimeter AC road was extended to divert runoff to the southwest basin (Sheet 8).
- An additional downdrain along with a soil berm adjacent to East Bench 1 was constructed near the southeast corner to divert runoff from the previously closed Phase 1 area to the southeast basin (Sheet 7A).
- Two metal flumes were installed including one on the east facing and one on the south facing slopes of the east sedimentation basin (Sheet 11).
- A drainage swale was excavated to divert runoff from the main access road to the McCarthy flume located on the south side of the east basin (Sheet 12).
- An additional soil berm along with a drainage transition to the downdrain was constructed in the northwest portion to drain the flat area between the Top Deck and West Deck (Sheet 10) to divert runoff and minimize erosion of the slope below. This area was the location of previous reconsolidation area no. 3 and did not receive any refuse placement during construction. Thus the design grades in this area were not achieved and only the required four foot thick soil cover was constructed.

4.4 CQA TESTING FOR CONCRETE AND ASPHALT

An AES QA/QC Monitor observed the placement of concrete and asphalt during construction of the drainage and pavement improvements. The results of the concrete strength tests are included in Appendix F. All the test results met or exceeded the minimum strength values specified in the contract documents.

4.5 SITE ROAD IMPROVEMENTS

The following site road improvements were constructed by the Contractor as part of Phase 3 closure construction at the MSL and are shown on the redline as-built drawings included in Appendix A.1:

- 6-inch thick AC slope paving was constructed along the west and southwest perimeter road and along the main access road located on the north and south faces of the slopes below the top deck (Sheets 8, 9 and 10).
- 6-inch AC curb per APWA Standard Plan 120-1 A3-150(6) was constructed along the west edge of the western perimeter road, access road to Bench 1 in the southwest corner, access ramp to the southwest basin and the access ramp to Bench 1 from the south perimeter road (Sheet 8A).
- New AC pavement comprising of 4-inch AC over 6-inch crushed miscellaneous base (CMB) placed over 12-oz geotextile was constructed for the main access road, the connector road from

north and south facing slopes below the top deck to the main access road and for the south and west perimeter roads (Sheets 8 through 12).

- A 6-inch thick CMB access road over 12-oz./sy geotextile was constructed on the top deck to connect the south and north AC access road (Sheet 9).

An AES QA/QC Monitor observed the construction of AC pavement on the access roads. GLA performed field density testing for the CAB layer as a part of their geotechnical CQA activities.

5.0 MISCELLANEOUS CIVIL CONSTRUCTION ACTIVITIES

5.1 GENERAL

This section includes construction/demolition of miscellaneous items as part of the MSL phase 3 final closure construction project. The key construction elements included demolition of the scale house, installation of the moisture monitoring system with chain link fence enclosures, and installation of permanent erosion control measures including sandbag chevrons, silt fence and straw rolls. All the required submittals for the materials used were reviewed and approved by the CM and Design/CQA firms prior to construction.

5.2 DEMOLITION OF EXISTING SCALE HOUSE

The equipment in the old scale system was removed offsite by SWMD personnel prior to the demolition of the scale house. Salvaged steel beams were placed over the southeast channel behind the Edison transmission tower for access to LFG monitoring wells as stated in the contract drawings. Prior to demolishing the scale house, all utilities and plumbing were disconnected. A buried septic tank was excavated and disposed in the reconsolidation area after the contents were pumped out. Concrete walls of the scale house were demolished approximately 12 inches below grade and holes were punched through the bottom slab. Correspondence related to this change is included in Appendix C. The scale house pit was backfilled and compacted with soil and paved with 4-inch thick AC pavement over 6 inches of CAB. GLA provided QA/QC observations and testing during compaction of the soil backfill.

5.3 INSTALLATION OF MOISTURE MONITORING SYSTEM

Two moisture monitoring assemblies comprising of weather sensors and data recorders were installed at the locations shown on Sheet 2 of the redline as-built drawings included in Appendix A.1. A chain link enclosure with fence posts and a gate was constructed at each location. GLA provided CQA services during the installation of the moisture monitoring systems.

5.4 INSTALLATION OF SANDBAG CHEVRONS, SILT FENCE, AND STRAW ROLLS

The final erosion control plan provided in the contract drawings required the installation of the following: sandbag chevrons along the flow line of benches, sandbag sedimentation barrier near drainage inlets, sandbag sediment traps at drainage outlets and straw rolls with a spacing of 15 feet on final cover slopes. AES personnel monitored the installation of all erosion control measures required by the contract drawings and observed the installation of straw rolls.

6.0 HYDROSEEDING OF FINAL COVER

6.1 GENERAL

As part of the final erosion control plan for Phase 3 final closure construction at the MSL, hydroseeding of final cover slopes with three types of seed mixes was performed. Pacific Restoration Group (PRG), a subcontractor to YS, performed the hydroseeding of final cover slopes, deck areas, and slopes of the east sedimentation basin.

6.2 HYDROSEEDING OF FINAL COVER SLOPES AND DECK AREAS

Prior to hydroseeding, certificates of compliance for the seed mixes listed in the Special Provisions were reviewed and approved by the CM and Design A-E firm. The following revisions to the specified seed mixes were made prior to hydroseeding:

- Substitution of *Ericameria Pinifolius* instead of *Ericameria Linearifolia* in Seed Mix B due to the non-availability of the latter seed.
- Addition of African Daisy (*Dimorphotheca aurantiaca* 3-lbs/acre 90/75) to the seed mix C was performed at the request of SWMD.

The seed mixes used for hydroseeding the final cover slopes and deck areas are listed in Table 6-1 and shown on Sheet 11 of the redline as-Built Drawings included in Appendix A.1. Correspondence related to revisions to the seed mix is included in Appendix C.

The procedure followed by PRG to hydroseed the seed mixes on final cover slopes and deck areas included the following three steps:

- The surface receiving seed mix was pre-dampened to a 2-inch depth and an application of 1,000 lbs/acre of gypsum and 700 lbs/acre of fiber was performed. The gypsum and fiber mix was track-walked using dozers and a track divot was left parallel to the slope contour.
- The seed mix, 150 lbs/acre 15-15-15 slow release fertilizer, and 800 lbs/acre fiber were hydroseeded.
- The final step involved hydroseeding with 3000 lbs/acre fiber and 120 lbs/acre organic tackifier.

The CM performed periodic spot checks of labels provided by the seed supplier to verify that the right type of seed mix was applied on a given area.

Table 6-1
Various Seed Mixes used for Seeding Final Cover Areas

Miliken Sanitary Landfill Phase 3 Final Closure Construction

Seed Mix C - Eriogonum

Seed Mix B - Artemisia

Seed Mix A - Grass

Lbs/AC	Species	Min. % P/G
6.00	Vulpia microstachys	90/60
30.00	Eriogonum fasciculatum	10/65
4.00	Lotus scoparius	90/60
1.00	Artemisia californica	15/50
2.00	Encelia californica	40/60
2.00	Hazarzia squarrosa	10/20
2.00	Eriophyllum confertiflorum	30/60
1.00	Camissonia bistorta	95/75
1.50	Eriastrum densifolium	05/60
3.00	Dimorphotheca aurantiaca ²	90/75
52.50		

Lbs/AC	Species	Min. % P/G
8.00	Artemisia californica	15/50
15.00	Salvia mellifera	70/50
8.00	Salvia apiana	70/50
2.00	Eriogonum fasciculatum	10/65
6.00	Lotus scoparius	90/60
6.00	Vulpia microstachys	90/60
2.00	Hemizonia fasciculata	10/25
1.50	Lotus purshianus	90/35
1.00	Ericameria pinifolius ¹	10/20
49.50		

Lbs/AC	Species	Min. % P/G
8.00	Aristida purpurea	60/45
6.00	Vulpia microstachys	90/60
12.00	Hordeum californicum	90/80
10.00	Nassella cernua	80/50
5.00	Elymus multisetus	80/60
6.00	Bromus carinatus cucamonga	95/80
4.00	Trifolium gracilentum	95/85
2.00	Lepidium nitidum	95/75
53.00		

Notes:

¹substituted for Ericameria linearifolia

²Added to the seed mix by SWMD

7.0 CLOSURE CERTIFICATION

The Phase 3 final closure construction at the MSL was performed by Yeager Skanska between August 16, 2004 and July 18, 2005. AES Team provided the CM services to the SWMD during the final closure construction to verify compliance with the Plans, Special Provisions, the QA/QC Plan, and any design revisions/variances issued by the Design A-E Firm. AES Team also provided QA/QC services for LFG improvements, drainage structures, and miscellaneous construction. The earthwork CQA, including monitoring and testing of final cover, was provided by GLA under direct contract to the SWMD.

Based on the results of our observation of construction activities, the Phase 3 final closure construction at the MSL as of the end of construction on July 18, 2005, was performed in accordance with the requirements of the SWMD's Contract Drawings and Special Provisions and in conformance with the waste discharge requirements and Title 40, Subtitle D CFR and Title 27 CCR.

Prepared by:

ADVANCED EARTH SCIENCES, INC.

N. Sridhar
Sridhar Nannapaneni

Project Engineer

Reviewed by:

K. Khilnani

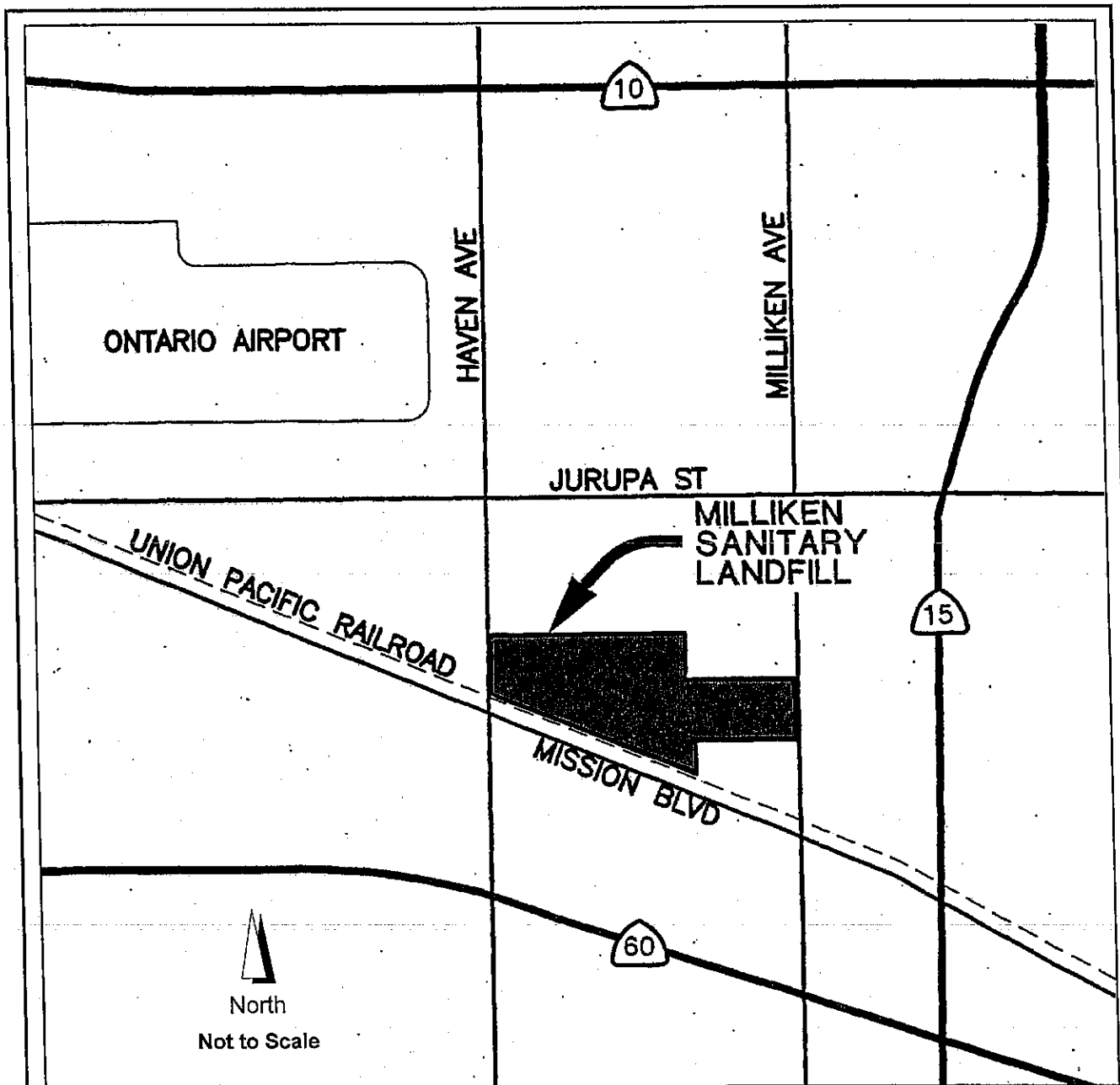
Kris Khilnani, P.E.,
Principal




8.0 REFERENCES

- Bryan A. Stirrat & Associates, 1997, *Milliken Landfill East Mound Final Cover Construction and Gas Extraction System Closure Construction Certification*, prepared for County of San Bernardino Waste System Division c/o NORCAL/San Bernardino, Inc.
- Bryan A. Stirrat and Associates, 1999, *Milliken Landfill North and East Face Final Cover Construction and Gas Extraction System Closure Construction Certification*, prepared for County of San Bernardino Waste System Division c/o NORCAL/San Bernardino, Inc.
- IT-EMCON, *Final Closure and Final Post-Closure Maintenance Plan, Milliken Sanitary Landfill, Ontario, California*, volumes I and II, prepared for the County of San Bernardino Waste System Division and Its Contractor NORCAL/San Bernardino, Inc., prepared September 10, 1999.





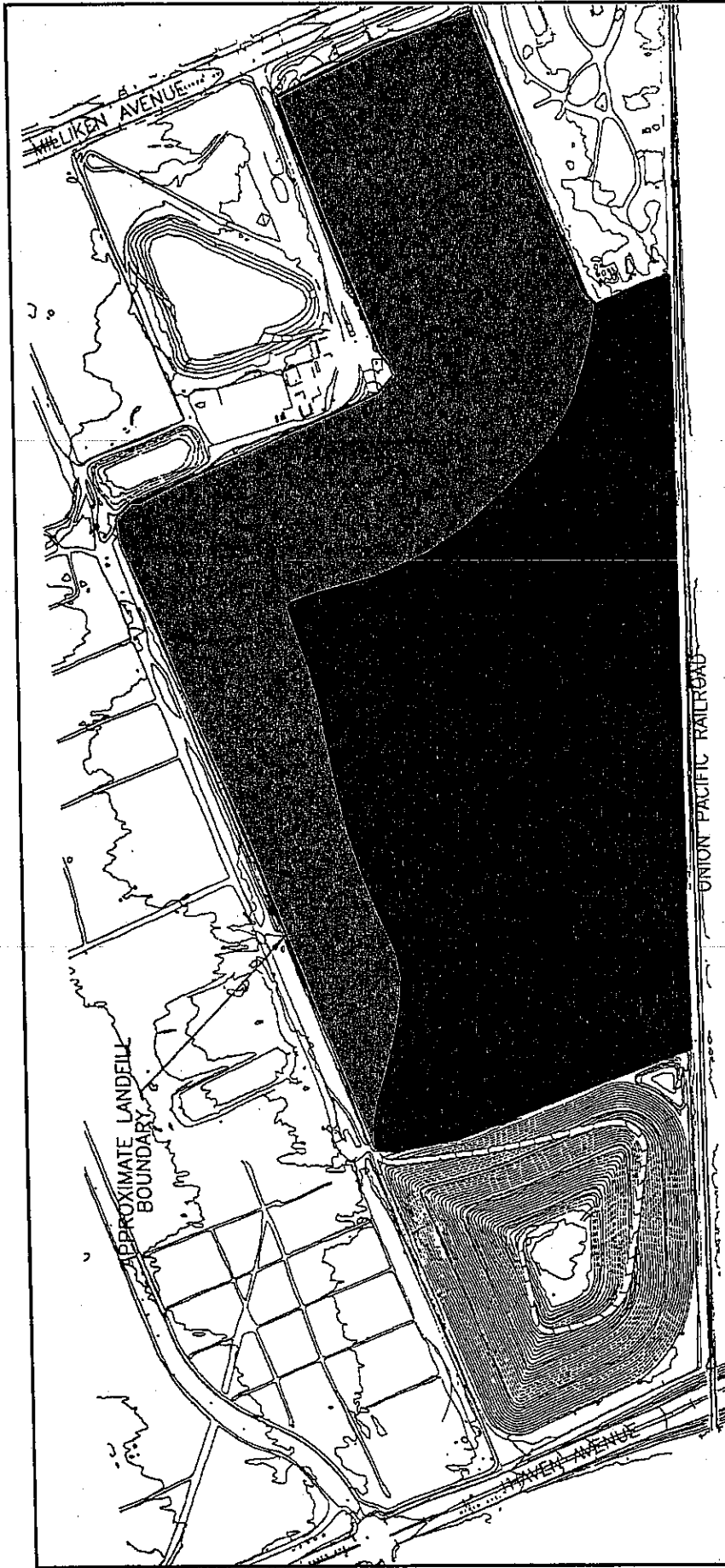
Drawing from GeoLogic Associates, February 2004

 Advanced Earth Sciences, Inc. <small>Geotechnical and Environmental Consultants</small>	Project No.: 04-111
	Milliken Sanitary Landfill Phase 3 Final Closure Construction County of San Bernardino



Site Location Map

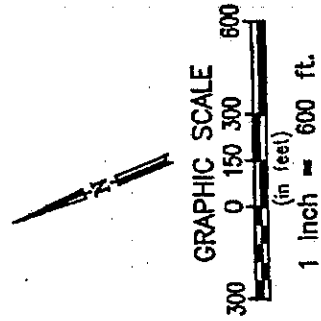
7-05


Figure 1-1



Explanation

-  Phase 3 Final Closure Construction Area
-  Previously Closed Areas (Phases 1 and 2)

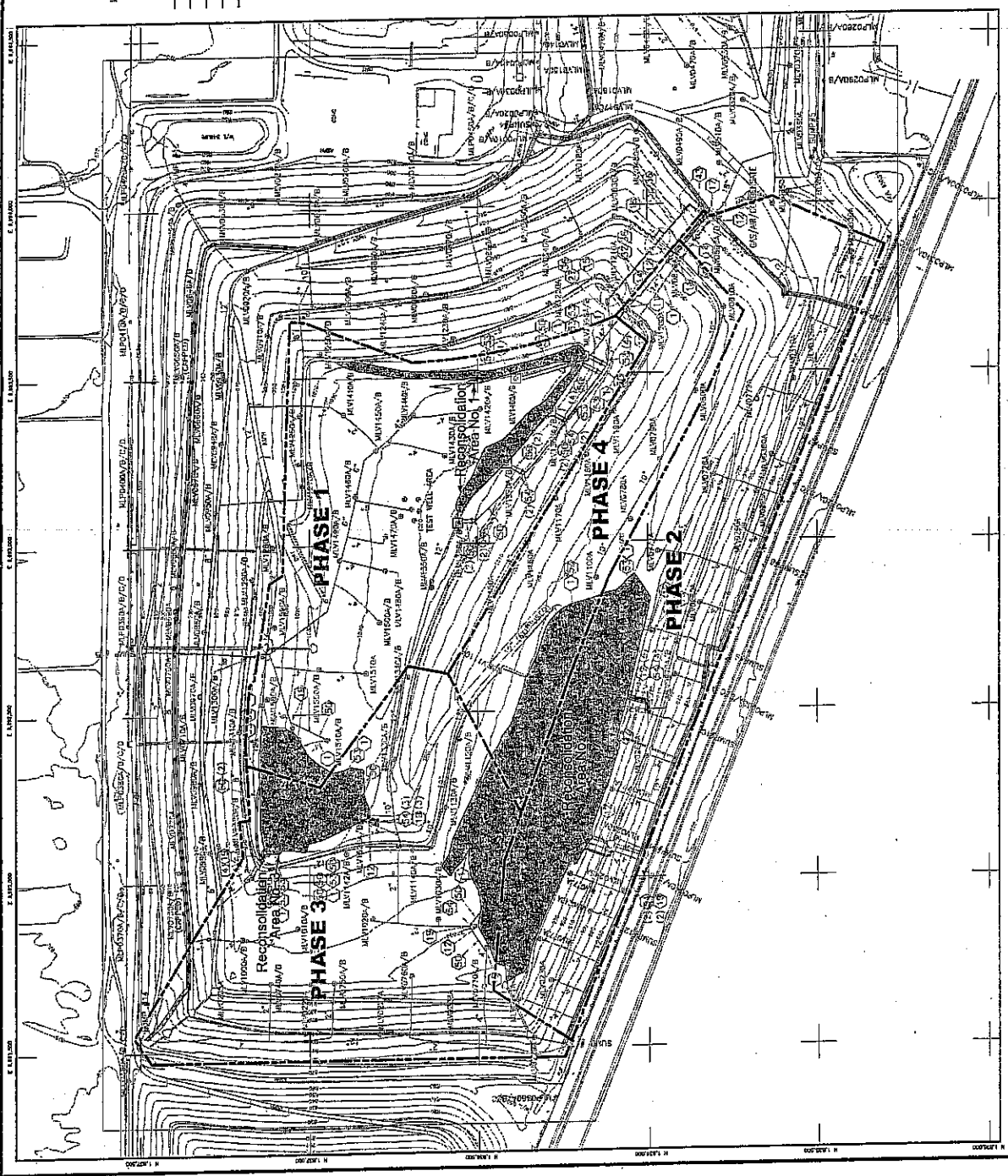



 Project No.: 04-111
 Milliken Sanitary Landfill
 Phase 3 Final Closure Construction
 County of San Bernardino

Closure Phasing Plan

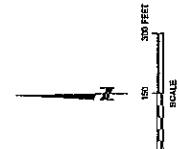
Figure 1-2

7-05



- LEGEND**
- M10200A/B • EXISTING VERTICAL GAS EXTRACTION WELL TO BE EXTENDED AFTER FINAL COVER
 - M10200B/B • EXISTING VERTICAL GAS EXTRACTION WELL TO BE ABANDONED
 - M10200C/B • EXISTING VERTICAL GAS EXTRACTION WELL TO BE ABANDONED
 - SUP #1 • EXISTING CONCRETE TOWER STAIR
 - M10200D/B • EXISTING GAS WIDENING PHASE
 - EXISTING VERTICAL GAS OUT BELOW GRADE (WELLS NOT INSTALLED YET)
 - REMOTE WELLS/ASSEMBLY LOCATION
 - EXISTING COMPRESSED AIR LINE
 - EXISTING CONCRETE CONDUIT LINE
 - EXISTING GAS HEADER/LATERAL
 - EXISTING BELOW GRADE GAS HEADER/LATERAL PIPE
 - TURNS OF GAS SYSTEM PHOSPHOR (NO MORE THAN 21 WELLS OFF-LINE AT A TIME)

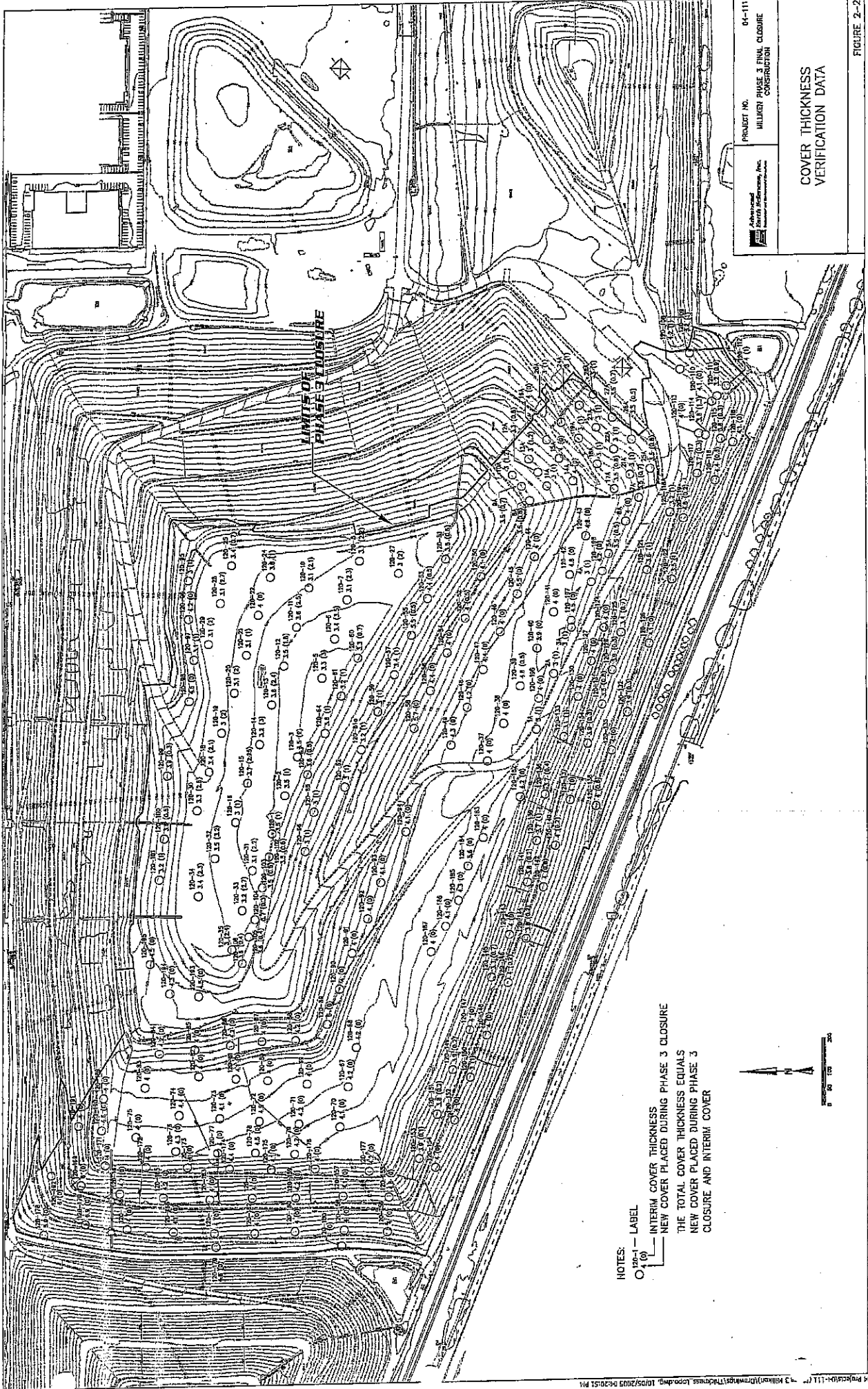
BASE MAP REFERENCES:
 Base map from Bryan A. Silwell & Associates, drawing filed with the State of Michigan, dated 05/24/2004, and State of Michigan Planning & Equal Opportunity, dated 05/24/2004, and 05/24/2004, Sheet No. B-1.



	Project No.:	04-111
	William Sanitary Landfill Existing Gas Extraction System	

Final Cover Phasing Plan

9-05 Figure no. 2-1



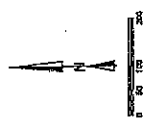
PROJECT NO. 04-111
 MILKLET PHASE 3 FINAL CLOSURE
 CONSTRUCTION

Advanced
 South Industries, Inc.
 a subsidiary of Advanced Construction

COVER THICKNESS
 VERIFICATION DATA

FIGURE 2-2

NOTES:
 ○ 1 (0) LABEL
 — INTERIM COVER THICKNESS
 — NEW COVER PLACED DURING PHASE 3 CLOSURE
 — THE TOTAL COVER THICKNESS EQUALS
 — NEW COVER PLACED DURING PHASE 3
 — CLOSURE AND INTERIM COVER



PHASE I ENVIRONMENTAL SITE ASSESSMENT

*County of San Bernardino
Solid Waste Management Division*

Milliken Surplus Property

City of Ontario, County of San Bernardino, CA

December 14, 2005

Prepared For:

COUNTY OF SAN BERNARDINO
Solid Waste Management Division
222 West Hospitality Lane, 2nd Floor.
San Bernardino, California 92415-0017

Prepared By:

BRYAN A. STIRRAT & ASSOCIATES, INC.
1360 Valley Vista Drive, Suite 200
Diamond Bar, California 91765
(909) 860-7777



BAS JN: 2004.0092

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**MILLIKEN SURPLUS PROPERTY
PHASE I ENVIRONMENTAL SITE ASSESSMENT**

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SECTION 1.0
INTRODUCTION

1.0 INTRODUCTION

Bryan A. Stirrat & Associates (BAS) was retained by the San Bernardino Solid Waste Management Division (SWMD) to perform a Phase I Environmental Site Assessment (ESA) of a property located on the south side of Francis Street between Haven Avenue and Milliken Avenue, in the City of Ontario, California (Figure 1). The SWMD, owner of the property, is considering the sale of the currently undeveloped site, also known as the Milliken Surplus Property.

1.1 PURPOSE

The purpose of this Phase I ESA is to identify and assess characteristics of the property that could be of environmental concern or, conversely, to reasonably illustrate the lack of site characteristics that would indicate a potential environmental concern for potential development of the Milliken Surplus Property.

1.2 SCOPE OF WORK

The work described herein was performed in accordance with guidelines for Phase I ESA provided by ASTM E1527-00. In completing this ESA the following tasks were performed.

1.2.1 Site Reconnaissance, Site Vicinity Reconnaissance, and Interview with Personnel Familiar with the Site

- BAS searched for evidence of present or past operations that use or may have used potentially hazardous materials.
- BAS personnel visually inspected and assessed the site for evidence of storage, use, disposal, and/or spills of potentially hazardous materials. Any evidence of visible or suspected hazardous materials was documented with color photographs and identified on a map(s).
- BAS visually inspected the site for abnormal or unusual topographic features (such as mounds, depressions, sink holes, etc.) as potential storage and/or disposal areas of hazardous materials.
- A site vicinity reconnaissance (area within 1.5 mile radius of the site) was performed to compile a list of companies/businesses in the site vicinity that are

reported or appear to use or produce hazardous substances that, in BAS' judgment, may impact the site.

- BAS conducted interviews/discussions with personnel familiar with the property.

1.2.2 Review of Regional Geology and Hydrogeology

- Regional geology and hydrogeology review included evaluation of depth to groundwater, localized and regional groundwater flow, and potential groundwater conditions.

1.2.3 Review of Data on Historical Uses of the Site and the Site Vicinity

- Review of readily available historical aerial photographs and maps – the review provided information on historical land use at the site and in the site vicinity as it relates to potential sources of hazardous waste (e.g., landfills, sumps, or gas stations that are no longer present, or changes to facility features).
- Review of information provided by the SWMD, such as property acquisition documentation and aerial photographs of the site.

1.2.4 Review of Environmental Database Information

- Review of readily available information from pertinent federal, state, county, and city governmental agencies and selected private individuals or offices.

1.2.5 Data Evaluation, Report Compilation, and Management

- BAS evaluated the available data to assess whether the objectives of the investigation have been met. As part of the data evaluation, BAS is providing the uncertainties associated with the collected data and the stated conclusions and recommendations.
- BAS prepared this report that includes descriptions of the site under investigation, the purpose and the objectives of the study, approach, detailed scope of work with rationales/justifications, the procedure that was used, pertinent findings, conclusions, recommendations for further work, and references for cited and/or reviewed documents.

SECTION 2.0

**GENERAL SITE AND VICINITY
CHARACTERISTICS AND SETTING**

2.0 GENERAL SITE AND VICINITY CHARACTERISTICS AND SETTING

The following sections describe site location, provide brief site description, general site vicinity characteristics and regional environmental setting, with emphasis on general geological and physiographical features.

2.1 SITE LOCATION, DESCRIPTION AND BOUNDARIES

The subject site is located on the south side of Francis Street, between Haven Avenue on the west and Milliken Avenue on the east, in the City of Ontario, in southwestern portion of San Bernardino County, California (Figure 1, Site Location Map). Currently, the subject property is undeveloped. The subject site has a roughly rectangular shape and an approximate total area of 98.8 acres. The property is identified by the San Bernardino County Tax Assessor by APNs 0211-281-04 (approximately 19.9 acres), 0211-281-21 (27.2 acres), and 0211-281-23 (approximately 51.7 acres).

On the north side, the subject site is bounded by Francis Street, beyond which are mostly commercial and light industrial developments. On the south, the western portion of the site is bordered by the closed Milliken Sanitary Landfill (MSL), owned by the SWMD, and the eastern portion of the site is bordered by a newly constructed commercial property, with still vacant buildings. On the east and west, the site is bordered by public roads, beyond which are commercial/industrial developments.

2.2 PHYSIOGRAPHIC, GEOLOGIC, GROUNDWATER AND SOIL CONDITIONS

Major physiographic features in the vicinity of the Milliken Surplus Property include Route 60 and Interstate 10, major east-west freeways, which are located approximately ½-mile south and 2 miles north of the site, respectively; and Interstate 15 Freeway, a north-south freeway, located less than ½-mile east of the site. The site is located approximately 1.5 miles southwest of Ontario International Airport. The nearest significant water body with respect to the site is the Santa Ana River, approximately 6 miles southeast of the site. Foothills of the San Gabriel Mountains are approximately 6 miles to the north of the site.

The Milliken Surplus Property is located within the Chino Basin, a large Quaternary sedimentary basin that extends southward from the San Gabriel Mountains on the north to the Jurupa Mountains on the south. The basin was formed by faulting and occupies a down-dropped fault block known as the Perris Block. It has been and continues to be filled with sediments derived from the San Gabriel Mountains. The thickness of the sediments beneath the site is estimated to be about 800 feet. The sediments beneath the site dip gently in a southerly direction and consist of medium to low-to-medium energy, interbedded strata (pebble conglomerates, sands, silts and clays). The strata were deposited by distributary streams draining the San Gabriel Mountains and by sheet flooding. At the present time, the land surface continues to aggregate, and medium-energy sediments continue to be deposited. The site elevation is approximately 880 feet above mean sea level (amsl).

The Milliken Surplus Property is located within the northern portion of the Peninsular Ranges Geomorphic Province of Southern California. The Peninsular Ranges Province is characterized as a northwest-southeast oriented complex of blocks separated by similarly trending faults which dominate the structure of the Peninsular Ranges. Major faults in this province are associated with the San Jacinto and Elsinore Fault Zones. Earthquakes occurring within 100 kilometers (60 miles) of the site are considered capable of generating ground shaking of engineering significance to the site. Several active and potentially active faults are within this zone. The Maximum Probable Earthquake (MPE) on the San Andreas Fault (Mojave Segment) is expected to have the greatest impact. No known active fault(s) cross the subject property.

The Milliken Surplus Property is located within the Chino II sub-basin of the Chino Groundwater Basin. Near this site, the Chino Basin aquifer consists of a thick section of Pleistocene alluvial fan deposits overlying Cretaceous or older igneous bedrock. Beneath the site, the base of the aquifer is about 700 feet below the ground surface. The aquifer consists of sand and gravel layers with scattered clay layers. The alluvium overlying the aquifer also contains silt and clay layers that could retard infiltration down to the aquifer. Generally the soils in this area have a high permeability.

Overall groundwater flow below and adjacent to the site is to the south, away from the San Bernardino and San Gabriel Mountains. While the Chino Basin is bounded and includes several faults which act as barriers to groundwater flow and the direction of groundwater flow may be variable on a local scale, the overall flow

direction remains towards the south. The nearest apparent groundwater barriers are the Red Hill and Chino Faults located approximately five and one-half miles northwest and eight miles southwest, respectively from this site. Groundwater in the eastern Chino Basin flows generally southwesterly. Groundwater in the vicinity of the site occurs in an unconfined aquifer. The static water table is at a depth of about 250 feet below the ground surface. There are no indications of perched aquifers beneath the site.

Based on development in the vicinity of the site, soils are likely to have sufficient load-bearing capacity to support variety of uses; however, only site specific geotechnical investigations can confirm that.

SECTION 3.0

ASSESSMENT RESULTS

3.0 ASSESSMENT RESULTS

As part of this investigation, BAS utilized a variety of information sources. Results of the following tasks are described in this section:

- Direct Site Inspection
- Interview with Current Owner of the Site
- Adjacent Sites and Vicinity Observations
- Site History/Land Use Review (historical aerial photos; USGS topographic map, County documentation)
- Results of the Regulatory Agency Review

3.1 SITE INSPECTION OBSERVATIONS

BAS personnel performed direct inspection of the subject site on November 4, 2005. During the site visit, the property was visually inspected for evidence of possible past and/or current environmental concerns. Photos included in Appendix A show the general characteristics of the site.

As described in the previous sections, the subject site is approximately 98.8 acres of vacant unimproved land. The site is fenced on three sides and is open on the north, along Francis Street. Surficial characteristics of the site separate it into three parts, which roughly correspond to the Assessor's parcels.

1. On the eastern side, parcel 4, adjacent to Milliken Avenue, is predominantly covered with dense native brush vegetation. A large gully, created by storm water run-off, separates parcel 4 from parcel 21. The gully is approximately 5 feet wide and 4 feet deep and generally coincides with the continuation of Dupont Street.
2. On the west side of the gully (parcel 21), native vegetation is not as dense, as on parcel 4. A large apparently man-made depression is located approximately in the middle of parcel 21.
3. The western portion of the Milliken Surplus Property, parcel 23, is characterized by the Union Pacific Rail Road (UPRR) spur, which crosses the parcel from the southwest corner of the property to the intersection with

Commerce Parkway on the north. An UPRR control box is located at the intersection of Francis Street and Commerce Parkway. The UPRR spur begins and ends as a single track, but splits into two roughly in the middle of parcel 23. South of the UPRR spur, the western half of parcel 23 is mostly covered by an abandoned vineyard.

Although there is evidence of a past brush fire in the central portion of the site, no depressed vegetation was observed on either of parcels, as green grass was growing in previously burnt areas. Small amounts of miscellaneous trash and debris were observed in the middle of parcel 23.

Several metal stub-outs, reminiscent of well boxes, were observed on the southern portion of the site.

No significant environmental concerns were identified through site inspections observations.

3.2 INTERVIEW WITH CURRENT SITE OWNER

As mentioned before, the site is currently owned by the County of San Bernardino Solid Waste Management Division, SWMD. An interview with Mr. Art Rivera was conducted over the telephone on November 7, 2005. The following summarizes the phone conversation.

During the phone interview, Mr. Rivera indicated that he has been involved with the site since 1992, when he joined the SWMD. Based on his knowledge, the site has never been developed. The western portion of the site (parcels 21 and 23) was acquired by the SWMD in 1991 as part of a settlement agreement with Ontario Industrial Partners. Parcel 4 was acquired later, not as part of the settlement.

According to Mr. Rivera, the railroad spur was constructed in the late 1990s. During approximately the same time, soil borrowing from the site, for daily cover at the adjacent Milliken Landfill, created the depression, observed in the central portion of the site.

Prior to the last year, Galliano Wines leased the western portion of the site from the County for harvesting grapes. The lease was discontinued in 2004.

The brush fire, evidence of which was observed during site reconnaissance, took place during the winter of 2004-2005, and is believed to have been the result of an accidental fire, started by a transient, who lived at the site at the time¹.

During the interview, Mr. Rivera indicated that a 50-foot wide Sewer Easement granted to Inland Empire Utilities Agency, formerly known as the Chino Basin Municipal Water District exists along the southern border of the site.

3.3 ADJACENT SITES AND VICINITY OBSERVATIONS

As briefly discussed in previous sections, parcels 21 and 23 are bounded on the south by the MSL owned by the SWMD and parcel 4 is bounded on the south by a new commercial development. On the other three sides, the site is bounded by either public access roadways (Haven Avenue, Milliken Street, and Francis Street) or a commercial/industrial development (to the north of parcel 4). The commercial/industrial developments to the north and east of the site are primarily warehouses. An electrical sub-station is located on the northwest corner of Commerce Parkway and Francis Street.

Aside from the landfill, a windshield survey of the vicinity of the site did not identify any potential areas of concern.

3.3.1 Milliken Sanitary Landfill

Visual observation of the MSL site did not reveal any current activities that would negatively impact the subject site (refer to other sections of this report with regard to subsurface impacts). The MSL site is briefly described below.

The MSL is a closed landfill that stopped receiving waste in 1999 and has gone through a three-phase final closure construction process. Phase I consisted of the final closure construction of the "East Mound" as was completed in 1997. Phase 2 consisted of final closure construction of the North and East Faces of the main mound and the work was completed in 1998. Final closure construction for the remaining portions of the landfill comprised of the south and west slopes and the top deck was completed in 2005.

¹ No evidence of a transient currently living on-site was observed during site inspection.

An active landfill gas (LFG) extraction and collection system encompasses the entire site. The LFG system at the site includes LFG extraction wells and multi-depth perimeter monitoring probes. The LFG extraction collection and destruction system is designed to be compliant with South Coast Air Quality Management District (SCAQMD) Rule 1150.1, based on current surrounding development. LFG migration off-site would be a violation of Rule 1150.1. The existing LFG system is "state-of-the-art" and is designed to perform within the AQMD Regulations. After the LFG is extracted, it is conveyed to a station where it is combusted and used for power generation.

Groundwater contamination (primarily chlorinated volatile organic compounds), originating from the landfill, has been well documented and a groundwater extraction and treatment system exists along the point of compliance (southern boundary) of the MSL. Groundwater flow is to the south (i.e., away from the Milliken Surplus Property which is located north of the closed MSL).

3.4 RESULTS OF SITE HISTORY AND LAND USE REVIEW

Based on review of historical aerial photos, a USGS topographic map, and information available from the SWMD, the site has been intermittently used for agricultural purposes since 1949, but has not been improved with any structures. The vicinity of the subject site was developed into industrial /commercial businesses during 1980s. The MSL began operations in the late 1950s.

- Historical Aerial Photographs. Historical aerial photographs of the subject site taken in 1938, 1949, 1953, 1960, 1968, 1977, 1985, 1989, 1994, 2002 and 2004 were obtained from GeoSearch. In addition, aerial photographs from 1980, 1983, 1985, 1986, 1987, 1988, 1989, 1991, 1992, 1993, 1994, 1995, 1996 (partial coverage), 1997, 1999 (partial coverage), 2003 and 2005, were reviewed at SWMD. Copies of aerial photographs obtained from GeoSearch and selected photos from SWMD collection are included in Appendix B.
 - The 1938 photograph shows the site undeveloped, surrounded by vacant lands.
 - The 1949 and 1953 photographs show the site being used for agricultural purposes. The site is surrounded by agricultural lands.
 - The 1960 through 1977 photographs show a different pattern to the site; center part of the site is not used for agriculture. In the vicinity of the site, a quarry was noted at the northwest corner of Milliken Avenue and Mission

Boulevard. Earth moving activity is evident at the adjacent parcels to the south of the site in 1968 through 1977 (MSL).

- The 1980 through 1985 photographs show the site similar to previous years. The central portion of the subject site shows the signs of water erosion and is not being cultivated. The construction of the building to the northeast of the site was started in 1980 and finished by 1983. Earth work to the north of current alignment of Francis Street in 1980 did not result in any construction by 1983. Except for industrial developments on the east side of Milliken Avenue and the landfill, agricultural lands surround the subject site.
- The 1986 and 1987 photographs show grading for the railroad beginning at Haven Street and Mission Boulevard. The remainder of parcel still appears in agricultural use. The east side of Dupont Street is graded and a few buildings are constructed.
- The 1988 and 1989 photographs show the beginning of railroad construction at the site. In the vicinity of the site, there is more development and additional structures have been constructed to the northeast of the site. East of Milliken Avenue, industrial sections are expanded. The storm water path coinciding with the railroad construction alignment was noted.
- The 1991 and 1992 photographs show massive grading to the northwest of the site. Construction of Haven Avenue was in progress. There is significant erosion along the continuation of Dupont Street. Also, expansion of buildings to the east of Milliken Avenue continues. The 1992 photograph shows a road going diagonally from the center of the site in the northwest direction toward Haven Avenue. Grading for Commerce Parkway started. The southwestern pit and northeastern pond are constructed at the Milliken Landfill. Haven Avenue is completed to approximately current alignment of Francis Street. Development of warehouses continues to the northwest of Haven Avenue and Jurupa Street. Also, construction of an electrical sub-station has started on the northwest corner of Commerce Parkway and Francis Street.
- The 1994 photograph shows the same agricultural activities on the western portion of the subject site, but also a man-made depression at the center of the subject property is apparent, and the eastern portion is crossed by several unpaved roads into several areas. The MSL appears to have reached its final extent and Jurupa Street and Haven Avenue are constructed. Railroad construction doesn't appear to be progressing.
- The 1995 through 1999 photos show partial coverage of the site. The subject site is in the same condition as before. By December 1999, railroad construction is completed with tracks crossing the site from Haven Avenue to Commerce Parkway, and Francis Street is paved.
- The 2002 through 2003 photographs show the current state of the site with unpaved paths on both sides of railroad. The western extent of the site shows

vegetation. Many developments surrounding the site are completed. Eight (8) structures are constructed to the north of Francis Street, as expansion of commercial/industrial developments continue to the northeast and northwest of the site. The path along the southern border of the subject site diminishes and is no longer accessible for the entire length of the site. A new development is now present on the northeast corner of Haven Avenue and Francis Street by 2004. Significant erosion water run-off along the continuation of Dupont Street is evident.

- USGS 7.5 Minute Geologic Map (Guasti Quadrangle, 1966, photo-revised 1981). As shown on the map, the natural terrain at the site and its vicinity is relatively flat with the gentle south-southwesterly topographic gradient. The elevation at the site is approximately 880 feet above mean sea level. The site is shown to be vacant and bounded on the south by the MSL. No other areas of potential concern in the vicinity of the site were identified through a review of the USGS Topographic map. A copy of the Topographic map is included in Appendix C.
- City of Ontario, Fire Department. An inquiry with the City of Ontario Fire Department has been made with regard to observed evidence of a past brush fire at the site, but has not yielded any results as of the date of this report.

3.5 RESULTS OF REGULATORY AGENCY LIST REVIEW

On November 1, 2005, BAS requested a records search of multiple Federal, State, and local environmental databases from Track Info Services, LLC. (Track Info), an Environmental FirstSearch Technology Corporation company. The Track Info Report is included in Appendix D. A total of 15 databases were searched using radii specified in ASTM E1527-00 plus one-half a mile (i.e., to a maximum of 1-½ miles) due to the extent of Milliken Surplus Property, which is almost one mile from east to west.

Searched databases included Federal, State and local (San Bernardino County) databases, prescribed by the ASTM Standard; as well as several supplemental Federal and State databases. These searches identified forty-two (42) properties (62 listings), mostly located north and east from the site. None of these properties are considered to be a potential source of environmental concern for the subject site due to their distance from the Milliken Surplus Property, non-release type of database listing and/or their location down or cross-gradient from the site as discussed below.

- **Resource Conservation & Recovery Act Generator (RCRA GEN).** There are six (6) RCRA generator sites located within a 3/4 mile radius of the subject site, two

of which are located within a one half-mile radius of the site. Out of six generator sites, two are Large Quantity Generators (Milliken Landfill and 3M Western Distribution Center), three are Small Quantity Generators (American Metal Recycling, Hamilton Fixtures and BMW of America) and one is a medical waste generator (Source One Health Care Technologies). Except for American Metal Recycling, which was reported to have administrative violations of their permit in the early 1990s, none of the other RCRA generator sites are reported to have any violations of their permits, and therefore are not considered to be potential environmental threat to the subject property.

- **Emergency Response Notification System (ERNS).** There is only one (1) site located within 1 mile radius of the subject site (and an additional five (5) sites beyond the ASTM-prescribed distance), where accidental releases or spills have been reported to the ERNS. The Leslie's Swimming Pool Supply site, located less than 1/3-mile north of the subject property, reported a release of 32,000 lb of calcium hypochlorite within a concrete containment area in their facility in July 1999. Although the Leslie's site is located up-gradient from the subject property, in consideration of the fact that the release was contained and significant time has elapsed since the release, this site is not considered to be an environmental concern for the Milliken Surplus Property.

The other five sites have reported the following releases/spills:

- 60 gallons of varnish was spilled from a truck on East Francis Avenue in 1991;
- 18 gallons of gasoline was released from a passenger car in 2002 on Jurupa Street;
- 25 gallons of diesel was spilled from a loader in 2002 onto a concrete surface;
- 4000 gallons of jet fuel was spilled into a concrete containment area during aircraft fueling at Ontario Airport in 2001; and
- 10 gallons of diesel was spilled on the north bound I-15 due to a traffic accident in 1990.

None of these releases and spills are considered to be an environmental concern for the Milliken Surplus Property due to the small quantities of materials released, spills onto containment area(s), elapsed time since reported releases and/or distances from the subject property.

- **State.** There are two (2) sites, both located to the south (i.e., down-gradient from the Milliken Surplus Property), which are reported by the State of California. Although soil and groundwater problems have been reported for American Metals Recycling and the MSL, respectively, by the Department of Toxic Substances Control (DTSC), in consideration of their down-gradient location, they are not considered to present an off-site contamination threat to the subject

property with respect to either soil or groundwater (i.e., reasons for being listed)².

- **Solid Waste Landfill (SWL).** There is one (1) SWL site reported to be located within 1 mile radius of the subject property. The Used Tire King property, a waste tire facility, is located within 1/3 of a mile east from the site. No problems have been reported for this facility and due to its position cross-gradient from the subject property, it does not present a potential threat as a contamination source. In addition, the Fieldstone Ontario Residential Plan, had a proposed Solid Waste Disposal Site, which lies outside of the search radius; and as only a proposed site, does not present an off-site contamination threat to the subject property. [It should be pointed out that it is unknown why the MSL was not listed on the database report. A direct inquiry with the California Integrated Waste Management Board (CIWMB) Solid Waste Information System (SWIS), which is the source of the SWL listings, includes the MSL in their database].
- **Permits.** There are 39 listings of permitted facilities in the database report, located within 1-1/2 miles of the Milliken Surplus Property site. However; only 24 have active permits (excluding some sites that are listed two or more times) within a defined search zone of 3/4 miles, for handling and/or generating hazardous waste. The definition of hazardous materials and wastes, for the purposes of the County permit, include not only hazardous substances, as promulgated by Federal and California law and regulations, but also waste oil, underground storage tanks and medical waste. None of the facilities are reported to have any violations of their County permits. These sites are therefore not considered to be an environmental concern with respect to the proposed site.
- **Underground Storage Tank (UST).** There are five (5) sites with registered USTs located within a 3/4-mile radius of the subject property, and one registered Above-ground Storage Tank (AST) site, located in the vicinity of the site (this AST site is at the Caltrans maintenance yard location of which is not known exactly). The presence of a registered UST or AST at a property does not, in itself, indicate that contamination has occurred. None of these tanks are reported to have leaked, and therefore, these sites are not considered to be potential off-site sources of contamination.
- **Leaking UST.** There is one site, Arco Station #5965, located approximately 3/4-mile northeast of the subject property, that according to the database report is undergoing leak confirmation for a gasoline release. However, direct inquiry with State Water Resources Control Board's Geotracker system revealed that there are no leaking UST's at this ARCO station (there are registered tanks but none of them are reported leaking). Further inquiry with San Bernardino HAZMAT has not yielded any results as of the date of this report. However, because the site is located more than half a mile away from the subject property, a threat of contamination from this site is minimal.

² Landfill gas migration issues are addressed in Section 3.6 of this report.

3.6 OTHER SITE ASSESSMENT

3.6.1 Landfill Gas Impacts on the Adjacent Northern Property Report

Concurrently with this Phase I ESA, BAS performed an assessment of landfill gas migration from the MSL to the Milliken Surplus Property entitled "*The Landfill Gas Impacts on the Adjacent Northern Property Report*" (BAS, November 2005). This report will be provided to potential buyers of the property along with the current ESA Report, and therefore only the conclusions of that report are summarized here.

The aforementioned report states that without additional mitigation measures within the landfill property and along the existing utility easement, including installation of additional monitoring probes and extraction wells, compliance with existing regulations with respect to LFG migration may not be possible. The SWMD will be implementing these additional mitigation measures prior to the sale of the Milliken Surplus Property.

The report recommended that any off-site structure, which may potentially be located at the Milliken Surplus Property, within 200 feet of the refuse boundary, incorporate a passive subsurface ventilation system along with a polyethylene or PVC vapor barrier integrated into the foundation design of the building.

3.6.2 Disclosure Documentation

Disclosure For The Property North Of The Milliken Sanitary Landfill Report was prepared by San Bernardino County SWMD in May 2005. The report includes easement documents; a copy of a settlement agreement between Ontario Industrial Partners (OIP) and the County of San Bernardino; biological and ecological survey reports; Milliken Landfill gas perimeter data; water quality monitoring report (Spring 2005); storm drain and landscape improvement plans.

There are several easements that exist along the subject property. As previously mentioned, a 50-foot wide sewer easement granted to Inland Empire Utilities Agency (IEUA) exists along the southern border of the subject site. Along Francis Street and Dupont Street, there are street and utility easements for the City of Ontario. A 50-foot grading and drainage easement for Nordstrom, Inc. also exists along the border of Parcel 21 and Parcel 4. Also, there is a 20-foot wide sewer

sewer easement for the City of Ontario in the same place between Parcel 21 and Parcel 4, which connects into a sewer easement for the IEUA.

Dupont Street, which conveys storm water flows from developed properties to the north, terminates along the north property line of Parcel No. 21. Approximately 600 feet of 42-inch reinforced concrete pipe (RCP) storm drain was constructed within Dupont Street. The downstream terminus of the 42-inch RCP is plugged with a brick and mortar bulkhead. Two catch basins exist within Dupont Street north of Francis Street: a 14-foot wide basin on the west side and a 21-foot wide basin on the east side. These catch basins collect storm water and discharge the flows into the existing 42-inch RCP. Stormwater builds up in the 42-inch RCP until it reaches capacity and then bubbles out of a manhole located downstream of the two catch basins. Under current conditions, storm water flows generated to the north between Dupont Street and Milliken Avenue, as well as drainage areas west of Dupont Street and north of Francis Street, which are conveyed within Dupont Street to its terminus, discharge onto the Milliken Surplus Property. The flows ultimately discharge into a detention basin located within the MSL property boundaries south of the Milliken Surplus Property. These storm water flows have caused severe erosion to the point that it has exposed and is threatening to undermine the sewer lines owned by the IEUA. However, the proposed storm drain improvements will mitigate the erosion on the subject site and the threat to the IEUA sewer lines. These proposed storm drain improvements direct the flows from the DuPont Avenue Storm Drain westerly, away from the aforementioned detention basin, to the Haven Avenue Storm Drain, in accordance with the City of Ontario Comprehensive Storm Drain Plan. The Haven Avenue Storm Drain is a San Bernardino County Flood Control District facility, located in the westerly portion of the Milliken Surplus Property. All DuPont Avenue Storm Drain flows must be directed to this facility.

SECTION 4.0

CONCLUSIONS AND RECOMMENDATIONS

4.0 CONCLUSIONS AND RECOMMENDATIONS

As detailed in the previous sections, this Phase I ESA, including direct site and vicinity inspections, interview of a person familiar with the site, and review of available historical information and regulatory agency databases, did not reveal any recognized environmental conditions (RECs) at the site, with the exception of the following:

1. The Milliken Surplus Property has a prior history of agricultural use with the associated possibility of prior applications of agricultural pesticides. The prior use of pesticides on developed agricultural lands in Southern California has not been found to present a material risk of harm to public health or the environment, and, with few exceptions to school properties, regulatory agencies have not initiated enforcement actions on these agricultural lands. In general, the historical use of agricultural pesticides is considered a *de minimus* condition under Section 1.1.1 of the "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process" (ASTM E 1527-00), and does not constitute a REC. However, it is also generally recognized by the environmental professionals, as well as lending institutions, that without testing of the site soils, no definitive determination can be made with regard to potential pesticide concentrations and potential associated risks. It is therefore recommended that limited soil sampling and testing be performed. It should also be noted that should surficial soil be taken off site for disposal, testing of that soil will be required.
2. A portion of the subject site has been burnt. Should pesticide presence in site soils be confirmed, it is also recommended that burnt areas of the site be further assessed for presence of dioxins, which could form under conditions of incomplete combustion.
3. The Milliken Surplus Property, in whole or in part, could be affected by migration of landfill gases from the MSL. Because landfill gas consists primarily of methane gas, which is non toxic, its migration is generally considered a safety issue. However, it should be recognized that other components of landfill gas may present material health risks. It is BAS' understanding that gas mitigation should be included in any future development of the subject property. In general, mitigation measures designed to protect a building from a build-up of methane, will also protect it from any other trace of landfill gas constituents. However, it is recommended that any future building designs, including drainage system designs (or sub-drainage system

designs for any methane mitigation system), account for the possibility of encountering non-methane organic landfill gas constituents.

4. Miscellaneous minor trash and debris should be properly removed from the site prior to site development.

With proper mitigation of conditions discussed above, no RECs have been identified through this Phase I ESA that should prohibit development of the site.

SECTION 5.0

LIMITATIONS

5.0 LIMITATIONS

The conclusions and recommendations presented herein are based upon the agreed scope of work outlined in Section 1.0 of this report. BAS makes no warranties or guarantees as to the accuracy or completeness of information obtained from information provided or compiled by others, such as from Federal and State database lists, interviewees, and site investigation or other reports. It is possible that relevant site environmental information exists beyond the scope of this investigation. Also, changes in site use may have occurred in the past that are not documented in records made available to BAS. Due to variability in natural processes and the fact that only a small portion of the site surface and subsurface can be practically sampled, unanticipated or changed conditions may be disclosed during construction at the site. Additional information, which was not found or obtainable at the time of writing this report, may result in modification of our conclusions and recommendations.

The services performed by BAS have been conducted in a manner consistent with the level of care ordinarily exercised by members of our profession currently practicing under similar conditions, under current regulatory policy and guidelines with respect to environmental concerns. No other warranty is expressed or implied. This report is not a legal opinion.

FIGURE

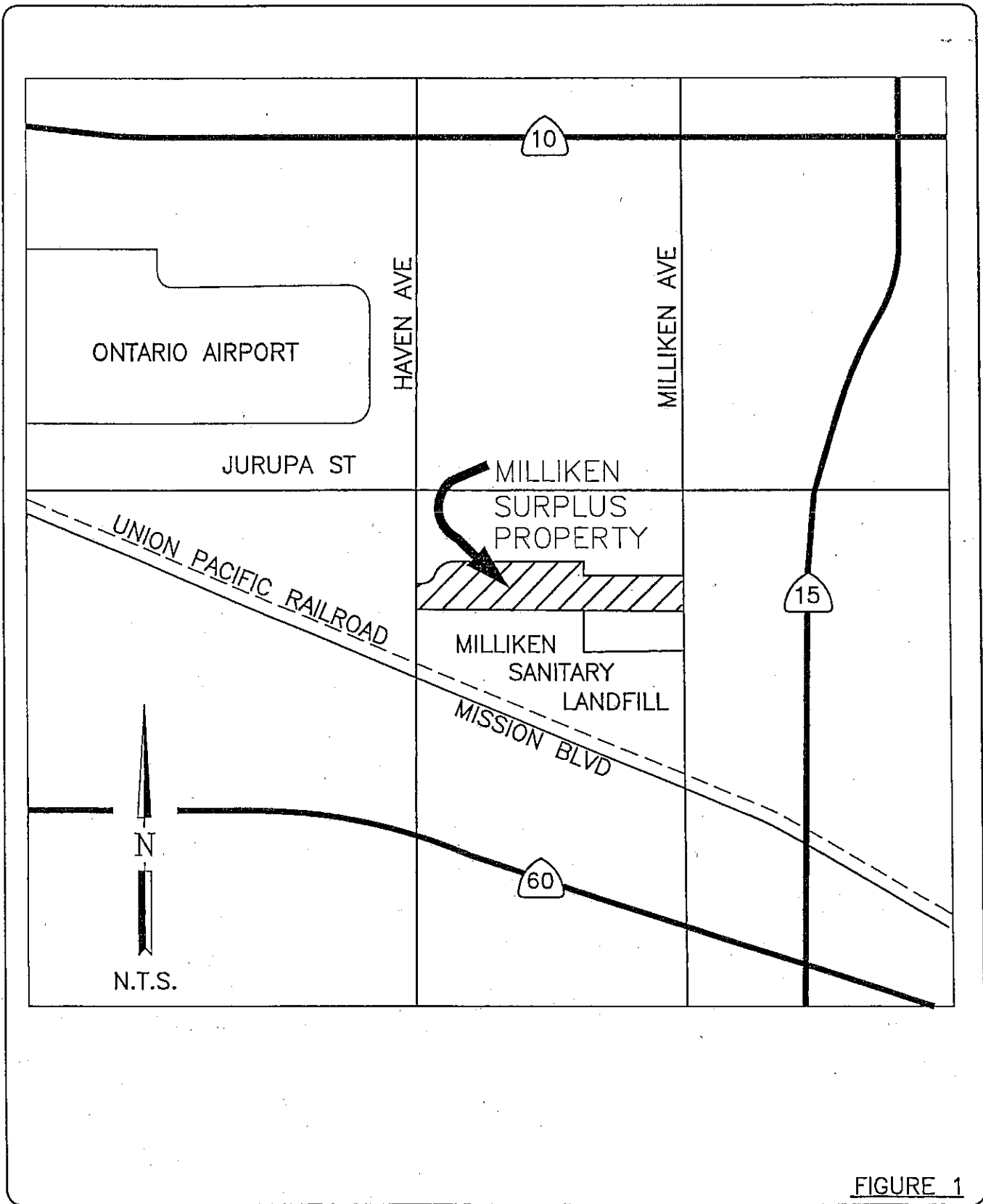


FIGURE 1



(909) 860-7777

BRYAN A. STIRRAT & ASSOCIATES
 CIVIL AND ENVIRONMENTAL ENGINEERS
 1360 VALLEY VISTA DRIVE DIAMOND BAR, CA 91785

MILLIKEN SURPLUS PROPERTY

SITE LOCATION MAP

JOB NO.	2004.0092
DATE	11-05
DRAWN BY	MG
FILE NAME:	Milliken Surplus



**Centrum
Analytical
Laboratories, Inc.**

CERTIFIED HAZARDOUS WASTE TESTING MOBILE & IN HOUSE LABORATORIES

Client: Tetra Tech, Inc.
348 W. Hospitality Lane, Ste. 100
San Bernardino, CA 92408-3216

Date Sampled: 04/19/06
Date Received: 04/20/06
Job Number: 27935

Project: Milliken Surplus Property

CASE NARRATIVE

The following information applies to samples which were received on 04/20/06:

The samples were received at the laboratory chilled and sample containers were intact.

Unless otherwise noted below, the Quality Control acceptance criteria were met for all samples for every analysis requested. The date of issue for this report is 04/25/06.

This report is being re-issued at the request of our client. There have been no changes in the results as previously reported.

The date of re-issue for this report is 04/28/06.

Report approved by:

Tom Wilson
Laboratory Director

ELAP Lab# 2419, 2479, 2527, 2373, 2562

RL: Reporting Limit -- The lowest level at which the compound can be reliably detected under normal laboratory conditions.
ND: Not Detected -- The compound was analyzed for, but was not found to be present at or above the Reporting Limit.
NA: Not Analyzed -- This compound was not on the list of compounds requested for analysis.

Metals by EPA 6010B and EPA 7471A

Client: Tetra Tech, Inc.
 Project: Milliken Surplus Property
 Job No: 27935
 Matrix: Soil
 Analyst: TLB

Date Sampled: 04/19/06
 Date Received: 04/20/06
 Date Digested: 04/21/06
 Date Analyzed: 04/21/06
 Batch Number: 6010S3635
 7471S1410

	Sample ID:	Blank	041906-SB1	041906-SB2	041906-SB3	041906-SB4	041906-SB5
Metals	Method	RL	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Antimony	6010B	5.0	ND	ND	ND	ND	ND
Arsenic	6010B	1.0	ND	ND	ND	ND	1.1
Barium	6010B	0.50	ND	87	83	93	87
Beryllium	6010B	0.50	ND	ND	ND	ND	ND
Cadmium	6010B	0.50	ND	ND	1.1	ND	ND
Chromium	6010B	0.50	ND	11	13	13	12
Cobalt	6010B	0.50	ND	6.5	5.2	6.6	6.5
Copper	6010B	1.0	ND	11	13	9.5	10
Lead	6010B	1.0	ND	3.5	7.9	1.9	3.5
Molybdenum	6010B	5.0	ND	ND	ND	ND	ND
Nickel	6010B	1.0	ND	6.4	7.0	7.3	7.8
Selenium	6010B	5.0	ND	ND	ND	ND	ND
Silver	6010B	2.0	ND	ND	ND	ND	ND
Thallium	6010B	10	ND	ND	ND	ND	ND
Vanadium	6010B	5.0	ND	31	27	34	33
Zinc	6010B	10	ND	42	61	37	39
Mercury	7471A	0.02	ND	ND	0.03	ND	ND



Metals by EPA 6010B and EPA 7471A

Client: Tetra Tech, Inc.
 Project: Milliken Surplus Property
 Job No: 27935
 Matrix: Soil
 Analyst: TLB

Date Sampled: 04/19/06
 Date Received: 04/20/06
 Date Digested: 04/21/06
 Date Analyzed: 04/21/06
 Batch Number: 6010S3635
 7471S1410

Sample ID: 041906-SB6 041906-SB7 041906-SB8					
Metals	Method	RL	mg/Kg	mg/Kg	mg/Kg
Antimony	6010B	5.0	ND	ND	ND
Arsenic	6010B	1.0	ND	2.1	ND
Barium	6010B	0.50	54	51	77
Beryllium	6010B	0.50	ND	ND	ND
Cadmium	6010B	0.50	ND	ND	ND
Chromium	6010B	0.50	8.8	8.6	10
Cobalt	6010B	0.50	4.5	4.5	5.8
Copper	6010B	1.0	6.9	6.9	7.9
Lead	6010B	1.0	4.9	8.8	1.7
Molybdenum	6010B	5.0	ND	ND	ND
Nickel	6010B	1.0	5.2	5.4	6.7
Selenium	6010B	5.0	ND	ND	ND
Silver	6010B	2.0	ND	ND	ND
Thallium	6010B	10	ND	ND	ND
Vanadium	6010B	5.0	24	24	28
Zinc	6010B	10	32	35	31
Mercury	7471A	0.02	ND	ND	ND

QC Sample Report - Metals by EPA 6010B and EPA 7471A

Matrix: Soil

Metals by EPA 6010B

Batch Number: 6010S3635

Spike Sample ID: Laboratory Control Sample

MS/MSD Sample ID: 27940-1

Analytical Notes:

Compound	Batch Accuracy Results				Batch Precision Results				
	Spike Concentration (mg/Kg)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail	MS Sample Result (mg/Kg)	MSD Sample Result (mg/Kg)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
Antimony	50	108	75 - 125	Pass	51.18	52.79	3%	20%	Pass
Arsenic	50	96	75 - 125	Pass	49.90	50.49	1%	20%	Pass
Barium	50	99	75 - 125	Pass	66.75	66.01	1%	20%	Pass
Beryllium	50	94	75 - 125	Pass	46.66	48.15	3%	20%	Pass
Cadmium	50	98	75 - 125	Pass	44.95	45.56	1%	20%	Pass
Chromium	50	100	75 - 125	Pass	51.98	54.30	4%	20%	Pass
Cobalt	50	99	75 - 125	Pass	47.44	48.01	1%	20%	Pass
Copper	50	99	75 - 125	Pass	55.91	56.17	0%	20%	Pass
Lead	50	95	75 - 125	Pass	48.74	54.43	11%	20%	Pass
Molybdenum	50	95	75 - 125	Pass	46.67	47.64	2%	20%	Pass
Nickel	50	100	75 - 125	Pass	47.80	48.26	1%	20%	Pass
Selenium	50	94	75 - 125	Pass	46.17	46.83	1%	20%	Pass
Silver	50	87	75 - 125	Pass	45.71	46.65	2%	20%	Pass
Thallium	50	96	75 - 125	Pass	44.15	45.37	3%	20%	Pass
Vanadium	50	98	75 - 125	Pass	57.98	59.00	2%	20%	Pass
Zinc	50	102	75 - 125	Pass	70.08	69.99	0%	20%	Pass

Analytical Notes:

Mercury by EPA 7471A

Batch Number: 7471S1410

Spike Sample ID: Laboratory Control Sample

MS/MSD Sample ID: 27940-1

Analytical Notes:

Compound	Batch Accuracy Results				Batch Precision Results				
	Spike Concentration (mg/Kg)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail	MS Sample Result (mg/Kg)	MSD Sample Result (mg/Kg)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
Mercury	0.42	102	75 - 125	Pass	0.432	0.437	1%	20%	Pass

Analytical Notes:

MS: Matrix Spike

LCS: Laboratory Control Sample

MSD: Matrix Spike Duplicate

LCSD: Laboratory Control Sample Duplicate

Organochlorine Pesticides by EPA 8081A

Client: Tetra Tech, Inc.
 Project: Milliken Surplus Property
 Job No.: 27935
 Matrix: Soil
 Analyst: SEC/LB

Date Sampled: 04/19/06
 Date Received: 04/20/06
 Date Extracted: 04/19-20/06
 Date Analyzed: 04/19-21/06
 Batch Number: PESTS1021

	Sample ID:	Blank	041906-SB1	041906-SB2	041906-SB3	041906-SB4	041906-SB5
Pesticides	RL	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Aldrin	0.001	ND	ND	ND	ND	ND	ND
Alpha-BHC	0.001	ND	ND	ND	ND	ND	ND
Beta-BHC	0.001	ND	ND	ND	ND	ND	ND
Delta-BHC	0.001	ND	ND	ND	ND	ND	ND
Gamma-BHC (Lindane)	0.001	ND	ND	ND	ND	ND	ND
Chlordane	0.010	ND	ND	ND	ND	ND	ND
4,4'-DDD	0.002	ND	ND	ND	ND	ND	ND
4,4'-DDE	0.002	ND	0.017	0.053	ND	0.039	0.044
4,4'-DDT	0.002	ND	0.007	0.021	ND	0.016	0.019
Dieldrin	0.002	ND	ND	ND	ND	ND	ND
Endosulfan I	0.001	ND	ND	ND	ND	ND	ND
Endosulfan II	0.002	ND	ND	ND	ND	ND	ND
Endosulfan sulfate	0.002	ND	ND	ND	ND	ND	ND
Endrin	0.002	ND	ND	ND	ND	ND	ND
Endrin Aldehyde	0.002	ND	ND	ND	ND	ND	ND
Endrin Ketone	0.010	ND	ND	ND	ND	ND	ND
Heptachlor	0.001	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	0.001	ND	ND	ND	ND	ND	ND
Methoxychlor	0.010	ND	ND	ND	ND	ND	ND
Toxaphene	0.020	ND	ND	ND	ND	ND	ND

Surrogates in % Recovery (Acceptance Limits: 50 - 150%)

	Sample ID:	Blank	041906-SB1	041906-SB2	041906-SB3	041906-SB4	041906-SB5
Tetrachloro-m-xylene		89	96	70	97	94	99

Organochlorine Pesticides by EPA 8081A

Client:	Tetra Tech, Inc.	Date Sampled:	04/19/06
Project:	Milliken Surplus Property	Date Received:	04/20/06
Job No.:	27935	Date Extracted:	04/19-20/06
Matrix:	Soil	Date Analyzed:	04/19-21/06
Analyst:	SEC/LB	Batch Number:	PESTS1021

Sample ID: 041906-SB6 041906-SB7 041906-SB8				
Pesticides	RL	mg/Kg	mg/Kg	mg/Kg
Aldrin	0.001	ND	ND	ND
Alpha-BHC	0.001	ND	ND	ND
Beta-BHC	0.001	ND	ND	ND
Delta-BHC	0.001	ND	ND	ND
Gamma-BHC (Lindane)	0.001	ND	ND	ND
Chlordane	0.010	ND	ND	ND
4,4'-DDD	0.002	ND	ND	ND
4,4'-DDE	0.002	0.017	0.051	ND
4,4'-DDT	0.002	0.011	0.019	ND
Dieldrin	0.002	ND	ND	ND
Endosulfan I	0.001	ND	ND	ND
Endosulfan II	0.002	ND	ND	ND
Endosulfan sulfate	0.002	ND	ND	ND
Endrin	0.002	ND	ND	ND
Endrin Aldehyde	0.002	ND	ND	ND
Endrin Ketone	0.010	ND	ND	ND
Heptachlor	0.001	ND	ND	ND
Heptachlor Epoxide	0.001	ND	ND	ND
Methoxychlor	0.010	ND	ND	ND
Toxaphene	0.020	ND	ND	ND

Surrogates in % Recovery (Acceptance Limits: 50 - 150%)

Sample ID: 041906-SB6 041906-SB7 041906-SB8			
Tetrachloro-m-xylene	94	77	97

QC Sample Report - Organochlorine Pesticides by EPA 8081A

Matrix: Soil

Batch Number: PESTS1021

Batch Accuracy Results

Spike Sample ID: Laboratory Control Sample

Compound	Spike Concentration (mg/Kg)	Spike Sample % Recovery	% Recovery Acceptance Limits	Pass/Fail
Lindane	0.0067	82	61 - 114	Pass
Heptachlor	0.0067	105	78 - 129	Pass
Aldrin	0.0067	98	71 - 123	Pass
Dieldrin	0.027	98	73 - 123	Pass
Endrin	0.027	103	72 - 133	Pass
DDT	0.027	112	76 - 128	Pass

Analytical Notes:

Batch Precision Results

MS/MSD Sample ID: Laboratory Control Sample

Compound	MS Sample Result (mg/Kg)	MSD Sample Result (mg/Kg)	Relative Percent Difference (RPD)	RPD Acceptance Limit	Pass/Fail
Lindane	0.0055	0.0055	0%	25%	Pass
Heptachlor	0.0070	0.0069	1%	25%	Pass
Aldrin	0.0066	0.0066	1%	25%	Pass
Dieldrin	0.0261	0.0261	0%	25%	Pass
Endrin	0.0275	0.0271	2%	25%	Pass
DDT	0.0298	0.0299	0%	25%	Pass

Analytical Notes:

MS: Matrix Spike

LCS: Laboratory Control Sample

MSD: Matrix Spike Duplicate

LCSD: Laboratory Control Sample Duplicate



TETRA TECH, INC.
 348 W. Hospitality Lane, Suite 100
 San Bernardino, California 92408
 Telephone: (909) 381-1674
 FAX: (909) 889-1391

SHIP TO: Centrum Labs
Riverside, CA
(via courier)

CHAIN OF CUSTODY RECORD

DATE 04/19/2006 PAGE 1 OF 1

Centrum Job # 27935

CLIENT: <u>Tetra Tech</u>			PARAMETERS										TURN-AROUND TIME			
PROJECT NAME: <u>Milliken Surplus Property</u>			80814 Pesticides Only	60102 CANADA Metals	DATE	TIME	LINE ITEM	SAMPLE NO.	DATE	TIME	FILTERED/UNFILTERED	MATRIX TYPE	CONTAINER TYPE	NUMBER OF CONTAINERS	PRESERVATIVE	OBSERVATIONS/COMMENTS
PROJECT MANAGER: <u>David Bertolacci</u>			X	X	04/19/2006	1515	1	0419206-SP 1	04/19/2006	1515	NA	S	G	1	NR	3-Day Standard Need results faxed to David @ 909-889-1391 by <u>04/25/06</u> <u>Tue 4/25/06</u>
SAMPLERS (Signatures)			X	X		1525	2			1525	NA	S	G	1	NR	
			X	X		1535	3			1535	NA	S	G	1	NR	
			X	X		1545	4			1545	NA	S	G	1	NR	
			X	X		1555	5			1555	NA	S	G	1	NR	
			X	X		1605	6			1605	NA	S	G	1	NR	
			X	X		1615	7			1615	NA	S	G	1	NR	
			X	X		1625	8			1625	NA	S	G	1	NR	
							9									
							10									

FILTERING:		MATRIX TYPE:		CONTAINER TYPE:		PRESERVATIVES: (Water Only)	
<input type="checkbox"/> FILTERED	<input type="checkbox"/> UNFILTERED	S - Soil	M - Sediment	G - Glass Bottle/Jar	SB - Brass Sleeve	HCL	NaOH
		W - Water		SS - Stainless Steel Sleeve	P - Plastic Bottle/Jar	NR (None required)	H ₂ SO ₄
RELINQUISHED BY	SIGNATURE	TETRA TECH, INC.		DATE	TIME	TOTAL NUMBER OF CONTAINERS ON THIS CHAIN OF CUSTODY: <u>8</u>	
<u>David Bertolacci</u>		COMPANY		<u>04/19/2006</u>	<u>1830</u>	METHOD OF SHIPMENT/SHIPMENT NO. <u>Lab Courier</u>	
RECEIVED BY	SIGNATURE	COMPANY		DATE	TIME	Special Shipping/Handling/Storage Requirements:	
<u>K Bambara</u>		<u>Centrum</u>		<u>4/20/06</u>	<u>0810</u>	<u>CHILLED + INTACT (B)</u>	
RELINQUISHED BY	SIGNATURE	COMPANY		DATE	TIME		
<u>K Bambara</u>		<u>Centrum</u>		<u>4/20/06</u>	<u>0830</u>		
RECEIVED BY	SIGNATURE	COMPANY		DATE	TIME		
<u>JEN NIQUIEZ</u>		<u>Centrum</u>		<u>4-20-06</u>	<u>830</u>		

DISTRIBUTION: White and Pink = Tetra Tech, Inc. Canary = Laboratory

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FOCUSED SURVEYS FOR SAN BERNARDINO KANGAROO RAT

(*DIPODOMYS MARIAMI PARVUS*) (SBKR) AND

BURROWING OWL (*ATHENE CUNICULARIA*)

FOR A 103-ACRE PARCEL

NORTH OF MILLIKEN SANITARY LANDFILL

CITY OF ONTARIO, SAN BERNARDINO COUNTY, CALIFORNIA

Prepared for:

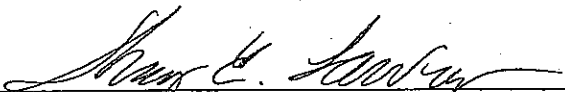
Lilburn Corporation
1905 Business Center Drive
San Bernardino, California 92408

Prepared by:

Tom Dodson & Associates
2150 North Arrowhead Avenue
San Bernardino, California 92405

April 2005

Certification: I hereby certify that the statements furnished herein, and in the attached exhibits present data and information required for this Biological Survey to the best of my ability, and the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Federal Fish and Wildlife Permit No. TE094308-0



Shay E. Lawrey

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INTRODUCTION AND SUMMARY OF FINDINGS

Tom Dodson & Associates (TDA) has prepared this report to relay the findings of focused surveys for San Bernardino kangaroo rat (*Dipodomys merriami parvus*) (SBKR) and burrowing owl (*Athene cunicularia*) at a 103-acre parcel, adjacent to the north side of the Milliken Sanitary Landfill. The subject parcel is located in the City of Ontario, San Bernardino County, on the Guasti, California USGS 7.5-minute Quadrangle map, Township 1 S, Range 7 W, on the northern portion of Section 36. Latitude ranges from 34°02'27" to 34°02'40"N and Longitude ranges from 117°33'27" to 117°33'30"W. The parcel is generally bounded by Francis Street on the north, Milliken Avenue on the east, Haven Avenue on the west, and Milliken Sanitary Landfill on the south.

Burrowing owls were observed and kangaroo rat sign was noted during a protocol Delhi sands flower-loving fly survey, conducted on the property by Kendall H. Osborne (Osborne 2003 and 2004). Based on this information, TDA was contracted to conduct a focused burrowing owl survey and a trapping survey for SBKR. Shay Lawrey, a biologist permitted by the U.S. Fish and Wildlife Service (USFWS) to trap and handle SBKR (TE 094308-0), conducted the protocol live-trapping survey and the focused burrowing owl survey between March 7 and March 12, 2005. The purpose of these surveys was to determine the presence or absence of these two species throughout the project area, evaluate their relative abundance and breeding status, and to map their locations. The results of the surveys were that no SBKR were captured, however, seven breeding pairs, and potentially eight breeding pairs, of burrowing owls were found spread out over the 103-acre parcel. Nests from various bird species were encountered on the property during the surveys.

METHODOLOGY

Background information was gathered prior to visiting the site to determine which sensitive species would be expected in this area. The California Natural Diversity Data Base (NDDDB) and literature references were examined to obtain information on species occurrences in the project vicinity. The CNDDDB search was conducted for the USGS – Guasti Quadrangle, California, 7.5 Minute Series Topographic. Shay Lawrey, of TDA, conducted the protocol trapping on the subject property between March 7 and March 12, 2005. Four trap lines of fifty, 12-inch, Sherman live traps were placed along the property (Figure 4). The trap lines traversed a slight rolling topography containing fallow vineyard, non-native grasses and reestablished native annual and perennial elements such as telegraph weed, buckwheat, croton and mule fat. Using SBKR trapping protocols issued by the USFWS, traps were set at dusk, baited with rolled oats, and inspected at midnight and again at pre-dawn the following morning. All animals were identified, sexed and released unharmed at the point of capture. Daily notes included weather conditions such as temperature, wind speed, and cloud cover.

The focused burrowing owls survey was conducted in accordance with the "Burrowing Owl Survey Protocol and Mitigation Guidelines" prepared by the California Burrowing Owl Consortium on April 1993. Although the protocol requires surveying the site and a 150-meter zone of influence on all sides of the project, zone of influence was not surveyed, as the parcel is completely surrounded by industrial development. The site was surveyed once in the evening on April 6th from 5:00 p.m. to 7:30 p.m. The main focus of this site visit was to locate potential burrow locations. Burrows were checked for signs indicating the presence of burrowing owls such as pellets, white wash, feathers, and prey remains. The site was then surveyed twice a day on April 7, 8 and 9, 2005 from 6:30 a.m. to 9:00 a.m. and from 5:00 p.m. to 7:30 p.m. The property was surveyed in transects set at 30-meter intervals. Burrows found during the initial site visit were rechecked for owl activity during each subsequent survey.

BACKGROUND INFORMATION

SBKR

There are 19 subspecies of Merriam's k-rat (*Dipodomys merriami*), three of which occur in California, including the SBKR. Of the three California subspecies, SBKR are the smallest and darkest. Merriam's kangaroo rats are wide spread throughout the arid regions of the western United States and northwest Mexico (Hall 1981; Williams *et al.* 1993a). Within this distribution, the historical range of SBKR is thought to have encompassed an area of approximately 326,467 acres. Today, SBKR is known to occupy approximately 3,247 acres (McKernan 1997). Of the six primary, recently, occupied locations in the San Bernardino and San Jacinto Valleys, only three sites (Santa Ana River and its tributaries, Cajon and Lytle creeks, and San Jacinto and Bautista creeks) support robust, sustaining populations of SBKR and large contiguous patches of occupied habitat. In most heteromyids, soil texture is a primary factor in determining species' distributions (Brown and Harney 1993). SBKR are found primarily on well drained, sandy loam substrates, characteristic of alluvial fan and flood plains, where they are able to dig simple, shallow burrows (MEC Analytical Systems 2000).

The USFWS emergency listed the SBKR on January 27, 1998 and subsequently listed them as federally endangered later that same year on September 24, 1998 (63 FR 3837) under the Endangered Species Act of 1973 (63 FR 3877), as amended. The USFWS also designated critical habitat units for the SBKR on April 23, 2002 (67 FR 19811). The units included reaches of the Santa Ana, Lytle and Cajon creeks, San Jacinto River and Bautista creek, and the Etiwanda alluvial fan (65 FR 77178).

It has been commonly thought that SBKR either do not occupy or rarely occupy areas with vegetative cover over 60% or areas dominated by non-native vegetation. This thought however, has been tested in recent years, as this species has been found, in high

densities, to occupy areas that would appear unsuitable, such as fallow orange groves and disturbed habitat dominated by ruderal vegetation. SBKR are nocturnal mammals and like other kangaroo rats, are highly adapted to live in hot and sometimes waterless deserts and valleys.

BURROWING OWLS

The burrowing owl is a mottled brownish and sand colored, dove sized raptor, with large yellow eyes, a rounded head lacking ear tufts, white eyebrows, and long legs compared to other owl species. It is a ground dwelling owl typically found in arid prairies, fields, and open areas where vegetation is sparse and low to the ground. The burrowing owl is heavily dependent upon the presence of mammal burrows, commonly ground squirrel, in its habitat to provide shelter from predators, inclement weather, and to provide a nesting place (Coulombe 1971). They are also known to make use of human-created structures such as cement culverts and pipes for burrows.

Burrowing owls spend a great deal of time standing on dirt mounds at the entrance to a burrow, or perched on a fence post or other low to the ground perch from which they hunt for prey. Burrowing owls frequently hunt by hovering in place above the ground and dropping on their prey from above. Burrowing owls feed primarily on insects such as grasshoppers, June beetles, and moths, but will also take small rodents, birds, and reptiles. They are active during the day and night, but are considered a crepuscular owl; generally observed in the early morning hours or at twilight. The breeding season for the burrowing owl is February 1 through August 31. Up to eleven, but typically seven to nine eggs are laid in a burrow, abandoned pipe, or other subterranean hollow where incubation is complete in 28-30 days. Young burrowing owls fledge in 44 days. The burrowing owl is considered a migratory species in portions of its range, which includes western North America from Canada to Mexico, and east to Texas and Louisiana. Burrowing owl populations in California are considered to be sedentary or locally migratory.

Throughout its range it is vulnerable to habitat loss, predation, vehicular collisions, destruction of burrow sites and poisoning of ground squirrels (Grinnell and Miller 1944, Zarn 1974, Remsen 1978). Burrowing owls have disappeared from significant portions of their range in the last 15 years and overall nearly 60% of the breeding groups of owls known to have existed in California during the 1980s had disappeared by the early 1990s (Burrowing Owl Consortium 1993). The burrowing owl is not listed under the state or federal Endangered Species Act, but is considered both a federal and state "species of special concern." The burrowing owl is a migratory bird protected by the international treaty under the Migratory Bird Treaty Act of 1918 and by State law under the California Fish and Game Code (CDFG Code #3513 & #3503.5).

RESULTS

BURROWING OWLS

There were 16 adult burrowing owls observed on the subject parcel during the April 2005 burrowing owl survey. Approximate locations of active and potentially active burrowing owl nests were plotted on Figure 2. Seven breeding pairs of burrowing owls were identified. Breeding pairs of owls were determined when both the male and female were observed perched together and interacting, by preening, feeding, vocalizing, or performing food exchanges or other activity that would signify a pair bond. An additional breeding pair of burrowing owls is thought to exist on the site even though only one owl was observed at any one time at the suspected nesting burrows. The site supports at least seven and potentially eight breeding pair of burrowing owls.

In one potential breeding location, only one owl was observed at the burrow entrance at any given time during the survey. However, there was evidence suggesting that this location was a breeding burrow. In one case, an adult male burrowing owl was observed delivering nesting material (clumps of dry grass) to the burrow. A female owl was observed using the same burrow on separate occasions. The burrow entrance was stockpiled with prey items (moths). Stockpiling prey items at the nest by owls and other raptors can indicate newly hatched young; males anticipating young in the nest go on hunting frenzies and sometimes secure more food than can be consumed by the newly hatched young. Excess prey items are left at the nest or cached in various locations for feeding later. The behavior of the adult owls at this location during the middle of the breeding season suggests that could be a breeding site and not simply a burrow occupied by a single owl.

The burrowing owls on the site were observed foraging predominantly for moths and other flying insects. Prey items found at burrow entrances included small mammals, moths and other insects, and feathers indicating bird kills. Burrowing owls could be seen perched outside their burrows at all times during the survey period. The site contains suitable habitat for burrowing owls as evidenced by the number of owls observed during the survey, behavior of the owls indicating multiple breeding pairs on the site. The soil is soft and spongy, allowing the owls to easily excavate their own burrows. There appear to be few natural predators in the area (coyote tracks were observed on the site), and the habitat conditions produce sufficient numbers of insect and other prey species for the owls.

SBKR

No SBKR were caught during the five-night trapping session. Throughout the survey site, there were various small mammal signs and four native rodent species were trapped (Table 1). Overnight temperatures ranged between 50°F and 54°F. There was a light cloud cover and a light drizzle at the end of the trap session. The plant communities found within the study site include fallow vineyard, non-native grasses, remnant coastal sage

scrub, and small patches of wetland associations (Appendix A). The soils and substrate are composed of sandy loam. In the project area the soils are stabilized, yet friable and are conducive for burrow construction and maintenance.

Table 1
RODENT SPECIES TRAPPED WITHIN THE 103-ACRE PARCEL
NORTH OF THE MILLIKEN SANITARY LANDFILL IN THE
CITY OF ONTARIO, SAN BERNARDINO COUNTY, CALIFORNIA

Species
San Diego pocket mouse (<i>Chaetodipus fallax</i>)
Deizura kangaroo rat (<i>Dipodomys simulans</i>)
cactus mouse (<i>Peromyscus eremicus</i>)
deer mouse (<i>Peromyscus maniculatus</i>)

DISCUSSION AND CONCLUSIONS

The result of the trapping survey is that no SBKR were captured within the 103-acre parcel directly north of the Milliken Sanitary Landfill. No further evaluation relative to this species is necessary. Burrowing owls exhibiting breeding behavior were observed on the project site. Active burrowing owl nests cannot be subject to take per the requirements of state law. The CDFG should be contacted to establish acceptable mitigation measures with regards to this species. Bird nests were encountered during the surveys. The State of California prohibits the take of active bird nests. Thus, any grubbing or brushing to occur on the property should be conducted outside of the State identified breeding season of February 15 through September 1.

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- California Fish and Game Code 3503 and 3503.5 state:
- 3503:** *It is unlawful to take, possess or needlessly destroy the nest or eggs of any bird except as otherwise provided by this code or any regulation made pursuant thereto.*
- 3503.5:** *It is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.*

FIGURE 1
Regional Location Map



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Zoom Level: 10-4 Datum: WGS84

Scale 1 : 150,000
1" = 2 mi

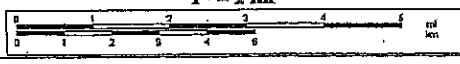
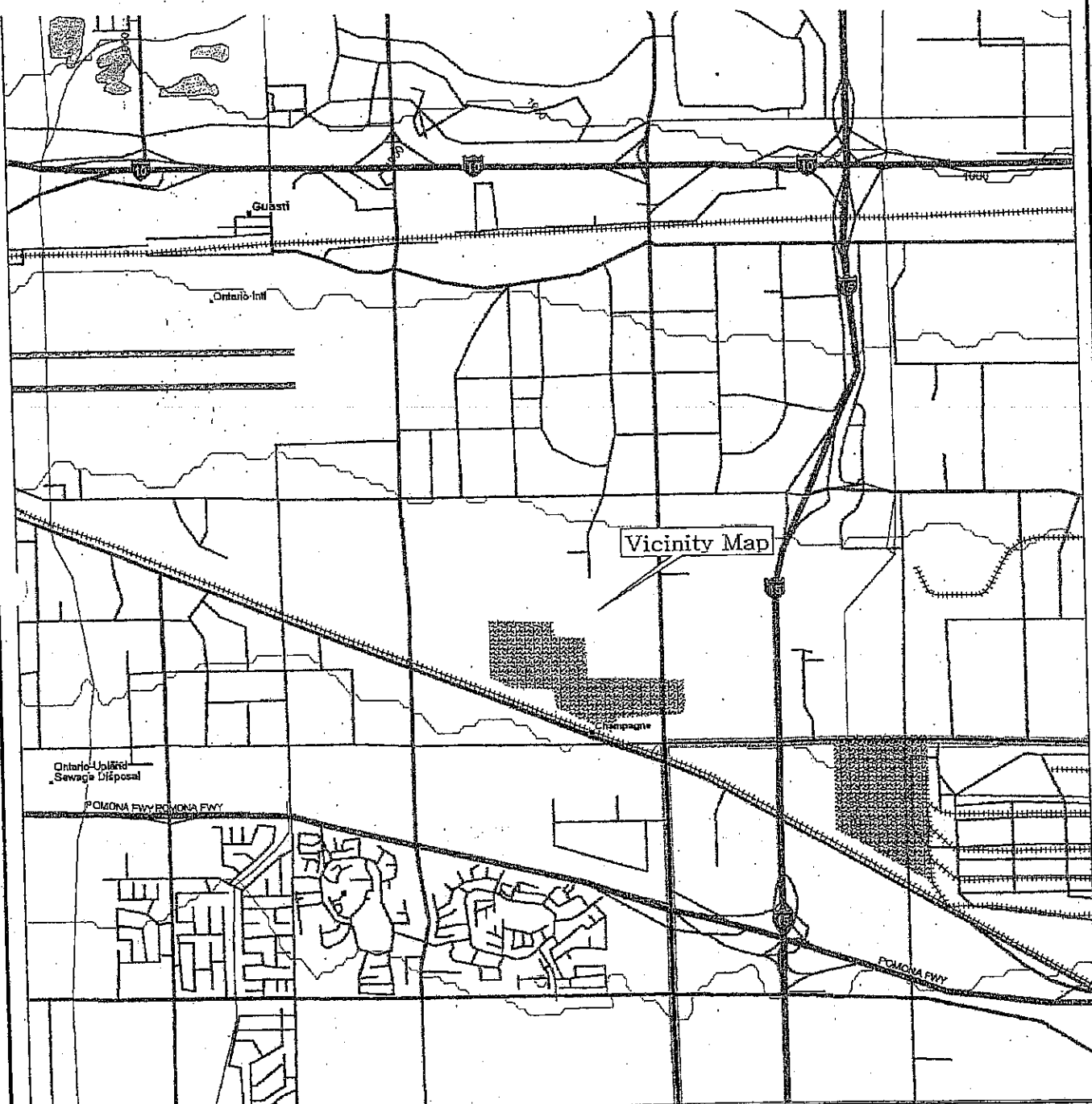


FIGURE 2
Vicinity Map



Vicinity Map

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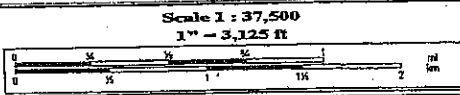


FIGURE 3
Site Location Map

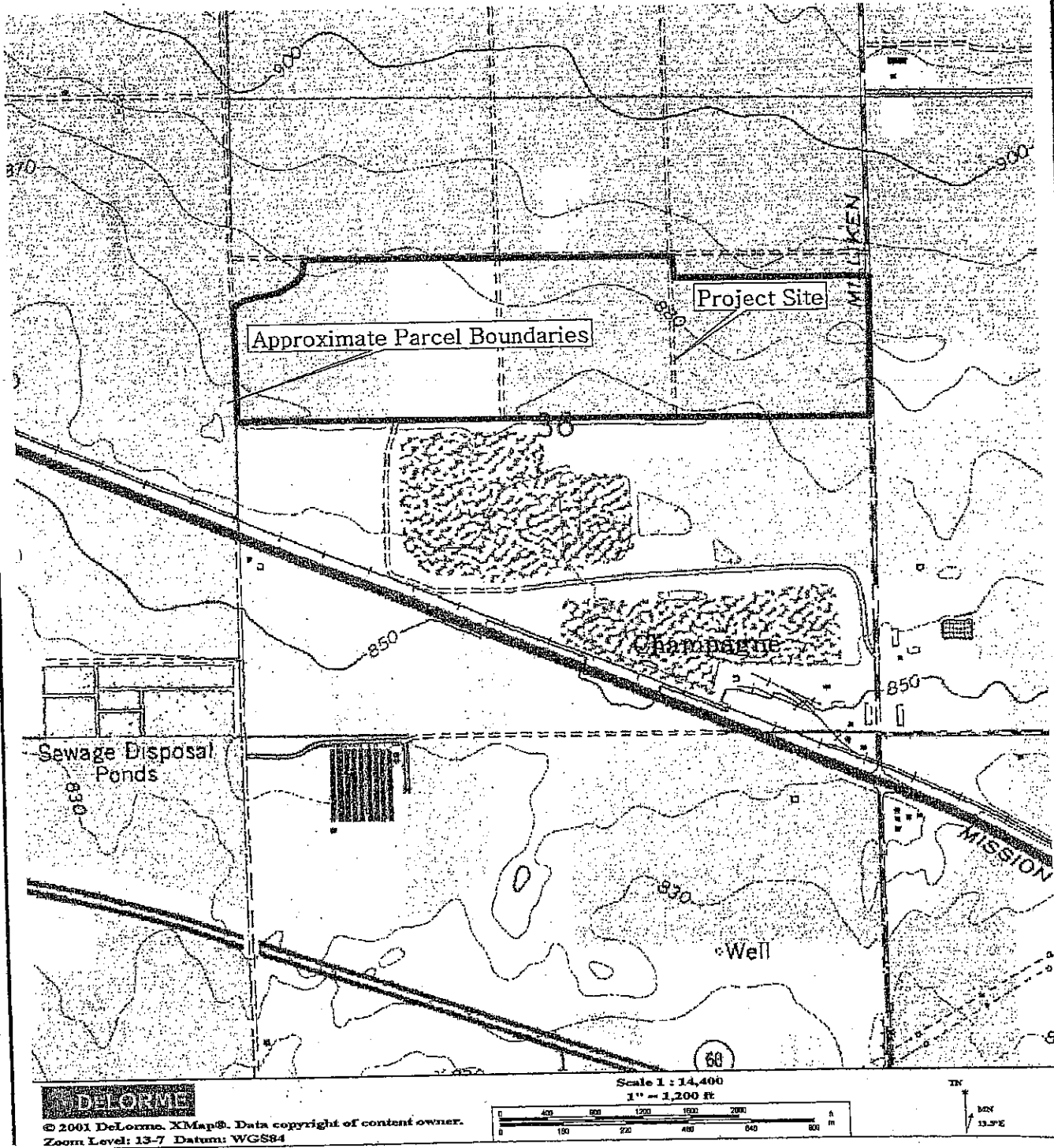
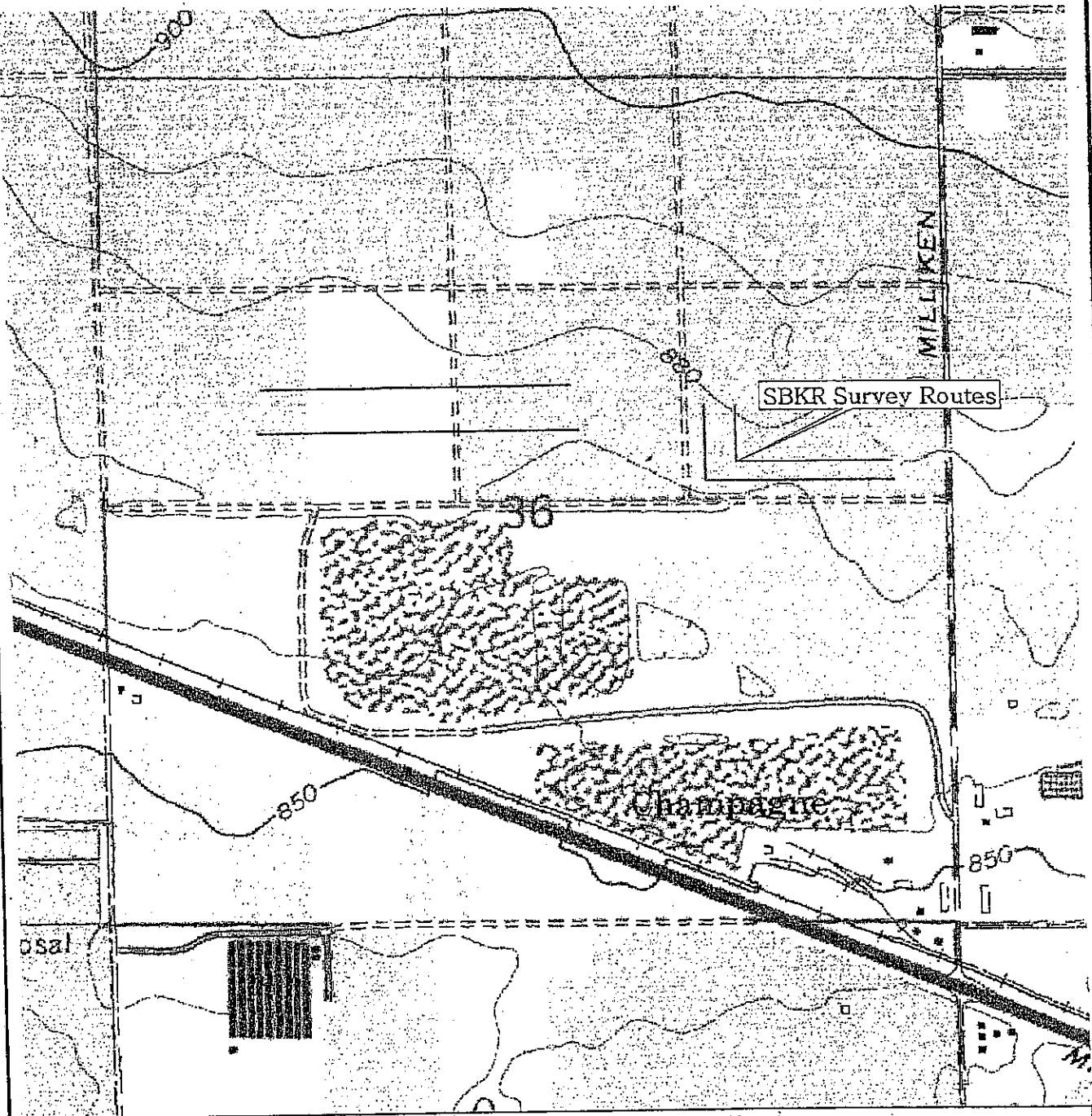


FIGURE 4
Trap Line Location



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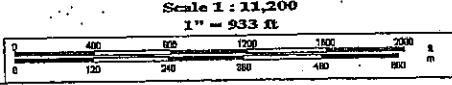
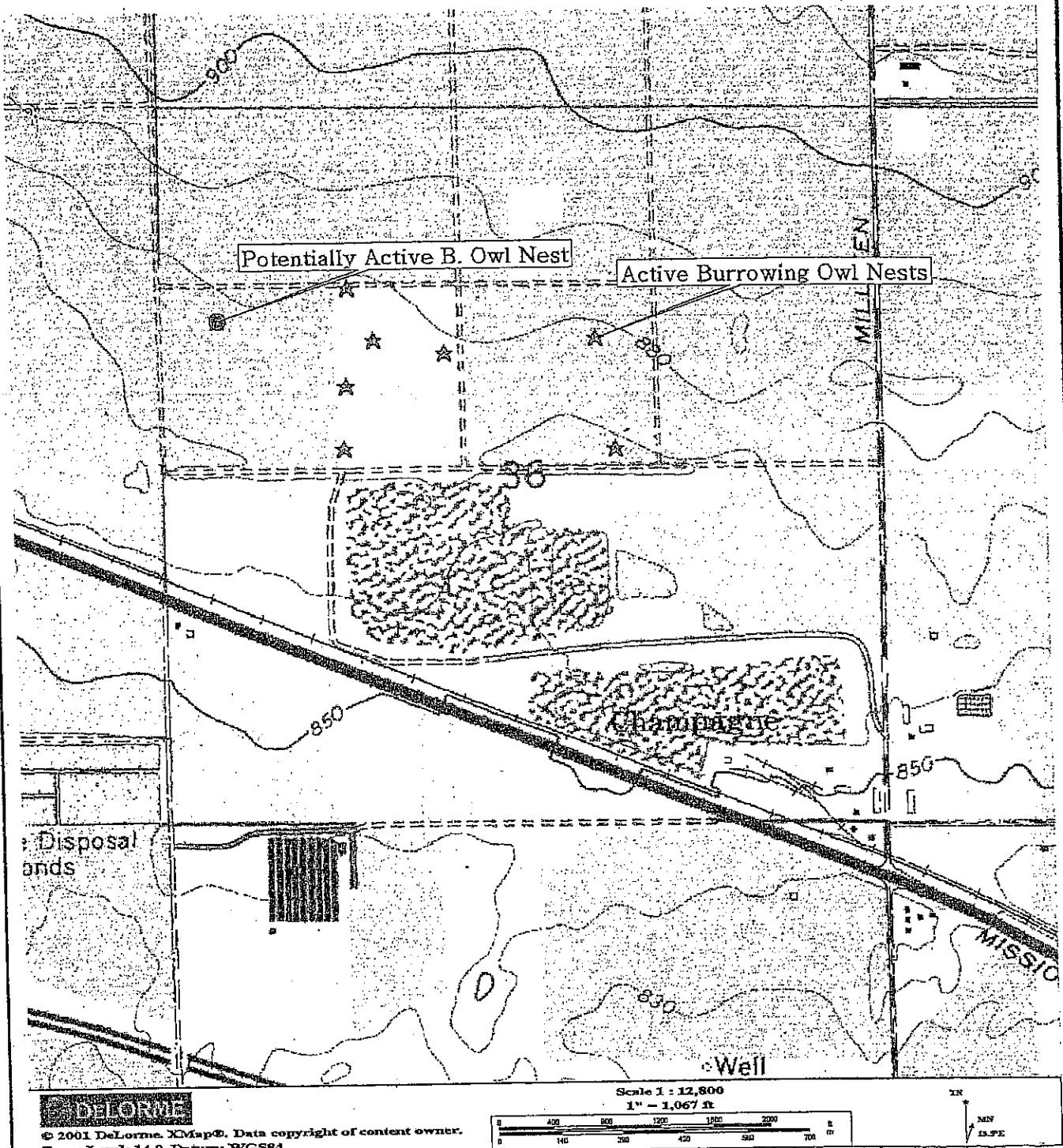


FIGURE 5
Active Burrowing Owl Burrow Locations



APPENDIX A
PLANT SPECIES LIST

Appendix A
PLANT SPECIES LIST

Alien spp	Latin Name	Common Name	Family
*	<i>Ambrosia artemisiifolia</i>	common ragweed	Asteraceae
	<i>Amsinckia menziesii</i>	small-flowered fiddleneck	Boraginaceae
	<i>Artemisia californica</i>	California sagebrush	Asteraceae
	<i>Astragalus pomonensis</i>	Pomona milkvetch	Fabaceae
*	<i>Avena fatua</i>	wild oats	Poaceae
	<i>Baccharis salicifolia</i>	mulefat	Asteraceae
*	<i>Brachypodium distachyon</i>	purple false-brome	Poaceae
*	<i>Bromus catharticus</i>	rescue grass	Poaceae
*	<i>Bromus diandrus</i>	rip-gut grass	Poaceae
*	<i>Bromus madritensis</i>	foxtail brome	Poaceae
	<i>Camissonia bistorta</i>	California sun cup	Onagraceae
	<i>Camissonia hirtella</i>	hairy sun-cups	Onagraceae
	<i>Camissonia micrantha</i>	miniature suncup	Onagraceae
*	<i>Centaurea melitensis</i>	tootalote	Asteraceae
*	<i>Conyza bonariensis</i>	South American horseweed	Asteraceae
	<i>Crassula connata</i>	pygmy weed	Crassulaceae
	<i>Cryptantha clevelandii</i>	Cleveland's cryptantha	Boraginaceae
	<i>Cryptantha intermedia</i>	common cryptantha	Boraginaceae
	<i>Cryptantha maritima</i>	Guadalupe cryptantha	Boraginaceae
	<i>Ericameria linearifolia</i>	narrowleaf goldenbush	Asteraceae
*	<i>Erodium botrys</i>	long-beaked filaree	Geraniaceae
*	<i>Erodium cicutarium</i>	redstem filaree	Geraniaceae
	<i>Heterotheca grandiflora</i>	telegraph weed	Asteraceae
*	<i>Hirschfeldia incana</i>	Mediterranean Hoary-Mustard	Brassicaceae
*	<i>Hordeum marinum</i>	Mediterranean barley	Poaceae
*	<i>Lactuca serriola</i>	wire lettuce	Asteraceae
	<i>Lotus purshianus</i>	Spanish clover	Fabaceae
	<i>Lotus strigosus</i>	strigose bird's-foot trefoil	Fabaceae
*	<i>Marrubium vulgare</i>	horehound	Lamiaceae
*	<i>Melilotus indica</i>	tall nasty clover	Fabaceae
	<i>Oenothera californica</i>	California Evening Primrose	Onagraceae
	<i>Oenothera elata</i>	Common evening primrose	Onagraceae
*	<i>Polygonum arenastrum</i>	common knotweed	Polygonaceae
*	<i>Rumex crispus</i>	Curley Dock	Polygonaceae
	<i>Salix sp.</i>	willow	Salicaceae
*	<i>Salsola tragus</i>	russian thistle	Chenopodiaceae
*	<i>Schismus sp.</i>	Mediterranean grass	Poaceae
*	<i>Sisymbrium altissimum</i>	tall tumblemustard	Brassicaceae
*	<i>Sisymbrium irio</i>	London rocket	Brassicaceae
*	<i>Vitis vinifera</i>	grape vine	Vitaceae
*	<i>Vulpia myuros</i>	Foxtail Fescue	Poaceae

**THIRD YEAR FOCUSED SURVEY
FOR DELHI SANDS
GIANT FLOWER-LOVING FLY
(*Rhaphiomidas terminatus abdominalis*)
ON A 103-ACRE SITE NORTH OF THE
MILLIKEN SANITARY LANDFILL,
ONTARIO, CALIFORNIA**

Prepared for:

**Solid Waste Management Division
County of San Bernardino
222 West Hospitality Lane, 2nd Floor
San Bernardino, CA 92415-0017**

Prepared by:

**Kendall H. Osborne
Osborne Biological Consulting
6675 Avenue Juan Diaz
Riverside, CA 92509**

2005 OCT 21 PM 3:50

September 20, 2005

**THIRD YEAR FOCUSED SURVEY FOR
DELHI SANDS GIANT FLOWER-LOVING FLY
(*Rhaphiomidas terminatus abdominalis*)
ON A 103-ACRE SITE NORTH OF THE MILLIKEN
SANITARY LANDFILL, ONTARIO, CALIFORNIA**

Prepared for

**Solid Waste Management Division
County of San Bernardino
222 West Hospitality Lane, 2nd Floor
San Bernardino, CA 92415-0617**

Prepared by

**Kendall H. Osborne
Osborne Biological Consulting
6675 Avenue Juan Diaz
Riverside, CA 92509**

The undersigned certify this report to be a complete and accurate account of the findings and conclusions of a third year, 2005 focused survey for Delhi Sands Giant Flower-loving Fly (*Rhaphiomidas terminatus abdominalis*) on a 103-acre site located on the north side of the Milliken Sanitary Landfill (between Milliken and Haven Avenues), Ontario, San Bernardino County, California.



**Ken H. Osborne
6675 Avenue Juan Diaz
Riverside, CA 92509**



**Matthew Van Dam
2557 S. Barrington Avenue
Los Angeles, CA 90064**

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SUMMARY

The San Bernardino County Solid Waste Management Division has requested a focused survey to assess the presence or absence of Delhi Sands Flower-Loving Fly (DSF, *Rhaphiomidas terminatus abdominalis*) on a 103-acre site located north of the Milliken Sanitary Landfill, Ontario, California. To assess this site for potential as habitat for the federally endangered DSF and to determine presence or absence of DSF on the site, I visited the site on June 23, 2003. Subsequently, I conducted two years of survey on the site from July 15 to September 20, 2003, and between July 1 and September 20, 2004. This report presents the results of a third year of survey for the DSF.

Delhi Sands Flower-Loving Fly was not observed on the site during the course of this year 2005 survey. In addition, DSF was not found on the site for either year 2003 or 2004 survey.

Delhi sands cover large portions of the site so that approximately half the site represents very high quality habitat for the DSF and another third of the site moderate quality habitat on sands in viticulture. A high diversity of sand associated arthropods and other wildlife was found on the subject site.

1.0 INTRODUCTION

This report presents the methods and results of a third year of survey for the Delhi Sands Flower-Loving Fly (DSF, *Rhaphiomidas terminatus abdominalis*), following a two year focused survey for a 103-acre site located north of the Milliken Sanitary Landfill, Ontario. The DSF was listed as an endangered species by the U.S. Fish and Wildlife Service (USFWS) on September 23, 1993 (USFWS 1993).

The survey site is located on the Guasti, California USGS 7.5-minute quadrangle map, Township 1 South, Range 7 West, on the northern portion of Section 36. Latitude ranges from approximately 34° 02' 27" to 34° 02' 40" N and Longitude from 117° 33' 27" to 117° 34' 30" W. Figure 1 shows the general vicinity of the survey site at 50% scale on the Guasti, California USGS 7.5-minute quadrangle map. Figure 2 displays the survey site at 200% scale on this USGS quadrangle. Figure 3 provides the project vicinity as it is given in *the Thomas Guide* (2001).

The survey area is generally bounded by Francis Street on the north, Milliken Avenue on the east, Haven Avenue on the west, and the Milliken Sanitary Landfill on the south.

The results of the field surveys will provide additional baseline data required to evaluate potential impacts to DSF or supporting suitable habitat for the species as a result of any future development of this site.

2.0 SPECIES BACKGROUND

Delhi Sands Giant Flower-loving fly belongs to a genus of flies (*Rhaphiomidas*) commonly known as giant flower loving flies. There are more than 30 species of these flies, distributed across the southwestern United States and northern Mexico. These flies are huge by the standards set by most flies – with size among the species ranging from ca. 1.5 centimeters up to 3, and even 4 centimeters, usually gray, tan, rust or yellow in color. All species of *Rhaphiomidas* are associated with rather arid, sandy habitats, with most species living on dune systems of inland desert valleys, rivers, deltas, and beach strands. A few species are found in sandy washes, alluvial benches and remnant glacial moraines. Many species of these flies often hover before flowers in the manner of hummingbirds, using a long, thin, tubular proboscis (mouth-part), with which the flies probe for nectar – hence the name “giant flower-loving flies”. Smaller flies of the family Apioceridae, once considered very closely related to *Rhaphiomidas* were traditionally called “flower-loving flies”.

The DSF is only known to occur in association with Delhi sand deposits. It presumably occupied the once extensive dune system of the upper Santa Ana River Valley, including portions of what is now the City of Colton, west through portions of the City of Ontario, and south to the Santa Ana River. Today, DSF exists on only a few disjunct sites (USFWS 1997) within a radius of about eight miles in southwestern San Bernardino and northwestern Riverside Counties (Colton, Rialto, Fontana, and Ontario). More than 95 percent of known DSF habitat was considered eliminated by development, agriculture and other land management practices by 1993 (Smith 1993, USFWS 1996 in Kingsley 1996). However, this proportion is now nearer 98 to 99% due to these ongoing processes. Many of the last remaining fragments of DSF habitat are currently under pressure by land management efforts such as heavy disking, irrigation, manure dumping, and gravel dumping. There is presently an estimated 1,200 acres of habitat that can support this species (USFWS 1997), but this estimate likely includes lands needing extensive habitat restoration.

Adult DSF flight period is typically August and September, when individual adults emerge, reproduce and die. The adult life span of an individual DSF lasts for a few days and adults do not live beyond the flight period (Kiyani 1995). DSF, like other *Rhaphiomidas* species, appears to have an annual life cycle (because of the annual flight). However, it is widely believed that the underground larval/pupal stage may persist for additional years, depending upon various environmental factors such as annual rainfall, food availability and weather conditions during the flight season (many desert *Rhaphiomidas* species do not appear after a drought year and often, substantial flights occur only sporadically over the years). It is known that DSF larvae develop underground, however the specific biology (larval biology, habits and food requirements) are not yet known for DSF or any other *Rhaphiomidas* species. Known life histories of all related fly families and genera involve parasitism or predation on other soil dwelling arthropods. It is therefore considered highly likely that *Rhaphiomidas* development is dependent on some other endemic insect species in the community.

Adult DSF are highly mobile, agile fliers. Male DSF are frequently seen flying low through habitat, using apparently random, circuitous paths around and between shrubs in search of

females. Such "cruising" behavior often covers areas on the scale of 1000 square meters in the timespan of a minute. Alternatively, male DSF are often seen flying about an open patch of ground (ca 100 square meters) such as along a dirt path or dune blow-out area. Here, males may repetitively land and rest on one or another object (such as small dried plants) in the area. Such rests are interrupted by periods of patrolling flight (apparently territorial) about the spot. When alarmed, these insects tend to fly rapidly in more or less a straight line – often covering distances of 100 meters in less than 6 seconds. Adult DSF are known to nectar at flowers of California buckwheat and California croton.

2.1 DSF Habitat Characteristics

DSF is typically found in areas of unconsolidated sandy soils (Delhi series) supporting an open community of native and exotic plant species. Dominant plants are typically California buckwheat (*Eriogonum fasciculatum*), California croton (*Croton californicus*), telegraph weed (*Heterotheca grandiflora*), and deerweed (*Lotus scoparius*). Many exotic species often dominate on DSF habitat as well. DSF have been found in habitats that do not support these dominant plant species and plant species composition may not be directly relevant to larval development (due to likely predatory or parasitic habit of DSF larvae). Adult DSF are known to nectar at flowers of California buckwheat and California croton. Many other plant species are common, including Thurber's eriogonum (*Eriogonum thurberi*), Autumn vinegar weed (*Lessingia glandulifera*) and sapphire eriastrum (*Eriastrum sapphirinum*). Nonnative plant species also occur in DSF habitat (and incidentally, virtually everywhere). DSF habitat also supports other associated insects such as flies and wasps considered as indicator species – *Apiocera convergens*, *Apiocera chrysolasia*, *Ligyra gazophylax*, *Campsomeris tolteca*, *Trielis alcione* and *Nemomydas pantherinus*. Over 350 insect species have been found on one DSF site. DSF habitat is typically marked by high abundance and diversity of predatory and parasitic insect groups including many highly specialized families of flies, wasps, bees, beetles, and antlions. The Delhi Sands community is one of California's unique natural communities containing an array of native plants and animals; some of which are found nowhere else. One plant species, Pringle's monardella, (*Monardella pringlei*) is already presumed extinct, as no living individuals have been observed in many years. Several species of insects and some vertebrates, which inhabit the Delhi Sands dunes system, are as endangered as the DSF, but no one has yet petitioned to have them officially declared Endangered (Greg Ballmer, pers. comm.). These include the convergent flower-loving fly *Apiocera convergens*, a newly discovered species of Jerusalem cricket, (*Stenopelmatus* sp.), a new species of camel cricket (*Ceuthophilus* sp.) and an endemic subspecies of butterfly *Apodemia mormo nigrescens* (Emmel and Emmel 1998). The other apiocerid fly (*Apiocera chrysolasia*), although known from approximately six general localities, is only common within the Delhi sands.

2.2 DSF Survey Guidelines

Interim General Survey Guidelines for the DSF have been suggested by the USFWS (1996). By following these guidelines, DSF presence or absence survey results may be deemed acceptable to the USFWS (rejection of survey results is likely to result where the

guidelines are not followed). The guidelines indicate that focused DSF surveys should be conducted wherever Delhi sands are present within the presumed range of DSF, twice weekly (two days per week) during the single annual flight period (usually from August 1 to September 20). Recent early season DSF discoveries lead the USFWS to recommend a survey season from July 15 to September 20 for 2003 and a survey season from July 1 to September 20 for 2004. Surveys must be conducted for two flight periods (two years). Furthermore, weather conditions must be suitable for DSF activity at the times survey work is pursued. The DSF is generally active when daytime temperatures exceed 80 degrees Fahrenheit (°F), but may fly with slightly cooler temperatures in bright sunlight. Since DSF may become established on sites subsequent to two year surveys, additional surveys may become necessary over succeeding years in order to maintain current and valid determinations of non occupancy by DSF on a site.

3.0 METHODS

The entire site has previously mapped as consisting of Delhi sands (Woodruff 1980). In 2003, the site was confirmed to have DSF habitat and potential and surveys were undertaken on the site for 2003 and 2004.

Focused DSF surveys were carried out on 50 dates between July 1, and September 20, 2005. These surveys were conducted under Federal U. S. Fish and Wildlife Permits as follows: Kendall H. Osborne, Permit # TE-837760-5 and Matthew Van Dam under Osborne's permit. Following the USFWS Interim General Survey Guidelines, we surveyed all portions of the subject site at least twice a week, generally between the hours of 1000 and 1400 (Table 1). The survey protocol, as set forth in the Interim General Guidelines for the Delhi Sands flower-loving fly survey, is designed to maximize the validity of a presence/absence determination. The 103-acre site was surveyed with time and effort appropriate to 100 acres due to the fact that appreciable portions of the site (more than three acres) have been developed to railroad tracks with a rock bed, support dense riparian vegetation in a drainage south of S. Dupont St., or are covered with dumped exotic soils and rubble, or are otherwise covered in dense, hard-packed clay and gravel soils.

Osborne photographed the property from several perspectives to document existing conditions for the current year. Notes were taken on vegetative cover and plant species composition, abundance and diversity and species composition of insects and other animals, soil types, degree and nature of disturbance, surface cover, organic content, compaction, current land management practices, existing development, conditions of surrounding vicinity and proximity of other DSF populations.

As with previous years, habitat suitability for DSF was evaluated using indicators of potential DSF habitat noted during the field visits, including: presence and abundance of loose, unconsolidated Delhi sands with low organic contamination; degree of habitat disturbance indicated by plant species composition and disposition of soil surface, presence and abundance of native sand associated plants such as *Croton californicus*, *Heterotheca grandiflora*, *Eriogonum thurberi*, and *Eriogonum fasciculatum*. Presence

and abundance of Delhi sands associated insects such as *Apiocera convergens*, *Apiocera chrysolasia*, and (to a lesser extent) *Nemomydas pantherinus*. Potential DSF habitat was further evaluated on the basis of overall insect diversity and abundance, particularly with respect to sand associated predators and parasitoids. Table 1 presents field survey date information for 2005.

Table 1. Dates, personnel, times and conditions for focused DSF survey work.

Date	Biologists	Hours	Weather Conditions
1 July 2005	M. Van Dam	1000 - 1400	72-92°F, winds 5-6 mph.
2 July 2005	M. Van Dam	1000 - 1400	74-93°F, winds 2-10 mph.
3 July 2005	M. Van Dam	1000 - 1400	70-91°F, winds 2-8 mph.
4 July 2005	M. Van Dam	1000 - 1400	70-90°F, winds 2-7 mph.
8 July 2005	M. Van Dam	1000 - 1400	72-87°F, winds 2-8 mph.
9 July 2005	M. Van Dam	1000 - 1400	69-89°F, winds 0-2 mph.
10 July 2005	M. Van Dam	1000 - 1400	71-89°F, winds 2-7 mph.
11 July 2005	M. Van Dam	1000 - 1400	78-94°F, winds 2-9 mph.
15 July 2005	M. Van Dam	1000 - 1400	78-91°F, winds 2-8 mph., haze
17 July 2005	M. Van Dam	1000 - 1400	81-96°F, winds 2-11 mph.
19 July 2005	M. Van Dam	1000 - 1400	88-100°F, winds 2-10 mph.
20 July 2005	M. Van Dam	1000 - 1400	91°F, winds 2-6 mph., haze
22 July 2005	M. Van Dam	1000 - 1400	91-103°F, winds 2-9 mph.
23 July 2005	M. Van Dam	1000 - 1400	86-95°F, winds 2-11 mph., haze
26 July 2005	M. Van Dam	1000 - 1400	81-94°F, winds 3-8 mph.
27 July 2005	M. Van Dam	1000 - 1400	81-97°F, winds 2-6 mph.
1 August 2005	M. Van Dam	1000 - 1400	81-92°F, winds 1-11 mph.
2 August 2005	M. Van Dam	1000 - 1400	79-95°F, winds 3-12 mph.
3 August 2005	M. Van Dam	1000 - 1400	77-96°F, winds 1-7 mph.
4 August 2005	M. Van Dam	1000 - 1400	81-95°F, winds 2-8 mph.
8 August 2005	M. Van Dam	1000 - 1400	80-101°F, winds 1-4 mph., high clouds
9 August 2005	M. Van Dam	1000 - 1400	81-101°F, winds 1-7 mph.
10 August 2005	M. Van Dam	1000 - 1400	78-96°F, winds 1-11 mph., high clouds
11 August 2005	M. Van Dam	1000 - 1400	78-89°F, winds 2-10 mph.
13 August 2005	M. Van Dam	1000 - 1400	70-80°F, winds 1-13 mph., overcast-clear
15 August 2005	M. Van Dam	1000 - 1200	70-71°F, winds 2 mph., overcast -- broken clouds, rained night before
16 August 2005	M. Van Dam	1000 - 1400	68-80°F, winds 1-6 mph., overcast - clear
17 August 2005	M. Van Dam	1000 - 1200	74-79°F, winds 3-5 mph.
18 August 2005	M. Van Dam	1000 - 1400	71-89°F, winds 3-6 mph.
19 August 2005	M. Van Dam	1000 - 1400	77-92°F, winds 2-5 mph.

20 August 2005	M. Van Dam	1000 - 1400	78-94°F, winds 2-6 mph.
20 August 2005	K. Osborne	1335 - 1400	91°F, winds 5 mph.
21 August 2005	M. Van Dam	1000 - 1400	81-96°F, winds 2-9 mph.
22 August 2005	M. Van Dam	1000 - 1400	81-99°F, winds 2-7 mph.
29 August 2005	M. Van Dam	1000 - 1400	85-100°F, winds 1-6 mph.
30 August 2005	M. Van Dam	1000 - 1400	85-95°F, winds 1-7 mph.
31 August 2005	M. Van Dam	1000 - 1400	74-93°F, winds 2-5 mph.
1 September 2005	M. Van Dam	1000 - 1400	73-90°F, winds 2-5 mph.
5 September 2005	M. Van Dam	1000 - 1400	75-93°F, winds 1-8 mph.
6 September 2005	M. Van Dam	1000 - 1400	82-90°F, winds 2-7 mph.
7 September 2005	K. Osborne	1100 - 1310	85-94°F, calm
7 September 2005	M. Van Dam	1120 - 1150, 1200- 1400	86-90°F, winds 3-5 mph.
8 September 2005	K. Osborne	1050 - 1400	85-87°F, winds 0-5 mph.
8 September 2005	M. Van Dam	1000 - 1145	75-79°F, winds 2-4 mph.
12 September 2005	M. Van Dam	1000 - 1200	65-75°F, winds 2-4 mph., partly cloudy
12 September 2005	K. Osborne	1055 - 1345	75-80°F, winds 0-2 mph., partly cloudy
13 September 2005	K. Osborne	1115 - 1335	75°F, winds 0-5 mph.
13 September 2005	M. Van Dam	1000 - 1145	65-76°F, winds 2-4 mph.
14 September 2005	K. Osborne	1100 - 1300	73-78°F, calm, clearing clouds
14 September 2005	M. Van Dam	1030 - 1200	67-70°F, winds 2-4 mph., partly cloudy
15 September 2005	M. Van Dam	1030 - 1400	68-85°F, winds 2-7 mph.
17 September 2005	K. Osborne	1205 - 1400	75-85°F, winds 0-2 mph.
17 September 2005	M. Van Dam	1000 - 1245	66-73°F, winds 2-4 mph.
18 September 2005	M. Van Dam	1000 - 1400	69-88°F, winds 2-6 mph., partly cloudy
18 September 2005	K. Osborne	1300 - 1400	88°F, calm
19 September 2005	M. Van Dam	1000 - 1245	66-87°F, winds 2-6 mph.

4.0 RESULTS

4.1 Delhi Sands Giant Flower-loving Fly not found on the subject site.

Delhi Sands Flower-Loving Fly (DSF, *Rhaphiomidas terminatus abdominalis*) was not observed on the subject site during the course of this year 2005 survey season. Conditions on the site remained without substantial change since previous years, and remain to represent some of the best and last remaining high quality DSF habitat in the Ontario area.

4.2 Existing Environment and Community

4.2.1 Adjacent lands

Lands north, west and east of the subject site are developed into commercial enterprises such as warehouses. The Milliken Sanitary Landfill, now closed, dominates lands to the south of the site, with an area of highly disturbed, disked land on the south of eastern portions of the site.

4.2.2 Topography

The site has slight rolling topography owing to relictual sand dune structure. Dunes, formerly in viticulture, still have elevational differentials of nearly 15 feet. In addition, large areas of excavation used to obtain fill materials associated with the landfill resulted in low basins in the central portion of the site. Elevation on the site ranges from approximately 857 feet to 885 feet.

4.2.3 Soils

The eastern (approximately) half of the site, as well as the western (approximate) third of the site consist of Delhi fine sands in dune formation. Past excavation activities on central portions of the site have exposed the underlying Tujunga gravelly sands (stripping away the overlaying Delhi sands. In addition, probably associated with past excavation and soils transportation associated with the landfill, additional areas of the central site have overlying soils contaminated with Tujunga materials packed to a hard and dense consistency. Past agricultural activities have apparently had little effect on the deep and extensive Delhi sands over most of the site.

4.2.4 Vegetation

The eastern half of the survey area is a long-abandoned vineyard, with secondary reestablishment of natural vegetation. Dominant plants in these areas are western ragweed (*Ambrosia acanthicarpa*) and *Verbesina encelioides*. Telegraph weed (*Heterotheca grandiflora*) and slender buckwheat (*Eriogonum gracile*) are co-dominants in some areas. *Eriogonum fasciculatum* and *Croton californica* are common in some areas on the eastern portion of the survey site. The western portion of the site with active viticulture on Delhi sands has a secondary weedy vegetation dominated by tumbleweed (*Amaranthus albus*) and western ragweed. Harder substrates on Tujunga soils (Woodruff 1980) where poorly drained, have mule fat (*Baccharis salicifolia*) in addition to the above listed dominant plants found over the site generally. Interestingly, dominant annual plant species have changed through the years 2003 – 2005. In 2003, eastern, sandy portions of the site were dominated by large shrubs of western ragweed (*Ambrosia acanthicarpa*). In summer of 2004 (after a relatively dry winter) the ragweed was greatly reduced in abundance. Finally, during summer 2005, after record high winter precipitation, telegraph weed (*Heterotheca grandiflora*), covering extensive areas in dense thickets, became the dominant vegetation.

Table 1(Appendix A) provides a list of plant species encountered on the survey site.

4.2.5 Insect Community

During site visits during the last three years, at least 171 insect species (counting only large and conspicuous insects) were either casually observed or collected. A list of most insect species observed during the course of focused survey work (three years) is presented in the appendix (Table 2, Appendix A). A highly diverse community of insects continued to be present on the site, including the Delhi sands associated flies, *Apiocera convergens* (endemic to Delhi sands deposits), *Ligyra gazophylax*, and *Nemomydas pantherinus*. *Apiocera convergens* was observed in higher abundance than I have seen on any other site. Interestingly, *Apiocera crysolasia* continued not to occur on the site. Bombyliid fly species (these being specialist parasites on other – typically predatory and parasitic insect species), and predatory robber flies (Assilidae) were diverse. In general, the insect community was marked by high abundance and diversity of predatory, parasitic and hyperparasitic insect groups. Apioicerids, mydids, bombyliids and asilids, (all mentioned above), tachinids, conopids, sphecids, pomilids, rhipiphorids, scoliids, mutilids, and mymerliontids were all well represented and common.

4.2.6 Vertebrate Community

Small mammal burrows were common throughout the site, mainly those of Botta's pocket gopher (*Thomomys bottae*) and apparently also some species of kangaroo rat (based on burrow structure). In addition, burrows of California ground squirrel (*Spermophilus beecheyi*) and coyote (*Canis latrans*) were common on the site as during previous years. The Side-blotched lizard (*Uta stansburiana*), and San Diego horned lizard (*Phrynosoma coronatum blainvillei*) were the most commonly encountered vertebrates – large numbers of them seen on every site visit.

4.2.6.1 Special Animals

During each of the years of survey (2003, 2004 and 2005), two "Special Animals" as defined California Department of Fish and Game Natural Diversity DataBase (CNDDB 2003) were incidentally detected within the survey area during the course of field surveys. The San Diego horned lizard (*Phrynosoma coronatum blainvillei*), was found in unusually high abundance, with several individuals observed per hour at times. San Diego Black-tailed jackrabbit (*Lepus californicus bennettii*) was also found on the site in small numbers. This year, perhaps as many as ten individuals of the Burrowing owl (*Athene cunicularia*) were observed occasionally in and near ground squirrel and coyote burrows on the central portion of the site (in sandy walls of the excavated basins). In one case, seven individuals were observed at one burrow. The owl is listed as "California Special Concern Species" (CSC) and "Federal Special Concern" species (FSC). The FSC category replaces the former "Category 2" category, wherein species were proposed as candidates for listing as threatened or endangered under the Federal Endangered Species Act. The San Diego horned lizard, and San Diego Black-tailed jackrabbit are listed as CSC. Table 3 (Appendix A) lists vertebrate species seen on the site.

5.0 DISCUSSION

On the basis of these survey results, and further, on the basis of my research and experience with DSF and other *Rhaphiomidas* species, experience with insect communities associated with Delhi sands and other sand dominated habitats of California, it is my opinion that the subject site continues to not currently support any DSF population.

The DSF is known to occur on a small, remnant dune located at the intersection of Greystone Drive and Milliken Avenue, approximately one mile (1.6 km) south of the subject site. This DSF population, is one of the last known remaining in the Ontario Recovery Unit (U.S. Fish and Wildlife Service 1997). Unfortunately, due to recent commercial developments and heavy recreational off-road vehicle activities around the periphery, in close proximity to and on that population site; and also due to the low numbers of DSF observed in this population, the future viability of the population is in serious doubt.

Proximity of this DSF population to the subject site and the high quality of DSF habitat on the site suggested potential for DSF to occur there. High numbers of sand endemic insects such as *Apiocera convergens*, as well as the presence of very abundant coast horned lizards and Burrowing owls suggest high conservation value and potential of the site.

The California Department of Fish and Game may require special measures be taken to protect Burrowing owls during the course of grading on the subject site. Consultation with the CDF and review of Burrowing Owl protocols recommended by the Burrowing Owl Consortium (www2.ucsc.edu/scpbrg/owls.htm), prior to any grading of the subject site is recommended.

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7.0 FIGURES

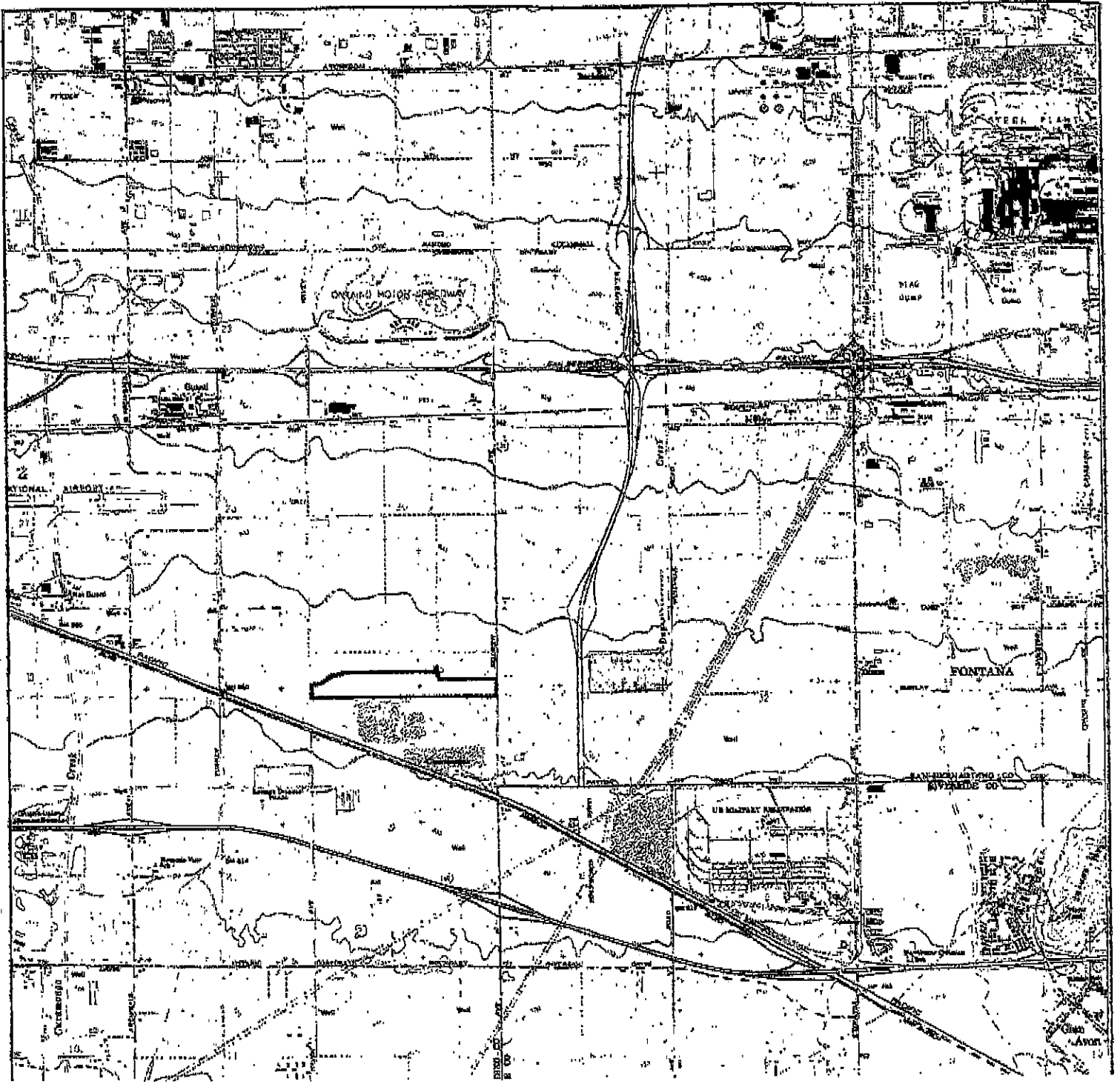


Figure 1. General vicinity of survey site, Guaste, California USGS 7.5" quadrangle at 50%. 103-acre site is outlined in black and highlighted in yellow.

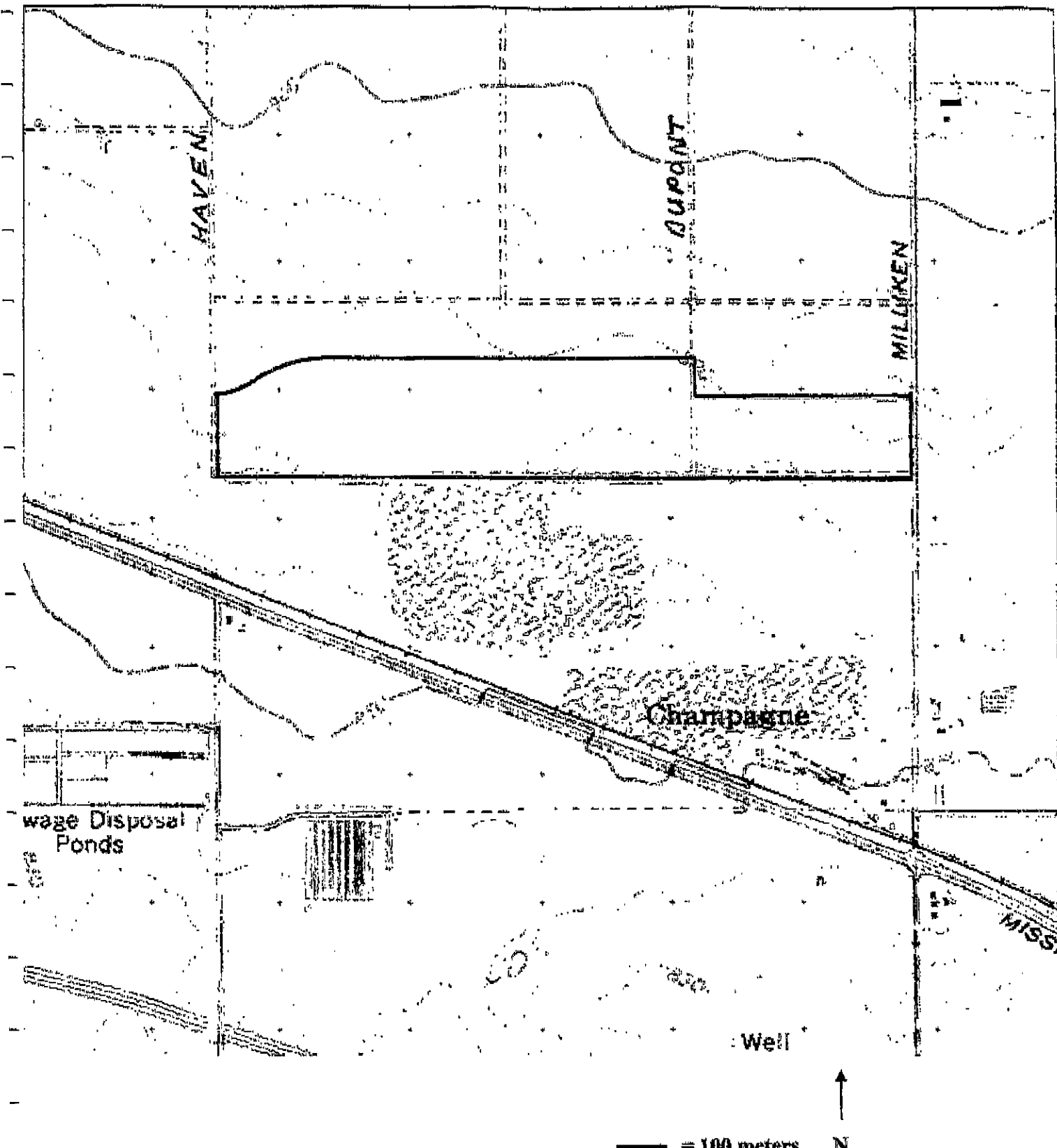


Figure 2. General vicinity of survey site, Guaste, California USGS 7.5" quadrangle at 200%. 103-acre survey site is outlined in black and highlighted in yellow.

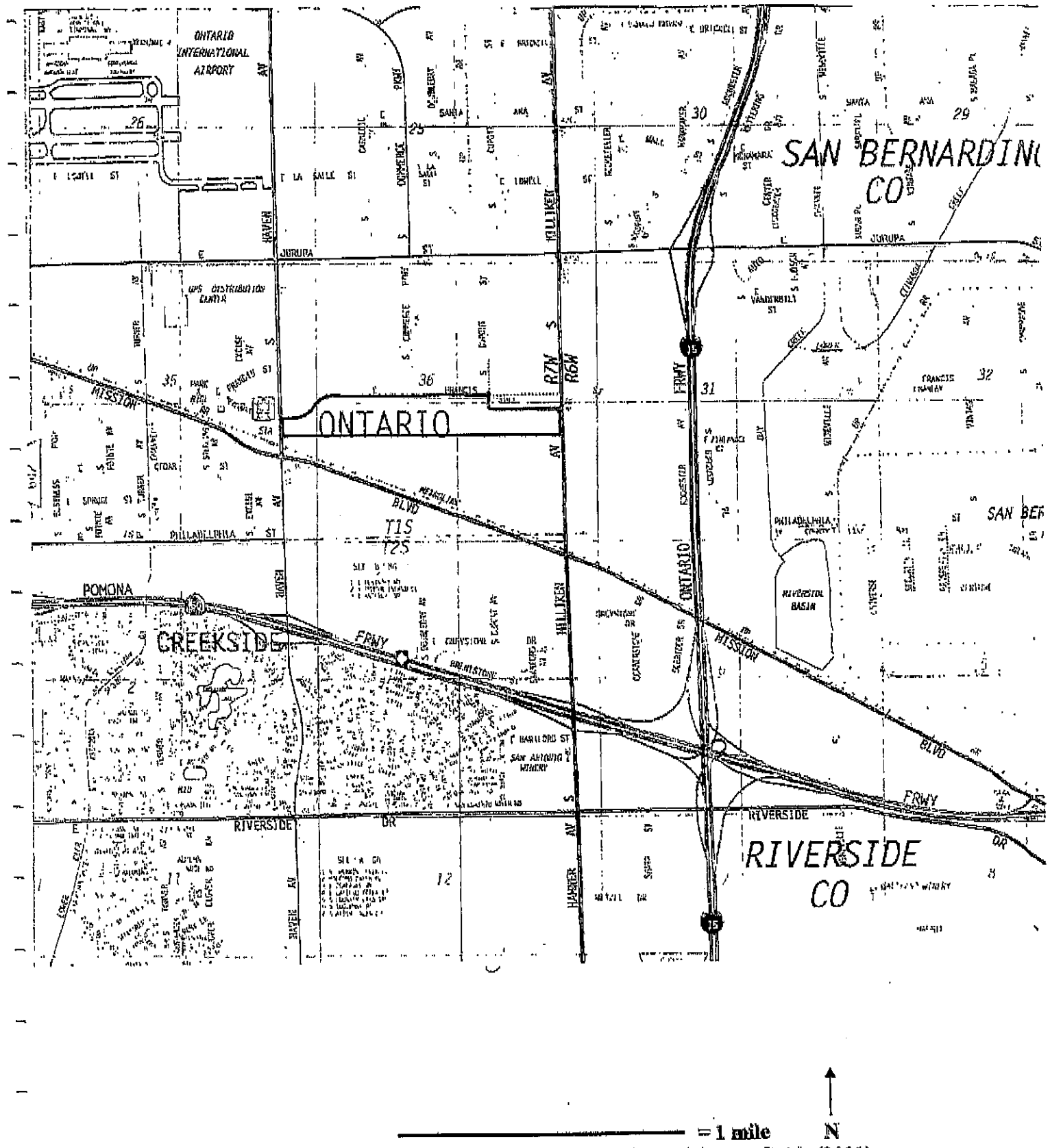


Figure 3. General site vicinity as it is given on page 643 in *the Thomas Guide* (2001). 103-acre survey area is outlined in black and indicated by an arrow.

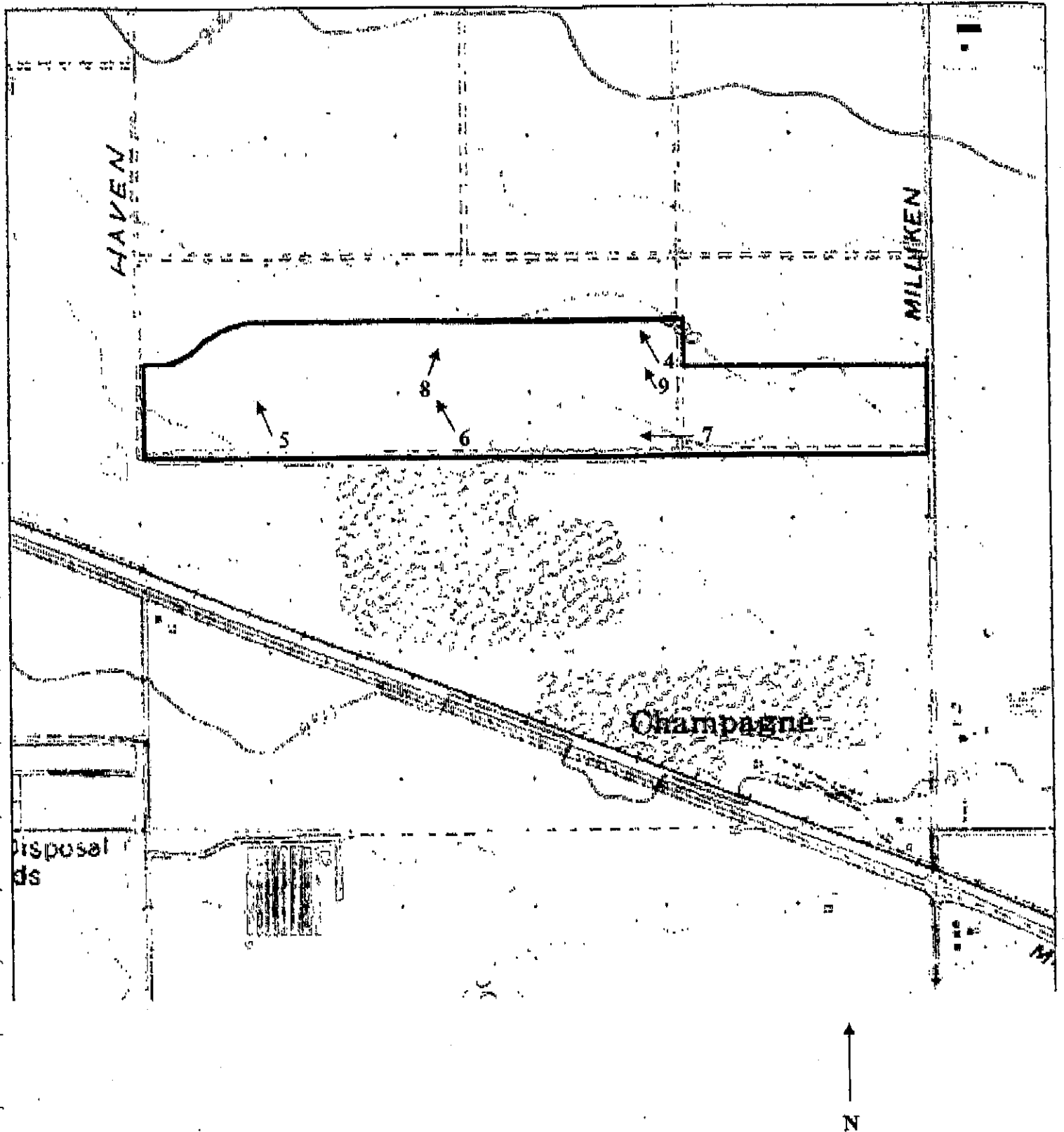


Figure 10. Approximate locations around survey site from which photographs were taken (base of arrows). Arrow indicates the direction a photograph was taken. Numbers next to the arrows indicate figure numbers (Figures 4-9).

8.0 APPENDIX

Appendix A

Table 1. Plant species encountered on the survey site.

<u>Family and common name</u>	<u>Species</u>
AMERANTHACEAE	
tumbleweed	<i>Amaranthus albus</i>
ASTERACEAE	
western ragweed	<i>Ambrosia acanthicarpa</i>
California sage	<i>Artemisia californica</i>
mule fat	<i>Baccharis salicifolia</i>
horseweed	<i>Conyza canadensis</i>
telegraphweed	<i>Heterotheca grandiflora</i>
sunflower	<i>Helianthus annua</i>
prickly lettuce	<i>Lactuca serriola</i>
valley lessingia	<i>Lessingia glandulifera</i>
wreath plant	<i>Stephanomeria virgata</i>
earless crown-beard	<i>Verbesina encelioides</i>
BORAGINACEAE	
Rancher's fiddleneck	<i>Amsinckia intermedia</i>
popcorn flower	<i>Plagiobothrys sp</i>
Slender pectocarya	<i>Pectocarya linearis</i>
BRASSICACEAE	
shortpod mustard	<i>Hirschfeldia incana</i>
CHENOPODIACEAE	
Russian thistle	<i>Salsola tragus</i>
saltbush	<i>Atriplex canescens</i>
CUCURBITACEAE	
coyote gourd	<i>Cucurbita palmata</i>
EUPHORBIACEAE	
California croton	<i>Croton californicus</i>
spruce	<i>Euphorbia peplus</i>
FABACEAE	
locoweed	<i>Astragalus sp</i>
deer weed	<i>Lotus scoparius</i>
Spanish clover	<i>Lotus purshianus</i>
bur clover	<i>Medicago sp</i>
GERANIACEAE	
filaree	<i>Erodium cicutarium</i>

LAMINACEAE

horehound

*Marubium vulgare***MALVACEAE**

mesa bush mallow

*Malacothammus fasciculatus***SALICACEAE**

black willow

Salix gooddingii

sandbar willow

Salix hindsiana

arroyo willow

*Salix lasiolepis***ONAGRACEAE**

suncup

Camissonia bistorta

primrose

*Oenothera sp***SOLANACEAE**

jimson weed

Datura wrightii

tree tobacco

*Nicotiana glouca***POLYGONACEAE**

slender buckwheat

Eriogonum gracile

California buckwheat

*Eriogonum fasciculatum***VITACEAE**

grape

*Vitis vinifera***ZYGOPHYLLACEAE**

puncture vine

*Tribulus terrestris***POACEAE**

slender oat

Avena barbata

red brome

Bromus madritensis

shismus

*Schismus barbatus***Table 2. Insects encountered on the survey site.**

<u>Order</u>	<u>Family</u>	<u>Genus, species</u>
Diptera	Apioceridae	<i>Apiocera convergens</i>
		<i>Efferia albibarbis</i>
		<i>Mallophora faurix</i>
		<i>Saropogon luteus</i>
		<i>Stenopogon brevisculus</i>
		<i>Stenopogon loma</i>
		<i>Stenopogon rufibarbis</i>
		<i>Apheobantus sp</i>
		<i>Exoprosopa butleri</i>
		<i>Ligyra gazophylax</i>
	<i>Neodiplicampta mira</i>	
	<i>Poecilognathus sp</i>	
	<i>Rhynchanthrax caprea</i>	
	<i>Thyridanthrax atrata</i>	
	<i>Thyridanthrax pallida</i>	
	Bombyliidae	

Diptera**Bombyliidae***Toxophora pellucida*

unidentified

unidentified

unidentified

*Villa lateralis**Villa moliter**Phaenicia sericata***Calliphoridae****Conopidae***Physocephala texana***Dolichopodidae***Condylostylus pilicornis***Muscidae***Musca domestica***Mydidae***Nemomydas pantherinus***Sarcophagidae***Sarcophaga sp***Syrphidae***Copostylum marginatum**Copostylum quadratum**Eupeodes volueris**Eristalis aenea**Eristalis latifrons**Eristalis tenax**Pseudodora clavatus**Volucella mexicana***Tabanidae***Tabanus punctifer***Tachinidae***Archytas apicifer**Cylindromyia sp**Eumachronychia**Gymnosoma fuliginosum**Peleteria ?***Therividae***Thereva semitaria***Hymenoptera****Anthophoridae***Anthophora urbana**Melissodes sp**Zylocopa varipuncta***Apidae***Apis mellifera***Chrysididae***Chrysis sp**Parnopes edwardsii***Formicidae***Iridomyrmex humilis**Liometopum sp**Meserpergandi sp**Pogonomyrmex californicus***Gasteroptropidae**

unidentified

Halictidae*Agapostemon sp***Megachilidae***Megachile sp***Mutillidae***Dasymutilla californica**Dasymutilla clydenetra**Dasymutilla coccineohirta**Dasymutilla sackeni**Pseudometheca sp***Pompilidae***Ageniella sp*

Hymenoptera**Pompilidae**

Aporinellus sp
Liris sp
Pepsis chrysothemis
Pepsis thysbe
unidentified

Scoliidae**Sphecidae**

Campsomeris tolteca
Ammophila sp
Ammophila aberti
Ammophila azteca
Bembix americana
Bicyrtes ventralis
Cerceris californicus
Cerceris femurrubrum
Chalybion californicum
Chlorion aerarium
Clypeon californicus
Cryptocheilus sp
Mimesia sp
Oxybelus pitanta
Oxybelus uniglumis
Philanthus multimaculatus
Prionyx foxi
Prionyx thomae
Scelliphron caementarium
Sphex ichneumones
Tachysphex sp
Tachysphex sp
Taschytes elongatus
Eumenes bollii
Euodynerus annulatum
Polistes apachus
Polistes dorsalis
Polistes exclamens
Polistes fuscatus

Vespidae**Neuroptera****Chrysidae**

Chrysopa sp

Heteroptera**Mymariontidae**

unidentified

Corimelaenidae

Corimelaena sp

Largidae

unidentified

Lygaeidae

Geocoris sp

Lygaeidae

Lygaeus kalmii

Nysius sp

Membracidae

unidentified

Miridae

Lygus sp

Nabidae

Nabis sp

Pentatomidae

Chlorochroa uhleri

Thyanta sp

Heteroptera	Pentatomidae	<i>Trichopepla aurorae</i>	
	Reduviidae	<i>Phymata sp</i> <i>Rhynocoris ventralis</i> <i>Sinea diadema</i> <i>Zelus sp</i> <i>Zelus renardii</i>	
Coleoptera	Rhopalidae	<i>Arhyssus sp</i>	
	Cerambycidae	<i>Parandra sp</i>	
	Chrysomelidae	<i>Coscinoptera aeneipennis</i> <i>Diabrotica balteata</i> <i>Diabrotica undecimpunctata</i> <i>Lema trilineata</i>	
		Coccinellidae	<i>Adalia bipunctata</i> <i>Coccinella septempunctata</i> <i>Hippodamia convergens</i> <i>unidentified</i>
	Curculionidae	<i>Collops sp</i>	
	Melyridae	<i>Macrosiagon flavipenne</i>	
	Rhipiphoridae	<i>Cotinus texana</i>	
	Scarabaeidae	<i>Elodes gracilis</i> <i>unidentified</i>	
	Odonata	Aeshnidae	<i>Aeshna multicolor</i> <i>Anax junius</i>
		Coenagrionidae	<i>Argia sp</i>
		Libellulidae	<i>Libellula croceipennis</i> <i>Libellula saturata</i> <i>Paltothemis lineatipes</i> <i>Pantala flavescens</i> <i>Pantala hymenaea</i> <i>Sympetrum corruptum</i> <i>Tramea lacerata</i> <i>Tramea onusta</i> <i>Danaus plexippus</i> <i>Erynnis funeralis</i> <i>Heliopetes ericitorum</i> <i>Hylephila phyleus</i> <i>Pyrgus albescens</i> <i>Brephidium exilis</i> <i>Everys amyntula</i> <i>Hemiarctus ceramus</i> <i>Leptotes marina</i> <i>Plebejus acmon</i> <i>Strymon melinus</i> <i>Acontia sedata</i> <i>Schinia sexplagiata</i> <i>Schinia scarletina</i>
Danaidae			
Hesperiidae			
Lycaenidae			
Lepidoptera	Noctuidae		

Lepidoptera	Nymphalidae	<i>Junonia coenia</i> <i>Vanessa cardui</i> <i>Vanessa virginiensis</i>	
	Pieridae	<i>Colias eurytheme</i> <i>Nathalis iole</i> <i>Pieris rapae</i> <i>Pontia protodice</i> <i>unidentified</i> <i>unidentified</i>	
	Pyralidae	<i>Paranthrene robiniae</i>	
	Sesiidae Sphingidae	<i>Hyles lineato</i>	
Orthoptera	Acrididae	<i>Derotmema saussuraenum</i> <i>Melanoplus sp</i> <i>Psoloessa thamnogaea</i> <i>Schistocerca sp</i> <i>Schistocerca nitens</i> <i>Trimerotropis californica</i> <i>Trimerotropis pallidipennis</i>	
	Mantodea	Mantidae	<i>Iris oratoria</i> <i>Litaneutria minor</i> <i>Stagmomantis californica</i>

Table 3. Vertebrate species encountered on the survey site.

<u>Common name</u>	<u>Species</u>
Reptiles	
Side-blotched lizard	<i>Uta stansburiana</i>
Western fence lizard	<i>Sceloporus occidentalis</i>
San Diego horned lizard	<i>Phrynosoma coronatum</i>
Coachwhip	<i>Masticophis flagellum</i>
Birds	
White-throated swift	<i>Aeronautes saxatalis</i>
Burrowing owl	<i>Athene cunicularia</i>
Red-tailed hawk	<i>Buteo jamaicensis</i>
Anna's hummingbird	<i>Calypte anna</i>
Lesser goldfinch	<i>Carduelis psaltria</i>
House finch	<i>Carpodacus mexicanus</i>
Turkey vulture	<i>Cathartes aura</i>
American crow	<i>Corvus brachyrhynchos</i>
American Kestrel	<i>Falco sparverius</i>
Northern mockingbird	<i>Mimus polyglottos</i>
California towhee	<i>Pipilo crissalis</i>
Blue-gray gnatcatcher	<i>Poliophtila caerulea</i>
Western meadowlark	<i>Sturnella neglecta</i>

Western kingbird
Morning dove

Tyrannus verticalis
Zenaida macroura

Mammals

Desert cottontail
Black-tailed jackrabbit
California ground squirrel
Coyote
Botta's pocket gopher

Sylvilagus audubonii
Lepus californicus
Spermophilus beecheyi
Canis latrans
Thomomys bottae

Appendix B

Field Notes

**GENERAL BIOLOGY
FOR A 103-ACRE SITE NORTH OF THE
MILLIKEN SANITARY LANDFILL,
ONTARIO, CALIFORNIA**

Prepared for:

**Solid Waste Management Division
County of San Bernardino
222 West Hospitality Lane, 2nd Floor
San Bernardino, CA 92415-0017**

Prepared by:

**Kendall H. Osborne
Osborne Biological Consulting
6675 Avenue Juan Diaz
Riverside, CA 92509**

November 4, 2005

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**FOR A 103-ACRE SITE NORTH OF THE
MILLIKEN SANITARY LANDFILL,
ONTARIO, CALIFORNIA**

Prepared for

**Solid Waste Management Division
County of San Bernardino
222 West Hospitality Lane, 2nd Floor
San Bernardino, CA 92415-0017**

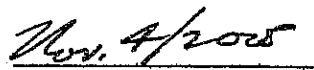
Prepared by

**Kendall H. Osborne
Osborne Biological Consulting
6675 Avenue Juan Diaz
Riverside, CA 92509**

I hereby certify that the statements furnished above and in the attached exhibits present that data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.



**Kendall H. Osborne
Osborne Biological Consulting
6675 Avenue Juan Diaz
Riverside, CA 92509**



Date

1.0 SUMMARY

The San Bernardino County Solid Waste Management Division has requested a general biological study a 103-acre site located north of the Milliken Sanitary Landfill, Ontario, California.

In order to assess the subject site for general biological attributes and resources, a field visit was made to the site on November 4, 2005. Notes were taken on vegetation communities and structure as well as plant and animal species observed on the site, along with photographs of the subject site. In addition, as a major source for this investigation, a review of recent reports of biological surveys of the site was undertaken.

This investigation determined that the subject property currently supports extensive areas of annual grassland/forbland vegetation, most associated with fine Delhi sands. A western portion of the site remains in active viticulture. A small strip of riparian scrub (with willows) occurs along a drainage giving off of the southern end of Dupont St. Additional scrub habitats on the southern central portion of the site have Mulefat (*Baccharis salicifolia*) in poorly drained areas. Coastal sage scrub elements such as deer weed, buckwheat, California sage bush, black sage, and white sage have become established on the slopes at the southern end of the borrow pits on the central site.

The federally endangered Delhi Sands Flower-Loving Fly (DSF, *Rhaphiomidas terminatus abdominalis*) and federally endangered San Bernardino Kangaroo Rat (SBKR, *Dipodomys mariami parvus*) have both been determined to be absent from the study site.

During the course of biological studies on the site, four "Special Animals" as defined by the California Department of Fish and Game Natural Diversity DataBase (CNDDDB 2005) were detected within the study area: Burrowing Owl (*Athene cunicularia*), Loggerhead Shrike (*Lanius ludovicianus*), San Diego horned lizard (*Phrynosoma coronatum blainvillei*), and San Diego Black-tailed jackrabbit (*Lepus californicus bennettii*). Populations of Burrowing Owl and San Diego horned lizard appear to represent populations of higher densities than normally appear in western San Bernardino or Riverside counties.

2.0 INTRODUCTION

This report presents the methods and results of a general biological assessment and review of recent biological surveys, for a 103-acre site located north of the Milliken Sanitary Landfill, Ontario.

A field investigation of the site was conducted on November 4, 2005. In the conduct of the field work, additional consideration was given to presence or absence of riparian or riverine habitats and vernal pools.

In addition to the field visit on November 4, 2005, previous biological survey reports for the site were reviewed. Recently, three years of focused surveys for the federally

endangered Delhi Sands Flower-Loving Fly (DSF, *Rhaphiomidas terminatus abdominalis*) have been undertaken on the study site with negative results (Osborne 2003, 2004, 2005). During the course of DSF surveys (always conducted during summer months), Burrowing Owl (*Athene cunicularia*) was frequently documented on the site as well as evidence of an unidentified species of Kangaroo Rat (Osborne 2004). In spring of 2005, focused surveys for Burrowing Owl and San Bernardino Kangaroo Rat (SBKR, *Dipodomys mariami parvus*) were undertaken on the site (Tom Dodson and Associates 2005). During the course of these surveys, Burrowing Owl nesting sites were well documented and mapped. The SBKR was determined to be absent from the site. All of the above cited reports made additional observations and documented ecological conditions, plant and animal species (especially a long list of insect species owing to the nature of the studies), and other characteristics of the site. Complete lists of plant, vertebrate and invertebrate species encountered on the site are presented in the appendix.

The study site is located on the Guasti, California USGS 7.5-minute quadrangle map, Township 1 South, Range 7 West, on the northern portion of Section 36. Latitude ranges from approximately 034° 02' 27" to 34° 02' 40" N and Longitude from 117° 33' 27" to 117° 34' 30" W. Figure 1 shows the general vicinity of the study site at 50% scale on the Guasti, California USGS 7.5-minute quadrangle map. Figure 2 displays the study site at 200% scale on this USGS quadrangle. Figure 3 provides the project vicinity as it is given in *the Thomas Guide* (2001). The study area is generally bounded by Francis Street on the north, Milliken Avenue on the east, Haven Avenue on the west, and the Milliken Sanitary Landfill on the south.

3.0 METHODS

A field investigation of the site was conducted on November 4, 2005. Habitat conditions were evaluated and general efforts were made to document biological resources likely to be overlooked in the previous conduct survey focusing on DSF, SBKR, and Burrowing Owl. General notes were taken on vegetation and wildlife observed on the site.

In addition to the November field visit, other reports on biological surveys for the site were reviewed and evaluated. These studies included three years of focused surveys for Delhi Sands Flower-Loving Fly (DSF, *Rhaphiomidas terminatus abdominalis*) (Osborne 2003, 2004, 2005) and focused surveys for Burrowing Owl and San Bernardino Kangaroo Rat (SBKR, *Dipodomys mariami parvus*) (Tom Dodson and Associates 2005).

In the conduct of the field work, additional consideration was given to presence or absence of riparian or riverine habitats, vernal pools, or any other potential jurisdictional waters or wetlands. General notes were taken on vegetation communities and structure, as well as plant and animal species (or their sign) observed on the site, along with photographs of the subject site.

Where wintering adult Burrowing Owls were found, GPS data were collected on burrow locations.

4.0 RESULTS

In the course of the November 4, 2005 field visit, I found abundant new annual vegetation had germinated due to recent rains. Many annual forb species, not normally observed during the summer season (when DSF surveys are undertaken) were observed. In addition, renewed investigation of shrublands on the site revealed a few shrub species not previously documented on the site.

Two special animal species were observed on the site on November 4. At least seven adult Burrowing Owls were observed in association with the numerous burrows on the sides of the borrow pits located on the central portion of the site. Loggerhead Shrike was also observed on the central site.

Habitat descriptions and species lists presented here are the result of combined data accumulated from the November 4, 2005 site visit, and the four focused survey reports previously prepared for the study site.

4.1 Existing Environment and Community

4.1.1 Adjacent lands

Lands north, west and east of the subject site are developed into commercial enterprises such as warehouses. The Milliken Sanitary Landfill, now closed, dominates lands to the south of the site, with an area of highly disturbed, disked land on the south of eastern portions of the site.

4.1.2 Topography

The site has slight rolling topography owing to relictual sand dune structure. Dunes, formerly in viticulture, still have elevational differentials of nearly 15 feet. In addition, large areas of excavation used to obtain fill materials associated with the landfill resulted in low basins in the central portion of the site. Elevation on the site ranges from approximately 857 feet to 885 feet.

4.1.3 Soils

The eastern (approximately) half of the site, as well as the western (approximate) third of the site consist of Delhi fine sands in dune formation. Past excavation activities on central portions of the site have exposed the underlying Tujunga gravelly sands (stripping away the overlaying Delhi sands. In addition, probably associated with past excavation and soils transportation associated with the landfill, additional areas of the central site have overlying soils contaminated with Tujunga materials packed to a hard and dense consistency. Past agricultural activities have apparently had little effect on the deep and extensive Delhi sands over most of the site.

4.1.4 Vegetation

The eastern half of the survey area is a long-abandoned vineyard, with secondary reestablishment of natural vegetation. Dominant plants in these areas are western ragweed (*Ambrosia acanthicarpa*) and *Verbesina encelioides*. Telegraph weed (*Heterotheca grandiflora*) and slender buckwheat (*Eriogonum gracile*) are co-dominants in some areas. *Eriogonum fasciculatum* and *Croton californica* are common in some areas on the eastern portion of the survey site. The western portion of the site with active viticulture on Delhi sands has secondary weedy vegetation dominated by tumbleweed (*Amaranthus albus*) and western ragweed. Harder substrates on Tujung soils (Woodruff 1980) where poorly drained, have mule fat (*Baccharis salicifolia*) in addition to the above listed dominant plants found over the site generally. A small strip of riparian scrub (with willows) occurs along a drainage giving off of the southern end of Dupont St. Coastal sage scrub elements such as deer weed (*Lotus scoparius*), buckwheat (*Eriogonum fasciculatum*), California sage bush (*Artemisia californica*), black sage (*Salvia mellifera*), and white sage (*Salvia apiana*) have become established on the slopes at the southern end of the borrow pits on the central site – probably invading from the slopes of the landfill to the south of the site. Interestingly, dominant annual plant species have changed through the years 2003 – 2005. In 2003, eastern, sandy portions of the site were dominated by large shrubs of western ragweed (*Ambrosia acanthicarpa*). In summer of 2004 (after a relatively dry winter) the ragweed was greatly reduced in abundance. Finally, during summer 2005, after record high winter precipitation, telegraph weed (*Heterotheca grandiflora*), covering extensive areas in dense thickets, became the dominant vegetation (Osborne 2005). Table 1 (Appendix A) provides a list of plant species encountered on the survey site.

4.1.5 Vertebrate Community

Small mammal burrows were common throughout the site, mainly those of Botta's pocket gopher, ground squirrel, pocket mouse, and Delzura kangaroo rat. Coyote dens are located on the central site (on the southeastern corner of the borrow pits) and on the large dune of the eastern portion of the site. During summer months, the Side-blotched lizard (*Uta stansburiana*), and San Diego horned lizard (*Phrynosoma coronatum blainvillei*) were the most commonly encountered vertebrates – large numbers of them seen on every site visit. Burrowing Owl, Northern mocking bird, Red tailed hawk and western meadowlark were the most common birds encountered on the site.

4.1.6 Insect Community

During summer site visits during the last three years, at least 171 insect species (counting only large and conspicuous insects) were either casually observed or collected (Osborne 2005). A list of most insect species observed during the course of focused survey work (three years) is presented in the appendix (Table 3, Appendix A). A highly diverse community of insects continued to be present on the site; including the Delhi sands associated flies, *Apiocera convergens* (endemic to Delhi sands deposits), *Ligyra gazophylax*, and *Nemomydas pantherinus*. *Apiocera convergens* was observed in higher

abundance than I have seen on any other site. Interestingly, *Apiocera crysolasia* continued not to occur on the site. Bombyliid fly species (these being specialist parasites on other – typically predatory and parasitic insect species), and predatory robber flies (Assilidae) were diverse. In general, the insect community was marked by high abundance and diversity of predatory, parasitic and hyperparasitic insect groups. Apiocerids, mydids, bombyliids and asilids, (all mentioned above), tachinids, conopids, sphecids, pomilids, rhipiphorids, scoliids, mutilids, and mymerliontids were all well represented and common.

4.1.7 Special Animals

During the course of biological studies on the site, the federally endangered Delhi Sands Flower-Loving Fly (DSF, *Rhaphiomidas terminatus abdominalis*) and federally endangered San Bernardino Kangaroo Rat (SBKR, *Dipodomys mariami parvus*) have both been determined to be absent from the study site.

Four "Special Animals" as defined California Department of Fish and Game Natural Diversity Data Base (CNDDDB 2005) were detected within the study area. In all studies, Burrowing Owls (*Athene cunicularia*) were observed in and near ground squirrel and coyote burrows on the central portion of the site (in sandy walls of the excavated basins or borrow pits). During DSF surveys in 2005, seven individuals were observed at one burrow (these likely including immatures from a nesting burrow). A formal survey of Burrowing Owl in spring (nesting season) of 2005 (Tom Dodson and Associates) resulted in the documentation of seven or eight nesting pairs of Burrowing Owls. The November 4, 2005 site visit documented at least seven overwintering or resident adult Burrowing Owls about the burrows on the central portion of the site (on the walls of the borrow pits). A map of burrow locations has been provided by Tom Dodson and Associates (2005). Table 1 provides a list of burrow locations (given as latitude and longitude) used by Burrowing Owl. This list includes burrows only where associated with the borrow pits. Burrowing Owl burrows not associated with the borrow pits on the central site were not recorded by GPS and were not investigated on November 4, 2005. The owl is listed as "California Special Concern Species" (CSC) and "Federal Special Concern" species (FSC). The FSC category replaces the former "Category 2" category, wherein species were proposed as candidates for listing as threatened or endangered under the Federal Endangered Species Act. The Loggerhead Shrike (*Lanius ludovicianus*) was observed on the central site on November 4, 2005, as well as during the course of the three summers of DSF survey. Continued presence of Loggerhead Shrike on the site suggests that it is possibly resident on the site and may nest there. The Loggerhead Shrike is a CSC species when nesting. The San Diego horned lizard (*Phrynosoma coronatum blainvillei*), was found in unusually high abundance during summer months, with several individuals observed per hour at times. San Diego Black-tailed jackrabbit (*Lepus californicus bennettii*) was also found on the site in small numbers. The San Diego horned lizard, and San Diego Black-tailed jackrabbit are listed as CSC. Table 2 (Appendix) lists vertebrate species seen on the site over the course of all biological studies of the site.

Table 1. Locations on borrow pits (central study site) of burrows used by Burrowing Owls. These do not include burrows located outside the borrow pit area. Latitude and Longitude are given with an error of ± 16 feet.

N. Latitude	W. Longitude
34° 02.494'	117° 34.186'
34° 02.495'	117° 34.211'
34° 02.502'	117° 34.211'
34° 02.504'	117° 34.211'
34° 02.507'	117° 34.211'
34° 02.519'	117° 34.212'
34° 02.479'	117° 34.216'
34° 02.480'	117° 34.209'
34° 02.473'	117° 34.197'
34° 02.509'	117° 34.177'
34° 02.549'	117° 34.216'
34° 02.556'	117° 34.216'
34° 02.552'	117° 34.216'
34° 02.555'	117° 34.200'
34° 02.476'	117° 34.127'

Although habitat conditions on the site appear suitable for the federally endangered Delhi Sands Flower-Loving Fly, three years of survey for this insect show it to be absent from the site.

5.0 DISCUSSION

The Burrowing Owl population documented on the subject site is large as compared to populations found at most localities in California. This population may be considered as significant to conservation of Burrowing Owl in southern California. As an alternative to onsite conservation, the California Department of Fish and Game may require special measures be taken to protect Burrowing Owls during the course of grading on the subject site. Consultation with the CDF and review of Burrowing Owl protocols recommended by the Burrowing Owl Consortium (www2.ucsc.edu/scpbrg/owls.htm), prior to any grading of the subject site is recommended.

6.0 REFERENCES

- California Natural Diversity Data Base (CNDDB). 2003. List of special animals. Heritage section, California Department of Fish and Game.
- Hickman, J.C. (ed.). 1993. The Jepson manual: Higher plants of California. University of California Press. Berkeley, California.
- Munz, P.A. 1974. A flora of southern California. University of California Press, Berkeley, California.

Osborne, K. H. 2003. Focused Survey for the Delhi Sands Giant Flower-loving Fly (*Rhaphiomidas terminatus abdominalis*) on a 103-acre site north of the Milliken Sanitary landfill, Ontario, California. Prepared for the Solid Waste Management Division County of San Bernardino.

Osborne, K. H. 2004. Second Year Focused Survey for the Delhi Sands Giant Flower-loving Fly (*Rhaphiomidas terminatus abdominalis*) on a 103-acre site north of the Milliken Sanitary landfill, Ontario, California. Prepared for the Solid Waste Management Division County of San Bernardino.

Osborne, K. H. 2005. Third Year Focused Survey for the Delhi Sands Giant Flower-loving Fly (*Rhaphiomidas terminatus abdominalis*) on a 103-acre site north of the Milliken Sanitary landfill, Ontario, California. Prepared for the Solid Waste Management Division County of San Bernardino.

Tom Dodson and Associates. 2005. Focused Surveys for San Bernardino Kangaroo Rat (*Dipodomys merriami parvus*) (SBKR) and Burrowing Owl (*Athene cunicularia*) for a 103-Acre Parcel North of Milliken Sanitary Landfill, City of Ontario, San Bernardino County, California. Prepared for Lilburn Corp., San Bernardino, California.

7.0 FIGURES

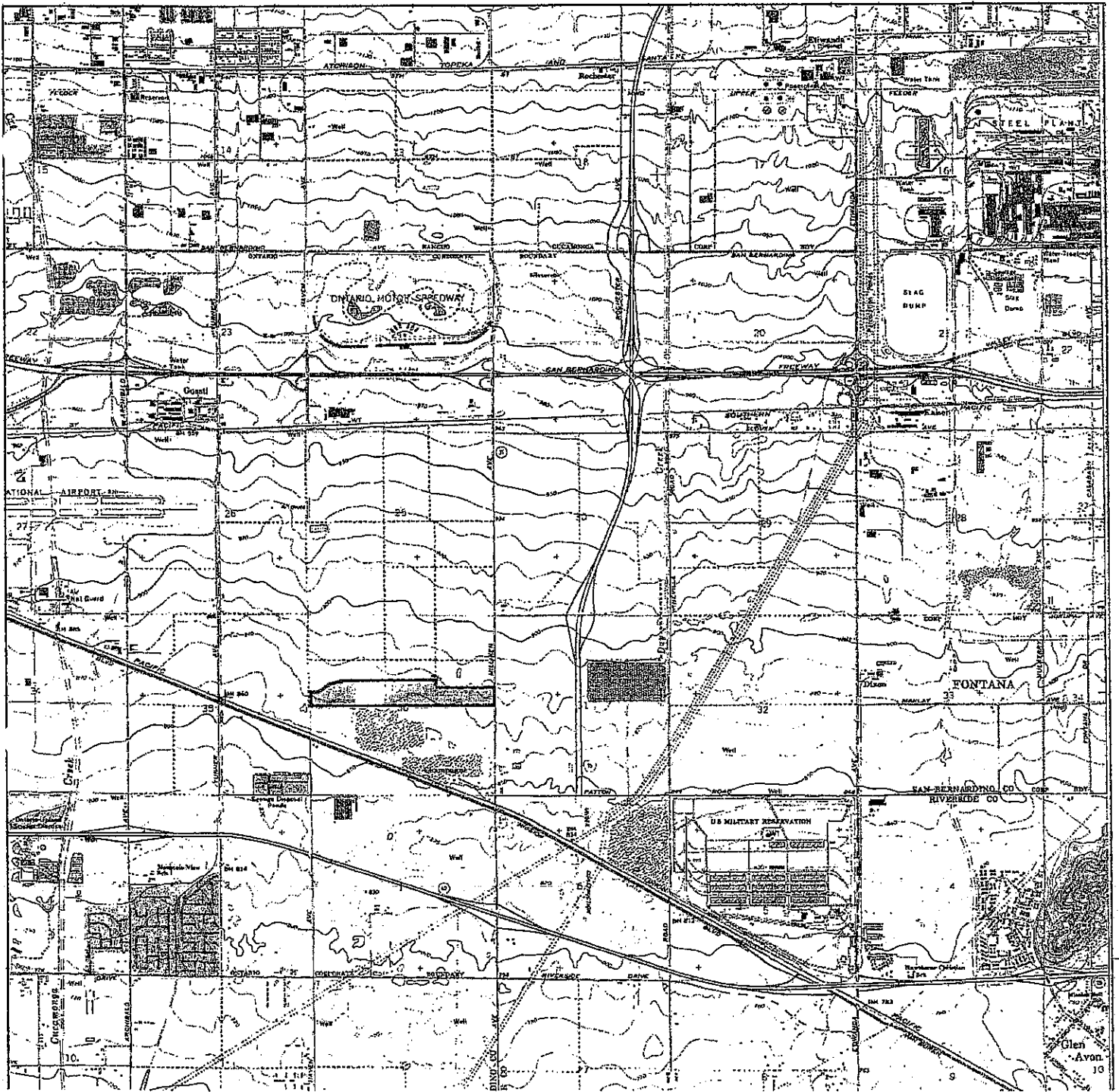


Figure 1. General vicinity of study site, Guaste, California USGS 7.5" quadrangle at 50%. 103-acre site is outlined in black and highlighted in yellow.

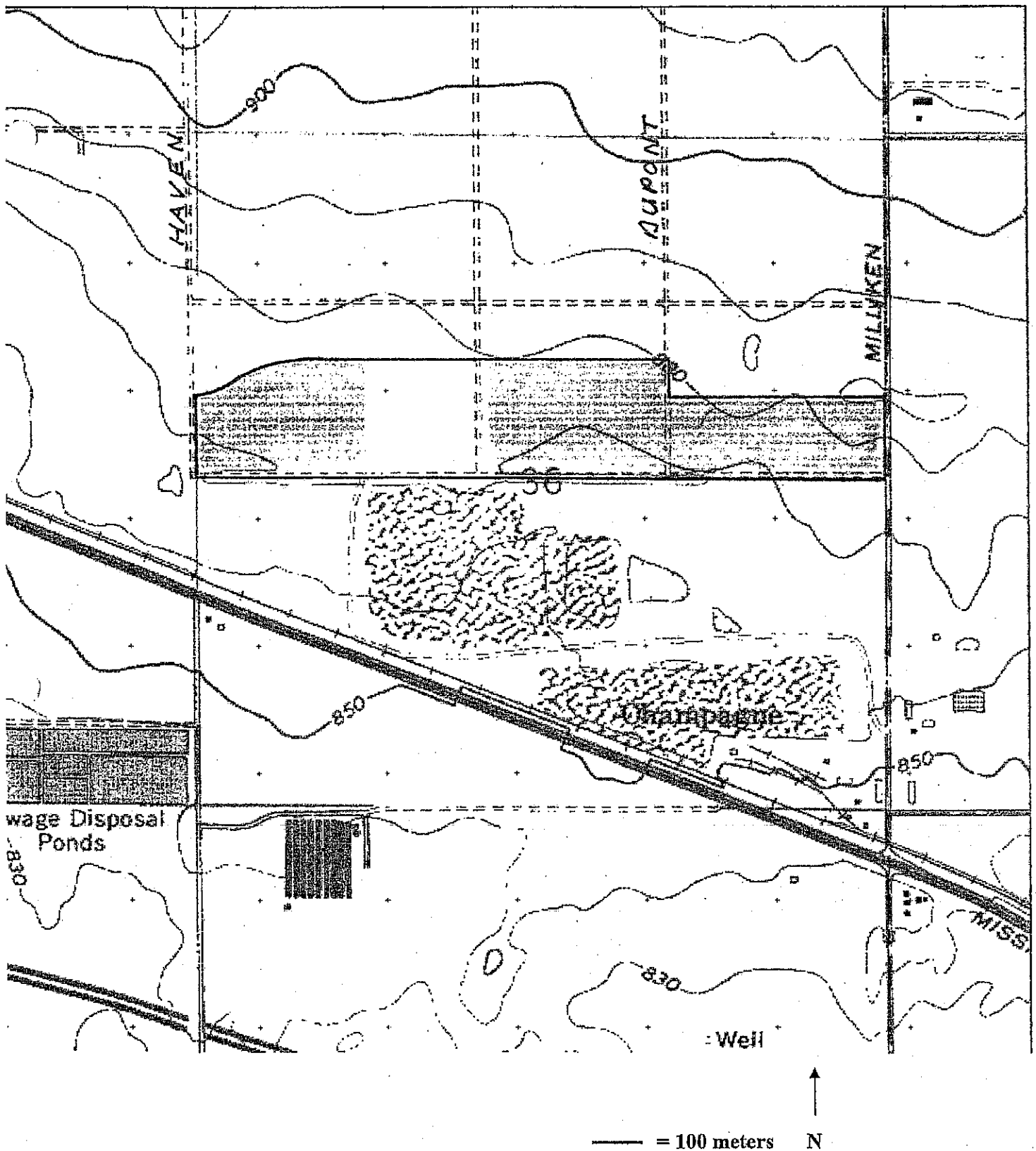


Figure 2. General vicinity of survey site, Guaste, California USGS 7.5" quadrangle at 200%. 103-acre study site is outlined in black and highlighted in yellow.

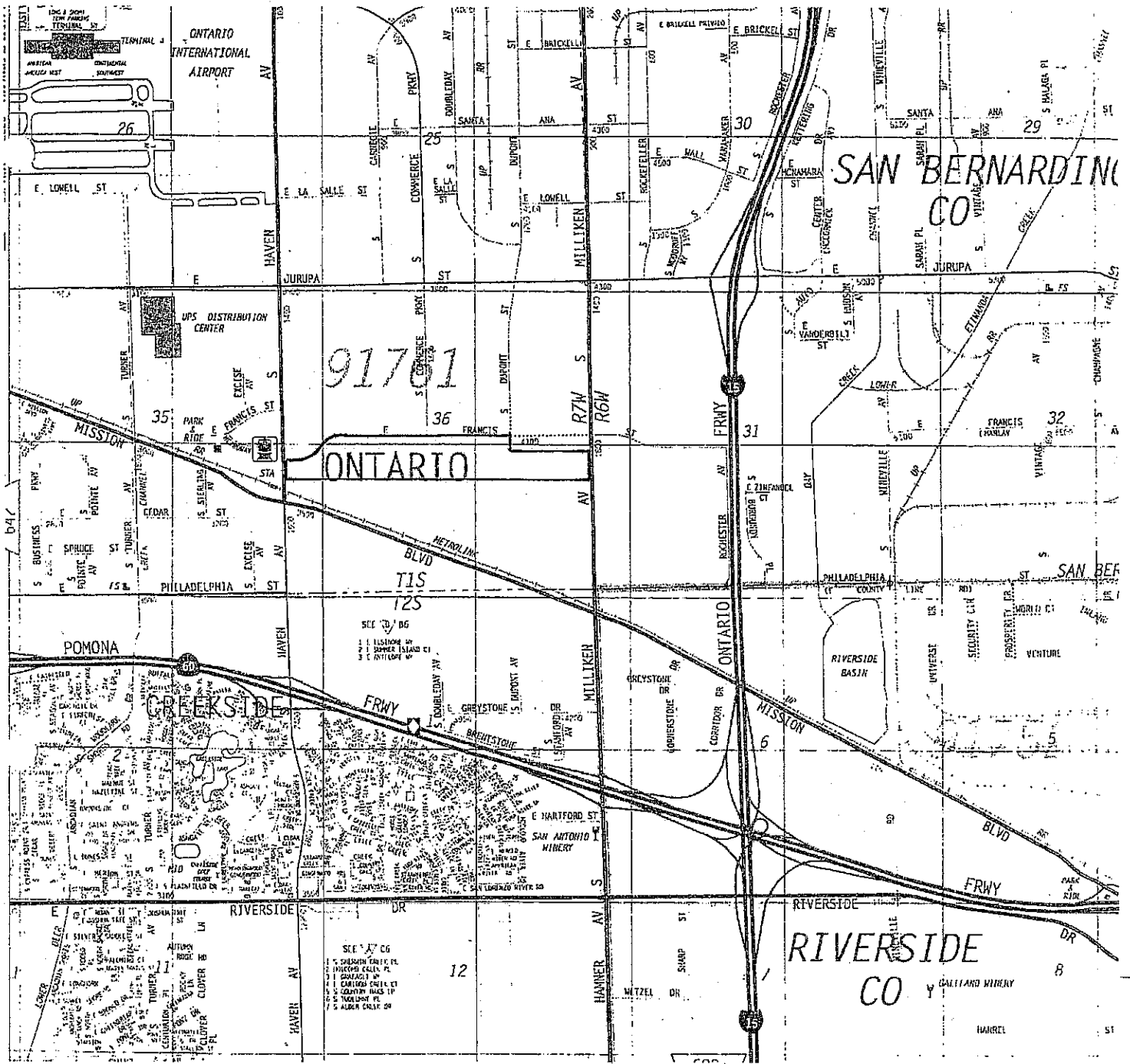


Figure 3. General site vicinity as it is given on page 643 in the *Thomas Guide* (2001). 103-acre study area is outlined in black and indicated by an arrow.

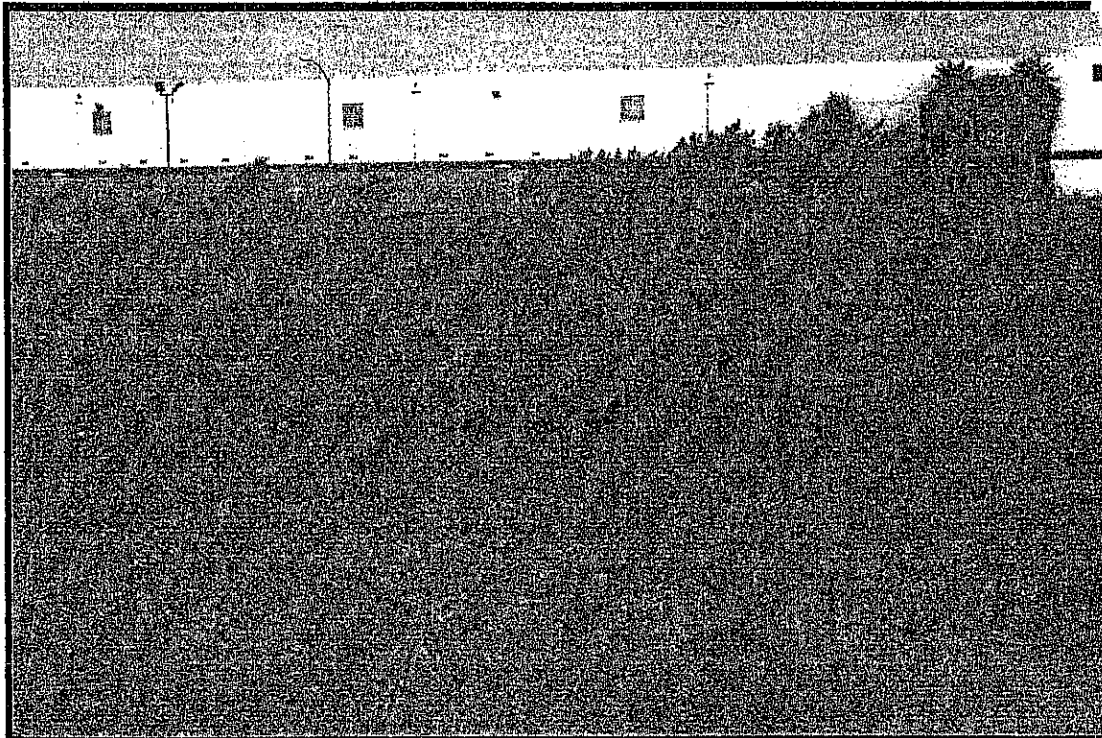


Figure 4. Photograph of high quality dune habitat on the eastern-central portion of the survey site dominated by *Heterotheca grandiflora* (2005). View looks to the northwest.

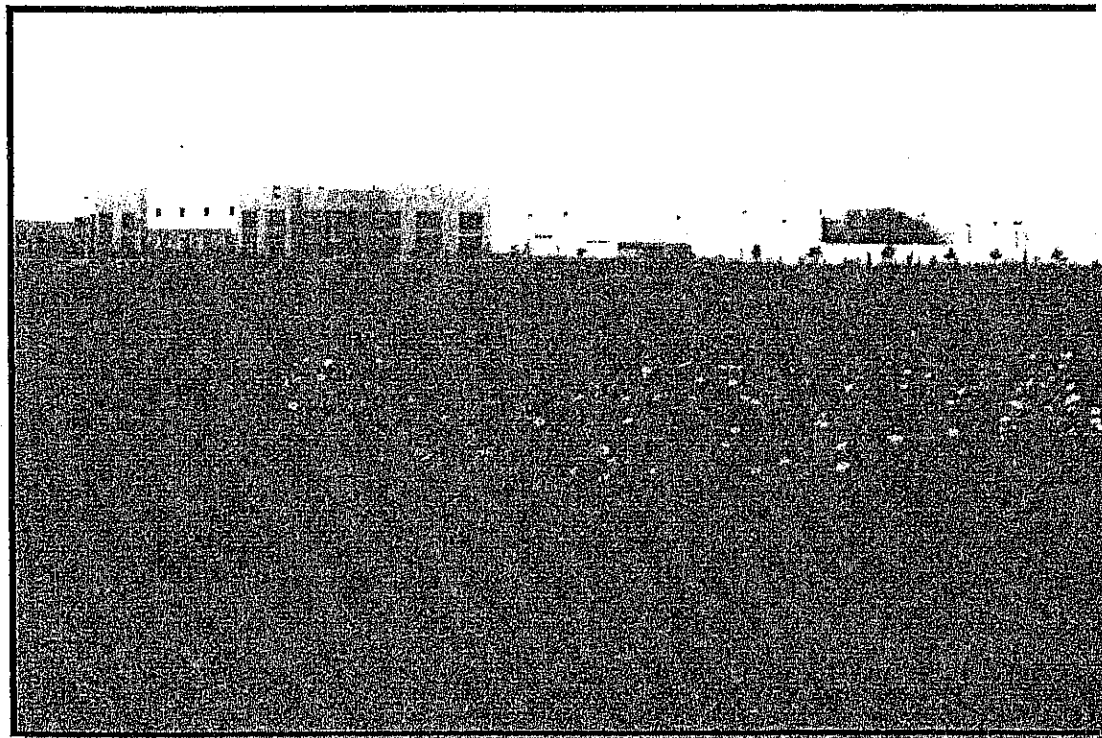


Figure 5. Photograph (2005) of typical habitat on western portions of the site in active viticulture. View looks northwest from near the southern edge of the site. Buildings are off-site to north. White flowers are jimsonweed.

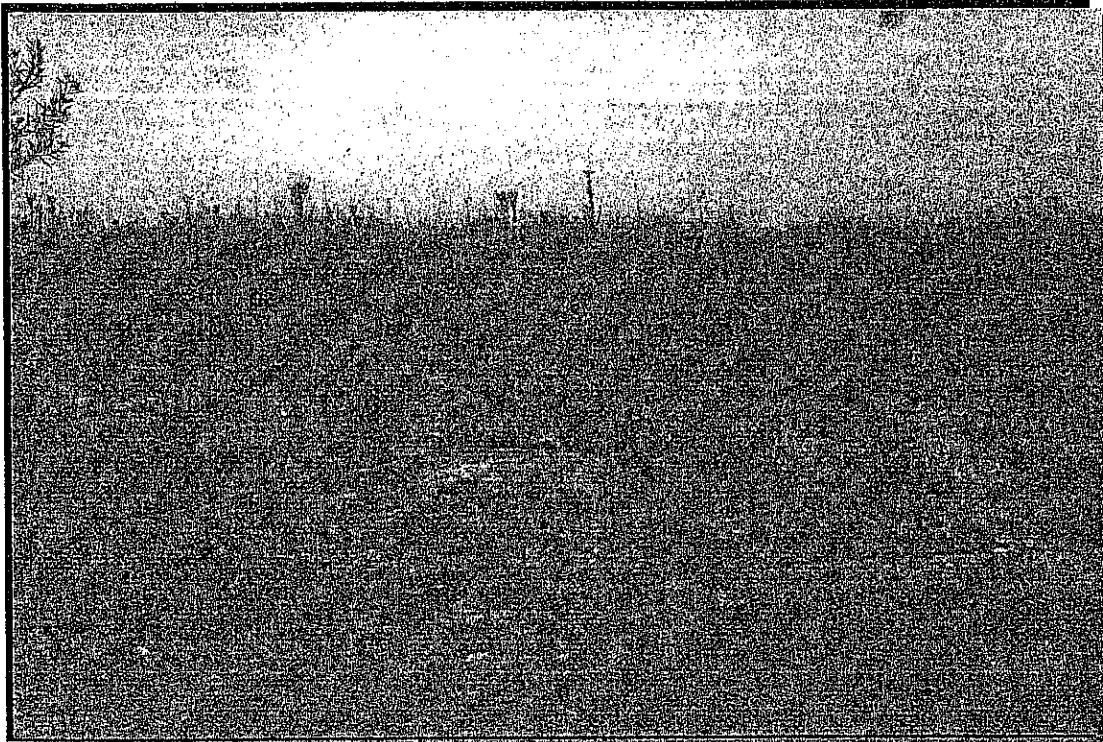


Figure 6. Photograph (2005) of excavated area in southern central portion of the site with Delhi sands in sides and Tujunga soils at bottom. This is the southwestern borrow pit area. Burrowing owl (seen here) is abundant in this area from 2003 through 2005.

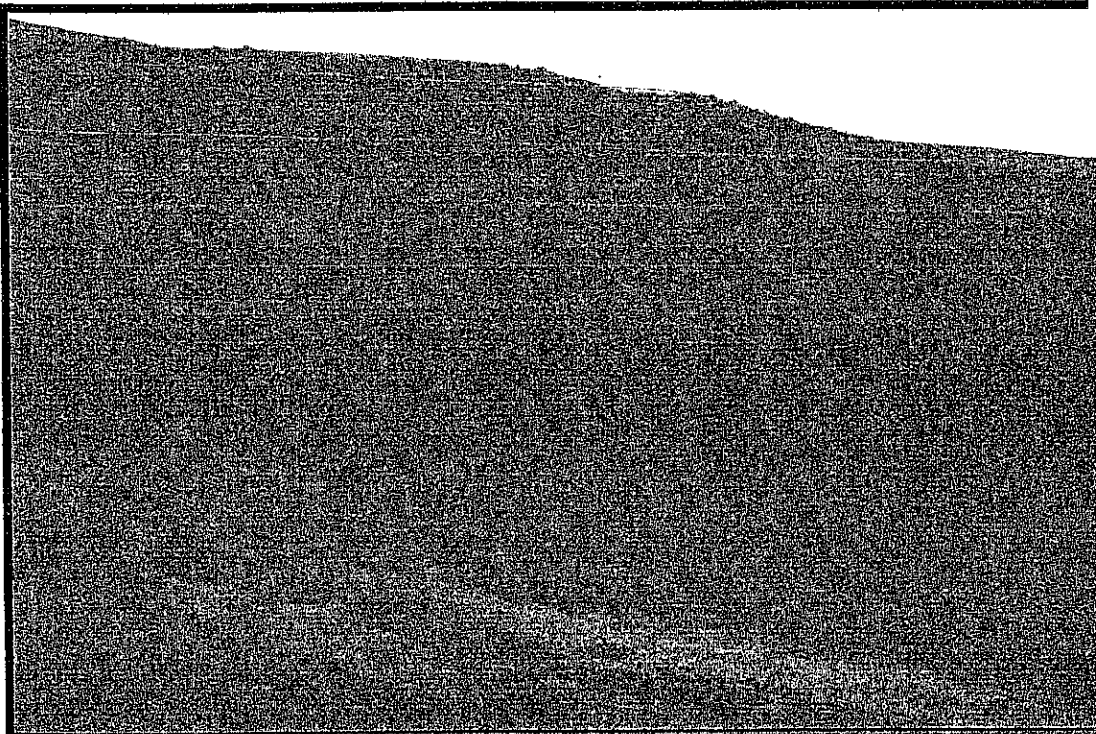


Figure 7. Photograph (2005) of dirt road along the central study survey site and annual grassland/forbland vegetation with new growth following fall rains. *Bacharis* scrub is seen in the background below the landfill. Note the landfill with abundant coastal sage scrub. View looks south southwest from the central site.



Figure 8. Annual vegetation dominated by *Heterotheca* on the dunes of the eastern study site. View looks east from the wash south of Dupont St.



Figure 9. Photograph of willow scrub in the wash on the central eastern site (down stream from Dupont street).

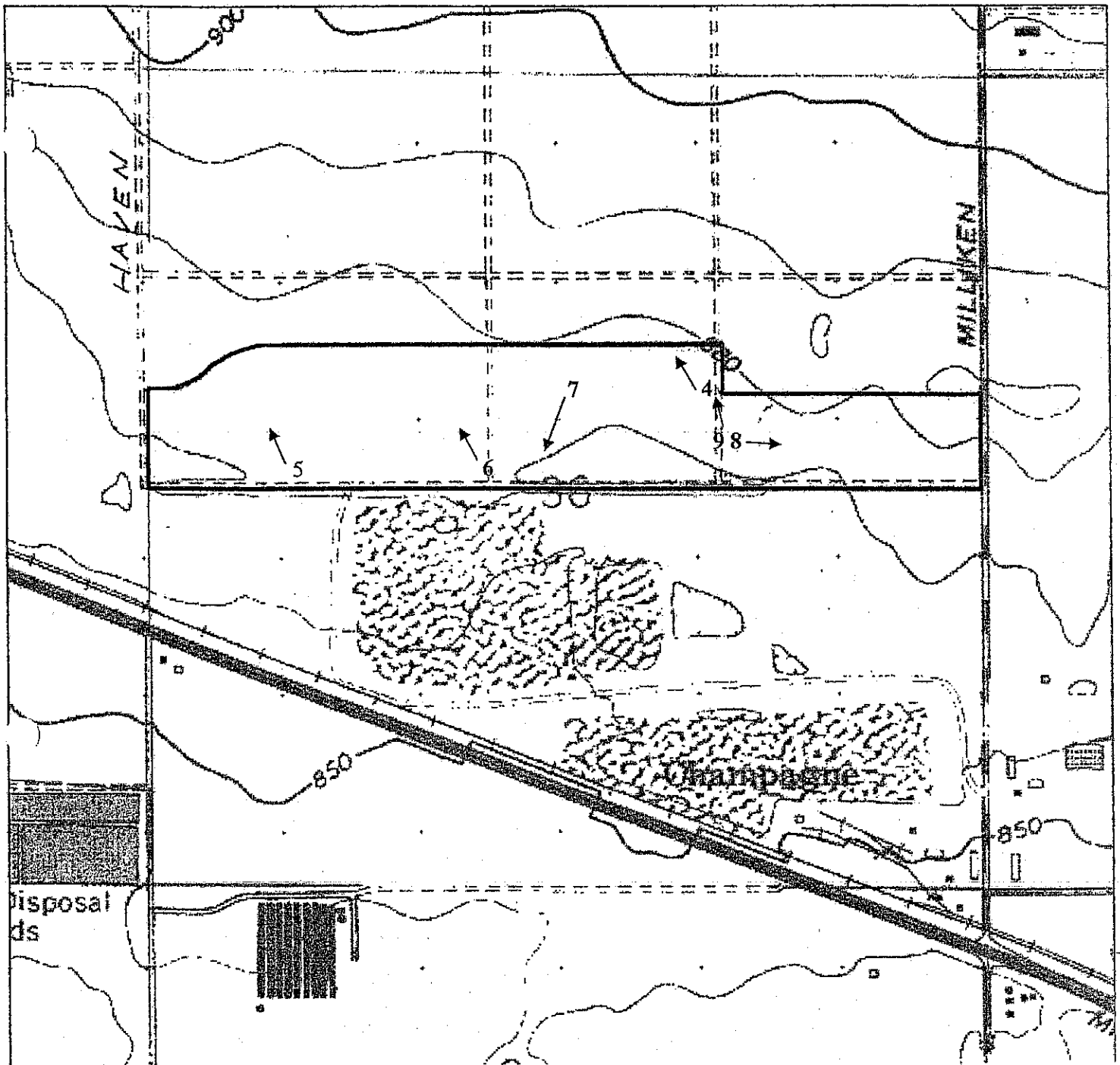


Figure 10. Approximate locations around survey site from which photographs were taken (base of arrows). Arrow indicates the direction a photograph was taken. Numbers next to the arrows indicate figure numbers (Figures 4-9).

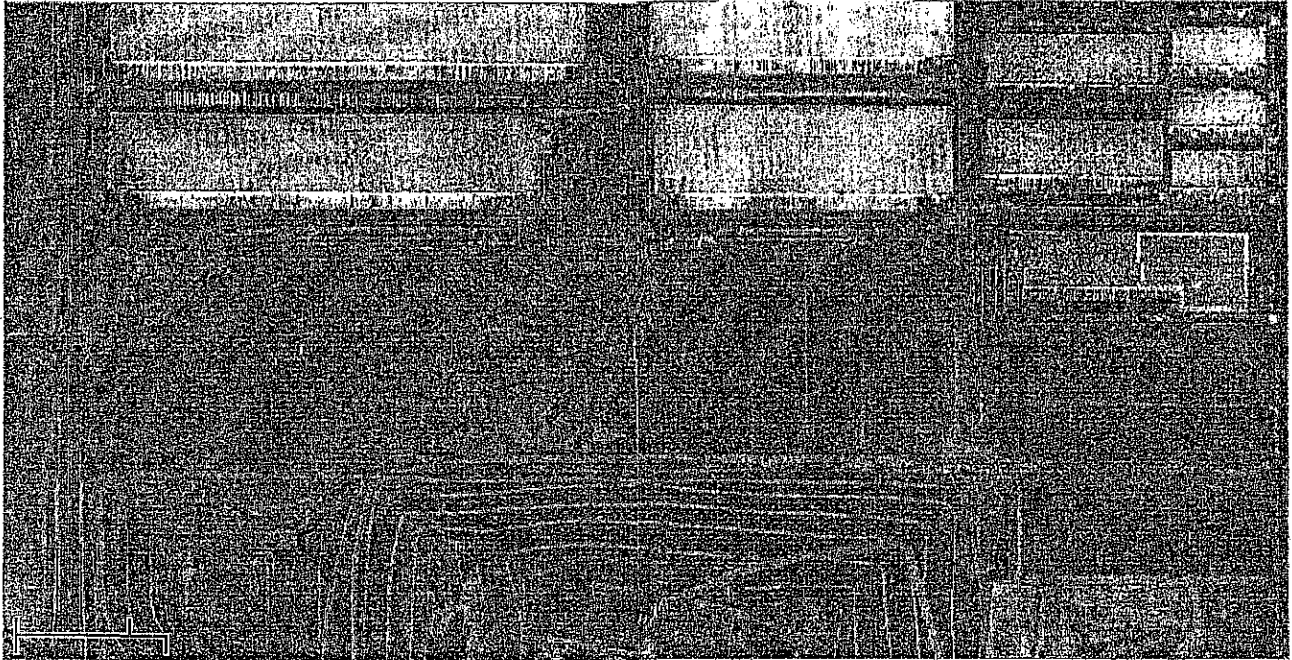


Figure 11. Approximate distribution of vegetation communities on the study site. Pink = active viticulture, Green = riparian scrub, Yellow = *Baccharis* scrub with coastal sage scrub elements, and Unshaded = annual grassland/forbland on abandoned vineyard. Black outline is the study site boundary.



8.0 APPENDIX

Appendix A

Table 1. Plant species encountered on the survey site.

FAMILY and common name	Species
AMERANTHACEAE	
white tumbleweed	<i>Amaranthus albus</i>
ASTERACEAE	
Annual bur-weed	<i>Ambrosia acanthicarpa</i> (not <i>artemisiifolia</i>)
California sage	<i>Artemisia californica</i>
mule fat	<i>Baccharis salicifolia</i>
coyote bush	<i>Baccharis sarathroides</i>
Tocalote	<i>Centaurea melitensis</i>
flax-leaved horseweed	<i>Coryza bonariensis</i>
horseweed	<i>Coryza canadensis</i>
interior goldenbush	<i>Ericameria linearifolia</i>
sunflower	<i>Helianthus annua</i>
slender sunflower	<i>Helianthus gracilentus</i>
Telegraph weed	<i>Heterotheca grandiflora</i>
prickly lettuce	<i>Lactuca serriola</i>
valley lessingia	<i>Lessingia glandulifera</i>
tall wreath plant	<i>Stephanomeria virgata</i>
dandelion	<i>Taraxacum officinale</i>
earless crown-beard	<i>Verbesinia encelioides</i>
BORAGINACEAE	
ranchers fiddleneck	<i>Amsinkia menziesii</i>
Cleveland's cryptantha	<i>Cryptantha clevelandii</i>
common cryptantha	<i>Cryptantha intermedia</i>
Guadalupe cryptantha	<i>Cryptantha maritima</i>
	<i>Plagiobothrys</i> sp.
slender pectocarya	<i>Pectocarya linearis</i>
BRASSICACEAE	
shortpod mustard	<i>Hirschfeldia incana</i>
tall tumbledustard	<i>Sisymbrium altissimum</i>
London rocket	<i>Sisymbrium irio</i>
CHENOPODIACEAE	
Saltbush	<i>Atriplex canescens</i>
Russion thistle	<i>Salsola tragus</i>
CRASSULACEAE	

sand pygme-stonecrop

CUCURBITACEAE

coyote gourd

EUPHORBIACEAE

California croton

spurge

FABACEAE

Pomona milkvetch

Spanish clover

deer weed

strigose bird's-foot trefoil

bur clover

tall nasty clover

GERANIACEAE

long-beak filaree

red-stem filaree

LAMINACEAE

Horehound

white sage

black sage

MALVACEAE

bush mallow

ONAGRACEAE

California sun cup

hairy sun-cups

miniature suncup

California evening primrose

common evening primrose

POLYGONACEAE

slender buckwheat

Cal buckwheat

common knotweed

curly dock

SALICACEAE

Black willow

arroyo willow

sandbar willow

SOLANACEAE

Jimson weed

tree tobacco

Crassula connata

Cucurbita palmata

Croton californicus

Euphorbia peplus

Astragalus pomonensis

Lotus purshianus

Lotus scoparius

Lotus strigosus

Medicago

Melilotus indica

Erodium botrys

Erodium cicutarium

Marubium vulgare

Salvia apiana

Salvia mellifera

Malacothamnus fasciculatus

Camissonia bistorta

Camissonia hirtella

Camissonia micrantha

Oenothera californica

Oenothera elata

Eriogonum gracile

Eriogonum fasciculatum

Polygonum arenastrum

Rumex crispus

Salix gooddingii

Salix lasiolepis

Salix exigua (=hindsiana)

Datura wrightii

Nicotiana glouca

VITACEAE

Grape

*Vitis vinifera***ZYGOPHYLLACEAE**

Puncture vine

*Tribulus terrestris***POACEAE**

slender wild oat

Avena barbata

wild oat

Avena fatua

purple false-brome

Brachypodium distachyon

rescue grass

Bromus catharticus

ripgut grass

Bromus diandrus

Foxtail chess/red brome

Bromus madritensis

Mediterranean barley

Hordeum murinum

Schismus

Schismus barbatus

foxtail fescue

*Vulpia myuros***Table 2. Vertebrate species encountered on the survey site.****Common name****Species****Reptiles**

Side-blotched lizard

Uta stansburiana

Western fence lizard

Sceloporus occidentalis

San Diego horned lizard

Phrynosoma coronatum

Coachwhip

*Masticophis flagellum***Birds**

White-throated swift

Aeronautes saxatalis

Burrowing owl

Athene cucularia

Red-tailed hawk

Buteo jamaicensis

Anna's hummingbird

Calypte anna

Lesser goldfinch

Carduelis psaltria

House finch

Carpodacus mexicanus

Turkey vulture

Cathartes aura

American crow

Corvus brachyrhynchos

American Kestrel

Falco sparverius

Loggerhead shrike

Lanius ludovicianus

Song sparrow

Melospiza melodia

Northern mockingbird

Mimus polyglottos

California towhee

Pipilo crissalis

Blue-gray gnatcatcher

Polioptila caerulea

Say's phoebe

Sayornis saya

Western meadowlark

Sturnella neglecta

Western kingbird

Tyrannus verticalis

Morning dove
White-crowned sparrow

Zenaida macroura
Zonotrichia atricapilla

Mammals

San Diego pocket mouse
Delzura kangaroo rat
Cactus mouse
Deer mouse
Desert cottontail
Black-tailed jackrabbit
California ground squirrel
Coyote
Botta's pocket gopher

Chaetodipus fallax
Dipodomys simulans
Peromyscus eremicus
Peromyscus maniculatus
Sylvilagus audubonii
Lepus californicus
Spermophilus beecheyi
Canis latrans
Thomomys bottae

Table 3. Insects encountered on the survey site.

<u>Order</u>	<u>Family</u>	<u>Genus, species</u>
Diptera	Apioceridae	<i>Apiocera convergens</i>
		<i>Efferia albibarbis</i>
	Asilidae	<i>Mallophora fautrix</i>
		<i>Saropogon luteus</i>
		<i>Stenopogon brevisculus</i>
		<i>Stenopogon lomae</i>
		<i>Stenopogon rufibarbis</i>
		<i>Apheobantus sp</i>
		<i>Exoprosopa butleri</i>
		<i>Ligyra gazophylax</i>
		<i>Neodiplicampta mira</i>
		<i>Poecilognathus sp</i>
	Bombyliidae	<i>Rhynchanthrax caprea</i>
		<i>Thyridanthrax atrata</i>
		<i>Thyridanthrax pallida</i>
		<i>Toxophora pellucida</i>
		unidentified
		unidentified
		unidentified
		<i>Villa lateralis</i>
		<i>Villa moliter</i>
		<i>Phaenicia sericata</i>
		<i>Physocephala texana</i>
Calliphoridae	<i>Condylostylus pilicornis</i>	
Conopidae	<i>Musca domestica</i>	
Dolichopodidae	<i>Nemomydas pantherinus</i>	
Muscidae	<i>Sarcophaga sp</i>	
Mydidae	<i>Copostylum marginatum</i>	
Sarcophagidae	<i>Copostylum quadratus</i>	
Syrphidae		

Diptera**Syrphidae**

Eupeodes volucris
Eristalis aenea
Eristalis latifrons
Eristalis tenax
Pseudodora clavatus
Volucella mexicana
Tabanus punctifer
Archytas apicifer
Cylindromyia sp
Eumachronychia
Gymnosoma fuliginosum
Peleteria sp

Tabanidae**Tachinidae****Therividae**

Thereva semitaria

Hymenoptera**Anthophoridae**

Anthophora urbana

Melissodes sp

Zylocopa varipuncta

Apidae

Apis mellifera

Chrysididae

Chrysis sp

Parnopes edwardsii

Formicidae

Iridomyrmex humilis

Liometopum sp

Meserpergandi sp

Pogonomyrmex californicus

unidentified

Gasteroptropidae

Agapostemon sp

Halictidae

Megachile sp

Megachilidae

Dasymutilla californica

Dasymutilla clydenetra

Dasymutilla coccineohirta

Dasymutilla sackeni

Pseudometheca sp

Pompilidae

Ageniella sp

Pompilidae

Aporinellus sp

Liris sp

Pepsis chrysothemis

Pepsis thysbe

unidentified

Scoliidae

Campsomeris tolteca

Sphecidae

Ammophila sp

Ammophila aberti

Ammophila azteca

Bembix americana

Bicyrtes ventralis

Cerceris californicus

Cerceris femurrubrum

Chalybion californicum

Hymenoptera	Sphecidae	<i>Chlonrion aerarium</i>	
		<i>Clypedon californicus</i>	
		<i>Cryptocheilus sp</i>	
		<i>Mimesia sp</i>	
		<i>Oxybelus pitanta</i>	
		<i>Oxybelus uniglumis</i>	
		<i>Philanthus multimaculatus</i>	
		<i>Prionyx foxi</i>	
		<i>Prionyx thomae</i>	
		<i>Scellphron caementarium</i>	
		<i>Sphex ichneumones</i>	
		<i>Tachysphex sp</i>	
		<i>Tachysphex sp</i>	
		<i>Taschytes elongatus</i>	
		<i>Eumenes bollii</i>	
		<i>Euodynerus annulatum</i>	
		<i>Polistes apachus</i>	
<i>Polistes dorsalis</i>			
<i>Polistes exclamens</i>			
<i>Polistes fuscatus</i>			
<i>Chrysopa sp</i>			
<i>unidentified</i>			
Neuroptera	Chrysidae		
	Mymerliontidae		
	Heteroptera	Corimelaenidae	<i>Corimelaena sp</i>
		Largidae	<i>unidentified</i>
		Lygaeidae	<i>Geocoris sp</i>
		Lygaeidae	<i>Lygaeus kalmii</i>
			<i>Nysius sp</i>
			<i>unidentified</i>
		Membracidae	<i>Lygus sp</i>
		Miridae	<i>Nabis sp</i>
Nabidae			
Pentatomidae		<i>Chlorochroa uhleri</i>	
	<i>Thyanta sp</i>		
	<i>Trichopepla aurorae</i>		
	<i>Phymata sp</i>		
	<i>Rhynocoris ventralis</i>		
	<i>Sinea diadema</i>		
	<i>Zelus sp</i>		
	<i>Zelus renardii</i>		
Coleoptera	Rhopalidae	<i>Arhyssus sp</i>	
	Carabidae	<i>unidentified</i>	
	Cerambycidae	<i>Parandra sp</i>	
	Chrysomelidae	<i>Coscinoptera aeneipennis</i>	
		<i>Diabrotica balteata</i>	
		<i>Diabrotica unedecimpunctata</i>	
		<i>Lema trilineata</i>	
		<i>Adalia bipunctata</i>	
	Coccinellidae		

Coleoptera	Coccinellidae	<i>Coccinella septempunctata</i>	
		<i>Hippodamia convergens</i>	
	Curculionidae	<i>unidentified</i>	
	Melyridae	<i>Collops sp</i>	
	Rhipiphoridae	<i>Macrosiagon flavipenne</i>	
	Scarabaeidae	<i>Cotinus texana</i>	
	Tenebrionidae	<i>Elodes gracilis</i>	
		<i>unidentified</i>	
Odonata	Aeshnidae	<i>Aeshna multicolor</i>	
		<i>Anax junius</i>	
	Coenagrionidae	<i>Argia sp</i>	
	Libellulidae	<i>Libellula croceipennis</i>	
		<i>Libellula saturata</i>	
		<i>Paltothemis lineatipes</i>	
		<i>Pantala flavescens</i>	
		<i>Pantala hymenaea</i>	
		<i>Sympetrum corruptum</i>	
		<i>Tramea lacerata</i>	
<i>Tramea onusta</i>			
Lepidoptera	Danaidae	<i>Danaus plexippus</i>	
	Hesperiidae	<i>Erynnis funeralis</i>	
		<i>Heliopetes ericitorum</i>	
		<i>Hylephila phyleus</i>	
		<i>Pyrgus albescens</i>	
		<i>Brephidium exilis</i>	
	Lycaenidae	<i>Everyis amyntula</i>	
		<i>Hemiargus ceramus</i>	
		<i>Leptotes marina</i>	
		<i>Plebejus acmon</i>	
		<i>Strymon melinus</i>	
		Noctuidae	<i>Acontia sedata</i>
			<i>Schinia sexplagiata</i>
			<i>Schinia scarletina</i>
		Nymphalidae	<i>Junonia coenia</i>
			<i>Vanessa cardui</i>
	<i>Vanessa virginiensis</i>		
	Pieridae	<i>Colias eurytheme</i>	
		<i>Nathalis iole</i>	
		<i>Pieris rapae</i>	
<i>Pontia protodice</i>			
<i>unidentified</i>			
Pyralidae	<i>unidentified</i>		
	Sesiidae	<i>Paranthrene robiniae</i>	
	Sphingidae	<i>Hyles lineata</i>	
Orthoptera	Acrididae	<i>Derotmema saussuraenum</i>	
		<i>Melanoplus sp</i>	

Orthoptera

Acrididae

Psoloessa thamnogaea
Schistocerca sp
Schistocerca nitens
Trimerotropis californica
Trimerotropis pallidipennis

Gryllidae

Gryllus sp
Oecanthus sp

Stenopelmatidae

Stenopelmatus sp

Tettiigoniidae

Microcentrum rhombifolium
Scudderia mexicana

Mantodea

Mantidae

Iris oratoria
Litaneutria minor
Stagmomantis californica

Appendix B

Field Notes

Date 1/4/05 Time 11:00 to 12:46 Job Spruce Hill
 Miles 138795 Location Spruce Hill Ontario
 Biologists K. W.
 Survey for:
 Habitat Assessment for: General Bio

Weather: Temp 66 Wind 0 Cloud cover overcast to clearing Rain ✓

Biological elements:

Vegetative communities:

General Bio / Forest on sand
Bachman's scrub
willow scrub
Vineyards

Soil type _____

Plant species:

Adx. BS, WS, Bachman's scrub

Vertebrates

MIELA NOSTA BLDPH YELWA SAPH RELTA ANVIC
WHSP NOMO MOBO BUCW HOFI

W

Arthropods

Oak Woodlands _____ Riparian Veg _____ type _____
 Vernal Pools _____

Comments: Burning Owl site

N	W
34° 02.494	117 34.186
34 02.495	117 34.211
34 02.502	117 34.211
34 02.504	117 34.211
02.507	.211
02.519	.212
02.479	.216
480	.209
473	.197

**HAZARDOUS GAS ASSESSMENT
MILLIKEN SANITARY LANDFILL
(ADJACENT NORTHERN PROPERTY)
SARES REGIS GROUP
ONTARIO, CA**

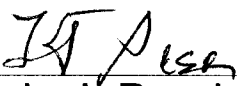
Prepared for:

Sares Regis Group
18802 Bardeen Avenue
Irvine, CA 92612-1521

Attn.: Peter M. Rooney

April 19, 2006

Project No. 3299



Louis J. Pandolfi
President



Prepared by

GEOSCIENCE ANALYTICAL, INC.
Geochemical, Environmental & Litigation Consultants
Established March 1981



21 April 2006

Sares Regis Group
18802 Bardeen Avenue
Irvine, CA 92612-1521

Attn.: Mr. Peter M. Rooney

RE: Partial Hazardous Gas Assessment – Milliken Sanitary Landfill Adjacent
Northern Property

Dear Mr. Rooney:

We have reviewed two reports concerned with landfill gas migration onto the above referenced property: *Landfill Gas Impacts on the Adjacent Northern Property* dated November 2005 prepared by Bryan A. Stirrat & Associates; *Report of Preliminary Evaluation – Landfill Gas Impacts on Property Adjacent to Milliken Landfill* dated October 8, 1991 prepared by Converse Environmental West. Results and recommendations from those reports, including proposed landfill gas extraction system modifications, have been incorporated into the subject investigation.

We have conducted a partial surficial hazardous gas assessment (methane) on the above referenced site. The subject investigation has been limited to that property known as the Adjacent Northern Property located north of the Milliken Sanitary Landfill, east of Haven Avenue and west of Milliken Avenue in the City of Ontario, County of San Bernardino, CA. The Milliken Sanitary Landfill is an inactive municipal solid waste disposal facility owned and operated by the County of San Bernardino. The landfill is closed and includes a landfill gas extraction system that is scheduled to be upgraded prior to development of the subject property. A site plan is attached (Figure 1). The property is slated for development of an industrial park.

Under the current investigation, one hundred twenty-two (122) soil probes have been advanced to depths of 4.0' below existing grade between April 18 and 19, 2006 for

purposes of establishing surficial concentrations of light hydrocarbons (Figure 1). Soil probe locations were established to provide adequate coverage of the property. Soil probes were sampled on April 19.

The methane concentrations identified within the soil probes ranged from 0.6 to 33.2 ppm (v/v) (Table 1).

The subject site contains methane significantly below the Lower Explosive Limit (50,000 ppm v/v). No elevated methane concentrations significantly above background levels have been identified. Furthermore, the County of San Bernardino will significantly further reduce the potential for migration of landfill gas with substantial improvements to the currently existing gas extraction system prior to any construction on the subject property. Based on all available data, no mitigation is recommended beyond minimal required levels for sites within a methane zone (landfill proximity) as defined by the County of San Bernardino, recommendations of 3rd party consultants and that ordinary mitigation routinely made a part of an industrial project under similar circumstances.


Mitigation shall include the following:

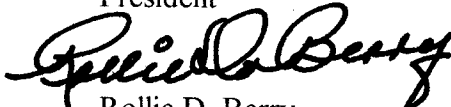
- Trench dams and conduit seals within 200' of the landfill boundary
- Passive subhardscape parking lot venting within 100' of the landfill boundary
- Passive interior ventilation for all occupied structures within 200' of the landfill boundary
- In lieu of interior ventilation, passive subslab ventilation and gas impervious membrane for all occupied structures within 200' of the landfill boundary.

The subject parcel is located within a methane zone due to its proximity to a closed sanitary landfill. In accordance with the proximity of the subject site to the landfill, the applicant has conducted a methane soil gas site survey for the building site. The purpose of the building site survey is to determine, to the satisfaction of the County of San Bernardino Department of Building and Safety, the applicability of methane prevention and monitoring systems requirements in connection with the construction of buildings on the site. The intent of the current investigation was therefore to determine the hazardous gas potential of the subject property utilizing sufficient shallow probes to provide statistically significant baseline geochemical data necessary and sufficient to provide site classification as to the required level of mitigation. Based on all available analytical data, the site does not contain appreciably elevated concentrations of methane or other light hydrocarbons and therefore mitigation shall be limited to that minimal mitigation described hereinabove for sites containing methane at concentrations <5,000 ppmv.

Mitigation shall be designed by a California registered professional civil engineer specializing in hazardous gas mitigation systems.

Sincerely yours,

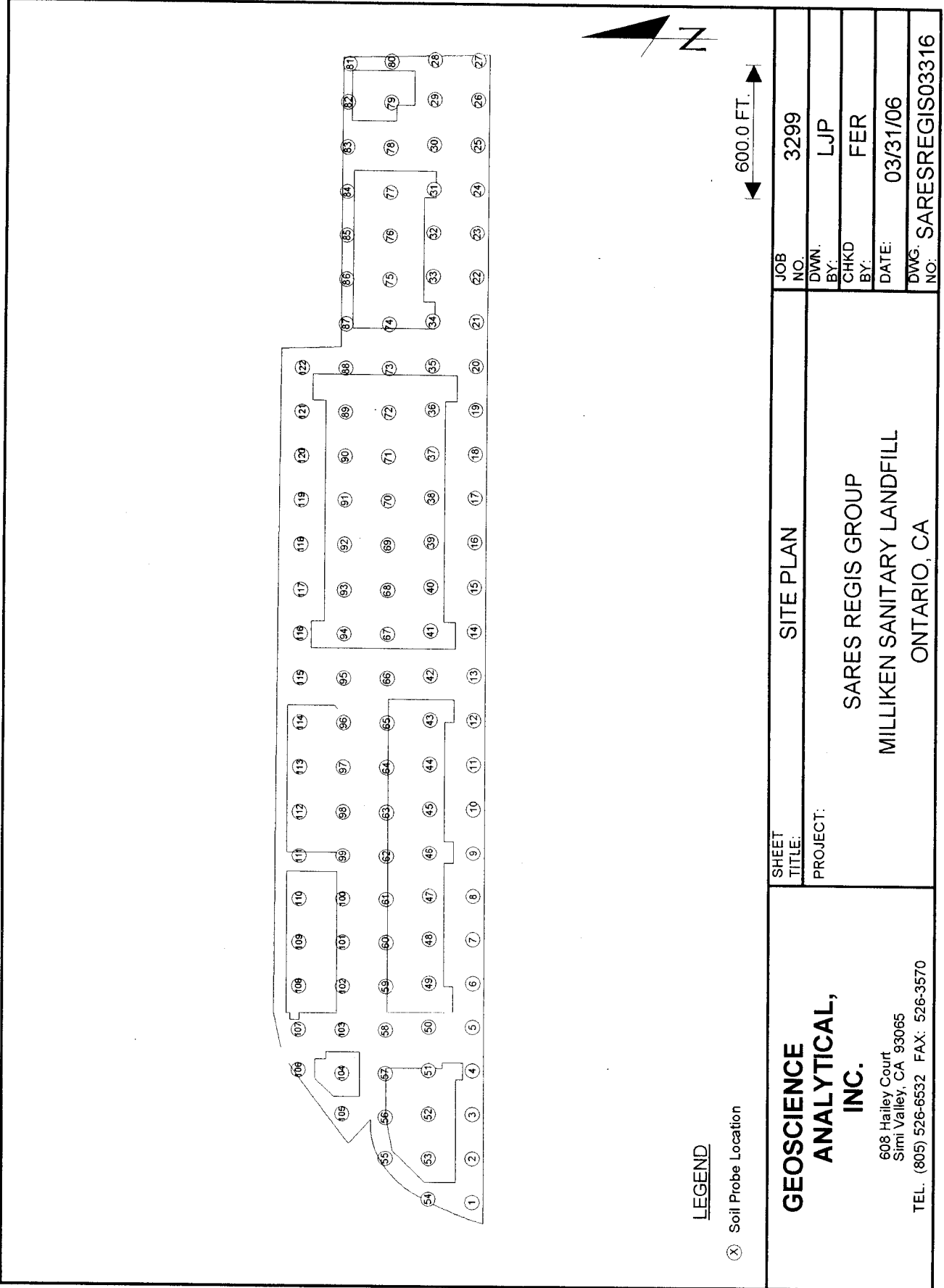

Louis J. Pandolfi
President


Rollie D. Berry
Registered Engineer (Civil)
CA No. 17223



ReSARES.REGIS.GROUP,MILLIKEN.LANDFILL.ONTARIO.04196

FIGURE 1



GEOSCIENCE ANALYTICAL, INC. 608 Hailey Court Simi Valley, CA 93065 TEL. (805) 526-6532 FAX: 526-3570	SHEET TITLE: SITE PLAN	JOB NO: 3299
	PROJECT: SARES REGIS GROUP MILLIKEN SANITARY LANDFILL ONTARIO, CA	DWN. BY: LJP
		CHKD BY: FER
		DATE: 03/31/06
		DWG. NO: SARESREGIS03316

FORM 1 CERTIFICATE OF COMPLIANCE FOR METHANE TEST DATA

Part 1: Certification Sheet

Description of Gas Analysis Instrument(s):

Instrument Name and Model: Varian FID GC

Date	Time	Probe Set #	Methane	Ethane	Ethylene	Pressure (inches water column)	Sensor depth (feet)	Description/ Sensor Location
			Concentration (ppmv)					
4/19/06	0712	P-1	4.2	0.3	<0.2	N/A	4.0	See Figure 1
	0715	P-2	4.3	0.2	<0.2		4.0	
	0719	P-3	4.0	<0.2	<0.2		4.0	
	0725	P-4	5.1	0.3	<0.2		4.0	
	0731	P-5	4.2	0.3	<0.2		4.0	
	0735	P-6	3.9	0.2	<0.2		4.0	
	0739	P-7	5.2	<0.2	<0.2		4.0	
	0744	P-8	2.9	<0.2	<0.2		4.0	
	0750	P-9	4.4	0.2	<0.2		4.0	
	0754	P-10	4.5	0.3	<0.2		4.0	
	0759	P-11	8.0	0.5	<0.2		4.0	
	0804	P-12	4.1	<0.2	<0.2		4.0	
	0809	P-13	8.7	0.6	<0.2		4.0	
	0813	P-14	5.8	0.4	<0.2		4.0	
	0817	P-15	7.3	<0.2	<0.2		4.0	
	0823	P-16	4.9	<0.2	<0.2		4.0	
	0829	P-17	9.4	0.6	0.5		4.0	
	0833	P-18	3.7	<0.2	<0.2		4.0	
	0838	P-19	5.5	0.4	<0.2		4.0	
	0844	P-20	3.9	<0.2	<0.2		4.0	
	0850	P-21	3.2	<0.2	<0.2		4.0	
▼	0856	P-22	3.6	0.2	<0.2	▼	4.0	▼
4/19/06	0902	P-23	3.4	<0.2	<0.2	N/A	4.0	See Figure 1

FORM 1 CERTIFICATE OF COMPLIANCE FOR METHANE TEST DATA (CONTINUED)

Part 1: Certification Sheet

Description of Gas Analysis Instrument(s):

Instrument Name and Model: Varian FID GC

Date	Time	Probe Set #	Methane	Ethane	Ethylene	Pressure (inches water column)	Sensor depth (feet)	Description/ Sensor Location
			Concentration (ppmv)					
4/19/06	0907	P-24	3.6	0.3	<0.2	N/A	4.0	See Figure 1
	0913	P-25	2.7	<0.2	<0.2		4.0	
	0919	P-26	3.8	<0.2	<0.2		4.0	
	0926	P-27	4.2	<0.2	<0.2		4.0	
	0931	P-28	2.9	<0.2	<0.2		4.0	
	0936	P-29	0.7	<0.2	<0.2		4.0	
	0942	P-30	1.7	<0.2	<0.2		4.0	
	0948	P-31	0.7	<0.2	<0.2		4.0	
	0955	P-32	2.8	<0.2	<0.2		4.0	
	1002	P-33	1.6	<0.2	<0.2		4.0	
	1007	P-34	3.3	<0.2	<0.2		4.0	
	1013	P-35	1.6	<0.2	<0.2		4.0	
	1017	P-36	4.0	<0.2	<0.2		4.0	
	1023	P-37	1.0	<0.2	<0.2		4.0	
	1028	P-38	2.9	<0.2	<0.2		4.0	
	1033	P-39	1.2	<0.2	<0.2		4.0	
	1037	P-40	3.6	<0.2	<0.2		4.0	
	1044	P-41	1.2	<0.2	<0.2		4.0	
	1049	P-42	3.8	<0.2	<0.2		4.0	
	1055	P-43	1.9	<0.2	<0.2		4.0	
	1101	P-44	2.5	<0.2	<0.2		4.0	
▼	1103	P-45	6.5	0.5	0.6	▼	4.0	▼
4/19/06	1109	P-46	4.3	<0.2	<0.2	N/A	4.0	See Figure 1

FORM 1 CERTIFICATE OF COMPLIANCE FOR METHANE TEST DATA (CONTINUED)

Part 1: Certification Sheet

Description of Gas Analysis Instrument(s):

Instrument Name and Model: Varian FID GC

Date	Time	Probe Set #	Methane	Ethane	Ethylene	Pressure (inches water column)	Sensor depth (feet)	Description/ Sensor Location
			Concentration (ppmv)					
4/19/06	1113	P-47	1.2	<0.2	<0.2	N/A	4.0	See Figure 1
	1119	P-48	2.3	<0.2	<0.2		4.0	
	1124	P-49	1.3	<0.2	<0.2		4.0	
	1129	P-50	1.7	<0.2	<0.2		4.0	
	1136	P-51	1.5	<0.2	<0.2		4.0	
	1142	P-52	1.6	<0.2	<0.2		4.0	
	1147	P-53	1.2	<0.2	<0.2		4.0	
	1153	P-54	2.0	<0.2	<0.2		4.0	
	1158	P-55	8.2	<0.2	<0.2		4.0	
	1238	P-56	33.2	<0.2	<0.2		4.0	
	1145	P-57	2.4	<0.2	<0.2		4.0	
	1252	P-58	1.9	<0.2	<0.2		4.0	
	1259	P-59	2.5	<0.2	<0.2		4.0	
	1310	P-60	2.9	<0.2	<0.2		4.0	
	1318	P-61	3.8	<0.2	<0.2		4.0	
	1325	P-62	3.7	0.5	0.5		4.0	
	1332	P-63	4.2	<0.2	<0.2		4.0	
	1339	P-64	3.6	<0.2	<0.2		4.0	
	1348	P-65	4.6	<0.2	<0.2		4.0	
	1356	P-66	1.4	<0.2	<0.2		4.0	
	1410	P-67	5.1	<0.2	<0.2		4.0	
▼	1418	P-68	1.2	<0.2	<0.2	▼	4.0	▼
4/19/06	1426	P-69	1.9	<0.2	<0.2	N/A	4.0	See Figure 1

FORM 1 CERTIFICATE OF COMPLIANCE FOR METHANE TEST DATA (CONTINUED)

Part 1: Certification Sheet

Description of Gas Analysis Instrument(s):

Instrument Name and Model: Varian FID GC

Date	Time	Probe Set #	Methane	Ethane	Ethylene	Pressure (inches water column)	Sensor depth (feet)	Description/ Sensor Location
			Concentration (ppmv)					
4/19/06	1437	P-70	1.4	<0.2	<0.2	N/A	4.0	See Figure 1
	1445	P-71	1.8	<0.2	<0.2		4.0	
	1453	P-72	0.7	<0.2	<0.2		4.0	
	1502	P-73	0.9	<0.2	<0.2		4.0	
	1510	P-74	1.2	<0.2	<0.2		4.0	
	1519	P-75	2.6	<0.2	<0.2		4.0	
	1528	P-76	3.6	<0.2	<0.2		4.0	
	1536	P-77	4.2	<0.2	<0.2		4.0	
	1545	P-78	1.0	<0.2	<0.2		4.0	
	1552	P-79	1.3	<0.2	<0.2		4.0	
	1610	P-80	1.7	<0.2	<0.2		4.0	
	1618	P-81	1.0	<0.2	<0.2		4.0	
	1628	P-82	0.9	<0.2	<0.2		4.0	
	1635	P-83	0.6	<0.2	<0.2		4.0	
	1647	P-84	1.7	<0.2	<0.2		4.0	
	1655	P-85	1.2	<0.2	<0.2		4.0	
	1703	P-86	1.8	<0.2	<0.2		4.0	
	1710	P-87	2.0	<0.2	<0.2		4.0	
	1722	P-88	1.8	<0.2	<0.2		4.0	
	1730	P-89	2.3	<0.2	<0.2		4.0	
	1738	P-90	3.1	<0.2	<0.2		4.0	
▼	1745	P-91	1.5	<0.2	<0.2	▼	4.0	▼
4/19/06	1756	P-92	2.4	<0.2	<0.2	N/A	4.0	See Figure 1

FORM 1 CERTIFICATE OF COMPLIANCE FOR METHANE TEST DATA (CONTINUED)

Part 1: Certification Sheet

Description of Gas Analysis Instrument(s):

Instrument Name and Model: Varian FID GC

Date	Time	Probe Set #	Methane	Ethane	Ethylene	Pressure (inches water column)	Sensor depth (feet)	Description/ Sensor Location
			Concentration (ppmv)					
4/19/06	1807	P-93	1.9	<0.2	<0.2	N/A	4.0	See Figure 1
	1813	P-94	1.5	<0.2	<0.2		4.0	
	1822	P-95	2.0	<0.2	<0.2		4.0	
	1829	P-96	2.4	<0.2	<0.2		4.0	
	1835	P-97	1.6	<0.2	<0.2		4.0	
	1844	P-98	1.9	<0.2	<0.2		4.0	
	1849	P-99	3.1	<0.2	<0.2		4.0	
	1857	P-100	1.9	<0.2	<0.2		4.0	
	1905	P-101	2.7	<0.2	<0.2		4.0	
	1910	P-102	18.2	0.6	<0.2		4.0	
	1925	P-103	4.5	<0.2	<0.2		4.0	
	1928	P-104	2.3	<0.2	<0.2		4.0	
	1935	P-105	3.0	<0.2	<0.2		4.0	
	1942	P-106	1.9	<0.2	<0.2		4.0	
	1948	P-107	2.8	<0.2	<0.2		4.0	
	1955	P-108	4.3	<0.2	<0.2		4.0	
	2002	P-109	11.0	0.7	<0.2		4.0	
	2019	P-110	5.5	<0.2	<0.2		4.0	
	2025	P-111	1.7	<0.2	<0.2		4.0	
	2032	P-112	6.1	<0.2	<0.2		4.0	
	2037	P-113	3.5	<0.2	<0.2		4.0	
▼	2042	P-114	3.1	<0.2	<0.2	▼	4.0	▼
4/19/06	2047	P-115	2.1	<0.2	<0.2	N/A	4.0	See Figure 1

APPENDIX I

SAMPLE COLLECTION METHODOLOGY

Soil gas samples were collected from the monitoring wells using a gas tight pump affixed to a 1/8" diameter nylon tube. The tube was transfixed to the sampling interval and a gaseous sample withdrawn. A 20cc sample of soil gas was collected and stored by water displacement in a silicone rubber stoppered glass vacutainer.

All samples were transported under Chain-of-custody to the laboratory. Sample collection was carried out by a California Registered Environmental Assessor with over twenty (23) years experience in completing combustible gas assessments throughout Southern California under the supervision of a Registered Professional Civil Engineer with approximately twenty (20) years experience in the design of soil gas mitigation and site assessment. Sample collection took place over a period of one (1) day.

APPENDIX II

ANALYTICAL PROTOCOL

The analytical protocol for analysis of C1-C7 hydrocarbon speciation was method ASTM D1945(mod). The gas chromatographic column was a 1/8" x 8' stainless steel packed with 100 – 120 mesh activated alumina. The carrier gas was chromatographic grade nitrogen at a flow rate of 30 cc/min. Detection was by means of flame ionization. The output signal is quantified and recorded with an HP3390A electronic integrator. Standards were manufactured by Scott Specialty Gases with an accuracy of $\pm 2.0\%$.

APPENDIX D
EDR HISTORICAL DOCUMENTATION



EDR® Environmental
Data Resources Inc

The EDR Aerial Photo Decade Package

**100-Acre Property
Haven Ave. & Francis St.
Ontario, CA 91761**

Inquiry Number: 1649549.5

April 07, 2006

The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

THE EDR AERIAL PHOTO DECADE PACKAGE

Environmental Data Resources, Inc.'s (EDR) Aerial Photography Print Service is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs at one photo per decade.

References

EPAs Standards and Practices for All Appropriate Inquiries (AAI), section 312.24, identifies the historical sources of information necessary to achieve the objectives and performance factors of section 312.20. According to AAI, *"historical documents and records may include, but are not limited to, aerial photographs, fire insurance maps, building department records, chain of title documents, and land use records."*

To meet the prior use requirements of ASTM E 1527-05, Section 8.3.2, the following standard *historical sources* may be used: aerial photographs, fire insurance maps, property tax files, land title records (although these cannot be the sole historical source consulted), topographic maps, city directories, building department records, or zoning/land use records. ASTM E 1527-05, Section 8.3 on Historical Use Information, identifies the prior use requirements for a Phase I environmental site assessment. ASTM E 1527-05 requires *"All obvious uses of the property shall be identified from the present, back to the property's first developed use, or back to 1940, whichever is earlier. This task requires reviewing only as many of the standard historical sources as are necessary and both reasonably ascertainable and likely to be useful."* (ASTM E 1527-05, Section 8.3.2) *Reasonably ascertainable means information that is publicly available, obtainable from a source within reasonable time and cost constraints, and practically reviewable.*

Data Gaps

In order to address *data gaps*, additional sources of information may be consulted. According to the AAI, Section 312.20 (g), *"to the extent there are data gaps (as defined in section 312.10) in the information developed...that affect the ability of persons (including the environmental professional) conducting the all appropriate inquiries to identify conditions indicative of releases or threatened releases...such persons should identify such data gaps, identify the sources of information consulted to address such data gaps, and comment upon the significance of such data gaps."* According to ASTM E 1527-05, Section 8.3.2.3, *"historical research is complete when either: (1) the objectives in 8.3.1 through 8.3.2.2 are achieved; or (2) data failure is encountered. Data failure occurs when all of the standard historical sources that are reasonably ascertainable and likely to be useful have been reviewed and yet the objectives have not been met....If data failure is encountered, the report shall document the failure and, if any of the standard historical sources were excluded, give the reasons for their exclusion."*

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Please contact EDR at 1-800-352-0050
with any questions or comments.

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Date EDR Searched Historical Sources:

Aerial Photography April 07, 2006

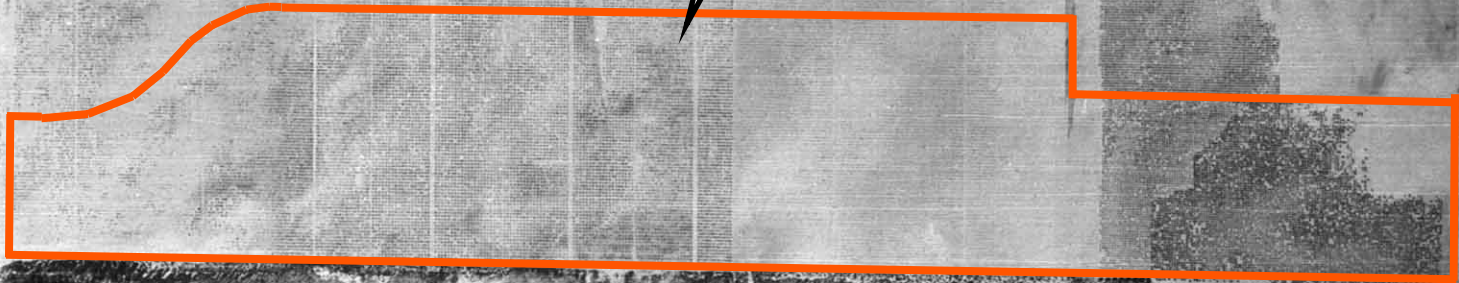
Target Property:

Haven Ave. & Francis St.

Ontario, CA 91761

<u>Year</u>	<u>Scale</u>	<u>Details</u>	<u>Source</u>
1938	Aerial Photograph. Scale: 1"=666'	Flight Year: 1938	Laval
1949	Aerial Photograph. Scale: 1"=666'	Flight Year: 1949	Fairchild
1953	Aerial Photograph. Scale: 1"=666'	Flight Year: 1953	Southwestern
1968	Aerial Photograph. Scale: 1"=666'	Flight Year: 1968	Western
1977	Aerial Photograph. Scale: 1"=666'	Flight Year: 1977	Teledyne
1989	Aerial Photograph. Scale: 1"=666'	Flight Year: 1989	USGS
1994	Aerial Photograph. Scale: 1"=666'	Flight Year: 1994	USGS
2002	Aerial Photograph. Scale: 1"=666'	Flight Year: 2002	USGS

SITE



INQUIRY #: 1649549.5

YEAR: 1938

| = 666'





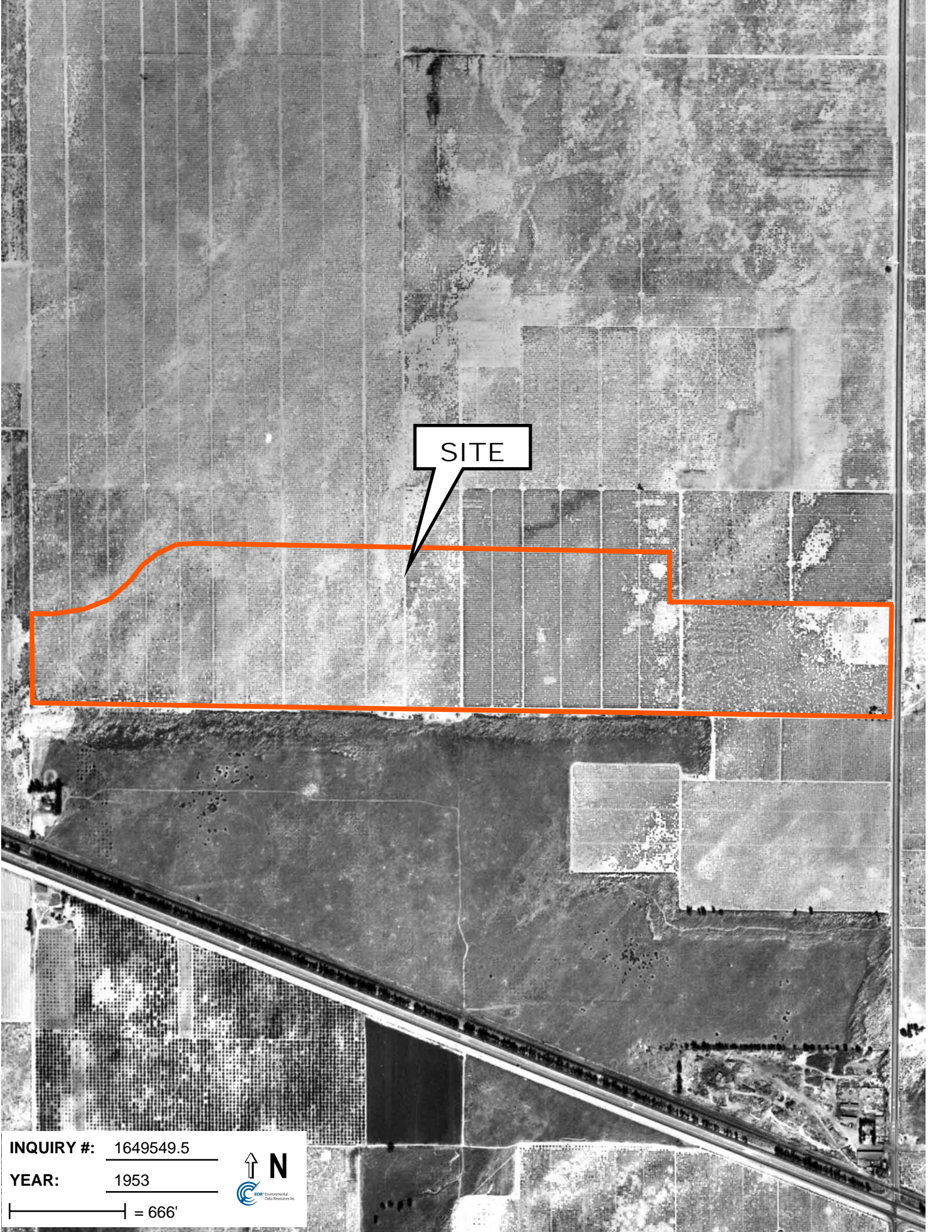
SITE

INQUIRY #: 1649549.5

YEAR: 1949

| = 666'





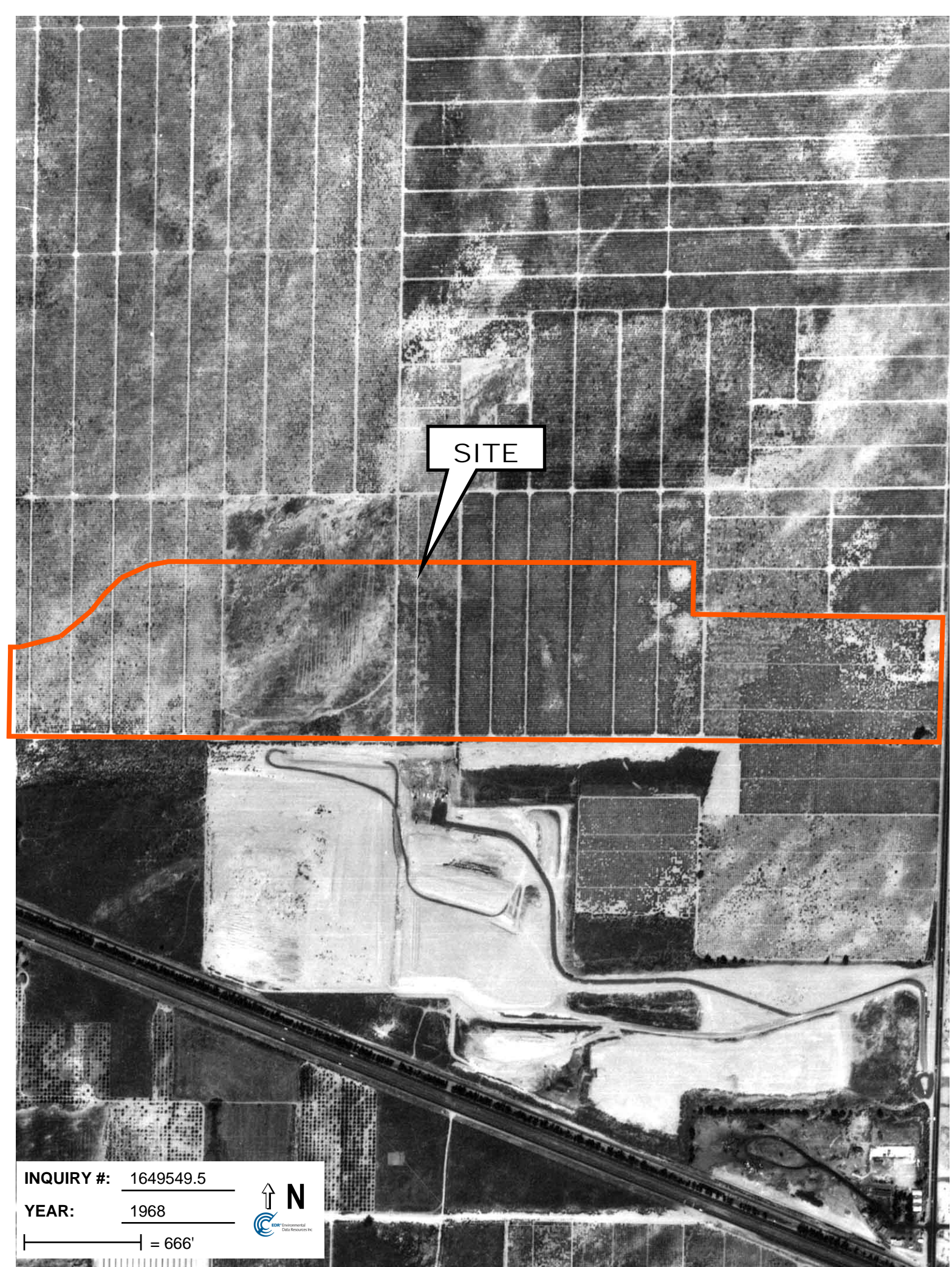
SITE

INQUIRY #: 1649549.5

YEAR: 1953

| = 666'





SITE

INQUIRY #: 1649549.5

YEAR: 1968



| = 666'





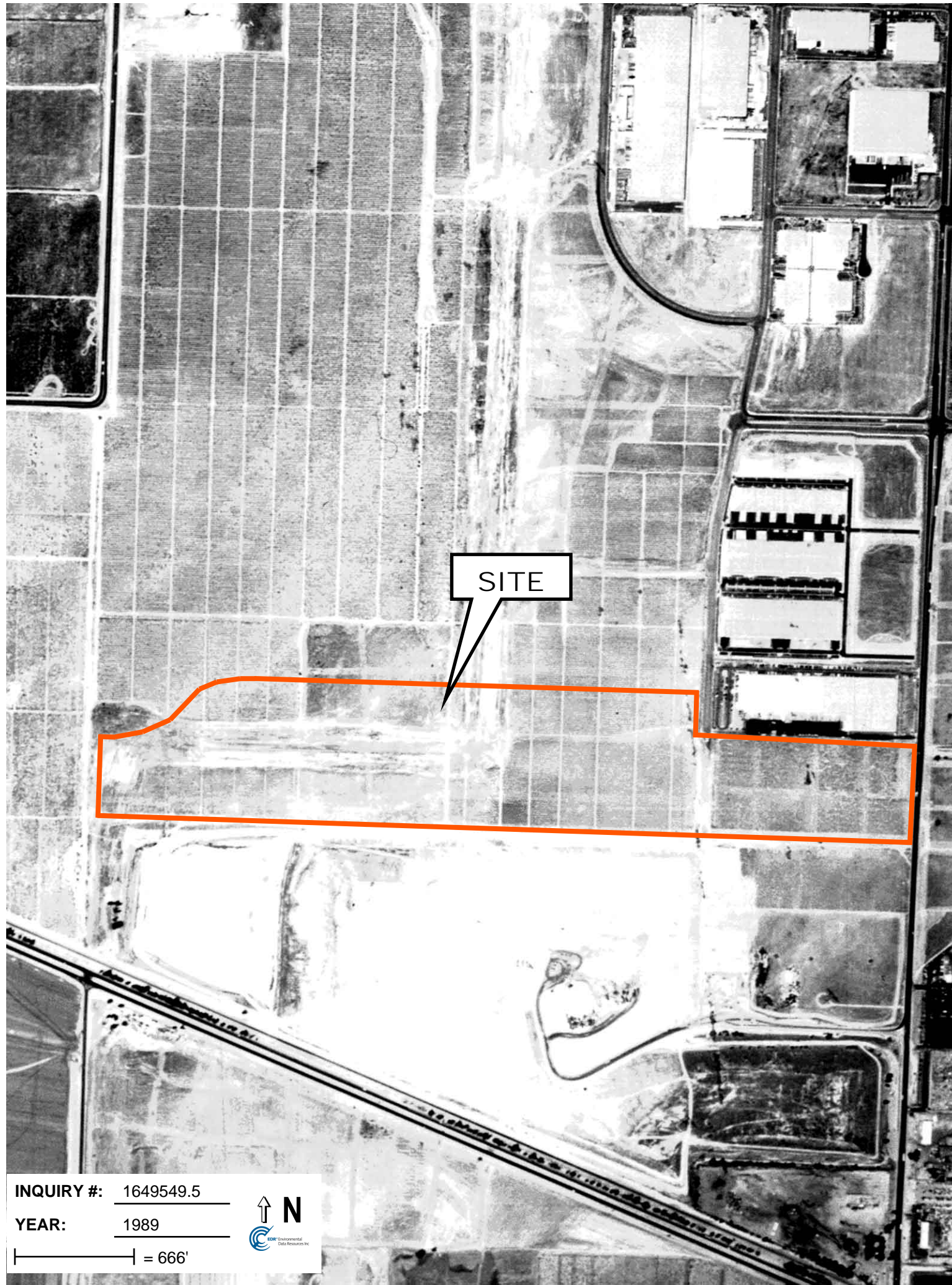
SITE

INQUIRY #: 1649549.5

YEAR: 1977

| = 666'





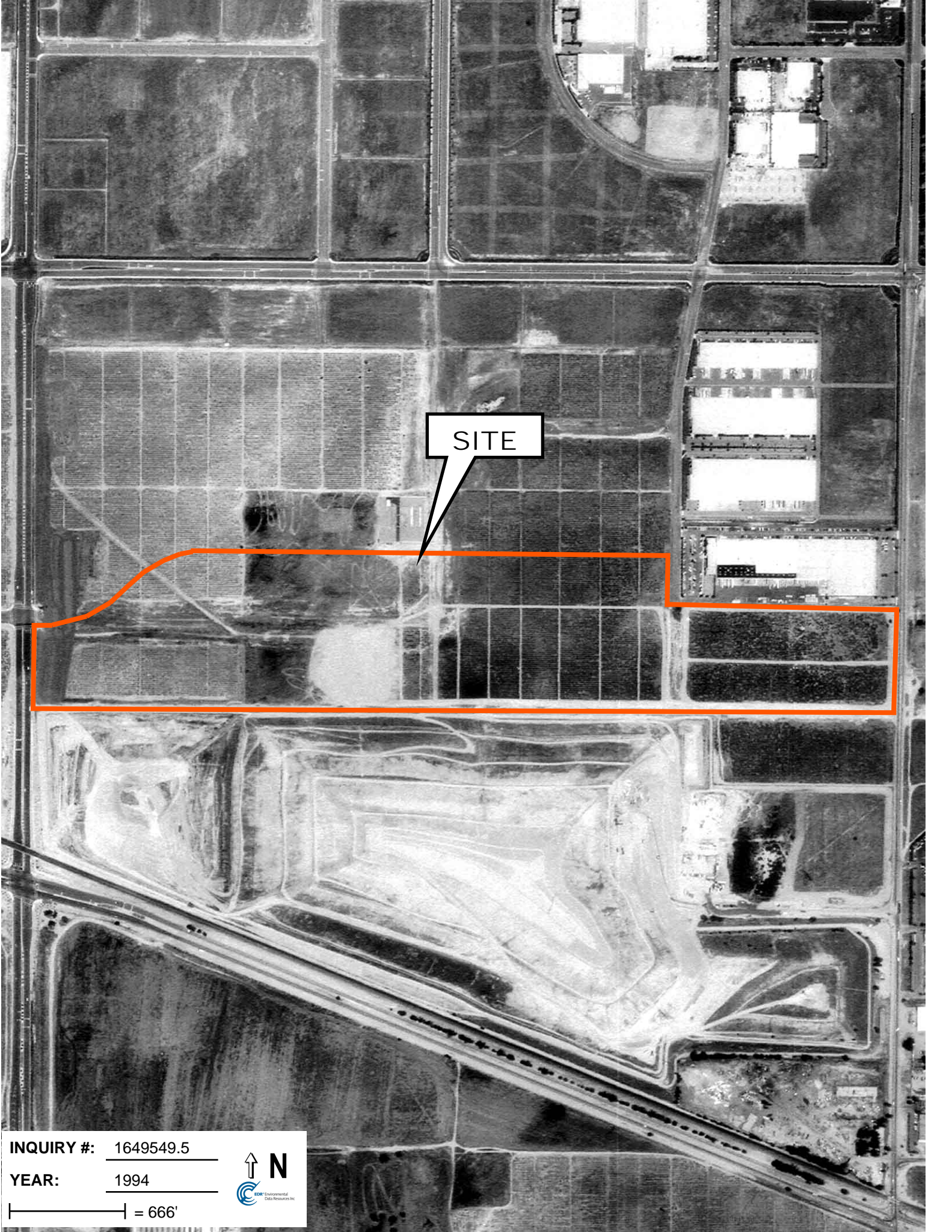
SITE

INQUIRY #: 1649549.5

YEAR: 1989

| = 666'





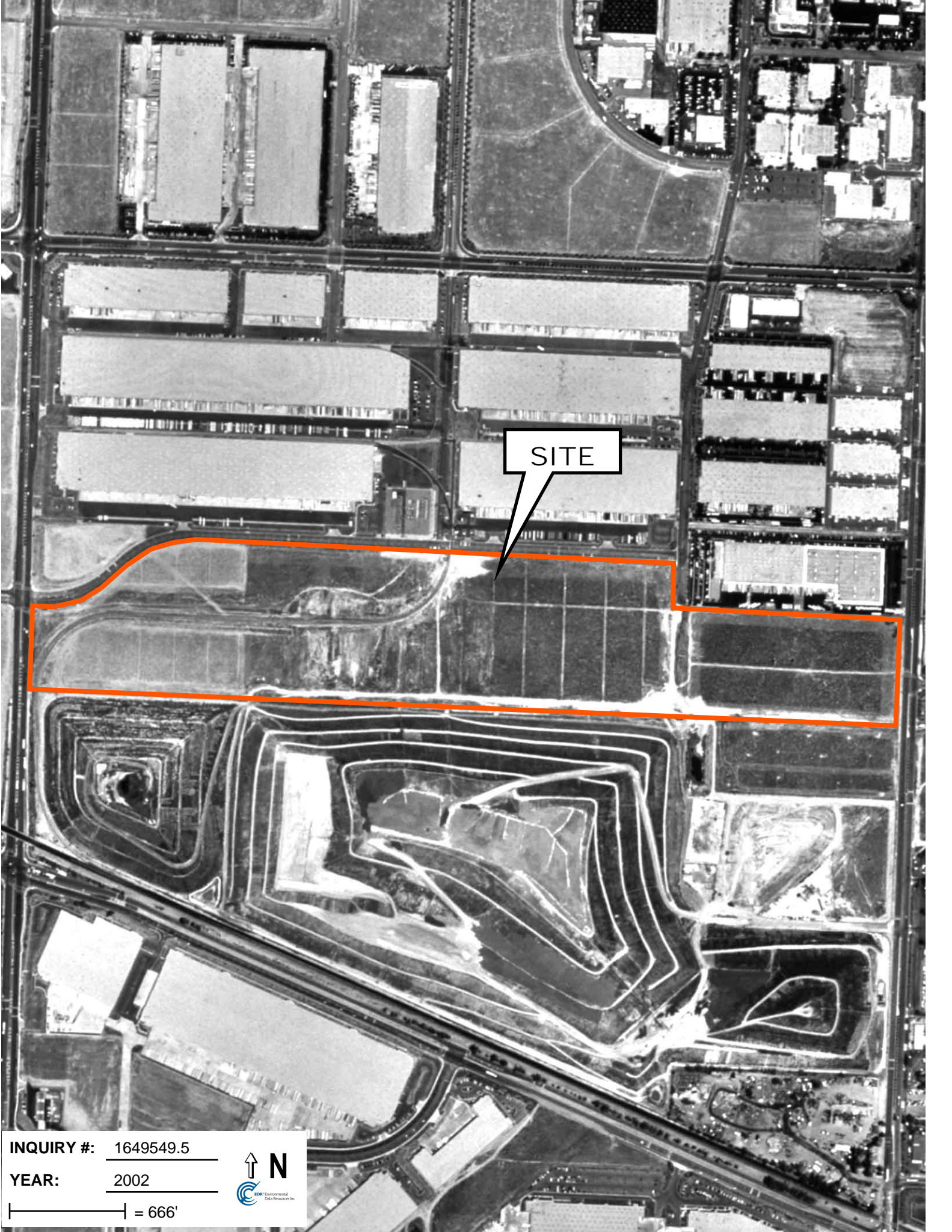
SITE

INQUIRY #: 1649549.5

YEAR: 1994

| = 666'





SITE

INQUIRY #: 1649549.5

YEAR: 2002

| = 666'





"Linking Technology with Tradition"®

Sanborn® Map Report

Ship To: Steven Grod

Tetra Tech Inc.

17770 Cartwright Road

Irvine, CA 92614

Order Date: 4/6/2006

Completion Date: 4/6/2006

Inquiry #: 1649549.3

P.O. #: JP Morgan

Site Name: 100-Acre Property

Address: Haven Ave. & Francis St.

City/State: Ontario, CA 91761

Cross Streets:

Customer Project: JP Morgan

1882371ARB 949-608-5910

This document reports that the largest and most complete collection of Sanborn fire insurance maps has been reviewed based on client supplied information, and fire insurance maps depicting the target property at the specified address were not identified.

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EDR® Environmental
Data Resources Inc

The EDR-City Directory
Abstract

100-Acre Property
Haven Ave. & Francis St.
Ontario, CA 91761

Inquiry Number: 1649549.6

Latitude = 34.042
Longitude = 117.568

Thursday, April 06, 2006

**The Standard in
Environmental Risk
Management Information**

440 Wheelers Farms Road
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

EDR City Directory Abstract

Environmental Data Resources, Inc.'s (EDR) City Directory Abstract is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Abstract includes a search and abstract of available city directory data. The city directory is a sophisticated tool for locating individuals and businesses. With each address, the directory lists the name of the corresponding occupant.

References

To meet the prior use requirements of ASTM E 1527-05, Section 8.3.2, the following *standard historical sources* may be used: aerial photographs, fire insurance maps, property tax files, land title records (although these cannot be the sole historical source consulted), topographic maps, city directories, building department records, or zoning/land use records. ASTM E 1527-05, Section 8.3 on Historical Use Information, identifies the prior use requirements for a Phase I environmental site assessment. ASTM E 1527-05 requires *"All obvious uses of the property shall be identified from the present, back to the property's first developed use, or back to 1940, whichever is earlier. This task requires reviewing only as many of the standard historical sources as are necessary and both reasonably ascertainable and likely to be useful."* (ASTM E 1527-05, Section 8.3.2) *Reasonably ascertainable means information that is publicly available, obtainable from a source within reasonable time and cost constraints, and practically reviewable.*

EPA's Standards and Practices for All Appropriate Inquiries (AAI), Section § 312.24, identifies the historical sources of information necessary to achieve the objectives and performance factors of § 312.20. According to AAI, *"historical documents and records may include, but are not limited to, aerial photographs, fire insurance maps, building department records, chain of title documents, and land use records."*

Data Gaps

In order to address data gaps, additional sources of information may be consulted. According the AAI, Section § 312.20 (g), *"to the extent there are data gaps (as defined in § 312.10) in the information developed...that affect the ability of persons (including the environmental professional) conducting the all appropriate inquiries to identify conditions indicative of releases or threatened releases...such persons should identify such data gaps, identify the sources of information consulted to address such data gaps, and comment upon the significance of such data gaps."* According to ASTM E 1527-05, Section 8.3.2.3, *"historical research is complete when either: (1) the objectives in 8.3.1 through 8.3.2.2 are achieved; or (2) data failure is encountered. Data failure occurs when all of the standard historical sources that are reasonably ascertainable and likely to be useful have been reviewed and yet the objectives have not been met....If data failure is encountered, the report shall document the failure and, if any of the standard historical sources were excluded, give the reasons for their exclusion."*

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with any questions or comments.

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SUMMARY

- ***City Directories:***

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1922 through 2003. (These years are not necessarily inclusive.) A summary of the information obtained is provided in the text of this report.

This report compiles information by geocoding the subject properties (that is, plotting the latitude and longitude for such subject properties and obtaining data concerning properties within 1/8th of a mile of the subject properties). There is no warranty or guarantee that geocoding will report or list all properties within the specified radius of the subject properties and any such warranty or guarantee is expressly disclaimed. Accordingly, some properties within the aforementioned radius and the information concerning those properties may not be referenced in this report.

Date EDR Searched Historical Sources: Apr 6, 2006

Target Property:

Haven Ave. & Francis St.
Ontario, CA 91761

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1922	Address Not Listed in Research Source	Los Angeles Directory Co Publisher
1923	Address Not Listed in Research Source	Los Angeles Directory Company
1926	Address Not Listed in Research Source	Los Angeles Directory Company
1930	Address Not Listed in Research Source	San Bernardino Directory Co.
1931	Address Not Listed in Research Source	Los Angeles Directory Co.
1934	Address Not Listed in Research Source	Los Angeles Directory Co.
1936	Address Not Listed in Research Source	San Bernardino Directory Co.
1938	Address Not Listed in Research Source	Los Angeles Directory Co.
1940	Address Not Listed in Research Source	Los Angeles Directroy Co Publisher
1941	Address Not Listed in Research Source	Associated Telephone Company Limited
1942	Address Not Listed in Research Source	San Bernardino Directory Co.
1945	Address Not Listed in Research Source	Southern California Telephone Company
1946	Address Not Listed in Research Source	Los Angeles Directory Company Publishers
1949	Address Not Listed in Research Source	San Bernardino Directory Co. Publishers
1950	Address Not Listed in Research Source	The Pacific Telephone and Telegraph Co

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1951	Address Not Listed in Research Source	Los Angeles Directory Company Publishers
1955	Address Not Listed in Research Source	The Pacific Telephone and Telegraph Co
1956	Address Not Listed in Research Source	General Telephone Company Publishers
1960	Address Not Listed in Research Source	Luskey Brothers & Co Publishers
1961	Address Not Listed in Research Source	Luskey Brothers & Co Publishers
1964	Address Not Listed in Research Source	Luskey Brothers & Co
1965	Address Not Listed in Research Source	GTE
1970	Address Not Listed in Research Source	General Telephone Company of California
1975	Address Not Listed in Research Source	General Telephone Company of California
1980	Address Not Listed in Research Source	GTE General Telephone Company of California
1981	Address Not Listed in Research Source	General Telephone Company of California
1985	Address Not Listed in Research Source	GTE
1990	Address Not Listed in Research Source	GTE California Incorporated
1991	Address Not Listed in Research Source	GTE California Incorporated
1995	Address Not Listed in Research Source	GTE Directories
1996	Address Not Listed in Research Source	GTE
2002	Address Not Listed in Research Source	SBC PACIFIC BELL
2003	Address Not Listed in Research Source	Haines & Co Publishers

Adjoining Properties

SURROUNDING

Multiple Addresses
Ontario, CA 91761

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1922	Address Not Listed in Research Source	Los Angeles Directory Co Publisher
1923	Address Not Listed in Research Source	Los Angeles Directory Company
1926	Address Not Listed in Research Source	Los Angeles Directory Company
1930	Address Not Listed in Research Source	San Bernardino Directory Co.
1931	Address Not Listed in Research Source	Los Angeles Directory Co.
1934	Address Not Listed in Research Source	Los Angeles Directory Co.
1936	Address Not Listed in Research Source	San Bernardino Directory Co.
1938	Address Not Listed in Research Source	Los Angeles Directory Co.
1940	Address Not Listed in Research Source	Los Angeles Directroy Co Publisher
1941	Address Not Listed in Research Source	Associated Telephone Company Limited
1942	Address Not Listed in Research Source	San Bernardino Directory Co.
1945	Address Not Listed in Research Source	Southern California Telephone Company
1946	Address Not Listed in Research Source	Los Angeles Directory Company Publishers
1949	Address Not Listed in Research Source	San Bernardino Directory Co. Publishers
1950	Address Not Listed in Research Source	The Pacific Telephone and Telegraph Co
1951	Address Not Listed in Research Source	Los Angeles Directory Company Publishers

<u>Year</u>	<u>Uses</u>	<u>Source</u>
1955	Address Not Listed in Research Source	The Pacific Telephone and Telegraph Co
1956	Address Not Listed in Research Source	General Telephone Company Publishers
1960	Address Not Listed in Research Source	Luskey Brothers & Co Publishers
1961	Address Not Listed in Research Source	Luskey Brothers & Co Publishers
1964	Address Not Listed in Research Source	Luskey Brothers & Co
1965	Address Not Listed in Research Source	GTE
1970	Address Not Listed in Research Source	General Telephone Company of California
1975	Address Not Listed in Research Source	General Telephone Company of California
1980	Address Not Listed in Research Source	GTE General Telephone Company of California
1981	Address Not Listed in Research Source	General Telephone Company of California
1985	Address Not Listed in Research Source	GTE
1990	Address Not Listed in Research Source	GTE California Incorporated
1991	Address Not Listed in Research Source	GTE California Incorporated
1995	Address Not Listed in Research Source	GTE Directories
1996	Address Not Listed in Research Source	GTE
2002	Address Not Listed in Research Source	SBC PACIFIC BELL
2003	Address Not Listed in Research Source	Haines & Co Publishers



EDR™ Environmental
Data Resources Inc

**EDR Historical
Topographic Map
Report**

**100-Acre Property
Haven Ave. & Francis St.
Ontario, CA 91761**

Inquiry Number: 1649549.4

April 06, 2006

**The Standard in
Environmental Risk
Management Information**

440 Wheelers Farms Road
Milford, Connecticut 06460

Nationwide Customer Service

Telephone: 1-800-352-0050

Fax: 1-800-231-6802

Internet: www.edrnet.com

EDR Historical Topographic Map Report

Environmental Data Resources, Inc.'s (EDR) Historical Topographic Map Report is designed to assist professionals in evaluating potential liability on a target property, and its surrounding area, resulting from past activities. ASTM E 1527-00, Section 7.3 on Historical Use Information, identifies the prior use requirements for a Phase I environmental site assessment. The ASTM standard requires a review of *reasonably ascertainable standard historical sources*. *Reasonably ascertainable is defined as information that is publicly available, obtainable from a source with reasonable time and cost constraints, and practically reviewable*. To meet the prior use requirements of ASTM E 1527-00, Section 7.3.4, the following *standard historical sources* may be used: aerial photographs, city directories, fire insurance maps, topographic maps, property tax files, land title records (although these cannot be the sole historical source consulted), building department records, or zoning/and use records. ASTM E 1527-00 requires *"All obvious uses of the property shall be identified from the present, back to the property's obvious first developed use, or back to 1940, whichever is earlier. This task requires reviewing only as many of the standard historical sources as are necessary, and that are reasonably ascertainable and likely to be useful."* (ASTM E 1527-00, Section 7.3.2 page 12.)

EDR's Historical Topographic Map Report includes a search of available public and private color historical topographic map collections.

Topographic Maps

A topographic map (topo) is a color coded line-and-symbol representation of natural and selected artificial features plotted to a scale. Topos show the shape, elevation, and development of the terrain in precise detail by using contour lines and color coded symbols. Many features are shown by lines that may be straight, curved, solid, dashed, dotted, or in any combination. The colors of the lines usually indicate similar classes of information. For example, topographic contours (brown); lakes, streams, irrigation ditches, etc. (blue); land grids and important roads (red); secondary roads and trails, railroads, boundaries, etc. (black); and features that have been updated using aerial photography, but not field verified, such as disturbed land areas (e.g., gravel pits) and newly developed water bodies (purple).

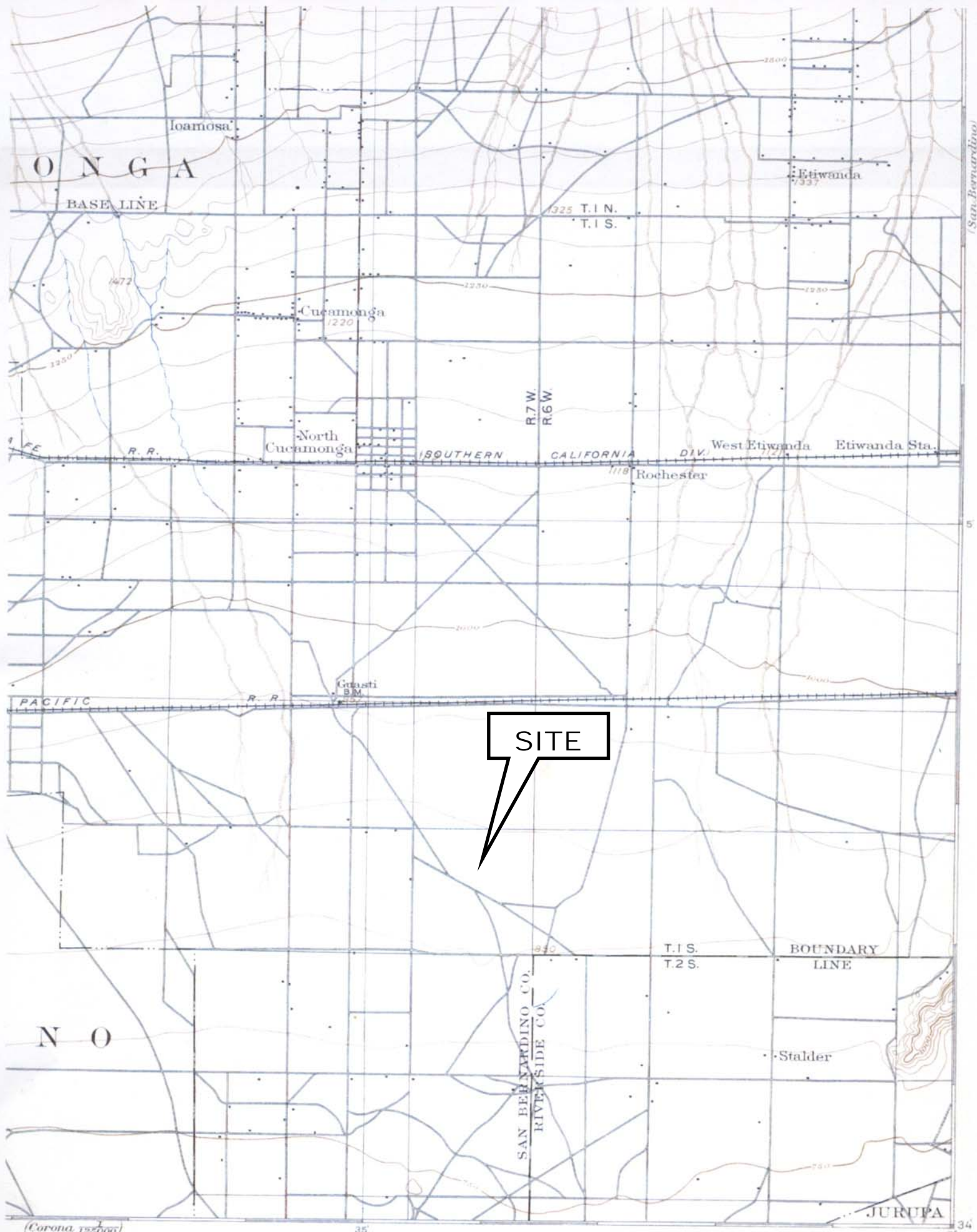
For more than a century, the USGS has been creating and revising topographic maps for the entire country at a variety of scales. There are about 60,000 U.S. Geological Survey (USGS) produced topo maps covering the United States. Each map covers a specific quadrangle (quad) defined as a four-sided area bounded by latitude and longitude. Historical topographic maps are a valuable historical resource for documenting the prior use of a property and its surrounding area, and due to their frequent availability can be particularly helpful when other standard historical sources (such as city directories, fire insurance maps, or aerial photographs) are not reasonably ascertainable.

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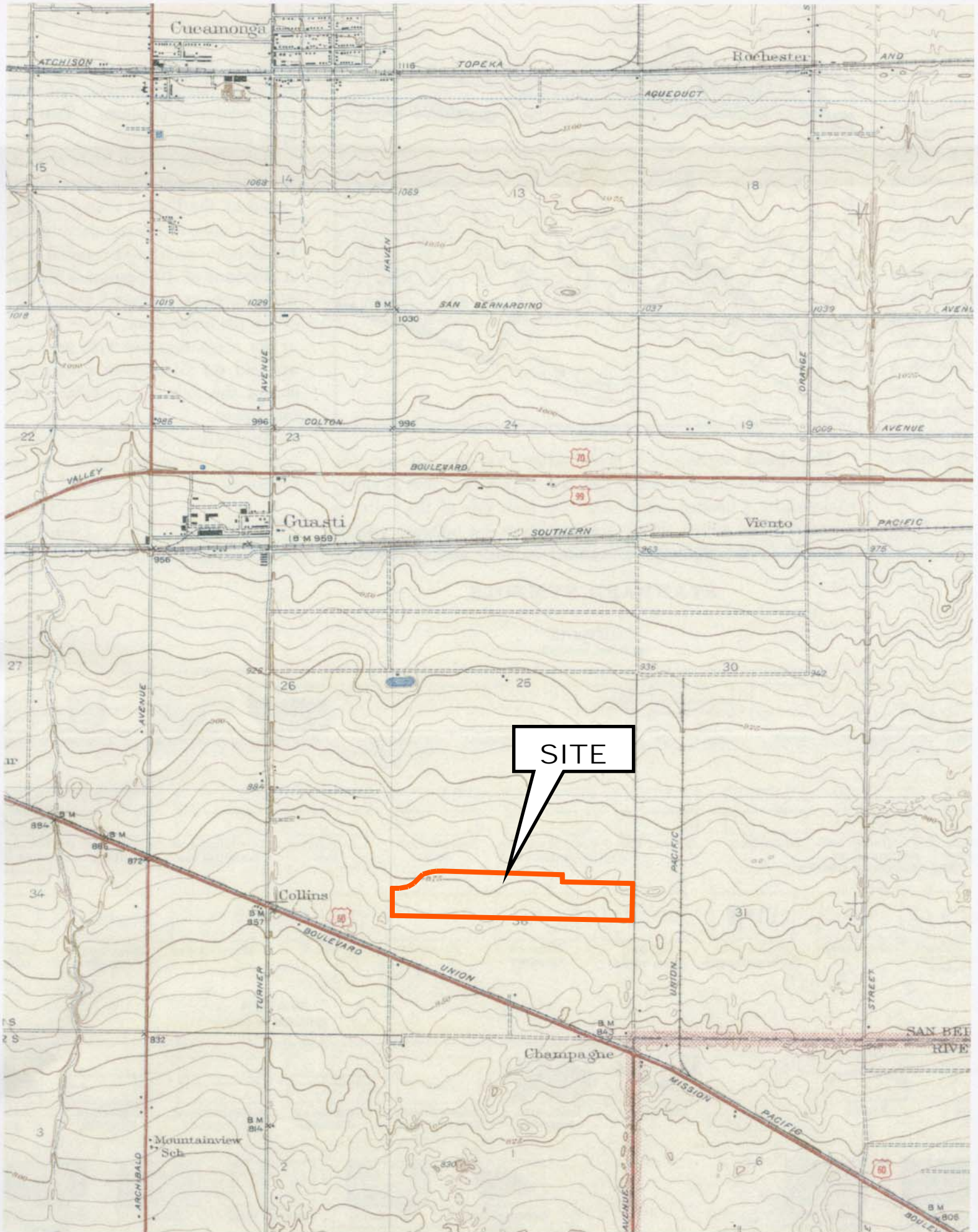
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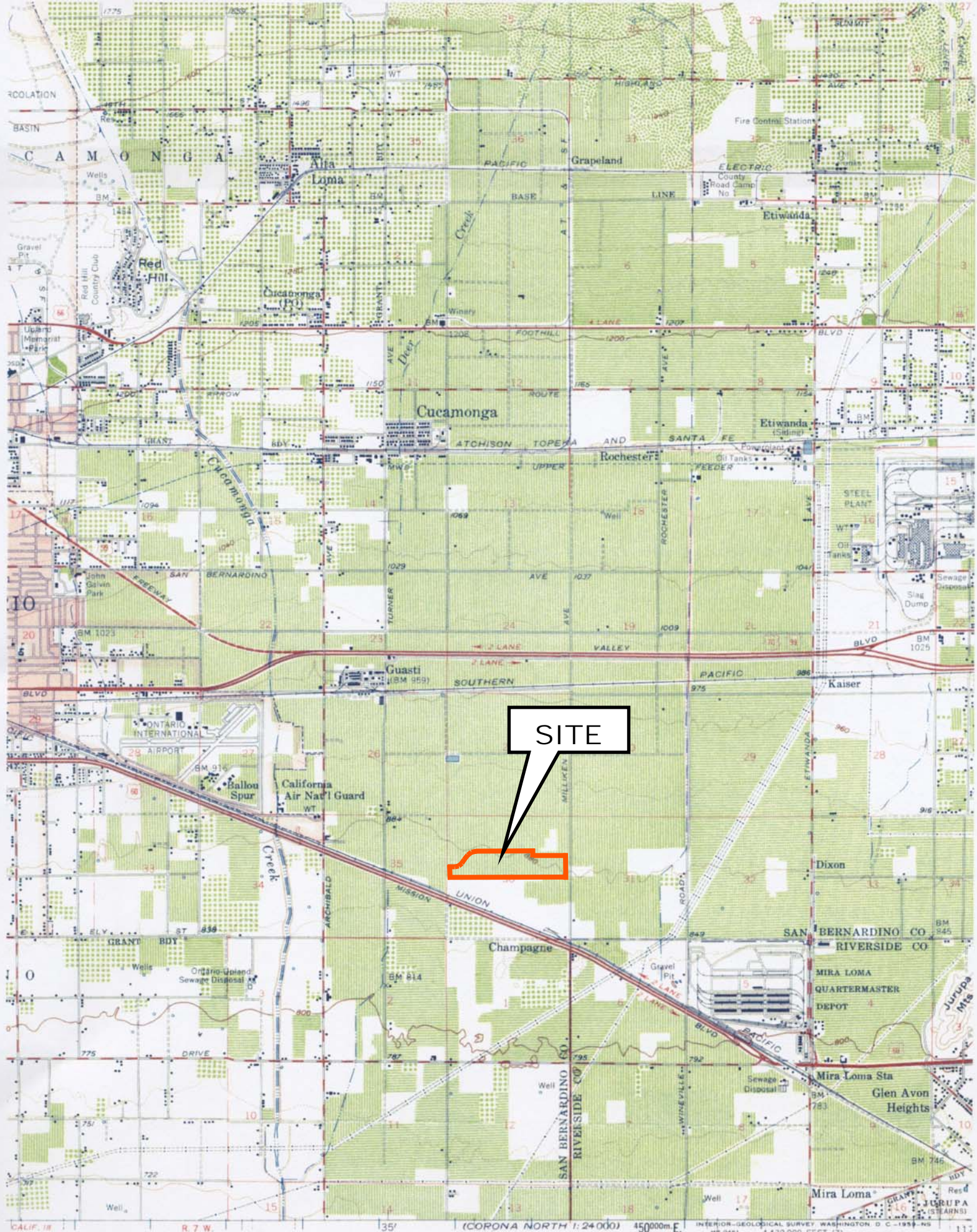
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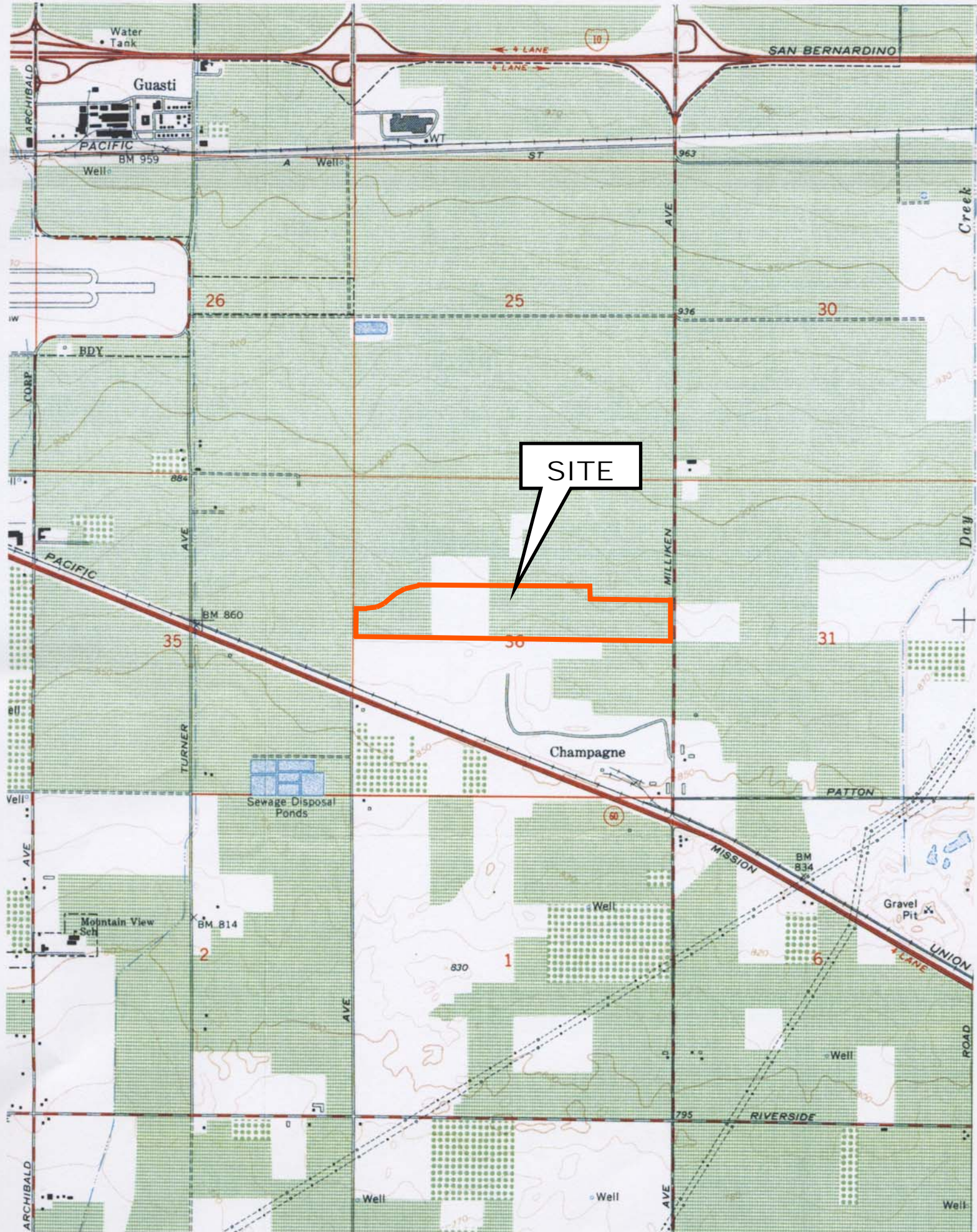
(San Bernardino)

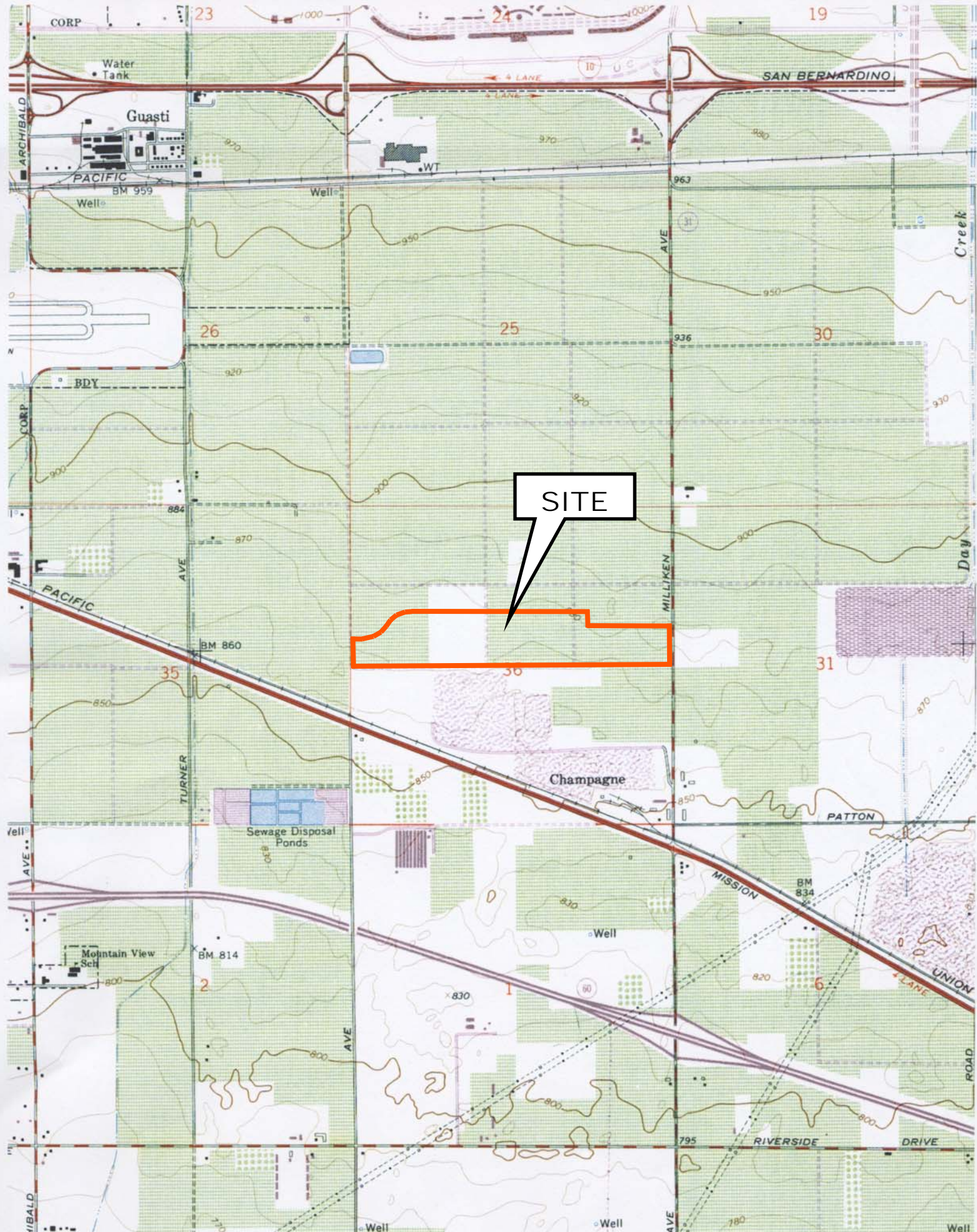
SITE

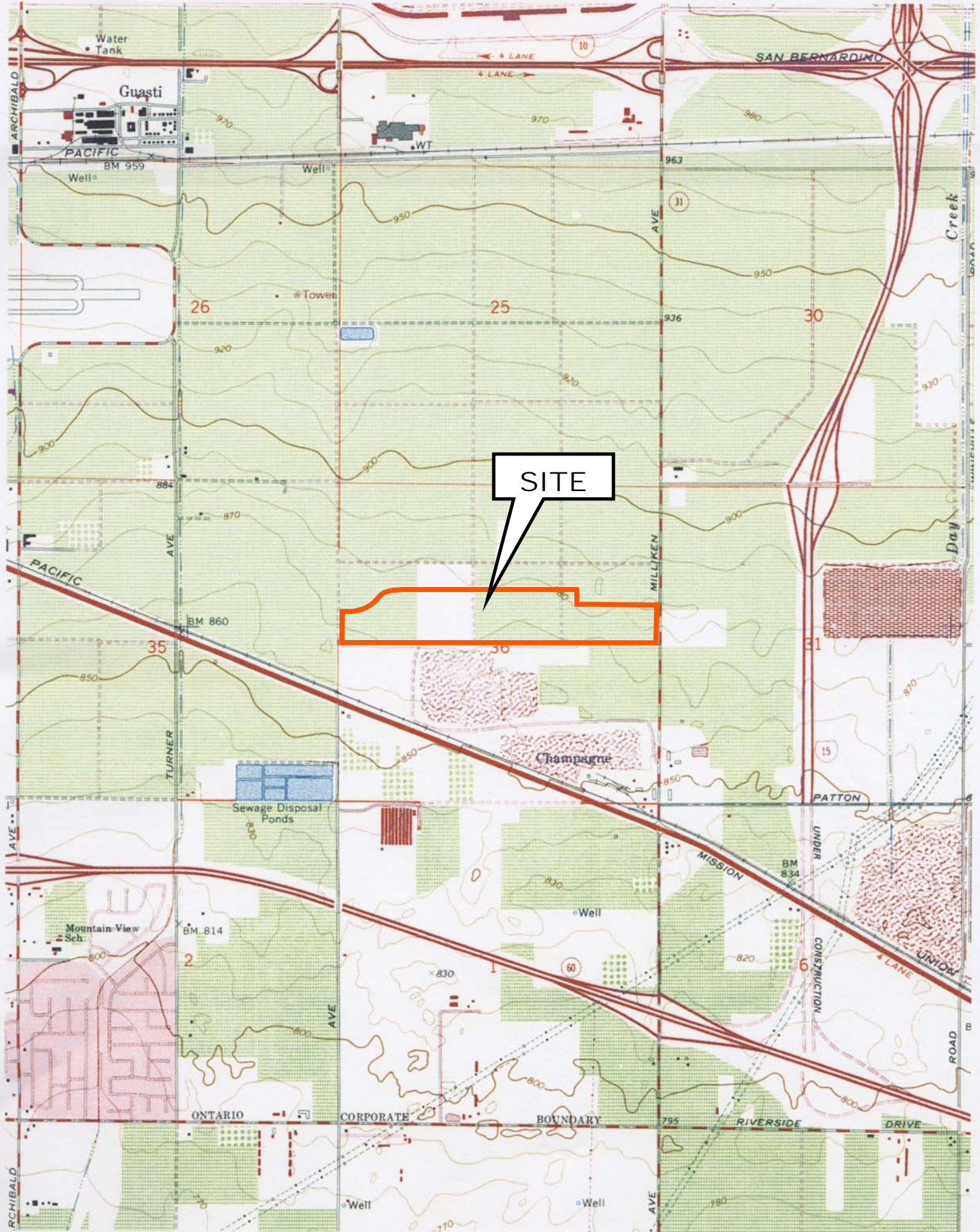




SITE







APPENDIX E
AGENCY REQUEST DOCUMENTATION



REQUEST FOR RECORDS RESEARCH

<i>For Office Use Only</i>	
Reference No.:	_____
Amount Paid:	_____
Receipt No.:	_____
Date:	_____

If this request is being faxed or e-mailed, please check the box below and indicate the amount to be mailed separately with the original form:

This request is being faxed or e-mailed. The original form will be mailed on 04-07-2006 along with a check or money order made payable to San Bernardino County Fire Department for the amount of **\$ 71.00**

SITE INFORMATION		
Facility Name / Owner Name 100-Acre Property / Co. of San Bernardino (c/o Solid Waste Management)	Site Address No street addresses associated with the Site. Three parcel numbers associated with the Site are 0211-281-04-0000, 0211-281-21-0000, and 0211-281-23-0000	City/Community Ontario, CA 91761

SPECIFIC RECORDS REQUESTED			
Record Type	Dates	Record Type	Dates
<input checked="" type="checkbox"/> ALL RECORDS			
<input type="checkbox"/> Active Permit Records	_____ To _____	<input type="checkbox"/> Risk Management Plan (RMP)/ CalARP	_____ To _____
<input type="checkbox"/> Inactive/Closed Permit Records	_____ To _____	<input type="checkbox"/> Hazardous Materials Handler Business Plan	_____ To _____
<input type="checkbox"/> Hazardous Waste Generator	_____ To _____	<input type="checkbox"/> Underground Storage Tank Removal Records	_____ To _____
<input type="checkbox"/> Hazardous Materials Handler	_____ To _____	<input type="checkbox"/> Site Remediation	_____ To _____
<input type="checkbox"/> Underground Storage Tank	_____ To _____	<input type="checkbox"/> Hazmat Incident/Emergency Response	_____ To _____
<input type="checkbox"/> Aboveground Storage Tank	_____ To _____	<input type="checkbox"/>	_____ To _____

Records are searched by site location. If no site address exists, please provide other identifying location information, such as an Assessor's Parcel Number, address range (125-135 E. Main St.), street corner (NW Corner Main St. & Elm Ave.), legal description (Township, Range, Section), and/or a map.

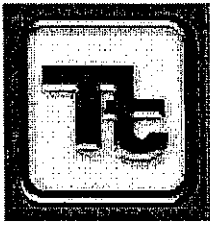
NOTE: To obtain records information for sites within the City of Victorville, contact the Victorville City Fire Department at (760) 955-5229.

REQUESTOR INFORMATION				
NAME Steven Grod	TITLE (if individual, leave blank) Project Manager		COMPANY (if individual, leave blank) Tetra Tech, Inc., Divisions-PPG	
MAILING ADDRESS 17770 Cartwright Road, 5 th Floor		CITY Irvine	STATE CA	ZIP CODE 92614
TELEPHONE (949) 608-5910	FAX (949) 608-5980	EMAIL ADDRESS steven.grod@tetrattech.com		

PURPOSE OF REQUEST	
<input checked="" type="checkbox"/> 1. Phase I site assessment or due diligence AT THE SITE	<input type="checkbox"/> 7. Owner or operator of the above facility or property
<input type="checkbox"/> 2. Environmental consultant or engineer involved with remediation AT THE SITE	<input type="checkbox"/> 8. General interest/Community awareness
<input type="checkbox"/> 3. Phase I site assessment or due diligence NEARBY	<input type="checkbox"/> 9. Potential buyer
<input type="checkbox"/> 4. Environmental consultant or engineer involved with remediation NEARBY	<input type="checkbox"/> 10. Real Estate Agent, Lender, Appraiser
<input type="checkbox"/> 5. Proposed School Site	<input type="checkbox"/> 11. Legal reasons
<input type="checkbox"/> 6. Proposed Drinking Water Well	<input type="checkbox"/> 12. Other: _____

- **PAYMENT OF \$71.00 MUST BE SUBMITTED WITH THIS REQUEST. A SEPARATE REQUEST MUST BE MADE FOR EACH SITE.**
- This form can be faxed or e-mailed. However, the original form must be mailed or delivered in person with the appropriate payment. Your faxed or e-mailed request will be logged at the time it is received (any request received after 5:00 PM will be logged in on the following business morning). Check the box in the upper left corner of this form to indicate that you have sent the original form with the fee by separate mail. **PLEASE NOTE THAT THE SEARCH WILL NOT BEGIN UNTIL PAYMENT IS RECEIVED.**
- A rate of \$71.00 per hour will be charged for any extended research.
- If no records exist, you will be notified in writing. If records are identified, you will be notified in writing or by phone once they are located and retrieved, generally within two to three weeks, with a description of records that exist for the site and files that are available for review. Upon receipt of records availability, an appointment can be scheduled for your review of available files.
- We will copy up to a maximum of 30 pages at the time records are examined at a rate of 25 cents per page. If more copies are required, you may bring a personal copier or arrange for a private copy service.

REQUESTOR'S SIGNATURE	
<i>I have read and understand the above record search procedures.</i>	
SIGNATURE OF REQUESTOR 	DATE April 6, 2006



2
~~13~~ PAGES

TETRA TECH, INC.

17770 Cartwright Road, Suite 500
Irvine, CA 92614
Office (949) 250-6788
Fax (949) 608-5980

April 6, 2006

CA State Fire Marshall
Pipeline Safety Division
P.O. Box 944246
Sacramento, CA 94244-2460

Phone: (916) 445-8477
Fax: (916) 445-8526


Re: Information pertaining to underground pipelines in Ontario, California

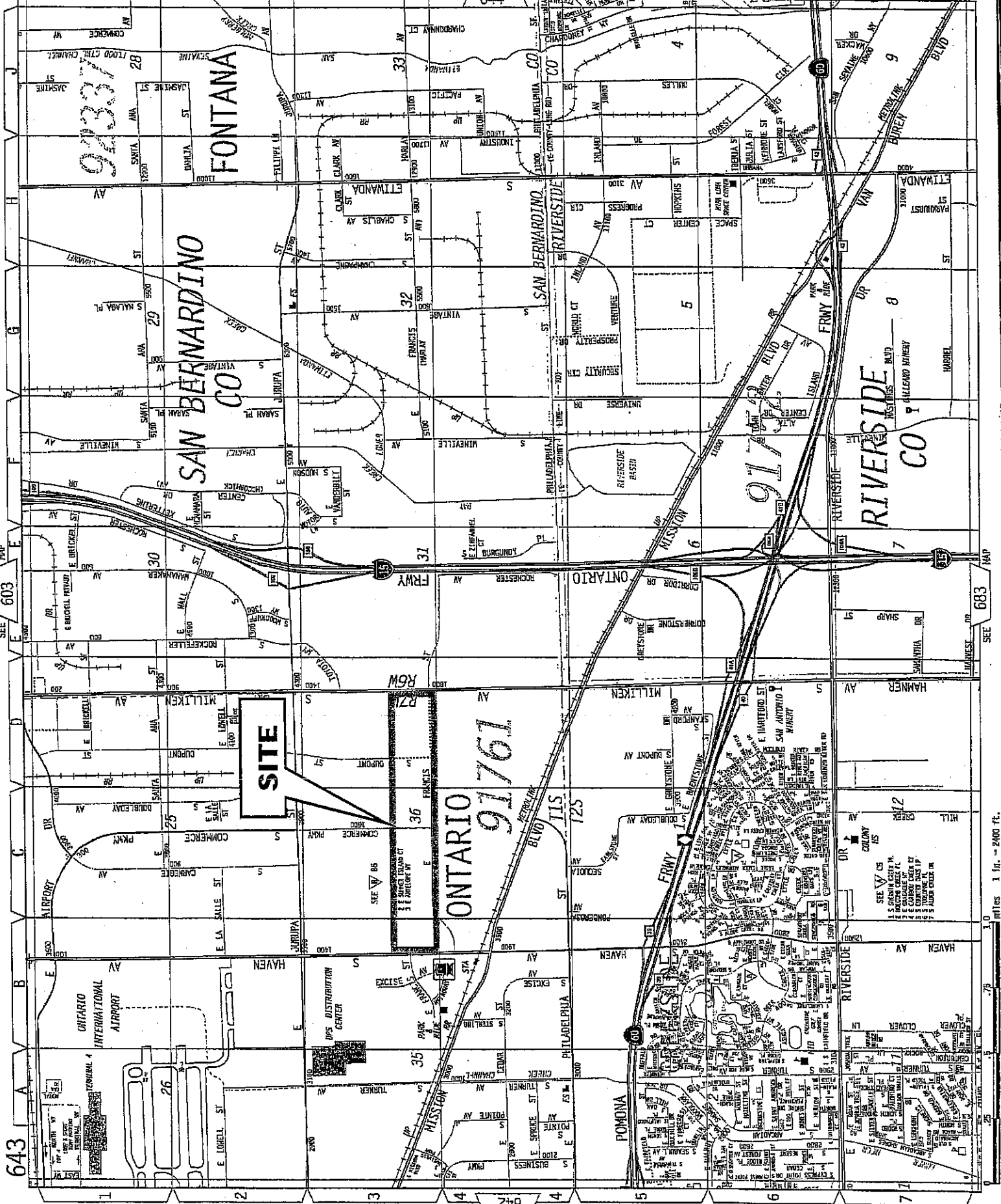
I would like information (location, direction, size, content, spills) regarding any underground oil and product pipelines for a property located by Francis Street, between Haven Avenue and Milliken Avenue, in Ontario, CA (please see attached maps). The property is shown on the San Bernardino County Thomas Guide Page 643, Grids B/C/D -3.

- APN 0211-281-04 Ontario, California 91761
- APN 0211-281-21 Ontario, California 91761
- APN 0211-281-23 Ontario, California 91761

Please e-mail or fax back any information you have pertaining to my request or let me know if no records are found. If there are any questions regarding this request, please call me directly at (949) 608-5910. Thank you for your time and help.

Sincerely,
Tetra Tech, Inc.


Steven Grod
steven.grod@tetrattech.com



92337

91761

SITE

91761

643

SAN BERNARDINO

SEE 642 MAP

SEE 683 MAP

1.0 miles 1 in. = 2400 ft.



3 pages

TETRA TECH, INC.

17770 Cartwright Road, Suite 500
Irvine, CA 92614
Office (949) 250-6788
Fax (949) 608-5980

April 6, 2006

State of California
Environmental Protection Agency (EPA)
Department of Toxic Substances Control (DTSC)
5796 Corporate Avenue
Cypress, California 90630

Phone: (714) 484-5300
Fax: (714) 484-5302

Re: Request to Review California EPA, DTSC, Files

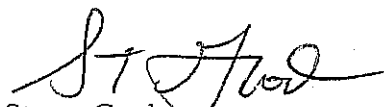
Julie Johnson:

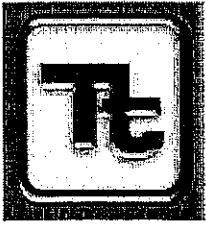
We are representing a client with interests in a property located in Ontario, California. The concern is for knowledge of hazardous materials investigations and regulatory status of the property. This letter is intended as a formal request for photocopies of files that the California EPA, DTSC, may have for the following property (three parcels - no addresses are associated with the parcels - see attached maps):

- APN 0211-281-04, Ontario, California 91761
- APN 0211-281-21, Ontario, California 91761
- APN 0211-281-23, Ontario, California 91761

We are also concerned with any activity and use limitations [such as institutional controls (e.g. deed restrictions, restrictive covenants, restrictive easements, or restrictive zoning) or engineering controls (e.g. capping, slurry walls, or point of use water treatment)] or environmental liens associated with the property. Please contact me if no records are found, or so I can arrange to come in and review the files. If there are any questions regarding this request, please call me directly at (949) 608-5910. Thank you for your time and help.

Sincerely,
Tetra Tech, Inc.


Steven Grod



3 pages

TETRA TECH, INC.

17770 Cartwright Road, Suite 500
Irvine, CA 92614
Office (949) 250-6788
Fax (949) 608-5980

April 6, 2006

California Environmental Protection Agency
Department of Toxic Substances Control
1101 North Grandview Avenue
Glendale, California 91201-2205

Phone: (818) 551-2800
Fax: (818) 551-2841

Re: Request to Review California EPA, DTSC, Files


Attn: Jone Barrio/Vivian Tutaan

We are representing a client with interests in a property located in Ontario, California. The concern is for knowledge of hazardous materials investigations and regulatory status of the property. This letter is intended as a formal request for photocopies of files that the California EPA, DTSC, may have for the following property (three parcels - no addresses are associated with the parcels - see attached maps):

- APN 0211-281-04, Ontario, California 91761
- APN 0211-281-21, Ontario, California 91761
- APN 0211-281-23, Ontario, California 91761

We are also concerned with any activity and use limitations [such as institutional controls (e.g. deed restrictions, restrictive covenants, restrictive easements, or restrictive zoning) or engineering controls (e.g. capping, slurry walls, or point of use water treatment)] or environmental liens associated with the property. Please contact me if no records are found, or so I can arrange to come in and review the files. If there are any questions regarding this request, please call me directly at (949) 608-5910. Thank you for your time and help.

Sincerely,
Tetra Tech, Inc.



Steven Grod



3 pages

TETRA TECH, INC.

17770 Cartwright Road, Suite 500
Irvine, CA 92614
Office (949) 250-6788
Fax (949) 608-5980

April 6, 2006

Ms. Annette Subriar
Santa Ana RWQCB
3737 Main Street, Suite 500
Riverside, CA 92501-3339

Phone: (951) 782-4130
Fax: (951) 781-6288

Re: File Request

Ms. Subriar:

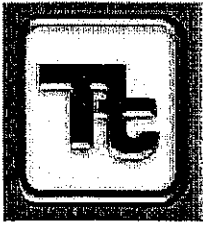
Please check the RWQCB records to see if you have LUST, SLIC, or Landfill files for the following property (three parcels - no addresses are associated with the parcels - see attached maps):

- APN 0211-281-04, Ontario, California 91761
- APN 0211-281-21, Ontario, California 91761
- APN 0211-281-23, Ontario, California 91761

We are also concerned with any activity and use limitations [such as institutional controls (e.g. deed restrictions, restrictive covenants, restrictive easements, or restrictive zoning) or engineering controls (e.g. capping, slurry walls, or point of use water treatment)] or environmental liens associated with the property. Please contact me if no records are found, or so I can arrange to come in and review the files. If there are any questions regarding this request, please call me directly at (949) 608-5910. Thank you for your time and help.

Sincerely,
Tetra Tech, Inc.


Steven Grod



1 PAGE

TETRA TECH, INC.

17770 Cartwright Road, Suite 500
Irvine, CA 92614
Office (949) 250-6788
Fax (949) 608-5980

April 6, 2006

Ms. Annette Subriar
Santa Ana RWQCB
3737 Main Street, Suite 500
Riverside, CA 92501-3339

Phone: (951) 782-4130
Fax: (951) 781-6288

Re: File Request

Ms. Subriar:

Please check the RWQCB records to see if you have LUST, SLIC, or Landfill files for the following property:

- Milliken Landfill, Ontario, California 91761

Please contact me if no records are found, or so I can arrange to come in and review the files. If there are any questions regarding this request, please call me directly at (949) 608-5910. Thank you for your time and help.

Sincerely,
Tetra Tech, Inc.


Steven Grod



5 PAGES
(SEE ATTACHED MAPS)
PUBLIC RECORDS REQUEST FORM

Information Management
Public Records Unit

Direct Dial: (909) 396-3700
FAX: (909) 396-3330

PublicRecordsRequest@aqmd.gov

PRU Office Use Only
CONTROL NUMBER

[Empty box for Control Number]

ATTENTION REQUESTOR: To expedite your request for District records, please fill out this form completely, and identify specifically the type of records you are requesting. Please limit your request to one facility or one site address for each request form filed, and three requested items per form. Additional forms or pages can be used if requesting information for more than one facility or for records not identified on this form. Requests should reasonably describe identifiable records prepared, owned, used, or retained by the District. Public Records Unit staff is available to assist you in identifying those records in the District's possession. The District is not required by law to create a new record or list from an existing record.

REQUESTOR INFORMATION

NAME: Steven Grod	DATE: 04-06-2006
COMPANY: Tetra Tech, Inc., Divisions PPG	
MAILING ADDRESS: 17770 Cartwright Road, Suite 500	
CITY: Irvine	STATE: CA ZIP CODE: 92614
PHONE NUMBER: (949) 608-5910	FAX NUMBER: (949) 608-5980

REQUESTED RECORDS (3 items per form)

Applications (APPLS)	Complaints	Asbestos Notifications/Records
<input checked="" type="checkbox"/> Permits to Operate (P/O)	<input checked="" type="checkbox"/> Site Inspection Reports (I/R)	Facility Potential to Emit (PTE)
Equipment List Report (EQL)	Emissions Summary	Facility Positive Balance (NSR)
<input checked="" type="checkbox"/> Notices of Violation (NOV)	Source Test Reports (S/T RPTS)	Toxic-Health Risk Assessment (HRA)
Notices to Comply (N/C)	Air Monitoring Data	Other (describe below or on additional pages):
TIME PERIOD OF DOCUMENTS REQUESTED	From: All	To: All

REQUESTED FACILITY INFORMATION (If Applicable)

FACILITY NAME: 100-Acre Property	
FACILITY ADDRESS: APN 0211-281-04-0000 (there is no address associated with the Site parcel)	
CITY: Ontario	STATE: CA ZIP CODE: 91761
FACILITY I.D. NO. (if known):	APPL. AND/OR PERMIT NO. (if known):

Direct cost of duplication: \$.15 per page for paper copies (first 10 pages free) and \$5.00 per copied audio tape. No charge for copied Diskettes or CDs. Transfer of gathered electronic records onto CD or Diskette typically costs \$10.00 each, but costs will vary (see Instructions for Requesting Records).

I wish to inspect the requested records, where applicable, and do not want copies produced at this time.

- I request that the SCAQMD contact me prior to copying the requested records if the cost exceeds \$20.00.
- I would like copies of the requested records and I hereby agree to reimburse the SCAQMD for the direct cost of duplicating the requested records in accordance with Gov. Code Sec. 6253(b).

St Grod

Signature of Requestor

Note: After a preliminary estimate, advance payment may be required.

(Rev. 05/06/2005-lkoenig)



PUBLIC RECORDS REQUEST FORM

PRU Office Use Only
CONTROL NUMBER

ATTENTION REQUESTOR: To expedite your request for District records, please fill out this form completely, and identify specifically the type of records you are requesting. Please limit your request to one facility or one site address for each request form filed, and three requested items per form. Additional forms or pages can be used if requesting information for more than one facility or for records not identified on this form. Requests should reasonably describe identifiable records prepared, owned, used, or retained by the District. Public Records Unit staff is available to assist you in identifying those records in the District's possession. The District is not required by law to create a new record or list from an existing record.

REQUESTOR INFORMATION

NAME: Steven Grod		DATE: 04-06-2006	
COMPANY: Tetra Tech, Inc., Divisions PPG			
MAILING ADDRESS: 17770 Cartwright Road, Suite 500			
CITY: Irvine		STATE: CA	ZIP CODE: 92614
PHONE NUMBER: (949) 608-5910		FAX NUMBER: (949) 608-5980	

REQUESTED RECORDS (3 items per form)

Applications (APPLS)	Complaints	Asbestos Notifications/Records
<input checked="" type="checkbox"/> Permits to Operate (P/O)	<input checked="" type="checkbox"/> Site Inspection Reports (I/R)	Facility Potential to Emit (PTE)
Equipment List Report (EQL)	Emissions Summary	Facility Positive Balance (NSR)
<input checked="" type="checkbox"/> Notices of Violation (NOV)	Source Test Reports (S/T RPTS)	Toxic-Health Risk Assessment (HRA)
Notices to Comply (N/C)	Air Monitoring Data	Other (describe below or on additional pages):
TIME PERIOD OF DOCUMENTS REQUESTED	From: All	To: All

REQUESTED FACILITY INFORMATION (If Applicable)

FACILITY NAME: 100-Acre Property		
FACILITY ADDRESS: APN 0211-281-21-0000 (there is no address associated with the Site parcel)		
CITY: Ontario	STATE: CA	ZIP CODE: 91761
FACILITY I.D. NO. (if known):	APPL. AND/OR PERMIT NO. (if known):	

Direct cost of duplication: \$.15 per page for paper copies (first 10 pages free) and \$5.00 per copied audio tape. No charge for copied Diskettes or CDs. Transfer of gathered electronic records onto CD or Diskette typically costs \$10.00 each, but costs will vary (see Instructions for Requesting Records).

- I wish to inspect the requested records, where applicable, and do not want copies produced at this time.
- I request that the SCAQMD contact me prior to copying the requested records if the cost exceeds \$20.00.
- I would like copies of the requested records and I hereby agree to reimburse the SCAQMD for the direct cost of duplicating the requested records in accordance with Gov. Code Sec. 6253(b).

Signature of Requestor

Note: After a preliminary estimate, advance payment may be required.

(Rev. 05/06/2005-lkoenig)



PUBLIC RECORDS REQUEST FORM

PRU Office Use Only
CONTROL NUMBER

ATTENTION REQUESTOR: To expedite your request for District records, please fill out this form completely, and identify specifically the type of records you are requesting. Please limit your request to one facility or one site address for each request form filed, and three requested items per form. Additional forms or pages can be used if requesting information for more than one facility or for records not identified on this form. Requests should reasonably describe identifiable records prepared, owned, used, or retained by the District. Public Records Unit staff is available to assist you in identifying those records in the District's possession. The District is not required by law to create a new record or list from an existing record.

REQUESTOR INFORMATION

NAME: Steven Grod		DATE: 04-06-2006	
COMPANY: Tetra Tech, Inc., Divisions PPG			
MAILING ADDRESS: 17770 Cartwright Road, Suite 500			
CITY: Irvine		STATE: CA	ZIP CODE: 92614
PHONE NUMBER: (949) 608-5910		FAX NUMBER: (949) 608-5980	

REQUESTED RECORDS (3 items per form)

Applications (APPLS)	Complaints	Asbestos Notifications/Records
<input checked="" type="checkbox"/> Permits to Operate (P/O)	<input checked="" type="checkbox"/> Site Inspection Reports (I/R)	Facility Potential to Emit (PTE)
Equipment List Report (EQL)	Emissions Summary	Facility Positive Balance (NSR)
<input checked="" type="checkbox"/> Notices of Violation (NOV)	Source Test Reports (S/T RPTS)	Toxic-Health Risk Assessment (HRA)
Notices to Comply (N/C)	Air Monitoring Data	Other (describe below or on additional pages):
TIME PERIOD OF DOCUMENTS REQUESTED	From: All	To: All

REQUESTED FACILITY INFORMATION (If Applicable)

FACILITY NAME: 100-Acre Property		
FACILITY ADDRESS: APN 0211-281-23-0000 (there is no address associated with the Site parcel)		
CITY: Ontario	STATE: CA	ZIP CODE: 91761
FACILITY I.D. NO. (if known):	APPL. AND/OR PERMIT NO. (if known):	

Direct cost of duplication: \$.15 per page for paper copies (first 10 pages free) and \$5.00 per copied audio tape. No charge for copied Diskettes or CDs. Transfer of gathered electronic records onto CD or Diskette typically costs \$10.00 each, but costs will vary (see Instructions for Requesting Records).

- I wish to inspect the requested records, where applicable, and do not want copies produced at this time.
- I request that the SCAQMD contact me prior to copying the requested records if the cost exceeds \$20.00.
 - I would like copies of the requested records and I hereby agree to reimburse the SCAQMD for the direct cost of duplicating the requested records in accordance with Gov. Code-Sec. 6253(b).

Signature of Requestor

RETURN TO:
Records Management Department
303 East "B" Street
Ontario, CA 91764
909-395-2009 Phone Number
909-395-2395 Fax Number

3 PAGES
(SEE ATTACHED MAPS)



Public Records Request

The City of Ontario has adopted the following policy statement in compliance with California Government Code Section 6253:

Any person may receive a copy of any identifiable public record not otherwise protected from public disclosure. Upon request, and subject to the appropriate fee, an exact copy shall be provided unless impracticable to do so. Computer data shall be provided in a form determined by the department. City departments upon notification by the City Clerk of any request for a copy of records shall determine within 10 days after the receipt of such request whether it is possible to comply and shall notify the City Clerk's Department in order to notify the requestor of such determination and the reason therefor.

Please complete the following information in order to process your records request:

Date: 4/6/2006 Phone: (949) 608-5910
Name: STEVEN GORD
Address: ONLY 3 PARCEL #S ASSOCIATED w/ SITE:
0211-281-04-0000, 0211-281-21-0000, 0211-281-23-0000

Please describe the records you are seeking as specifically as possible.

FIRE PREVENTION RECORDS: HAZ MAT / HAZ WASTE
STORAGE TANKS
SITE INVESTIGATION / CLEANUP
CONCERNS w/ ADJACENT MILLIKEN
LANDFILL TO THE SOUTH

NOTE: The City Council has directed that a copy fee of \$.15 per page be assessed when responding to records requests. You will be advised of the fee when documents are produced.

It should be noted that draft documents, notes and other working papers are not public record.

Signature 4-6-06

REQUEST TO INSPECT/REPRODUCE PUBLIC RECORDS

County of San Bernardino
Department of Public Health
Division of Environmental Health Services
385 N. Arrowhead Avenue
San Bernardino, CA 92415-0160

OFFICE USE ONLY	
PROGRAM	_____
DATE	_____
PAID \$	_____ # PGS _____
RECEIPT #	_____
REC'D BY	_____

SECTION 1: (TO BE COMPLETED BY REQUESTER)

RECORDS REQUESTED

Establishment Name: UNKNOWN - VACANT (FORMER AG. LAND)
 Location Address: N. OF MILLIKEN LAND FILL (SEE ATTACHED)
 Requester Name: STEVEN GROS
 Requester Address: 17770 CARTWRIGHT ROAD, SUITE 500
IRVINE CA 92614
 Phone #: OPTIONAL (949) 608-5910
 (to notify when copies/file are ready)

Case/File Number: _____ Inspector _____
 (if known) (if known)

(NOTE: EACH REQUESTER AND/OR FILE MUST HAVE A SEPARATE FORM COMPLETED.)

Time frame of information requested: (m./yr) From _____ To _____
 From _____ To _____
 From _____ To _____

ALL

Specific Information Requested (FILE OR REPORT TYPE OR NAME): _____

RECORDS FOR SEPTIC SYSTEMS AND WATER WELLS.

PLEASE CALL PRIOR TO MAKING COPIES w/ COST.

RETURN TO:

Records Management Department
303 East "B" Street
Ontario, CA 91764
909-395-2009 Phone Number
909-395-2395 Fax Number



Public Records Request

The City of Ontario has adopted the following policy statement in compliance with California Government Code Section 6253:

Any person may receive a copy of any identifiable public record not otherwise protected from public disclosure. Upon request, and subject to the appropriate fee, an exact copy shall be provided unless impracticable to do so. Computer data shall be provided in a form determined by the department. City departments upon notification by the City Clerk of any request for a copy of records shall determine within 10 days after the receipt of such request whether it is possible to comply and shall notify the City Clerk's Department in order to notify the requestor of such determination and the reason therefor.

Please complete the following information in order to process your records request:

Date: 4/25/2006 Phone: (949) 608-5910
Name: STEVEN GROD
Address: 3551 EAST FRANCES STREET

Please describe the records you are seeking as *specifically* as possible.

FIRE DEPARTMENT INFORMATION PERTAINING TO A
SPILL OF PCE TO A STORM DRAIN IN 2000.

SEE ATTACHED FROM FEDERAL/STATE AGENCY
DATABASE REPORT

NOTE: The City Council has directed that a copy fee of \$.15 per page be assessed when responding to records requests. You will be advised of the fee when documents are produced.

It should be noted that draft documents, notes and other working papers are not public record.

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
 EPA ID Number

BRIDGESTONE FIRESTONE (Continued)

S106112229

Expiration Date: 12/31/2005
 Region: SAN BERNARDINO

 Facility ID: FA0007810
 Facility Status: ACTIVE
 Permit Category: HAZMAT HANDLER 0-10 EMPLOYEES (W/GEN PRMT)
 Permit Number: PT0014090
 Expiration Date: 12/31/2005
 Region: SAN BERNARDINO

Facility ID: FA0007810
 Facility Status: ACTIVE
 Permit Category: SPECIAL GENERATOR(B)
 Permit Number: PT0016201
 Expiration Date: 12/31/2005
 Region: SAN BERNARDINO

13
 WSW
 1/4-1/2
 2284 ft.

3551 EAST FRANCIS
 ONTARIO, CA 90050

CHMIRS S105666964
 N/A

Relative:
 Lower

CHMIRS:
 OES Control Number: 00-2803
 Extent of Release: Not reported
 Property Use: Not reported
 Incident Date: Not reported
Date Completed: Not reported
 Time Completed : Not reported
 Agency Id Number : Not reported
 Agency Incident Number : Not reported
 OES Incident Number : 00-2803
 Time Notified : Not reported
 Surrounding Area : Not reported
 Estimated Temperature : Not reported
 Property Management : Not reported
 More Than Two Substances Involved? : Not reported
 Special Studies 1 : Not reported
 Special Studies 2 : Not reported
 Special Studies 3 : Not reported
 Special Studies 4 : Not reported
 Special Studies 5 : Not reported
 Special Studies 6 : Not reported
 Resp Agency Personnel # Of Decontaminated : Not reported
 Others Number Of Decontaminated : Not reported
 Others Number Of Injuries : Not reported
 Others Number Of Fatalities : Not reported
 Vehicle Make/year : Not reported
 Vehicle License Number : Not reported
 Vehicle State : Not reported
 Vehicle Id Number : Not reported
 CA/DOT/PUC/ICC Number : Not reported
 Company Name : Not reported
 Reporting Officer Name/ID : Not reported
 Report Date : Not reported
 Comments : Not reported
 Facility Telephone Number : Not reported
 Waterway Involved : Yes
 Waterway : Storm Drain

Actual:
 870 ft.

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
 EPA ID Number

(Continued)

S105666964

Spill Site :	Not reported
Cleanup By :	Contractor
Containment :	Not reported
What Happened :	Not reported
Type :	Not reported
Other :	Not reported
Substance :	Tertachlorethelene
Quantity Released :	
E Date :	Not reported
Contained :	No
Site Type :	Road
Evacuations :	0
Num Of Injuries :	0
Num Of Fatalities :	0
Date/Time :	Not reported
Year :	2000
Agency :	Ontario FD
BBLS :	0
Cups :	0
CUFT :	0
Gallons :	250
Grams :	0
Pounds :	0
Liters :	0
Ounces :	0
Pints :	0
Quarts :	0
Sheen :	0
Tons :	0
Unknown :	0
Description :	Illegal Dump
Incident date :	6/23/200012:00:00 AM
Admin Agency :	Not reported
OES date :	Not reported
OES time :	Not reported
OES notification :	6/23/200010:49:55 AM
Amount :	Not reported

D14 SKECHERS USA, INC
 South 4100 E MISSION AVE
 1/4-1/2 ONTARIO, CA 91761
 2335 ft.

HAZNET S105790454
 San Bern. Co. Permit N/A

Site 1 of 2 in cluster D

Relative:
 Lower

HAZNET:
 Gepaid: CAL000265145
 TSD EPA ID: CAT080013352
 Gen County: San Bernardino
 Tsd County: San Bernardino
 Tons: 0.04
 Facility Address 2: Not reported
 Waste Category: Waste oil and mixed oil
 Disposal Method: Recycler
 Contact: MICKEY GRIFFIN EXT 2671
 Telephone: (909) 390-1600
 Mailing Name: Not reported
 Mailing Address: 1777 S VINTAGE AVE
 ONTARIO, CA 91761
 County San Bernardino

Actual:
 851 ft.

APPENDIX F
RESUMES

STEVEN GROD

Project Manager, Private Practice Group

Tetra Tech, Inc. – Division PPG

EDUCATION/SPECIAL TRAINING

B.S. Oceanography – Humboldt State University – Arcata, CA

REGISTRATIONS/CERTIFICATIONS

Registered Environmental Assessor #07806

OSHA 40-Hour HAZWOPER Training (29 CFR 1910.120)

AHERA-certified Building Inspector

QUALIFICATIONS

Mr. Grod has over 10 years of experience in the conduct of environmental studies in the United States. This experience includes soil and groundwater characterization; property transfer evaluation of individual residential, commercial, and industrial properties and portfolios primarily across the western United States.

Currently, Mr. Grod serves as a Project Manager of Tetra Tech Inc.'s Irvine, California office. As Project Manager, Mr. Grod is responsible for performing and/or overseeing or supervising environmental assessments, environmental sampling, compliance audits, regulatory records research and review, subsurface investigations, and preparation of AutoCAD-based drawings.

Previously, Mr. Grod held similar positions in California with Vertex Engineering Services, Inc. and at ATEC Environmental Consultants (ATEC) and ATC Associates Inc. (ATC), which acquired ATEC in 1996.

RELEVANT EXPERIENCE SUMMARY

- Managed and performed Phase I environmental site assessments for various types of properties including residential, commercial, industrial, manufacturing, and oil field properties. Specific property types have included multi-tenant shopping centers, high-rise office buildings, dry cleaners, gasoline/service stations, metal and powder coating, wire manufacturing, injection molding, medical and biological research and development, aerospace and computer parts manufacturing, etc.
- Performed Phase I environmental site assessments and NEPA studies for the wireless telecommunications industry.
- Assisted with oversight of soil borings and groundwater monitoring well installations, and performing soils and groundwater sampling.

- Performed reviews/searches of regulatory records for legislation regarding hazardous materials use, hazardous materials and waste storage, and hazardous waste disposal; and conducted environmental compliance audits at industrial and commercial facilities.
- Assisted with preparation of compliance documentation (Hazardous Materials Business Plans and Spill Prevention, Control, and Countermeasures Plans).
- Performed AHERA, modified AHERA, and comprehensive Asbestos Surveys in residential, commercial and industrial buildings.
- Performed modified HUD lead-based paint sampling utilizing wipe sampling and chip sampling techniques.
- Assisted with lead-based paint surveys using gamma ray spectrometer.
- Performed radon gas and lead in drinking water sampling surveys.

EMPLOYMENT HISTORY

2005 – Present	Tetra Tech, Inc. – Division PPG Irvine, CA
2003 – 2005	Vertex Engineering Services, Inc. Patchogue, NY 11772
1996 – 2003	ATC Associates Inc. (ATC) Tustin, CA
1991 – 1996	ATEC Environmental Consultants (ATEC) Newport Beach, CA
1984 – 1991	Orange County Marine Institute Dana Point, CA

PROFESSIONAL REFERENCES

Furnished upon request

STEPHANIE J. PACHECO

Senior Soil Scientist

Tetra Tech, Inc.-San Bernardino

EDUCATION/SPECIAL TRAINING

M.S., Soil Science, University of California, Riverside, 1989

B.S., Environmental Resources in Agriculture, Arizona State University, Tempe, 1985

Certification, Jurisdictional Delineation of Wetlands, University of California, Berkeley Extension, 1996

40-hour Occupational Safety and Health Administration (OSHA) Hazardous Waste Health and Safety Training, 1991

8-hour Update for OSHA Hazardous Waste Health and Safety Training, Current

QUALIFICATIONS

Ms. Pacheco is a soil scientist who specializes in wetlands delineations and in understanding the role that biotic and abiotic parameters may have on soils. In her capacity as a soil scientist, Ms. Pacheco has performed wetland delineations using U.S Army Corps of Engineers and California Coastal Commission criteria. In her capacity as a soil scientist, Ms. Pacheco has written and processed permit applications associated with Section 404/401 of the Clean Water Act and Sections 1600-1603 et. seq of the California Department of Fish and Game code for a number of private sector clients. She has also provided technical support for various environmental impact statements and reports by evaluating potential project impacts to soil resources. In this capacity, she has provided technical analysis of project impacts to the erosion potential from wind and water to soils associated with the project location. These analyses also included the evaluation of project impacts to potential prime farmlands. As well as technical support, Ms. Pacheco has served as a project manager for a large environmental impact statement analysis project. In this capacity, she provided project oversight as well as technical review of the potential environmental impacts that may result from the construction of a levee structure and replacement of a bridge in an environmentally sensitive riparian habitat.

Additionally, with her experience as a horticultural and soil scientist, Ms. Pacheco currently is leading a series of investigations on desert cymopterus (*Cymopterus deserticola*) populations both on Edwards Air Force Base, California and in off-base areas within the Western Mojave Desert. Desert cymopterus is a California Species of Concern and is under review by the United States Fish and Wildlife Service (USFWS) for possible listing as a threatened and endangered species. Additionally, Ms. Pacheco has performed wetland delineations using U.S Army Corps of Engineers and California Coastal Commission criteria. She has also provided technical support for various environmental impact statements and reports by evaluating potential project impacts to soil resources. In this capacity, she has provided technical analysis of project impacts to the erosion potential from wind and water to soils associated with the project location. These analyses also included the evaluation of project impacts to potential prime farmlands.

RELEVANT EXPERIENCE

Wetland Delineations/Biological Resources

- **Individual Permit/Water Quality Certification/Streambed Alteration Agreement, Pacific Communities Builders Development, Victorville, California.** Conducted a jurisdictional delineation of a tributary of the Mojave River, and subsequent 404/401 and 1600 et. seq permitting for a 258 acre development in Victorville, California. Mitigation for loss of jurisdictional waters

negotiated with the U.S. Army Corps of Engineers and the Regional Water Quality Control Board-Lahontan District. Mitigation for loss of burrowing owl (*Athene cunicularia*) habitat was negotiated with the California Department of Fish and Game.

- **Use of Nationwide Permits/Water Quality Certification Waiver/Streambed Alteration Agreement for Wind Energy Conversion System (WECS) Project, Palm Springs, California.** Completed permitting applications to satisfy Section 404/401 of the Clean Water Act and 1600 et. seq of the California Department of Fish and Game Code for wind energy projects in the Palm Springs area. Negotiations with U.S. Army Corps of Engineers, Regional Water Quality Control Board-Colorado River Basin Region and the California Department of Fish and Game was completed for this project as well as informal consultation for Coachella milk vetch (*Astragalus lentiginosus* var. *coachellae*).
- **Phase I: Population Study of Desert Cymopterus (*Cymopterus deserticola*) at Edwards Air Force Base, California.** Project manager for a population study of desert cymopterus at two known populations on Edwards AFB. The population study was performed to determine population viability and environmental constraints of this plant. Provided project design and implementation as well as project management for this phase of investigations associated with desert cymopterus
- **Off-Base Survey for Desert Cymopterus (*Cymopterus deserticola*) Populations in Portions of the Western Mojave Desert, California.** Project manager for off-base surveys of desert cymopterus with the western Mojave Desert. Designed and lead the off-base survey teams during the survey. Surveys were performed within a 30-mile distance of Edwards AFB for populations of desert cymopterus.
- **Phase II: Reproductive Study of Desert Cymopterus (*Cymopterus deserticola*) at Edwards Air Force Base.** Project manager for a study of the environmental and biological elements that may contribute to the reproductive success of desert cymopterus at two previously studied sites. Provided project design and implementation as well as project management for this phase of investigations associated with desert cymopterus.
- **Wetland Delineation of Sand Creek, San Bernardino County for the San Manuel Band of Serrano Mission Indians.** Delineated a portion of Sand Creek for three point criteria as per the U.S. Army Corps of Engineers 1987 criteria. Determined those portions of Sand Creek that were jurisdictional wetlands and Waters of the United States. Prepared a technical report with findings of that delineation.
- **Biological Monitoring during Drilling Program, Mission Basin, San Luis Rey River, San Diego County, California.** Provided biological monitoring during exploratory drilling program in support of Mission Basin Groundwater Storage and Recovery Feasibility Study. As per negotiated terms in Streambed Alteration Agreement between the San Diego County Water Authority and the California Department of Fish and Game, monitoring ensured that minimal impacts to site specific riparian habitat occurred during a major exploratory drilling program. Monitoring included conducting Tailgate meetings to inform all staff of federal and state listed sensitive species found in the project area as well as determining the least intrusive access to proposed drilling sites. Provided summary reports to the San Diego County Water Authority of monitoring activities.
- **Wetland Delineation of Unlined Drainage, Riverside County for March Air Reserve Base.** Delineated an unlined drainage parallel to Cactus Avenue and Heacock Avenue as associated with March Air Reserve Base in Riverside County for jurisdictional wetlands and Waters of the United

States using U.S. Army Corps of Engineers 1987 criteria. Prepared a technical report with findings of that delineation.

Environmental Impact Statements/Environmental Impact Reports/Planning Studies

- **Initial Study for Gas Collection System, Victorville Sanitary Landfill, San Bernardino County.** In support of the installation of a gas collection system to include a flare station for the County of San Bernardino Solid Waste Management System, prepared an Initial Study in compliance with the California Environmental Quality Act (CEQA). Results of analysis allowed for the preparation of a Mitigated Negative Declaration for the Project.
- **Environmental Assessment for the Morongo Valley Uranium Treatment Demonstration Project, Morongo Valley California.** Prepared an EA to support the County of San Bernardino Special Districts Department in analyzing environmental consequences of a proposed treatment system to remove naturally occurring uranium from potential drinking water. This was a demonstration project to determine the feasibility of using this type of system for other drinking water sources containing naturally occurring uranium found in the county.
- **Environmental Assessment for the San Bernardino Regional Emergency Training Center at the San Bernardino Airport, San Bernardino, California.** Prepared an EA to evaluate the potential environmental impacts from a proposed emergency training facility at the San Bernardino Airport. This EA analyzed potential impacts to the environment and included a Department of Transportation Section 4(f) analysis
- **National Environmental Policy Act (NEPA) Assessments.** Primary author for NEPA site assessments for Verizon Wireless Communication. Ensured that NEPA site assessments were compliant with the National Environmental Policy Act of 1969. NEPA site assessments were performed on sites located in Arizona and Southern California.
- **Initial Study for Rowland Water District, Los Angeles County.** In compliance with the California Environmental Quality Act (CEQA), performed an Initial Study for a potable water pipeline project on behalf of the Rowland Water District. As part of the Initial Study, prepared a Mitigated Negative Declaration for the project.
- **Initial Study for a Sewer Line Installation, City of Santa Clarita, Los Angeles County.** Provided technical support and project management for an Initial Study conducted on a proposed sewer line installation project for the City of Santa Clarita. The City of Santa Clarita proposed to construct a mainline sewer to service the Placerita Canyon area. Environmental impacts considered in this analysis included evaluation of the presence of heritage oak trees and growth inducement impacts to the region from the project.
- **Project Manager for the Santa Margarita River Flood Control Project Environmental Impact Statement and Clean Water Act Section 404 Analysis.** Provided project coordination and technical review for the EIS and Section 404 permit application for a proposed levee, storm water management system, and bridge replacement. Ms. Pacheco also reviewed previously determined Biological Agreements and Biological Opinions specific to the proposed project area for potential environmental impacts to sensitive riparian habitats as well as threatened and endangered species. The project was proposed to prevent property damage and disruption of essential operations at Marine Corps Base, Camp Pendleton, California.

- **Analysis of Soil Resources for an Environmental Impact Report (EIR)/(EIS), Broadwell Basin Residuals Repository.** Analyzed soil criteria for the location of a hazardous waste facility in the Broadwell Playa in an EIR/EIS prepared for San Bernardino County. Wind and water erosion potentials were assessed, as well as engineering properties of soils associated with a playa environment.

- **Analysis Soil Resources for Project Impacts Associated with the U.S. AFB Closure and Realignment Support Contract EIS Process.** Contract involved planning, organizing, and control of simultaneous environmental activities and their impact to soil resources at various locations throughout the country. Four EISs were prepared in a 9-month period. The EISs addressed the full spectrum of resource area impacts. Work included preparation of program plans, impact methodology documents for the assessment of wind and water erosion, impact statements, and technical supporting reports. Included siting and planning support studies, mission compatibility analyses, and preparation of mitigation planning studies.

PROFESSIONAL ORGANIZATIONS/ASSOCIATIONS

Soil Science Society of America, American Society of Agronomy

JON R. LOVEGREEN, CPGS, CEG, RG, REA

Manager, Private Practice Group

Tetra Tech, Inc. – Division PPG

EDUCATION/SPECIAL TRAINING

M.A. Geology and Marine Geology – Columbia University – New York, NY

B.S. Geology – University of Southern California – Los Angeles, CA

A.Sci. Sciences – Reedley Community College – Reedley, CA

REGISTRATIONS/CERTIFICATIONS

Certified Professional Geological Scientist (CPGS), American Institute of Professional Geologists (#4379)

Certified Engineering Geologist (CEG), California (#1164)

Registered Geologist (RG), California (#3726)

Registered Environmental Assessor (REA), California, (#00032)

40 Hour OSHA Training

QUALIFICATIONS

Mr. Lovegreen has over 30 years of experience in the conduct of engineering geology and environmental studies worldwide. This experience includes soil and groundwater characterization and soil remediation design; property transfer evaluation of individual residential, commercial, and industrial properties and portfolios across the western United States; conceptual remedial cost evaluations for environmentally impaired properties; the design and implementation of investigations and remedial activities at State/Local-regulated sites within and outside of regional National Priority List (NPS) (Superfund) sites; and the conduct of seismic geology studies for proposed nuclear power plants, hydroelectric projects and high-rise office buildings in the U.S., Asia, Latin America, and the Middle East.

Currently, Mr. Lovegreen serves as the Manager of Tetra Tech, Inc.'s Private Practice Group (PPG) located in Irvine, California. Mr. Lovegreen is responsible for senior review and consulting on environmental assessment, remediation, construction, surety, mold, and development projects in Southern California and the western United States. His responsibilities include: regulatory negotiations, soil and groundwater field studies; the development of site conceptual remediation models; the development and performance of remedial investigations, feasibility studies, human health risk characterizations and remedial designs.

Previously, Mr. Lovegreen served as the Division and District Manager of Vertex Engineering Service Inc.'s Southern California office while Vertex was a Tetra Tech, Inc. company. During the 1970s and 1980s he held technical and management positions at Woodward-Clyde Consultants in New Jersey and California and subsequently was a co-founder of Applied Geosciences Inc. (later acquired by ATC Associates Inc.) in Southern California.

RELEVANT EXPERIENCE SUMMARY

- Management of environmental investigations and remediation of brownfield (industrial) sites at numerous locations in Southern California and the San Francisco Bay area for developers, property owners, and financial institutions.
- Conduct, management, and/or technical review of thousands of Phase I environmental site assessments (ESAs) and Phase II subsurface investigations since the mid-1980s for real estate transactions at numerous manufacturing, industrial, commercial, and residential properties across the western United States.
- Oversight of UST removals and submitted documentation supporting no further action at numerous locations throughout California.
- Development and implementation of environmental due diligence methodology in the mid-1980s.
- Technical oversight of two VES demonstration/research sites with a major oil company in southern California in the mid-to-late 1980s.
- Management of the initial characterization and remediation in the early 1980s of chlorinated solvents that had impacted soil and groundwater at a semi-conductor manufacturing facility in Southern California. Remediation was initiated by the design and installation of one of the first vapor extractions systems (VES).
- Technical peer review of the soil characterization and remediation of a former tire manufacturing facility in Southern California. Following completion of asbestos abatement and demolition of the facility the site was redeveloped with a hotel, office building, and discount outlet shopping center. Remediation activities included mothballing the VES while the site was developed and subsequent reinstallation of the VES treatment unit and return of the VES to operation.
- Characterization and remediation of an 80-acre former steel plant in southern California. Following characterization and limited remediation of soil with metals'-impacted slag, the site was redeveloped as the U.S. headquarters of a multi-national corporation.
- Corporate oversight during the conduct of a multi-year soil and groundwater characterization of a semi-conductor facility in the Santa Clara Valley of California where chlorinated solvents had impacted soil and groundwater. Soil remediation was subsequently undertaken and the site was sold.
- Evaluation of the extent of petroleum product in the subsurface at a pipeline facility and the design, installation, and operation of a recovery system for the 20-acre plume of free-phase petroleum product.

- Design of a leak detection and monitoring program for 115 underground storage tanks (USTs) and sumps at two aerospace facilities.
- Management of the groundwater remediation of a 30,000-gallon release of diesel fuel utilizing a cutoff trench with skimmer and pump-and-treat technology at a trucking facility in Omaha, Nebraska. Free-phase diesel fuel had reached a large-diameter storm water sewer with the potential to migrate to the Missouri River.
- Technical peer review of a Phase I ESA for a 105,000-acre property in Arizona.
- Project manager and client liaison for the technical review of mold mitigation measures at two multi-unit apartment complexes with construction defects in central California.
- Characterization and remediation of oil field properties to facilitate redevelopment as commercial and/or industrial properties. These services included addressing petroleum hydrocarbon- and chlorinated solvent-impacted soil and groundwater, abandonment of oil wells, risk assessments, and methane gas mitigation measures design.
- Technical peer review of a RCRA Part B site characterization for a chemical facility in southern California with multiple site mitigation units (Sums). Soil remediation using a VES was designed and implemented. The work was conducted under the regulatory oversight of the State of California Department of Toxic Substances Control (DTSC).
- From the 1970s to early 1980s numerous active fault, reservoir-induced seismicity, and other engineering geology investigations were managed and/or conducted by Mr. Lovegreen worldwide. These were conducted or managed for proposed hydroelectric projects, nuclear and fossil power plants, tunnels, and high-rise commercial buildings. In the United States, the investigations were conducted in New York, South Carolina, Pennsylvania, Ohio, California, Nevada, Utah, and Alaska. Internationally these investigations took place in South Korea, Argentina, Egypt, Iran, India, and Greece.

PROFESSIONAL ORGANIZATIONS/ASSOCIATIONS

Member, American Institute of Professional Geoscientists (AIPG)

Associate Member, Environmental Bankers Association (EBA)

Associate Member, Los Angeles County Bar Association

Member, Industrial Environmental Council of Orange County (IECOC)

Member, San Diego Environmental Professionals (Formerly AHMP)

PUBLICATIONS

Mr. Lovegreen has authored or co-authored a number of publications in the fields of hazardous materials, petroleum hydrocarbon investigation and remediation, fault studies, reservoir-induced seismicity, and remote sensing. A list of appropriate publications can be provided upon request.

EMPLOYMENT HISTORY

1968 to 1970 James E. Slosson & Associates, Inc. (part time)
1970 to 1972 Tony Raamat & Associates, Inc. (part time)
1972 to 1985 Woodward-Clyde Consultants – Staff Geologist to Project Manager
1985 to 1996 Applied Geosciences, Inc. - Founder
1996 to 2002 ATC Associates, Inc. - Director, Technical Services
2003 to 2005 Vertex, a Tetra Tech, Inc. company – Division & District Manager
2005 to Present Tetra Tech, Inc. – Manager, PPG

PROFESSIONAL REFERENCES

Mr. Richard Belyea, Comerica Bank
Mr. Greg Chila, The O'Donnell Group, Inc.
Mr. Shawn Hardy, Archon Group, L.P.
Mr. James Kennedy, J.P. Morgan Investment Management
Roger Holt, Esq., Greenberg, Glusker, et. al.
Laurence Hummer, Esq.