
SOIL-GAS INVESTIGATION

225 East Broadway
Glendale, California

Prepared for

GLENDALE REDEVELOPMENT AGENCY

633 East Broadway, Room 201
Glendale, California 91206-4387

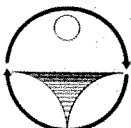
Prepared by

EP ASSOCIATES

126 South Jackson Street, Suite 304
Glendale, California 91205

Project Number 10900102

December 26, 1997



EP ASSOCIATES

ENVIRONMENTAL
PROFESSIONALS
ASSOCIATES

126 S. Jackson, Suite 304 • Glendale, CA 91205

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Stephen J. Stone

Stephen J. Stone

Environmental Specialist

Vahan Hoonanian

Vahan Hoonanian, Principal

Registered Environmental Assessor #2544

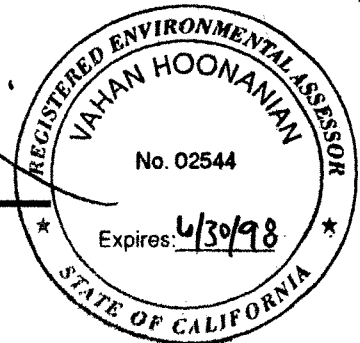


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1.0 INTRODUCTION

On December 12, 1997, Environmental Professionals Associates (EP Associates) was retained by Glendale Redevelopment Agency to perform a soil-gas investigation for the property located at 225 East Broadway, Glendale, California (Figure 1). The purpose of this investigation was to assess whether shallow subsurface soils near the subject property have been impacted by halogenated and aromatic volatile organic compounds (VOCs). The investigation was performed in accordance with the guidelines established by the California Environmental Protection Agency-California Regional Water Quality Control Board-Los Angeles Region (LARWQCB) (LARWQCB, 1997).

2.0 BACKGROUND

In November 1997, EP Associates conducted a Phase I Environmental Site Assessment for the subject property. The purpose of EP Associates' investigation was to identify any potential environmental impairment and liability that the subject property might have received as a result of historical storage or usage of hazardous substances or petroleum products at the subject property and at nearby properties. EP Associates discovered that a gasoline and oil station as well as a dry cleaning business historically operated at the present location of subject property. EP Associates also discovered that the property on which the U.S. Post Office, located on the east of the subject property, across North Louise Street, and International Motors, a used car dealership located south of the subject property across East Broadway, were formerly used as gasoline stations.

3.0 SCOPE OF WORK

The scope of work for the soil-gas investigation consisted of the following:

- Collect and analyze onsite soil-gas samples from selected depths at six soil-gas probe locations (SG1 through SG6) situated on two alleys located north and west of the subject property
- Evaluate the data obtained during the soil-gas investigation
- Prepare a report identifying the findings

4.0 SUBJECT PROPERTY AND VICINITY DESCRIPTION

The subject property is located within the historical commercial district and the redevelopment area of the City of Glendale. It is bounded by an alley and a two-story apartment building on the north, North Louise Street and a U.S. Post Office on the east, East Broadway and retail businesses on the south, and an alley and retail businesses on the west.

The subject property measures 150 feet by 120 feet and is comprised of three lots (Lots 1, 2, and 3, from east to west). In the mid-1950's, a three-story building with a basement was built on Lot 3 (west building). Subsequently, a second building was constructed on Lots 1 and 2 (east building). The east building also consists of three stories and a basement. The west building and the east building have since been interconnected to form a single building. The interconnected building on Lots 1, 2, and 3 occupies the entire subject property.

The subject property has been leased and occupied by the Los Angeles County Department of Public Social Services (LACDPSS) since 1979. From the mid-1950's to the late 1970's, the building was used as a bank and office by Fidelity Federal Savings and Loan Association.

Based on the records reviewed by EP Associates, in 1919, a gasoline and oil station operated at the northwest corner of Lot 3. A dry cleaning business operated on Lot 2 from at least 1925 to 1949. Approximate locations of these businesses are shown on Figure 2. A permit record obtained from the City of Glendale Environmental Management Center indicates that M. R. Gabbert, a contractor, was permitted by the city on March 1, 1954, to sand fill three small underground storage tanks at 221 East Broadway. This address corresponds to that of Lot 2 of the subject property. There are no records indicating whether or not the tanks were later removed from the subject property. However, the tanks were most likely removed from the subject property during the construction of the existing building. This assumption is based on the fact that constructing the existing basement would have required the excavation and removal of soils to a depth of approximately 15 feet below the existing ground surface.

The property south of the subject property, across from East Broadway, is currently occupied by International Motors, a used car dealership, as well as retail businesses. The property on which International Motors is currently located was formerly used as a gasoline station (Preacher's Auto Beauty). The U. S. Post Office property, located on the east across North Louise Street, was earlier used as a gasoline station and automotive repair shop.

The nearest property with a registered underground storage tank is Mann Theaters located in the Glendale Exchange, approximately 200 feet north of the subject property. The tank capacity is 100 gallons, and it is used for storage of diesel fuel for an emergency generator.

5.0 HYDROGEOLOGY

The subject property is situated approximately 1.5 miles east of the Los Angeles River. The Los Angeles River flows south-southwestward in the area of the subject property. The subject property is located approximately 1 mile south of the Verdugo Wash.

The subject property is located in the southeastern region of the San Fernando Valley Ground Water Basin (SFVB) (ULARA Watermaster, 1996). The SFVB is one of four basins within the

Upper Los Angeles River Area (ULARA Watermaster, 1996). The basin in the area of the subject property is bounded to the north and east by the Verdugo Mountains, and to the south by the Santa Monica Mountains.

Ground water beneath the subject property occurs in alluvial deposits of the southeastern portion of the SFVB (DWP, 1983). The alluvial deposits consist primarily of sands and gravels with localized and interbedded lenses of silt and clays. The alluvium overlies sandstones and conglomerates of the Topanga Formation (DWP, 1983).

Records of ground-water conditions in the general vicinity were reviewed at the Los Angeles County Department of Public Works, Hydrogeologic Records Division to obtain groundwater depth near the subject property. The nearest water well to the subject property is Observation Well 3945C, owned by the Los Angeles County Department of Water and Power. The well is located near the intersection of South Louise Street and Elk Avenue, approximately 1,800 feet south of the subject property. Ground water in this well was at a depth of 91 feet below the ground surface, as last measured on May 23, 1996.

Depth to ground water in monitoring wells installed at the Mobil Service Station #11-GHW (approximately 1,700 feet southeast of the subject property), (Frey, 1992) and a former Chevron Station, located at 201 north Central Avenue (approximately 1,800 feet northwest of the subject property) (RESNA, 1992), was reported at approximately 100 feet below the ground surface.

In December 1997, Law/Crandall Inc. observed installation of several caissons at the future site of the Circuit City, located approximately 100 feet southwest of the subject property across East Broadway. The caissons were drilled to a depth of approximately 50 feet below the ground surface. During an EP Associates' interview with Mr. Steve Conway of Law/Crandall, Inc. on December 17, 1997, Mr. Conway revealed that ground water was not encountered in the caissons. P

Based on the information reviewed by EP Associates, ground water beneath the subject property is expected to be at a depth of approximately 100 feet below the ground surface. P

General ground-water flow direction for the shallow aquifer in this area is to the southwest (ULARA, 1996).

6.0 SOIL-GAS INVESTIGATION

6.1 Sampling Locations

Prior to conducting the soil-gas investigation, Goldak, a geophysical survey company in Glendale, California, cleared the subsurface utilities. Soil-gas Probes SG1, SG5, and SG6 were located along the west alley. Soil-gas Probes SG2, SG3, and SG4 were located along the north

alley. The soil-gas probe locations are shown on Figure 2.

The identification numbers for the soil-gas sampling locations and corresponding sampling depths are identified below.

LOCATION ID	DEPTH (FEET)
SG1	10, 20, and 25
SG2	5, 10, 15, 20, and 25
SG3	10, 20, and 24
SG4	10, 20, and 24
SG5	10, 16, and 23
SG6	10 and 20

6.2 Field Sampling Procedures

The soil-gas investigation was conducted by American Analytics, Chatsworth California, under a subcontract agreement with EP Associates. American Analytics is approved by LARWQCB for performing soil-gas investigations. American Analytics utilized a Geoprobe sampling equipment to drive the sampling probes and collect the soil-gas samples.

At each sampling location, a 1¼-inch outside diameter (OD) carbon-steel probe rod was driven to the target depth. The sampling depths varied depending upon the density of the subsurface soils. The Geoprobe sampling equipment is capable of penetrating 50 to 60 feet below the ground surface through soft formations and in the absence of subsurface obstructions. However, the maximum depth penetrated by the equipment during this investigation was 25 feet below the ground surface.

EP Associates' initial scope of work for each sampling location was to collect soil-gas samples at a depth of 10 feet below the ground surface and at depth intervals of 10-feet thereafter, to the maximum depth that the equipment could penetrate. Soil-gas Probe SG2 was located nearest to the former location of the service station and was therefore sampled at depth intervals of 5 feet. At the location Soil-gas Probe SG5, the Geoprobe equipment could not penetrate below a depth of 16 feet because of subsurface conditions. A sample was collected at that depth. Consequently, in order to obtain a sample at a greater depth, American Analytics drove another hole a few inches south of Soil-gas Probe SG5 and collected a sample at a depth of 23 feet below the ground surface, the maximum depth to which the equipment could penetrate.

The soil-gas samples were collected through 0.25-inch OD continuous and expendable polyethylene tubing that was advanced into the ground through the probe rod. Precleaned probe rods were used at each sampling location in order to prevent possible cross contamination. The probe rod is designed such that the ambient air around the tube in the annular space between the probe rod and tube is not in contact with the tip of the probe rod. The probe rod was driven to the target depth using a hydraulically-operated impact hammer and then withdrawn approximately 1 inch, leaving the expendable drop-off drive tip in place. The drop-off tip and probe rod couplings were of the same diameter to ensure a proper seal between the formation and the sampling assembly. All sampling probe rods appeared to fit tightly in the sampling holes, thus not requiring the holes to be sealed with wet bentonite.

Prior to collecting each sample, the sampling tube was purged by extracting 100 milliliter (ml) of soil gas per every 5 linear feet of tubing.

The sampling tubes were purged using a vacuum pump circuit. This instrument was equipped with a mechanism to seal each sampling tube prior to and after purging and collecting each sample. This prevented possible intrusion of ambient air into the tube and subsequent dilution of the soil gas present in the tube. All samples were collected for analysis under a zero-vacuum condition.

The soil-gas samples were collected by an American Analytics' field technician. Samples were collected in a 25 ml gas-tight syringe and submitted to the on-site mobile laboratory technician for analysis. A chain-of-custody record showing the sample identification number and time received was completed on site by American Analytics and EP Associates. The chain-of-custody record is included in the Appendix.

Upon completion of sampling, the probe rods were removed and the holes were filled with bentonite chips and tap water. The upper few inches of each hole was filled with asphalt that was compacted in place using a hammer.

6.3 Field Analytical Procedures

Nineteen soil-gas samples were collected and analyzed at American Analytics' mobile laboratory. The samples were injected through an O.I. Model 4560 purge and trap system into a laboratory-grade Hewlett-Packard 5890 Series II gas chromatograph (GC) equipped with an O.I. photoionization detector Model 4430 and an O.I. Hall (ELCD) Model 5220 in series. The results were quantified using a PC-based GC data acquisition system equipped with Turbochrom Perkin-Elmer/Nelson software. The soil-gas samples were analyzed for halogenated VOCs and aromatic hydrocarbons using the method specified in the LARWQCB guidelines.

The analytical results are presented in the table.

6.4 Instrument Calibration and Quality Control Sample Analysis

To optimize the quality of the measurement data, American Analytics performed an initial calibration of the GC instrument with a National Institute of Science and Technology-traceable standard as well as a method blank at the beginning of the day. A daily mid-point calibration verification of the GC was also performed. In addition, upon completion of all sample analyses, a laboratory control sample consisting of a different source than that of the initial and mid-point calibration source was analyzed.

The response factor, standard lot ID numbers, calculated peak areas, and additional relevant data are presented in the Appendix.

7.0 FINDINGS AND CONCLUSIONS

Results of the soil-gas sampling performed near the subject property indicate that halogenated and aromatic hydrocarbons were not detected at or above their laboratory detection limits at the locations sampled. EP Associates' concludes that it is highly unlikely that shallow subsurface soils at or near the subject property are impacted by aromatic or halogenated hydrocarbons.

8.0 RECOMMENDATION

Based on the findings and conclusions noted in this report, EP Associates recommends no further subsurface investigation be performed for environmental site characterization purposes at the subject property at this time.

REFERENCES

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DWR, 1990. *Planned Utilization of the Ground Water Basins of the Coastal Plain of Los Angeles County*, Appendix A, Ground Water Geology, Bulletin No. 104., California Department of Water Resources, June 1961, reprinted 1990.

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RESNA, 1992. *Report Subsurface Environmental Investigation at Former Chevron Station 9-3848, 201 North Central Avenue, Glendale, California*, RESNA, Job 29078-4, November 6, 1992.

ULARA, 1996. *Watermaster Service in the Upper Los Angeles River Area Los Angeles County, Groundwater Contours*, Upper Los Angeles River Area Watermaster, May 1996.

TABLE

Laboratory Test Results for Soil-gas Samples

TABLE
 Laboratory Test Results for Soil-gas Samples
 225 East Broadway
 Glendale, California

Concentrations in Micrograms per Liter (ppb)

COMPOUND	SG1 10'	SG1 20'	SG1 25'	SG2 5'	SG2 10'	SG2 15'	SG2 20'	SG2 25'	SG3 10'
Benzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane (DCE)	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene-(cis)	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene-(trans)	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Freon-113	<5	<5	<5	<5	<5	<5	<5	<5	<5
Freon-12	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1,1,2-Tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1,2,2-Tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene (PCE)	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
m,p-Xylenes	<1	<1	<1	<1	<1	<1	<1	<1	<1
o-Xylene	<1	<1	<1	<1	<1	<1	<1	<1	<1

TABLE (continued)
 Laboratory Test Results for Soil-gas Samples
 225 East Broadway
 Glendale, California

Concentrations in Micrograms per Liter (ppb)

COMPOUND	SG3 20'	SG3 24'	SG4 10'	SG4 20'	SG4 24'	SG5 10'	SG5 16'	SG5 23'	SG6 10'
Benzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon Tetrachloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane (DCE)	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene-(cis)	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethene-(trans)	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Freon-113	<5	<5	<5	<5	<5	<5	<5	<5	<5
Freon-12	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1,1,2-Tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene (PCE)	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
m,p-Xylenes	<1	<1	<1	<1	<1	<1	<1	<1	<1
o-Xylene	<1	<1	<1	<1	<1	<1	<1	<1	<1

TABLE (continued)
Laboratory Test Results for Soil-gas Samples
225 East Broadway
Glendale, California

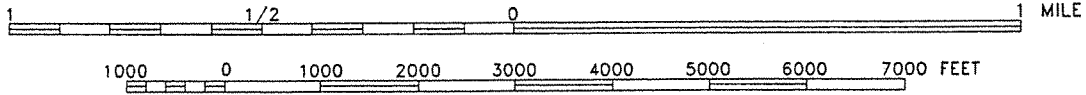
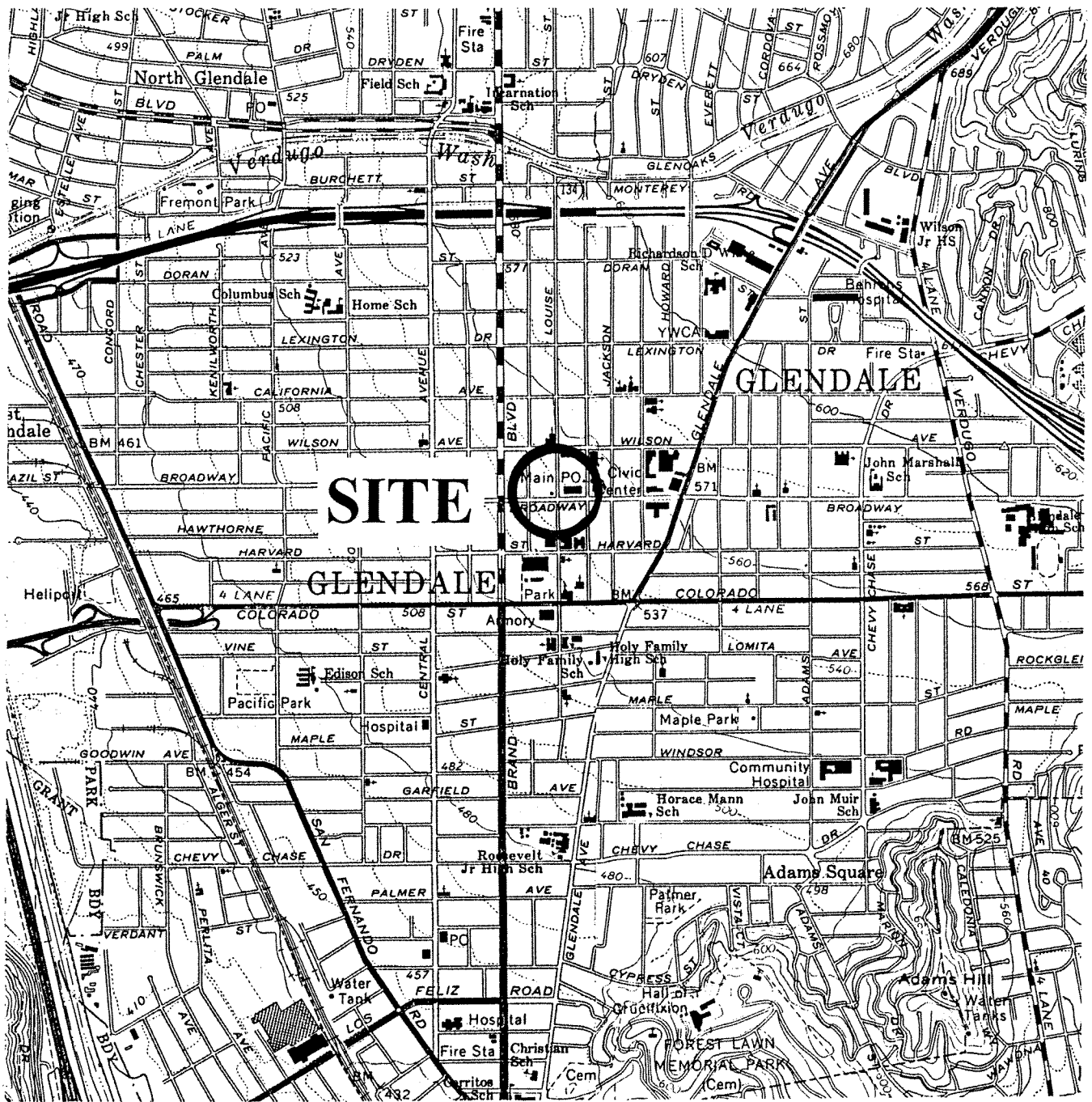
Concentrations in Micrograms per Liter (ppb)

COMPOUND	SG6 20'
Benzene	<1
Carbon Tetrachloride	<1
Chloroethane	<1
Chloroform	<1
1,2-Dichloroethane (DCE)	<1
1,1-Dichloroethane	<1
1,2-Dichloroethene-(cis)	<1
1,2-Dichloroethene-(trans)	<1
1,1-Dichloroethene	<1
Ethylbenzene	<1
Freon-113	<5
Freon-12	<1
Methylene chloride	<5
1,1,1,2-Tetrachloroethane	<1
1,1,2,2-Tetrachloroethane	<1
Tetrachloroethene (PCE)	<1
Toluene	<1
1,1,1-Trichloroethane	<1
1,1,2-Trichloroethane	<1
Trichloroethene	<1
Trichlorofluoromethane	<1
Vinyl chloride	<1
m,p-Xylenes	<1
o-Xylene	<1

FIGURES


Figure 1 - Vicinity Map

Figure 2 - Soil-gas Sampling Locations



REFERENCE: USGS 7.5-MINUTE QUADRANGLES, PASADENA (PHOTOREVISED 1981) AND BURBANK (PHOTOREVISED 1981), CALIFORNIA

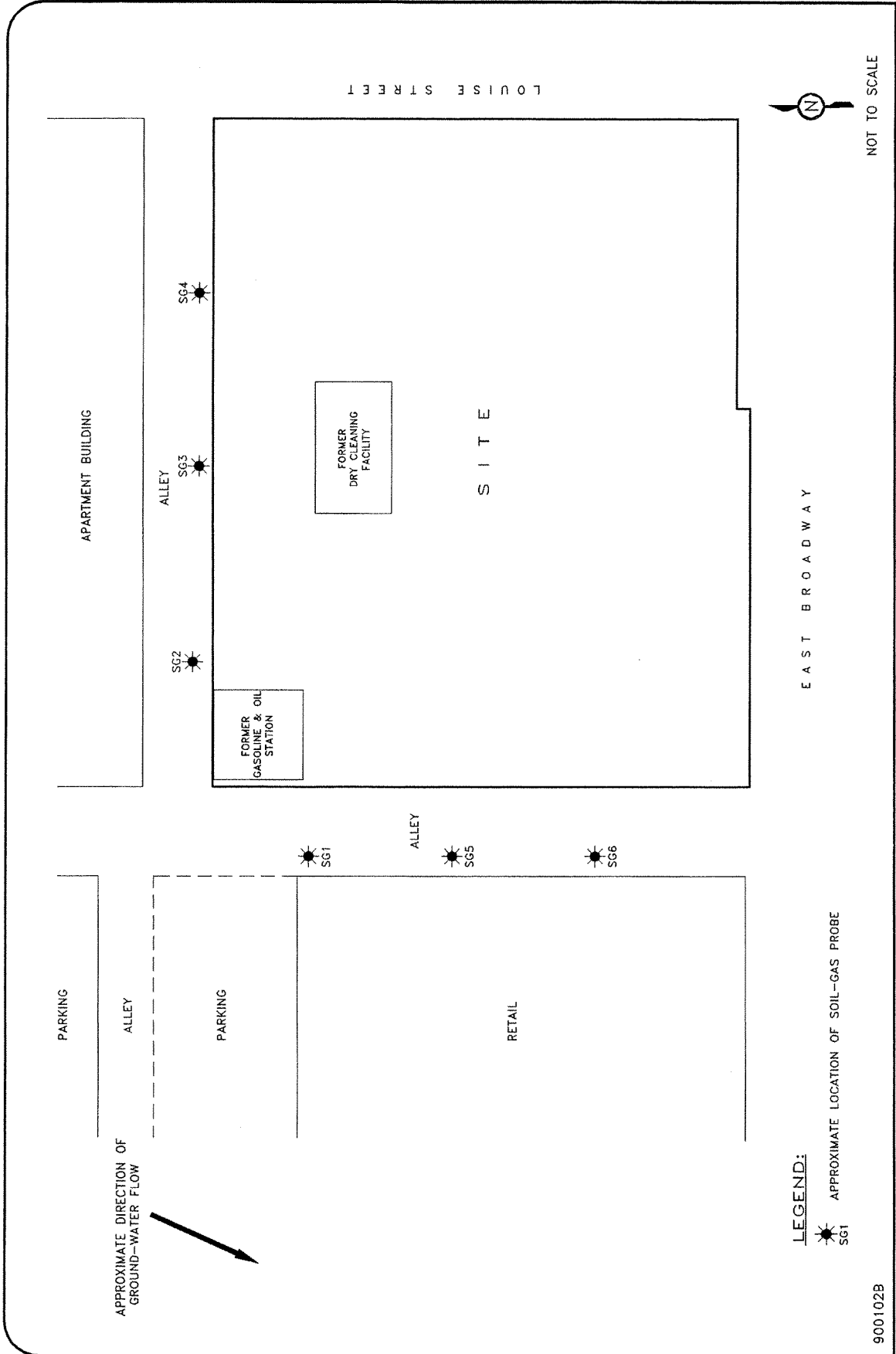
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 DRAWN: AK
 DATE: 12-17-97
 APPROVED: VH
 REVISED:

VICINITY MAP
 225 EAST BROADWAY
 GLENDALE, CA

FIGURE
 1



LEGEND:

- SG1 APPROXIMATE LOCATION OF SOIL-GAS PROBE

FIGURE
2

SOIL-GAS SAMPLING LOCATIONS

225 EAST BROADWAY
GLENDALE, CA


PROJECT NO. 10900102

DRAWN: AK

DATE: 12-17-97

APPROVED: VH

REVISED:



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APPENDIX

Soil-gas Sampling Results, QA/QC Data by American Analytics, and
Chain-of-Custody Form



LABORATORY ANALYSIS RESULTS

Client: E.P Associates
 Project No.: 10900102
 Project Name: 225 E. Broadway
 Sample Matrix: Vapor
 Method: VOC'S by GC/PID/ELCD

AA Project No.: MB24004
 Date Received: 12/12/97
 Date Reported: 12/23/97
 Units: ug/L

Date Sampled:	12/12/97	12/12/97	12/12/97	12/12/97	
Date Analyzed:	12/12/97	12/12/97	12/12/97	12/12/97	
AA ID No.:	65602	65603	65604	65605	
Client ID No.:	SG1-10	SG1-20	SG1-25	SG2-5	MRL
<u>Compounds:</u>					
Benzene	<1	<1	<1	<1	1
Carbon tetrachloride	<1	<1	<1	<1	1
Chloroethane	<1	<1	<1	<1	1
Chloroform	<1	<1	<1	<1	1
1,2-Dichloroethane (EDC)	<1	<1	<1	<1	1
1,1-Dichloroethane	<1	<1	<1	<1	1
1,2-Dichloroethene-(cis)	<1	<1	<1	<1	1
1,2-Dichloroethene-(trans)	<1	<1	<1	<1	1
1,1-Dichloroethene	<1	<1	<1	<1	1
Ethylbenzene	<1	<1	<1	<1	1
Freon-113	<5	<5	<5	<5	5
Freon-12	<1	<1	<1	<1	1
Methylene chloride	<5	<5	<5	<5	5
1,1,1,2-Tetrachloroethane	<1	<1	<1	<1	1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1	1
Tetrachloroethene	<1	<1	<1	<1	1
Toluene	<1	<1	<1	<1	1
1,1,1-Trichloroethane	<1	<1	<1	<1	1
1,1,2-Trichloroethane	<1	<1	<1	<1	1
Trichloroethene	<1	<1	<1	<1	1
Trichlorofluoromethane	<1	<1	<1	<1	1
Vinyl chloride	<1	<1	<1	<1	1
m,p-Xylenes	<1	<1	<1	<1	1
o-Xylene	<1	<1	<1	<1	1

George Havallas
 Laboratory Director



LABORATORY ANALYSIS RESULTS

Client: E.P. Associates
 Project No.: 10900102
 Project Name: 225 E. Broadway
 Sample Matrix: Vapor
 Method: VOC'S by GC/PID/ELCD

AA Project No.: MB24004
 Date Received: 12/12/97
 Date Reported: 12/23/97
 Units: ug/L

Date Sampled:	12/12/97	12/12/97	12/12/97	12/12/97	
Date Analyzed:	12/12/97	12/12/97	12/12/97	12/12/97	
AA ID No.:	65606	65607	65608	65609	
Client ID No.:	SG2-10'	SG2-15'	SG2-20'	SG2-25'	MRL
<u>Compounds:</u>					
Benzene	<1	<1	<1	<1	1
Carbon tetrachloride	<1	<1	<1	<1	1
Chloroethane	<1	<1	<1	<1	1
Chloroform	<1	<1	<1	<1	1
1,2-Dichloroethane (EDC)	<1	<1	<1	<1	1
1,1-Dichloroethane	<1	<1	<1	<1	1
1,2-Dichloroethene-(cis)	<1	<1	<1	<1	1
1,2-Dichloroethene-(trans)	<1	<1	<1	<1	1
1,1-Dichloroethene	<1	<1	<1	<1	1
Ethylbenzene	<1	<1	<1	<1	1
Freon-113	<5	<5	<5	<5	5
Freon-12	<1	<1	<1	<1	1
Methylene chloride	<5	<5	<5	<5	5
1,1,1,2-Tetrachloroethane	<1	<1	<1	<1	1
1,1,2,2-Tetrachloroethane	<1	<1	<1	<1	1
Tetrachloroethene	<1	<1	<1	<1	1
Toluene	<1	<1	<1	<1	1
1,1,1-Trichloroethane	<1	<1	<1	<1	1
1,1,2-Trichloroethane	<1	<1	<1	<1	1
Trichloroethene	<1	<1	<1	<1	1
Trichlorofluoromethane	<1	<1	<1	<1	1
Vinyl chloride	<1	<1	<1	<1	1
m,p-Xylenes	<1	<1	<1	<1	1
o-Xylene	<1	<1	<1	<1	1

George Havalias
 Laboratory Director



LABORATORY ANALYSIS RESULTS

Client: E.P Associates
 Project No.: 10900102
 Project Name: 225 E. Broadway
 Sample Matrix: Vapor
 Method: VOC'S by GC/PID/ELCD

AA Project No.: MB24004
 Date Received: 12/12/97
 Date Reported: 12/23/97
 Units: ug/L

Date Sampled:	12/12/97	12/12/97	12/12/97	12/12/97	
Date Analyzed:	12/12/97	12/12/97	12/12/97	12/12/97	
AA ID No.:	65610	65611	65612	65613	
Client ID No.:	SG3-10'	SG3-20'	SG3-24'	SG4-10'	MRL
<u>Compounds:</u>					
Benzene	<1	<1	<1	<1	1
Carbon tetrachloride	<1	<1	<1	<1	1
Chloroethane	<1	<1	<1	<1	1
Chloroform	<1	<1	<1	<1	1
1,2-Dichloroethane (EDC)	<1	<1	<1	<1	1
1,1-Dichloroethane	<1	<1	<1	<1	1
1,2-Dichloroethene-(cis)	<1	<1	<1	<1	1
1,2-Dichloroethene-(trans)	<1	<1	<1	<1	1
1,1-Dichloroethene	<1	<1	<1	<1	1
Ethylbenzene	<1	<1	<1	<1	1
Freon-113	<5	<5	<5	<5	5
Freon-12	<1	<1	<1	<1	1
Methylene chloride	<5	<5	<5	<5	5
1,1,1,2-Tetrachloroethane	<1	<1	<1	<1	1
1,1,1,2-Tetrachloroethane	<1	<1	<1	<1	1
Tetrachloroethene	<1	<1	<1	<1	1
Toluene	<1	<1	<1	<1	1
1,1,1-Trichloroethane	<1	<1	<1	<1	1
1,1,2-Trichloroethane	<1	<1	<1	<1	1
Trichloroethene	<1	<1	<1	<1	1
Trichlorofluoromethane	<1	<1	<1	<1	1
Vinyl chloride	<1	<1	<1	<1	1
m,p-Xylenes	<1	<1	<1	<1	1
o-Xylene	<1	<1	<1	<1	1

George Havalias
 Laboratory Director



LABORATORY ANALYSIS RESULTS

Client: E.P Associates
 Project No.: 10900102
 Project Name: 225 E. Broadway
 Sample Matrix: Vapor
 Method: VOC'S by GC/PID/ELCD

AA Project No.: MB24004
 Date Received: 12/12/97
 Date Reported: 12/23/97
 Units: ug/L

Date Sampled:	12/12/97	12/12/97	12/12/97	12/12/97	
Date Analyzed:	12/12/97	12/12/97	12/12/97	12/12/97	
AA ID No.:	65614	65615	65616	65617	
Client ID No.:	SG4-20'	SG4-24'	SG5-10'	SG5-16'	MRL
<u>Compounds:</u>					
Benzene	<1	<1	<1	<1	1
Carbon tetrachloride	<1	<1	<1	<1	1
Chloroethane	<1	<1	<1	<1	1
Chloroform	<1	<1	<1	<1	1
1,2-Dichloroethane (EDC)	<1	<1	<1	<1	1
1,1-Dichloroethane	<1	<1	<1	<1	1
1,2-Dichloroethene-(cis)	<1	<1	<1	<1	1
1,2-Dichloroethene-(trans)	<1	<1	<1	<1	1
1,1-Dichloroethene	<1	<1	<1	<1	1
Ethylbenzene	<1	<1	<1	<1	1
Freon-113	<5	<5	<5	<5	5
Freon-12	<1	<1	<1	<1	1
Methylene chloride	<5	<5	<5	<5	5
1,1,1,2-Tetrachloroethane	<1	<1	<1	<1	1
1,1,1,2,2-Tetrachloroethane	<1	<1	<1	<1	1
Tetrachloroethene	<1	<1	<1	<1	1
Toluene	<1	<1	<1	<1	1
1,1,1-Trichloroethane	<1	<1	<1	<1	1
1,1,2-Trichloroethane	<1	<1	<1	<1	1
Trichloroethene	<1	<1	<1	<1	1
Trichlorofluoromethane	<1	<1	<1	<1	1
Vinyl chloride	<1	<1	<1	<1	1
m,p-Xylenes	<1	<1	<1	<1	1
o-Xylene	<1	<1	<1	<1	1

George Havalias
 Laboratory Director



LABORATORY ANALYSIS RESULTS

Client: E.P Associates
 Project No.: 10900102
 Project Name: 225 E. Broadway
 Sample Matrix: Vapor
 Method: VOC'S by GC/PID/ELCD

AA Project No.: MB24004
 Date Received: 12/12/97
 Date Reported: 12/23/97
 Units: ug/L

Date Sampled:	12/12/97	12/12/97	12/12/97	
Date Analyzed:	12/12/97	12/12/97	12/12/97	
AA ID No.:	65618	65619	65620	
Client ID No.:	SG5-23'	SG6-10'	SG6-20'	MRL
<u>Compounds:</u>				
Benzene	<1	<1	<1	1
Carbon tetrachloride	<1	<1	<1	1
Chloroethane	<1	<1	<1	1
Chloroform	<1	<1	<1	1
1,2-Dichloroethane (EDC)	<1	<1	<1	1
1,1-Dichloroethane	<1	<1	<1	1
1,2-Dichloroethene-(cis)	<1	<1	<1	1
1,2-Dichloroethene-(trans)	<1	<1	<1	1
1,1-Dichloroethene	<1	<1	<1	1
Ethylbenzene	<1	<1	<1	1
Freon-113	<5	<5	<5	5
Freon-12	<1	<1	<1	1
Methylene chloride	<5	<5	<5	5
1,1,1,2-Tetrachloroethane	<1	<1	<1	1
1,1,2,2-Tetrachloroethane	<1	<1	<1	1
Tetrachloroethene	<1	<1	<1	1
Toluene	<1	<1	<1	1
1,1,1-Trichloroethane	<1	<1	<1	1
1,1,2-Trichloroethane	<1	<1	<1	1
Trichloroethene	<1	<1	<1	1
Trichlorofluoromethane	<1	<1	<1	1
Vinyl chloride	<1	<1	<1	1
m,p-Xylenes	<1	<1	<1	1

George Havalias
 Laboratory Director



LABORATORY ANALYSIS RESULTS

Client: E.P Associates
Project No.: 10900102
Project Name: 225 E. Broadway
Sample Matrix: Vapor
Method: VOC'S by GC/PID/ELCD

AA Project No.: MB24004
Date Received: 12/12/97
Date Reported: 12/23/97
Units: ug/L

Date Sampled:	12/12/97	12/12/97	12/12/97	
Date Analyzed:	12/12/97	12/12/97	12/12/97	
AA ID No.:	65618	65619	65620	
Client ID No.:	SG5-23'	SG6-10'	SG6-20'	MRL
<u>Compounds:</u>				
o-Xylene	<1	<1	<1	1

MRL: Method Reporting Limit

George Havalias
Laboratory Director



AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

9765 ETON AVE., CHATSWORTH, CA 91311

(818) 998-5547

(818) 998-5548

1-800-533-TEST

1-800-533-8378

FAX (818) 998-7258

DATE: 12/12/97

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AA Client <u>E. P. Assoc</u>						Phone <u>818-246-4499</u>		Sampler's Name			
Project Manager <u>[Signature]</u>						P.O. No.		Sampler's Signature			
Project Name <u>225 E. Broadway</u>						Project No. <u>10900102</u>		Project Manager's Signature <u>[Signature]</u>			
Job Name and Address <u>225 E. BROADWAY, GLENDALE</u>						ANALYSIS REQUIRED				Test Requirements	
						Detection Limits		Test Name			
						8/10/88-20					
AA ID.#	Client's ID.	Date	Time	Sample Type	Number of Containers						
65602	591-10'	12/12	8:38	Vapor	1	X					
65603	591-20'	12-11	9:03	LI	1	X					
65604	591-25'	11-4	9:22	LI	1	X					
65605	592-5'	11-11	9:54	LI	1	X					
65606	592-10'	11-11	10:13	LI	1	X					
65607	592-15'	11-11	10:40	LI	1	X					
65608	592-20'	11-11	11:00	LI	1	X					
65609	592-25'	11-11	11:20	LI	1	X					
65610	593-10'	11-11	12:50	LI	1	X					
65611	593-20'	11-11	12:05	LI	1	X					
65612	593-24'	11-11	12:30	LI	1	X					
65613	594-10'	11-11	12:55	LI	1	X					
65614	594-20'	11-11	1:20	LI	1	X					
65615	594-24'	11-11	1:40	LI	1	X					
65616	595-10'	11-11	2:05	LI	1	X					
65617	595-16'	11-11	2:35	LI	1	X					
SAMPLE INTEGRITY TO BE FILLED IN BY RECEIVING LAB						Relinquished by:		Date	Time	Received by:	
Samples Intact Yes _____ No _____										<u>David Cao</u>	
Samples Properly Cooled Yes _____ No _____						Relinquished by:		Date	Time	Received by:	
Samples Accepted Yes _____ No _____											
If Not Why: _____						Relinquished by:		Date	Time	Received by:	
AA Project No. <u>MB 24004</u>						Relinquished by:		Date	Time	Received by:	



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1-800-533-TEST

1-800-533-8378

FAX (818) 998-7258

DATE: 12/12

PAGE 2 OF 2

AA Client E.P. Assoc						Phone		Sampler's Name			
Project Manager UNYI						P.O. No.		Sampler's Signature			
Project Name 225 E. Broadway						Project No. 10900102		Project Manager's Signature [Signature]			
Job Name and Address 225 E. BROADWAY GLENDALE						ANALYSIS REQUIRED					
						Detection Limits		Test Requirements			
						Test Name					
						<div style="border: 1px solid black; padding: 5px; transform: rotate(-45deg); display: inline-block;"> 8810/8820 </div>					
						Return in house		Ambient Air next to Vicksen Van exhaust - 886			
AA ID.#	Client's ID.	Date	Time	Sample Type	Number of Containers						
65618	595-23	12/12	2:50	Vapor	1	X					
65619	596-10	- - -	3:15	- - -	1	X					
65620	596-20	- - -	3:28	- - -	1	X					
65621	Air	- - -	4:16	- - -	1						

SAMPLE INTEGRITY-TO BE FILLED IN BY RECEIVING LAB

Samples Intact Yes _____ No _____

Samples Properly Cooled Yes _____ No _____

Samples Accepted Yes _____ No _____

If Not Why: _____

Relinquished by:	Date	Time	Received by:
			David Cao
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by:

AA Project No. **MB24004**