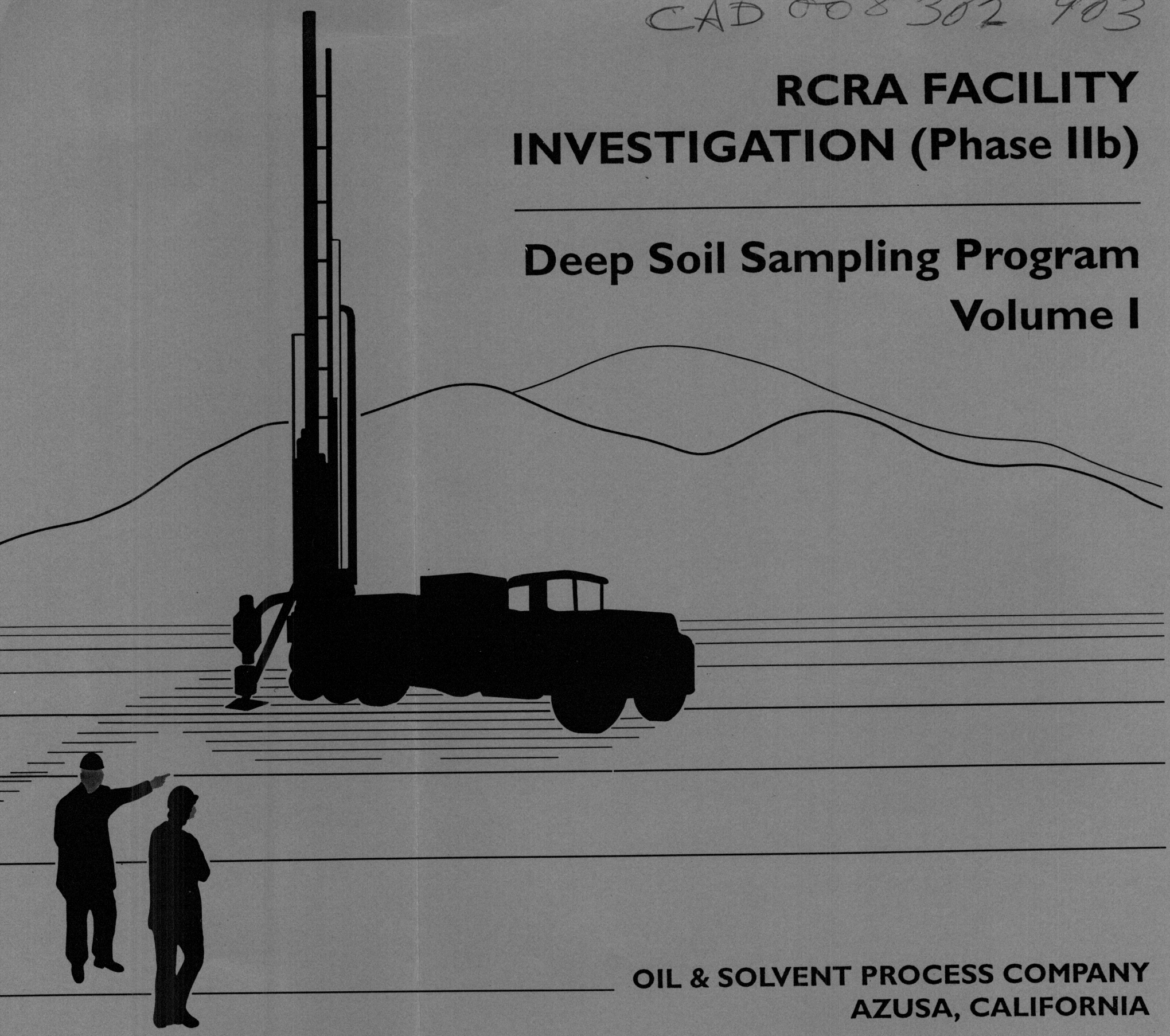
CAD 008 302 903

RCRA FACILITY INVESTIGATION (Phase IIb)

Deep Soil Sampling Program
Volume I



OIL & SOLVENT PROCESS COMPANY
AZUSA, CALIFORNIA

H-3

Chemical Waste Management, Inc.

4227 Technology Drive
Fremont, California 94538-6337
415/651-2964

November 19, 1991

Mr. Jeffrey Zelikson
Director
U.S. Environmental Protection Agency
Region IX
75 Hawthorne Street
Mail Code H-4-6
San Francisco, CA 94105

Subject: RCRA Facility Investigation (RFI) Oil & Solvent Processing Company Azusa, California EPA ID CAD 008302903

Dear Mr. Zelikson:

Chemical Waste Management, Inc. (CWM), is pleased to forward the RFI Phase IIb Deep Soil Sampling Program report for the subject facility. In preparing this milestone report, our consultant has compiled, reviewed, and interpreted data collected Phase IIb and previously reported data. We hope you will find the report complete and comprehensive in scope.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you have any questions or comments regarding the report or the status of the RFI, please contact me at (510) 651-2964.

Sincerely,

CHEMICAL WASTE MANAGEMENT, INC.

M. Lee Dodge, P.E.
Project Manager

MLD/miy

Enclosure

Printed on recycled paper

cc: Ron Cavagrotti, Meredith/Boli & Associates-Los Angeles
Michael Cloud, Meredith/Boli & Associates-Santa Cruz
Phil Comella, CWM-Oak Brook
Richard Gurske, CWM-Fremont
Zaki Nasser, OSCO-Azusa
Mike Wetzel, CWM-Oak Brook
Marc Yalom, CWM-Fremont
File #05-330.06

MEREDITH/BOLI & ASSOCIATES, INC.

SCIENTIFIC and REGULATORY CONSULTANTS

6701 Center Drive West, Suite 900
Los Angeles, California 90045-1535
(213) 670-9221

RCRA FACILITY INVESTIGATION (PHASE IIb)
DEEP SOIL SAMPLING PROGRAM

Oil & Solvent Process Company
Azusa, California

VOLUME I

Prepared for:

OIL & SOLVENT PROCESS COMPANY
1704 West First Street
Azusa, California 91702

Submitted to:

US ENVIRONMENTAL PROTECTION AGENCY
Region IX
75 Hawthorne Street
San Francisco, California 94105

and

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
Department of Toxic Substances Control
Region III
1405 North San Fernando Boulevard, Suite 300
Burbank, California 91504

18 November 1991

EXECUTIVE SUMMARY

S.1 INTRODUCTION

The Oil & Solvent Process Company (OSCO) has been recycling spent solvents into solvent products at its Azusa, California facility since 1954. Recycling operations have involved the storage and processing of solvents in containers and tanks and their treatment via distillation units. Throughout its operational history, OSCO appears to have exercised more caution than most contemporaneous businesses to minimize the possibility and occurrence of environmental releases. In spite of this environmental awareness and concern, historical spills and releases have occurred at the site that have resulted in areas of observed soil contamination.

Groundwater contamination in the San Gabriel Valley, first detected in December 1979, has lead to twelve years of basin-wide assessments, individual site investigations, and proposed and actual groundwater remediation activities. Four broad areas of groundwater contamination were delineated and placed on the US Environmental Protection Agency's (USEPA's) National Priorities List in May 1984. OSCO was identified as a Potentially Responsible Party (PRP) for the regional groundwater contamination on 15 March 1991. USEPA has assumed the lead role for Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) investigation activities in the San Gabriel Valley, with the Los Angeles Regional Water Quality Control Board (RWQCB) providing site investigation and groundwater monitoring assistance under separate State agency programs.

USEPA's search for PRPs has been conducted under the aegis of either its CERCLA or Resource Conservation and Recovery Act (RCRA) program, depending on the regulatory status of the business entity involved. In OSCO's case, USEPA agreed in 1989 that site investigations would be performed pursuant to the conditions of the facility's RCRA "Part B" permit, issued during that year. Explicit and comprehensive conditions in the RCRA permit dictate the performance of a multi-stage RCRA Facility Investigation (RFI) at the site. The RFI has been ongoing at the OSCO facility since early 1989, and has included a soil gas survey (Phase I), shallow soil sampling program (Phase IIa), and deep soil boring program (Phase IIb). An upcoming groundwater monitoring program (Phase III) will complete planned RFI activities at the site.

The primary purpose of this report is to describe the results of the recently completed deep soil boring program, which included both soil and soil vapor sampling elements. The field investigation was performed during the period 8 February to 24 September 1991. A secondary, yet equally important, purpose of this report is to consolidate and evaluate the body of information that has been gathered at the OSCO facility, in order to begin to understand the likely sources of contamination and the fate of previous environmental releases.

S.2 EXISTING SITE CONDITIONS

The OSCO facility is located in the City of Azusa, in the center of the San Gabriel Valley in eastern Los Angeles County. It is situated in a predominantly industrial area, and OSCO has several large and small business neighbors. Significant nearby features include the Santa Fe Flood Control Basin to the west, the Miller Brewing Company to the north, and the Azusa Land Reclamation Landfill to the east, all within a 1-mile radius of the site. Climatic conditions are characterized by warm summers, mild winters, and

infrequent rainfall. Of the area's approximately 18 inches of annual rainfall, 93% falls between the months of November and April, inclusive.

The San Gabriel Valley is a vast alluvial basin ranging up to 12,000 feet in depth. Near the OSCO facility, the immediately underlying lithologic formation consists of angular to subrounded alluvial deposits ranging in size from silt to boulders over 6 feet in diameter. Sands, gravels, cobbles, and boulders predominate in this geologic setting, making the area a very desirable source for aggregate. Topographically, the OSCO site is relatively flat, with a gentle grade (2%) to the southwest.

The San Gabriel basin comprises a major drinking water aquifer, providing approximately 240,000 acre-feet of water to approximately one million customers. Typical well yields in the basin range from 100 to 4,000 gpm. The depth to groundwater beneath the OSCO facility is projected to be about 300 feet. Significant elevation fluctuations are noted in response to precipitation events, and the nearby San Gabriel River and recharge via the Santa Fe Flood Control Basin appear to significantly influence groundwater elevations and movement in the vicinity of the site.

As evidenced by the San Gabriel Valley CERCLA investigation, groundwater quality is a major concern. Nearby wells at the Azusa Land Reclamation Landfill and The Norac Facility (to the south) have been tested for organic contaminants. These and other groundwater sampling results from nearby wells have determined the presence of several organic compounds, including perchloroethene (PCE), trichloroethene (TCE), 1,2-dichloroethane (1,2-DCA), 1,1-dichloroethene (1,1-DCE), and carbon tetrachloride (CCl_4) at maximum concentrations of 700 ug/l, 1,200 ug/l, 28 ug/l, 350 ug/l, and 28 ug/l, respectively. A groundwater monitoring program has been proposed for the OSCO facility to establish site-specific groundwater conditions.

Data concerning near-surface contamination at the OSCO facility is available from several previous field sampling and investigation activities. Each of these events has been summarized in Section 4.0 of this report, including the incorporation of detailed analytical results. Consolidation of pre-existing data at this point in the RFI program was deemed essential for understanding and beginning to interpret the potential sources and fate of contaminant releases at the site. Results from previous investigations also were used to aid in establishing deep soil boring locations for the Phase IIb program.

S.3 DEEP SOIL BORING PROGRAM

The deep soil boring program was designed as a logical extension of the "surface down" investigation approach established for the OSCO facility. As implemented, the program consisted of drilling nine borings to depths ranging from 43 to 197 feet below ground surface (bgs), collecting more than 140 soil samples for chemical and physical analyses, and completing each boring into a soil vapor monitoring well containing one to three nested probes. Other program elements included geophysically logging the boreholes and performing an aerial flyover and land-based survey of the site.

The goal of the deep soil boring program was to determine the vertical and horizontal extent of contaminant migration in the vadose zone from likely source areas identified during previous shallow surface investigations. In response to agency concerns regarding the detectability of "point sources" of contamination that may follow pinpoint or tortuous pathways, it was decided to complete the borings into soil gas probes that could extract and test soil vapors from various depths and lateral reaches of the vadose zone. It was theorized that this would allow a more comprehensive sampling of vadose zone

conditions (particularly horizontally), thereby minimizing the possibility that significant subsurface contamination would go undetected.

The nine borings were drilled at seven locations of known or suspected contamination. The first two borings were drilled with an auger rig, but a maximum depth of only 57.5 feet was achieved with this technique. Consequently, the remaining borings were completed using a dual wall, reverse air circulation downhole hammer rig. As the boring was advanced, the field geologist noted lithologic zones where sampling could be achieved successfully (i.e., high sand content). When these zones were encountered, drilling was halted and a sample was obtained by driving a split spoon sampler into the bottom of the boring.

Soil samples were analyzed for a target list of organic compounds that had been selected based on the results of the Phase I and Phase IIa investigations. An on-site mobile laboratory analyzed the samples using USEPA-approved methods for detecting purgeable halogenated and aromatic volatile organics (Methods 8010/8020); results typically were available in about one hour. Off-site commercial laboratories were used to provide confirmation sampling and supplemental analysis for additional volatile organic compounds (USEPA Method 8240). Physical analyses for grain size distribution and total organic content also were obtained.

Boreholes were terminated if contamination no longer was judged to be present, as evidenced by the collection of three consecutive "non-detect" samples over a 15-foot interval. In two instances, (i.e., Borings B-1 and B-6), the slow progress of drilling resulted in a decision to terminate the boring even though contamination was observed to be present at the bottom of the boring. Once the boring was completed, it was logged via gamma and neutron geophysical techniques. Boring and test pit locations (from the shallow surface sampling program) were established by a licensed surveyor.

One or more soil vapor probes were installed in each of the nine borings for a total of 17 probes. All borings were completed with one probe at the bottom, the primary function of which was to corroborate the results of the soil chemistry analysis at this depth (i.e., to confirm the absence of contamination in borings where "non-detect" values were reported). In seven of the borings, one or two additional probes were installed at stratigraphic horizons known to be contaminated, typically at depths of around 60- to 75-feet bgs. The probes were constructed of 1-inch diameter, 5-foot length stainless steel well screen connected to the surface via a 1-inch diameter PVC riser.

A recognized expert in the fields of soil gas studies and contaminant transport in the vadose zone was retained to help design, implement, and interpret the results from a soil vapor investigation program. A program was designed and implemented in two phases. The purpose of the first phase was to collect soil vapor from the area immediately surrounding each well screen in order to help interpret soil data that indicated the presence or absence of contamination at these lithologic intervals. This was accomplished by sampling each soil vapor probe after applying a low vacuum pressure to the system.

The purpose of the second phase of the soil vapor study was to assess subsurface air flow dynamics and to evaluate further the relationship between organic contaminant concentrations in the soil and vapor phases in the vadose zone. Soil vapor from one of the probes, designated as the extraction well, was evacuated at high enough flow rates to induce measurable pressure changes at nearby observation probes. These measurements allowed calculations to be made for vadose zone permeability and radii of influence under constant flow conditions. During both phases of the investigation, vapor samples were extracted and analyzed for organic and biogenic gases that included PCE, TCE, 1,1,1-trichloroethane (1,1,1-TCA), methyl ethyl ketone (MEK), acetone, toluene, xylenes, and ethylbenzene.

S.4 INVESTIGATION RESULTS AND CONCLUSIONS

The upper 200 feet of vadose zone at the OSCO facility comprise a relatively homogeneous assemblage of coarse sediments consisting of interbeds and lenticular layers of sand and gravel with inclusions of cobble- and boulder-size clasts. The sediments were deposited in an alluvial fan environment and incorporate braided channels of coarser material (i.e., gravel) surrounded by finer grained sediments. Clay layers were not present beneath the OSCO facility and silts were encountered only rarely. Some of the finer grained sandy units were characterized as damp or (occasionally) moist, but none of the units were considered wet or saturated. Because of the poor correlation among the boring logs (due to the absence of well defined lithologic units and their lenticular and interbedded nature), it was not possible to develop meaningful geologic cross sections for the site.

Volatile organic compounds (VOCs) were detected in soil samples from eight of the nine deep soil borings completed at the site (all but Boring B-3). Detected VOCs included chlorinated organics (e.g., PCE, 1,1,1-TCA, etc.), aromatic hydrocarbons (e.g., toluene, xylenes, etc.), and ketones (e.g., acetone, MEK, etc.). PCE was the most commonly detected VOC, being present in six of the nine borings at concentrations ranging up to 470 ug/kg (in Boring B-2R). Total xylenes were detected at the highest concentration of any of the organic compounds (62,000 ug/kg at Boring B-2), which appeared to represent an area of shallow contamination that attenuated quickly with depth. Ketones also were detected at concentrations that generally were higher than the chlorinated compounds (up to 6,600 ug/kg at Boring B-4). However, they were encountered at only two locations (Borings B-1 and B-4) and appeared to reflect localized contaminant conditions. Borings B-1 and B-4 exhibited the highest relative contamination, whereas Borings B-3 and B-5 exhibited the lowest. Soil chemistry data from the drilling program are summarized on Table S-1 herein.

The soil vapor study results indicate that soil contamination may be more vertically extensive and present at higher concentrations than would be indicated by the soil chemistry results alone. Soil vapor VOC concentrations detected by the lowermost probes in Borings B-4 and B-8R (i.e., 220 ppmv and 280 ppmv for PCE, respectively) did not appear to correspond with the soil chemistry results for these locations, which indicated that VOCs were below detection limits. In most other instances, soil vapor and soil sample analytical results exhibited relatively good correlation.

In instances where VOCs were detected in soil, soil vapor concentrations generally were relatively high (i.e., >100 ppmv). Soil samples where VOCs were reported as being below detection limits generally corresponded with relatively low soil vapor readings (i.e., <100 ppmv). Low level VOC vapor concentrations are believed to reflect the presence of organic constituents that have migrated in the gas phase from shallower or more distant zones of contamination, and are not indicative of the presence of near-boring soil contamination.

It is considered highly likely that all major sources of contamination at the OSCO facility have been identified and investigated during this latest phase of the RFI program. Based on the data accumulated to date, it is not possible to determine whether or not the OSCO facility has contributed to groundwater contamination. Three of the seven sampling locations of the deep soil boring program (i.e., Borings B-2/B-2R, B-3, and B-5) are considered to be free from contamination at depth, while soil and/or soil vapor contamination is evident at depth at the four remaining boring locations (i.e., Borings B-1, B-4, B-6, and B-8/B-8R). The deepest that contamination has been detected (191 feet bgs at Boring B-6) is approximately 110 feet above groundwater.

TABLE S-1

SUMMARY OF DETECTED ORGANIC COMPOUNDS FOR NINE DEEP SOIL BORINGS[a]

OSCO FACILITY, AZUSA, CALIFORNIA

Boring No.	Concentration Range of Detected Compounds[b] (ug/kg)								Other Detected Compounds (concentration in ug/kg)
	TCE	PCE	1,1,1-TCA	Toluene	Xylenes	Acetone	MEK	MIBK	
B-1	BDL	BDL	10-21	5-22	BDL	23-2,000	17-720	10-36	Methylene chloride (6-7); cis-1,2-Dichloroethene (9)
B-2	BDL	40	BDL	BDL	62,000	NA	NA	NA	Ethylbenzene (4,000); 1,2-Dichlorobenzene (700)
B-2R	6-8	5-470	6-8	5-300	8-3,200	NA	NA	NA	Ethylbenzene (5-1,100); 1,4-Dichlorobenzene (64-180)
B-3	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	
B-4	BDL	5-150	8-23	7-39	20-57	13-6,600	18-5,100	41-200	Benzene (6); Ethylbenzene (5-15); 1,1,2-Trichloroethane (6); trans-1,2-Dichloroethene (6)
B-5	BDL	6	BDL	6	38	BDL	BDL	BDL	Ethylbenzene (7); Methylene chloride (5-7)
B-6	BDL	5-32	BDL	BDL	BDL	BDL	BDL	BDL	
B-8	6	BDL	BDL	BDL	BDL	NA	NA	NA	1,1-Dichloroethene (24)
B-8R	BDL	7-33	BDL	BDL	BDL	NA	NA	NA	trans-1,2-Dichloroethene (8)

[a] A comprehensive data summary, including concentration profiles with depth, is provided in Appendix F hereto.
[b] Includes only the detected values for the identified compounds.

BDL = Below detection limit.
NA = Not analyzed; although quantitative analyses were not performed for ketones at these locations, on-site laboratory chromatograms for USEPA Methods 8010/8020 indicated that they were not present.

TABLE OF CONTENTS

	Page
EXECUTIVE SUMMARY	S-1
LIST OF TABLES	iv
LIST OF FIGURES	v
LIST OF APPENDIXES	vi
1.0 INTRODUCTION	1-1
1.1 Purpose of the Deep Soil Sampling Program	1-1
1.2 Regulatory Status and Basis for Action	1-4
1.2.1 OSCO Facility RCRA Permit	1-4
1.2.2 RCRA Regulations	1-4
1.2.3 CERCLA Activities	1-5
1.2.4 RWQCB Activities	1-5
1.2.5 Cal EPA Activities	1-7
2.0 FACILITY SETTING	2-1
2.1 Location and Ownership	2-1
2.2 Land Use	2-1
2.3 Climate	2-1
2.4 Present Facility Operations	2-3
2.5 OSCO Facility History	2-5
2.5.1 Early Historical Records (1953-1979)	2-5
2.5.2 Middle Years (1979-1986)	2-6
2.5.3 CWM Purchase and Recent Events (1986-Present)	2-7
2.5.4 Historical Solvent Use	2-7
3.0 GEOLOGY AND HYDROGEOLOGY	3-1
3.1 Physiography and Topography	3-1
3.2 Geologic History	3-1
3.3 Regional Provenance and Valley Infilling	3-5
3.4 Aquifer Definition and Dimensions	3-5
3.5 Groundwater Flow	3-5
3.6 Groundwater Quality and Use	3-6

TABLE OF CONTENTS
(continued)

		Page
4.0	**PREVIOUS FIELD INVESTIGATIONS AT THE OSCO FACILITY**	4-1
	4.1 Retention Pond Sampling and Cleanup (1980)	4-1
	4.2 History of Spills (1984-Present)	4-1
	4.3 Removal of Underground Tanks (1986 and 1989)	4-4
	4.4 EMCON Site Assessment (1986)	4-5
	4.5 ENRAC Soil Excavation and Sampling Program (1988)	4-8
	4.6 Distillation Unit No. 1 Partial Closure (1990)	4-8
	4.7 RFI Phase I -- Soil Gas Survey (1990)	4-13
	4.8 RFI Phase IIa -- Shallow Soil Sampling (1990)	4-15
5.0	**DEEP SOIL SAMPLING METHODOLOGIES**	5-1
	5.1 Investigation Objectives	5-1
	5.2 Soil Borings	5-1
	5.2.1 Location Selection	5-1
	5.2.2 Drilling Methods	5-3
	5.2.3 Geophysical Logging	5-3
	5.3 Soil Sampling	5-4
	5.3.1 Sampling Frequency	5-4
	5.3.2 Sampling Methods	5-4
	5.3.3 Decontamination	5-4
	5.3.4 Soil Sampling Analyses	5-5
	5.3.5 QA/QC Procedures	5-5
	5.3.6 Rationale for Borehole Termination	5-5
	5.4 Soil Vapor Probe Installation	5-6
	5.4.1 Purposes of Soil Vapor Probes	5-6
	5.4.2 Soil Vapor Probe Design	5-6
	5.5 Soil Vapor Investigations	5-9
	5.5.1 Soil Vapor Extraction Procedures	5-9
	5.5.2 Soil Vapor Sampling	5-9
	5.5.3 Soil Vapor Analyses	5-10
6.0	**DEEP SOIL SAMPLING RESULTS**	6-1
	6.1 Lithology	6-1
	6.2 Soil Chemistry	6-2
	6.3 Soil Vapor Investigation Results	6-4
	6.4 Aerial Flyover and Survey	6-6

TABLE OF CONTENTS
(concluded)

		Page
7.0	**EVALUATION AND INTERPRETATION OF INVESTIGATION RESULTS**	7-1
	7.1 Identification of Contaminant Sources	7-1
	7.2 Presence and Significance of Deep Boring Contamination	7-2
	7.3 Geologic Influences on Contaminant Migration	7-5
	7.4 Interpretation of Soil Vapor Study Results	7-12
	7.5 Conclusions	7-13
8.0	**RECOMMENDATIONS**	8-1
9.0	**REFERENCES**	9-1

LIST OF TABLES

			Page
Table 1-1	--	Summary of Previous RFI Activities at the OSCO Facility	1-2
Table 3-1	--	Groundwater Flow Directions Determined for the Azusa Land Reclamation Landfill (April 1985-March 1987)	3-8
Table 3-2	--	Summary of Compounds Detected in USEPA's 1986 Source Sampling Program	3-11
Table 3-3	--	Summary of Selected Organic Groundwater Data Collected from the Azusa Land Reclamation Landfill (August 1984-May 1991)	3-12
Table 3-4	--	Organic Compounds Detected in Groundwater at The Norac Company, Inc. (19 March 1991)	3-14
Table 4-1	--	Results of Retention Pond Soil Analyses (1980)	4-3
Table 4-2	--	Results of Underground Tank/Sump Soil Analyses (1986)	4-6
Table 4-3	--	Summary of Organic Compounds Detected During the Sampling Event for Underground Sump No. 2 (18 September 1989)	4-7
Table 4-4	--	Results of EMCON Shallow Soil Sampling Program (1986)	4-9
Table 4-5	--	Results of ENRAC Excavation and Sampling Program (12 and 19 July 1988)	4-11
Table 4-6	--	Summary of Organic Parameters Detected During Closure of Distillation Unit No. 1 (1990)	4-14
Table 4-7	--	Summary of Metals Detected During the RFI Shallow Soil Sampling Program	4-20
Table 4-8	--	Summary of Organic Compounds Detected During the RFI Shallow Soil Sampling Program	4-22
Table 4-9	--	Highest OVM Readings Obtained During the RFI Shallow Soil Sampling Program	4-25
Table 5-1	--	Construction Details for Soil Vapor Probes	5-7
Table 6-1	--	Summary of Detected Organic Compounds for Nine Deep Soil Borings	6-3
Table 6-2	--	Comparison of Soil and Soil Vapor Analytical Results for Selected Organic Compounds	6-5
Table 6-3	--	Surveyed Boring and Test Pit Coordinates	6-7

LIST OF FIGURES

			Page
Figure 1-1	--	Estimated Extent of Groundwater Contamination in the San Gabriel Valley	1-6
Figure 2-1	--	Site Location Map	2-2
Figure 2-2	--	OSCO Facility Layout	2-4
Figure 3-1	--	Regional Geology -- San Gabriel Valley	3-2
Figure 3-2	--	Geologic Section	3-3
Figure 3-3	--	OSCO Facility Topographic Map	3-4
Figure 3-4	--	Groundwater Table -- San Gabriel Basin	3-7
Figure 3-5	--	Groundwater Elevations at the Azusa Land Reclamation Landfill	3-9
Figure 4-1	--	Historical OSCO Facility Investigation Soil Sampling Locations	4-2
Figure 4-2	--	Soil Sampling Locations During 1988 ENRAC Excavation	4-10
Figure 4-3	--	Soil Gas TCE Concentrations (January 1990)	4-16
Figure 4-4	--	Soil Gas PCE Concentrations (January 1990)	4-17
Figure 4-5	--	Soil Gas 1,1,1-TCA Concentrations (January 1990)	4-18
Figure 4-6	--	Locations of RFI Phase IIa Test Pits	4-19
Figure 5-1	--	Locations of RFI Phase IIb Deep Soil Borings	5-2
Figure 5-2	--	Typical Soil Boring Completion Diagram	5-8
Figure 7-1	--	Hypothetical Contaminant Plume Configuration Based on Observed Ketone Concentrations	7-7
Figure 7-2	--	Vapor Phase Concentration Contours Based on Shallow Boring Probe Results (1,1,1-TCA)	7-8
Figure 7-3	--	Vapor Phase Concentration Contours Based on Shallow Boring Probe Results (MEK)	7-9
Figure 7-4	--	Vapor Phase Concentration Contours Based on Shallow Boring Probe Results (Toluene)	7-10
Figure 7-5	--	Vapor Phase Concentration Contours Based on Shallow Boring Probe Results (PCE)	7-11

LIST OF APPENDIXES

Appendix A -- Laboratory Reports for Previous Field Investigations

Appendix B -- Sampling and Decontamination Procedures

Appendix C -- Photographic Essay

Appendix D -- Boring/Probe As-Built Drawings and Specifications

Appendix E -- Deep Soil Boring Logs

Appendix F -- Data Summary Tables and Graphs

Appendix G -- InterPhase Soil Vapor Study

Appendix H -- Laboratory Reports for Deep Soil Boring Program

1.0 INTRODUCTION

The corrective action provisions of the Oil & Solvent Process Company's (OSCO's) Resource Conservation and Recovery Act (RCRA) Hazardous Waste Facility Permit (RCRA Permit), issued on 29-30 November 1989 (modified on 14 November 1990), contain specific procedures for the performance of a site investigation program. Termed a RCRA Facility Investigation (RFI), this program is to be implemented in phases to allow site conditions to be evaluated in a systematic, "surface down" approach. In this way, information gathered from initial studies can be used to guide the conduct of subsequent field activities, thereby providing coherent direction to the program and facilitating the synthesis and interpretation of the data collected.

The purpose of the RFI is to determine the presence and extent of subsurface contamination that may have resulted from historical solvent recycling operations at the OSCO facility. The components of the investigation include a shallow soil gas survey; sediment, shallow soil, and deep soil sampling; vadose zone soil vapor studies; and groundwater sampling. A chronology of events that comprise the RFI to date is provided on Table 1-1 herein.

A shallow soil gas survey (WTI, 1990a) and shallow soil sampling program (WTI, 1990c) have been implemented at the site. The primary purpose of this document is to describe the results of a deep soil sampling and vadose zone soil vapor field investigation that was conducted during the period 8 February to 24 September 1991. A secondary, yet equally important, purpose of this report is to consolidate and evaluate the body of information that has been gathered at the OSCO facility to date, in order to begin to understand the likely sources of contamination and the fate of previous environmental releases.

Section VI.8 of the OSCO facility's RCRA Permit requires the submittal of a Final and Summary RFI Report within 60 calendar days after the "completion of the RFI Plan." This permit section anticipates that the final report will include groundwater monitoring results. However, because groundwater monitoring data are not expected to be available until approximately the first quarter of 1992, this submittal should be considered an "interim" RFI report. Nevertheless, it is a comprehensive site characterization study that is expected to serve as the "final" RFI report once the results of the groundwater investigation have been documented and appended.

1.1 PURPOSE OF THE DEEP SOIL SAMPLING PROGRAM

A deep soil sampling program was established as an integral RFI component to determine the nature and extent of subsurface (i.e., vadose zone) solvent contamination from known or suspected facility sources. As originally envisioned, six borings were to be advanced to minimum depths of 100 feet using a dual-wall reverse air circulation rig equipped with a downhole percussion hammer (WTI, 1990b). In response to agency concerns regarding the detectability of "point sources" of contamination that may follow pinpoint or tortuous pathways, it was decided to complete the borings into nested soil gas probes that could extract and test soil vapors from various depths and lateral reaches of the vadose zone. It was theorized that this would allow a more comprehensive sampling of vadose zone conditions (particularly horizontally), thereby minimizing the possibility that significant subsurface contamination would go undetected.

The deep soil sampling program originally was described in a workplan that was prepared for both shallow and deep soil investigation activities (WTI, 1990b). As a result, it did not have benefit of the shallow soil sampling results, and minor changes were recommended by OSCO's present technical

TABLE 1-1

SUMMARY OF PREVIOUS RFI ACTIVITIES
AT THE OSCO FACILITY

Date	Activity
2 March 1989	Final workplan for soil gas survey (Phase I) activities submitted
April 1989	Auxiliary workplan information submitted for soil gas survey
16-25 October 1989	Soil gas survey performed at the OSCO facility
19 January 1990	Soil gas survey results reported by Western Technologies Inc.
2 March 1990	Final workplan for shallow and deep soil sampling (Phase II) activities submitted
3 April 1990	Phase II workplan revised
24 July 1990	Phase II workplan receives final agency approval
24-26 July 1990 7-10 August 1990	Shallow soil sampling (Phase IIa) performed at the OSCO facility
5 October 1990	Shallow soil sampling results reported by Western Technologies Inc.
11 December 1990	Meredith/Boli & Associates, Inc. retained by CWM to perform deep soil sampling (Phase IIb)
8 January 1991	Phase IIb workplan revised and approved by USEPA
8 February 1991	Phase IIb field investigations commence

consultants (and approved by the US Environmental Protection Agency (USEPA)) prior to initiation of field activities during February 1991 (Cavagrotti, 1991). As revised, the extant workplan describes the following major program activities:

- Drill seven borings at locations that were selected based on a review of previous investigation results. Total depths of each boring were to be determined by the geologist in the field, but would be a minimum of 50 feet and cumulatively would total at least 600 feet

- Complete the borings using either a CME-95 hollow stem auger rig or a dual-wall reverse air circulation rig, depending on the performance of these rigs in the site's alluvial environment

- Obtain soil samples for chemical analyses at 5-foot intervals to a depth of 20 feet, 10-foot intervals to a depth of 50 feet, and 20-foot intervals thereafter. Obtain samples, as possible, for physical property analyses

- Analyze samples for volatile organic compounds (VOCs) using USEPA Methods 8010 and 8020 via an on-site mobile laboratory. VOCs were selected as appropriate target compounds based on the results of previous investigations, particularly the shallow soil sampling program. Ten percent (10%) of the samples were to be submitted to an off-site certified laboratory for confirmatory analysis

- Perform geophysical surveys of all completed borings

- Complete the borings with soil gas monitoring probe nests, the depths and number of which were to be determined from the geophysical and chemical field results. Conduct discrete soil vapor studies once the borings were complete

- Perform a survey to locate precisely the shallow soil sampling test pits (Phase IIa) and deep soil borings.

Field activities were performed in substantial conformance with the workplan and the minimal work objectives described above were met. Significant differences in the actual field work included the completion of nine borings (two with the CME-95), collection of substantially more samples than specified, analysis of some samples using USEPA Method 8240, development and implementation of a soil vapor study workplan, and conduct of an aerial flyover to develop an updated site topographic map. Details of the investigation procedures are provided in Section 5.0 herein.

In summary, the design and execution of the deep soil sampling program was aimed at establishing an improved understanding of the sources and extent of contamination that may have originated from the OSCO facility and the potential for this contamination to have contributed to the regional groundwater pollution being investigated in the San Gabriel Valley (see Section 1.2 herein). The development of a working model for contaminant distribution and movement, based on the information collected during all facility investigations to date, was envisioned as a project goal. The program also was designed to provide a sufficiently detailed understanding of subsurface conditions so that decisions could begin to be made regarding the need for, and nature of, any additional investigation and/or subsequent corrective actions.

1.2 REGULATORY STATUS AND BASIS FOR ACTION

As a Federal- and State-permitted hazardous waste management facility, OSCO is subject to the corrective action provisions of RCRA and State laws. The corresponding regulations require that potential sources of contamination be investigated and any discovered contamination be remediated at sites seeking a new or renewed permit. Specific investigation activities were prescribed in the facility's RCRA Permit when it was renewed in 1989.

The OSCO facility also is considered a Potentially Responsible Party (PRP) for the San Gabriel Valley Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) investigation, which has been underway since 1979. As such, agencies that are responsible for investigating and cleaning up the regional groundwater contamination, including the CERCLA office of USEPA and the Los Angeles Regional Water Quality Control Board (RWQCB), have taken an interest in, and are monitoring activities at, the site. A review of the regulatory status of the OSCO facility is provided in the following sections.

1.2.1 OSCO Facility RCRA Permit

Section VI of OSCO's RCRA Permit contains a corrective action program (including the RFI) for the facility. It involves a series of workplans, field investigations, and reports to define and remediate any discovered contamination at the site. Individual RFI activities are to be implemented in accordance with a compliance schedule and must meet minimum requirements specified in technical appendixes to the permit. Specific permit requirements for a deep soil sampling investigation (Section VI.6.B and Attachment D) were implemented during this phase (i.e., Phase IIb) of the RFI.

1.2.2 RCRA Regulations

Regulatory authority for the RCRA corrective action provisions described above is found at 40 CFR 264.100-101. Specifically, the following citations apply:

> "(a) The owner or operator of a facility seeking a permit for the treatment, storage or disposal of hazardous waste must institute corrective action as necessary to protect human health and the environment for all releases of hazardous waste or constituents from any solid waste management unit at the facility, regardless of the time at which waste was placed in such unit.
>
> (b) Corrective action will be specified in the permit. The permit will contain schedules of compliance for such corrective action (where such corrective action cannot be completed prior to issuance of the permit) and assurances of financial responsibility for completing such corrective action." 40 CFR 264.101

Much more detailed and explicit corrective action regulations were proposed by USEPA on 27 July 1990 (55 FR 39798). Although not yet final, these regulations provide a template for the corrective action requirements that USEPA and Cal EPA routinely incorporates in their hazardous waste facility permits, as exemplified by the OSCO permit.

1.2.3 CERCLA Activities

The San Gabriel Valley CERCLA (i.e., Superfund) sites are located within the approximately 170-square-mile groundwater basin in the San Gabriel Valley. Groundwater contamination, consisting primarily of chlorinated hydrocarbons, first was detected in December 1979 during routine environmental monitoring by Aerojet Electrosystems near its facility in Azusa, California. By May 1984, four broad areas of contamination had been delineated and placed on USEPA's National Priorities List of hazardous waste sites (Figure 1-1a herein). Subsequent water quality sampling indicated that the contamination was pervasive throughout much of the San Gabriel Basin, as shown on a revised Agency-issued drawing issued in August 1989 (Figure 1-1b herein). USEPA presently manages all of the Basin as one large site, because of the realization that actions in one area may have a significant affect on other areas.

The OSCO facility is located at the head of what has been identified as Plume Area 2 (Figure 1-1a). Because of the facility's proximity to the apparent source of groundwater contamination and its history of recycling the solvents that have been detected in the groundwater, USEPA issued a CERCLA 104(e)/RCRA 3007 information request to OSCO on 19 August 1983 and a follow-up request on 9 March 1988. OSCO responded with detailed descriptions of past and present facility operations on 7 October 1983 and 20 May 1988, respectively. A General Notice letter identifying the site as a PRP was issued on 15 March 1991.

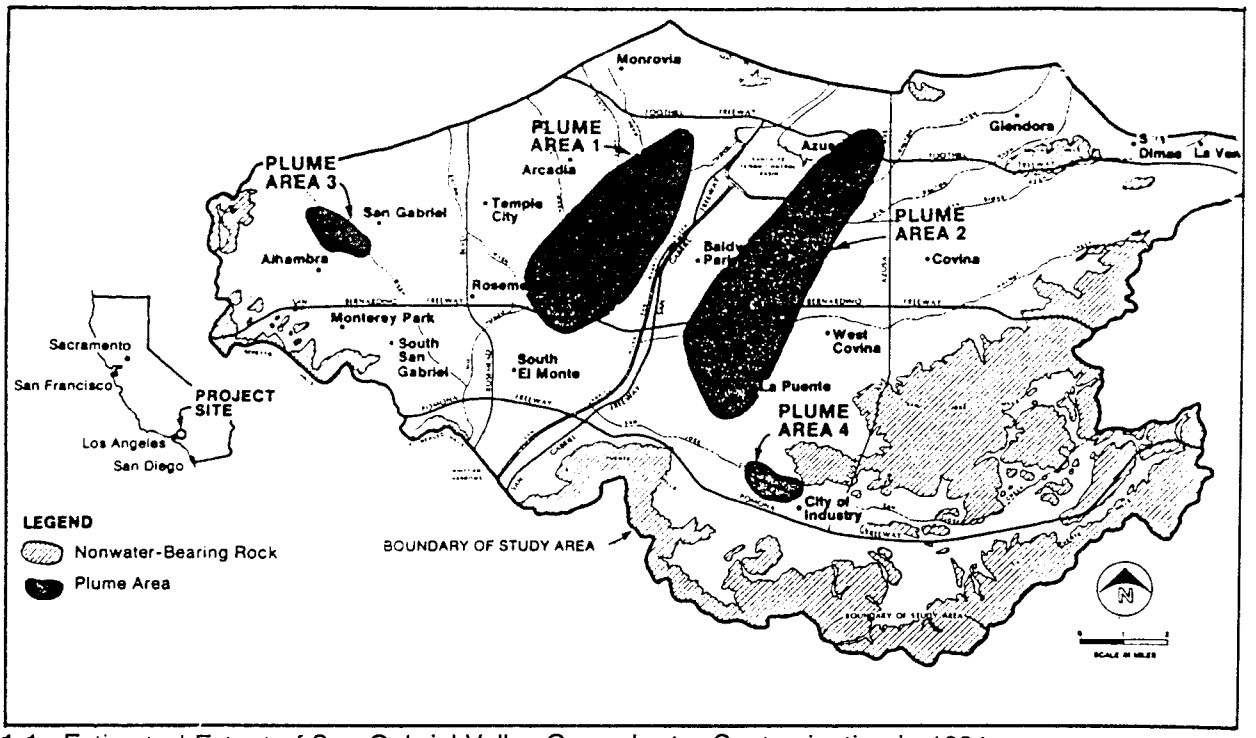
The RCRA office of USEPA has assumed primary responsibility for all investigation activities at the OSCO facility pursuant to RCRA corrective action regulations and permit provisions, as discussed in the previous section. At the present time, the Agency's CERCLA office is monitoring field work and providing input to the RFI planning and reporting process. This arrangement has served to avoid uncoordinated and duplicative work requirements during the course of the investigation.

1.2.4 RWQCB Activities

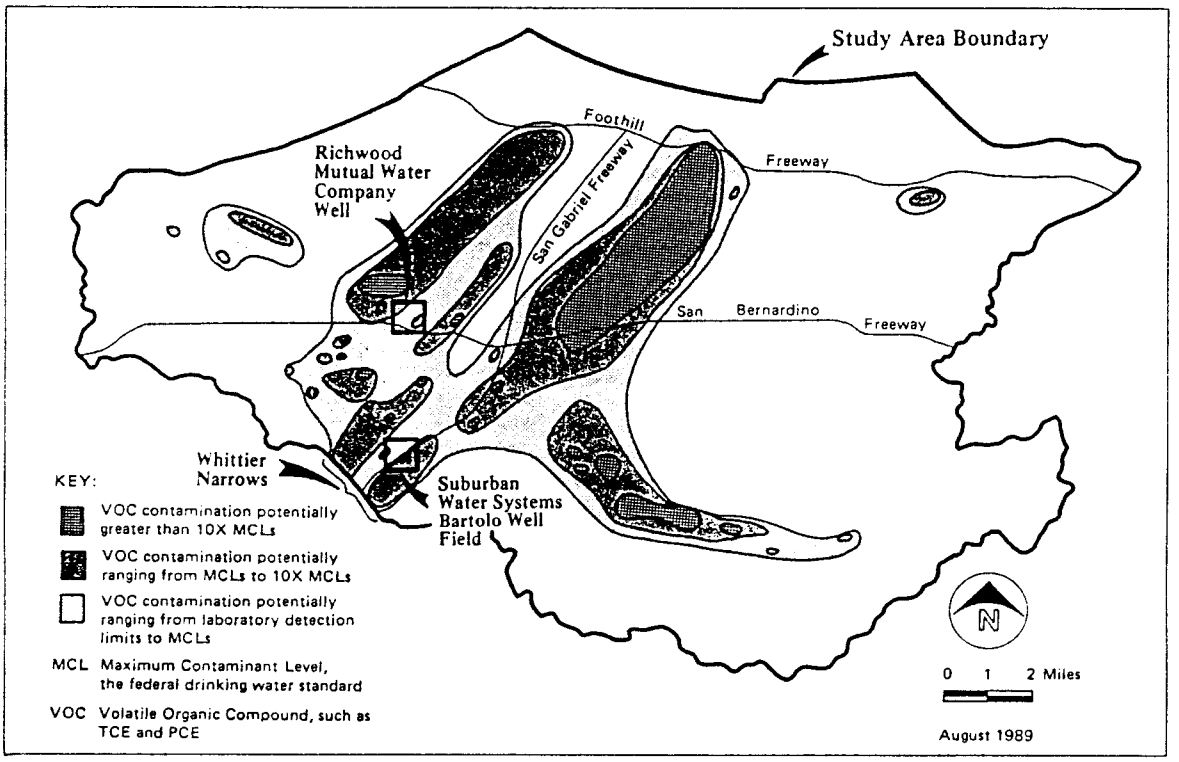
The RWQCB initiated investigation activities in the San Gabriel Valley on 7 January 1980 with a survey of 233 industrial facilities to determine possible sources of trichloroethene (TCE) groundwater contamination (USEPA, 1986). It continued investigating industries until 1983, when USEPA used the survey results to compile a list of facilities that used or may have used solvents.

On 1 January 1984, the RWQCB inaugurated its "AB 1803 Program" with the passage of an assembly bill of the same designation. AB 1803 required local health officers to conduct an evaluation of public water systems under their jurisdiction to determine the occurrence of, and/or potential for, contamination of groundwater sources by organic chemicals. The Upper San Gabriel Valley Municipal Water District and the San Gabriel Valley Municipal Water District sponsored an investigation of 119 wells during 1984-1985, representing more than 25% of the wells in operation at that time (CH2M Hill, 1988).

The RWQCB subsequently initiated a Well Investigation Program (WIP) to systematically identify and investigate suspected sources of groundwater contamination in the San Gabriel Valley. To date, more than 4,300 potential sources of contamination have been identified. The OSCO facility was identified as a "major suspected source" in an April 1990 WIP report (San Gabriel Valley Daily Tribune, 1990). Although the RWQCB tracks the status of its ongoing site investigations in the San Gabriel Valley via quarterly summary reports, OSCO is not included in the RWQCB program due to its relationship with USEPA.



1-1a Estimated Extent of San Gabriel Valley Groundwater Contamination in 1984



1-1b Estimated Extent of San Gabriel Valley Groundwater Contamination in 1989

MEREDITH/BOLI & ASSOCIATES, INC.

OIL & SOLVENT PROCESS COMPANY

ESTIMATED EXTENT OF GROUNDWATER CONTAMINATION IN THE SAN GABRIEL VALLEY

FIGURE 1-1

1990-211

11/15/91

SOURCES: USEPA, 1986 and USEPA, 1989.

1.2.5 Cal EPA Activities

Upon the discovery of groundwater contamination in the San Gabriel Valley, the California Environmental Protection Agency (Cal EPA; then known as the California Department of Health Services, or DHS) initiated a well sampling program. By April 1980, a total of 246 wells within the basin had been tested, of which 37 were found to have TCE concentrations higher than 5 micrograms per liter (ug/l; CH2M Hill, 1988). When the San Gabriel Valley sites were placed on the National Priorities List (NPL) in 1984, USEPA signed a cooperative agreement with DHS giving DHS lead agency status for implementing Remedial Investigation/Feasibility Study (RI/FS) activities. This responsibility reverted to USEPA in March 1985, and DHS (now Cal EPA) has played only a limited role in San Gabriel Valley investigation activities since that date.

2.0 FACILITY SETTING

The OSCO facility is situated on 7 acres of land in the northern portion of the San Gabriel Valley. An additional 3 acres adjacent to, and east from, the facility house OSCO's administrative and customer services offices. The history and operational setting of the facility and surrounding areas are recounted in the following sections.

2.1 LOCATION AND OWNERSHIP

The OSCO facility is located at 1704 West First Street, Azusa, California. It is within the boundaries of the City of Azusa, less than 1 mile south from the Foothill Freeway (US Interstate 210) and approximately 20 miles northeast from downtown Los Angeles (see Figure 2-1 herein). The following concerns are in the immediate vicinity: Miller Brewery across West First Street to the north (formerly the site of gravel pits and the Irwindale Raceway); The Norac Company to the south (a vacant lot storing Norac-owned materials); and several small industrial and commercial firms along Peckham Road to the west and Motor Avenue to the east.

The primary approach to the facility is from the Foothill Freeway south on Irwindale Avenue and west on West First Street. The main facility access gate and visitor entrance open to West First Street. Geographically, the facility is located at west longitude 117° 56′ 009″ and north latitude 37° 07′ 015″. It is situated within Section 4, Township 1~~5~~S, Range 10 West, San Bernardino Prime Meridian.

OSCO is a wholly-owned subsidiary of Chemical Waste Management, Inc. (CWM), with regional offices headquartered in Fremont, California. As a California corporation, OSCO is the legal owner/operator of the facility.

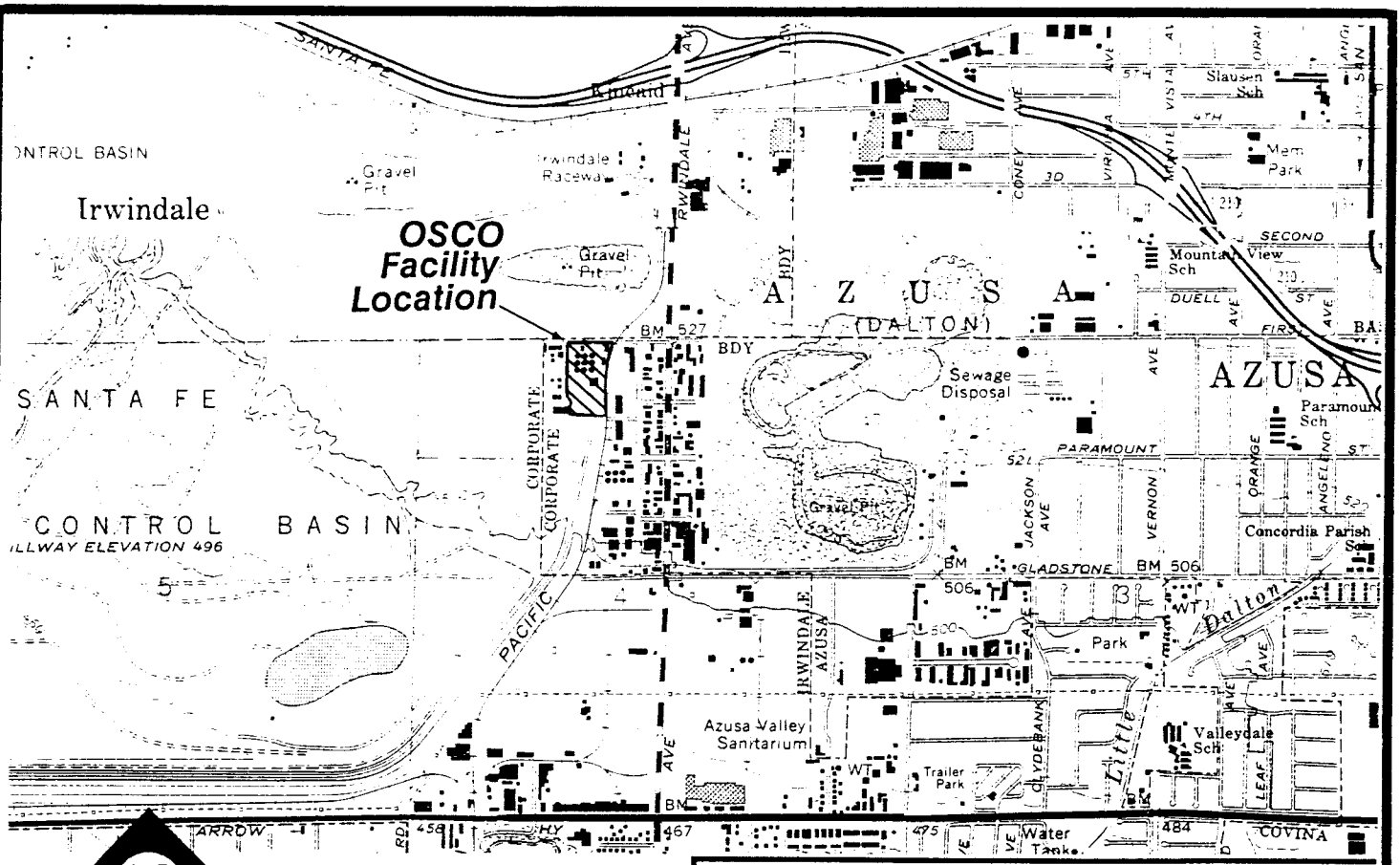
2.2 LAND USE

Land uses and significant features within a 1-mile radius of the OSCO facility include industrial-related businesses to the south and east, the Azusa Land Reclamation Landfill to the east, the Santa Fe Flood Control Basin to the west, and largely open land to the north. No residences or sensitive receptors are located within this 1-mile radius (Chambers Group, Inc., 1990). Approximately 80 businesses are located within a 1,500-foot radius of the site. These include a variety of machining, welding, printing, tool manufacturing, metals fabrication, landscaping, construction, trucking, and woodworking facilities (Chambers Group, Inc., 1990).

The OSCO site and immediately surrounding area have been designated for heavy industrial activity. The most recently issued zoning map (January 1989) for the City of Azusa designates the site for general manufacturing (M2).

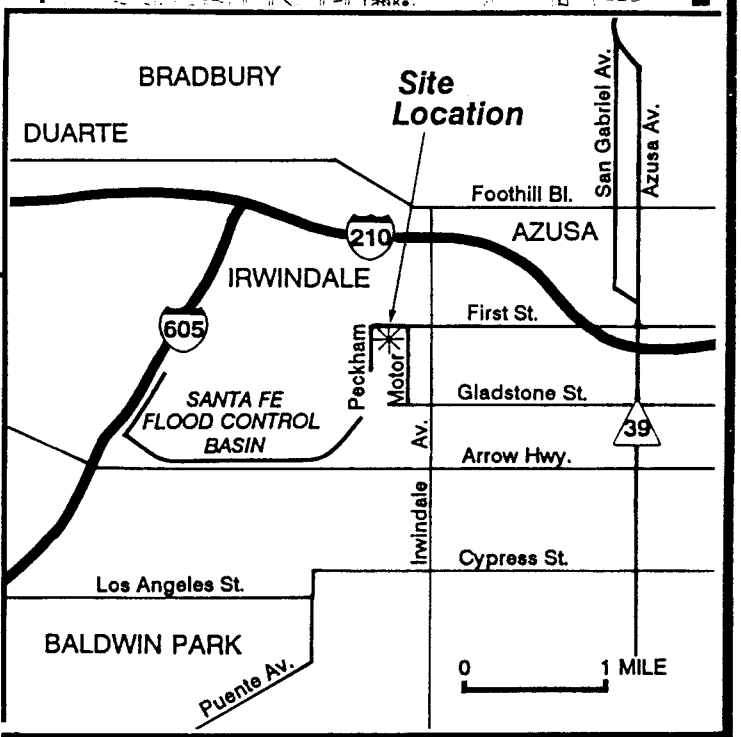
2.3 CLIMATE

The climate of the San Gabriel Valley is considered subtropical to semiarid. It is governed largely by the strength and location of the semi-permanent high pressure center over the Pacific Ocean and the moderating effects of the nearby vast oceanic heat reservoir. Local climatic conditions are characterized by warm summers, mild winters, infrequent rainfall, moderate daytime onshore breezes, and low humidities (Chambers Group, Inc., 1990).



SCALE 0 ½ 1 MILE

BASE MAP: U.S. Geologic Survey 7.5 Minute Series
Azusa, California Quadrangle
1964, photorevised 1981.



MEREDITH/BOLI & ASSOCIATES, INC.

OIL & SOLVENT PROCESS COMPANY

SITE LOCATION MAP
AZUSA, CALIFORNIA

FIGURE 2-1

1990-211

11/15/91

Precipitation averages 27 inches on the frontal area of the San Gabriel Mountains and 18 inches over the valley floor (CH2M Hill, 1988). Average annual precipitation recorded between 1951 and 1980 at the San Gabriel Fire Department meteorological station, approximately 10 miles southwest from the site in the City of San Gabriel, was 17.76 inches (NOAA, 1982). About 93% of this rainfall occurred between the months of November and April, inclusive. The current 5-year drought undoubtedly has resulted in below average annual precipitation totals at the site in recent years.

Temperatures in the valley generally are moderate, seldom dropping below freezing. The summer months occasionally may bring temperatures that exceed 100°F. At the San Gabriel Fire Department station, a mean annual temperature of 64°F was reported for the period 1951 to 1980 (NOAA, 1982).

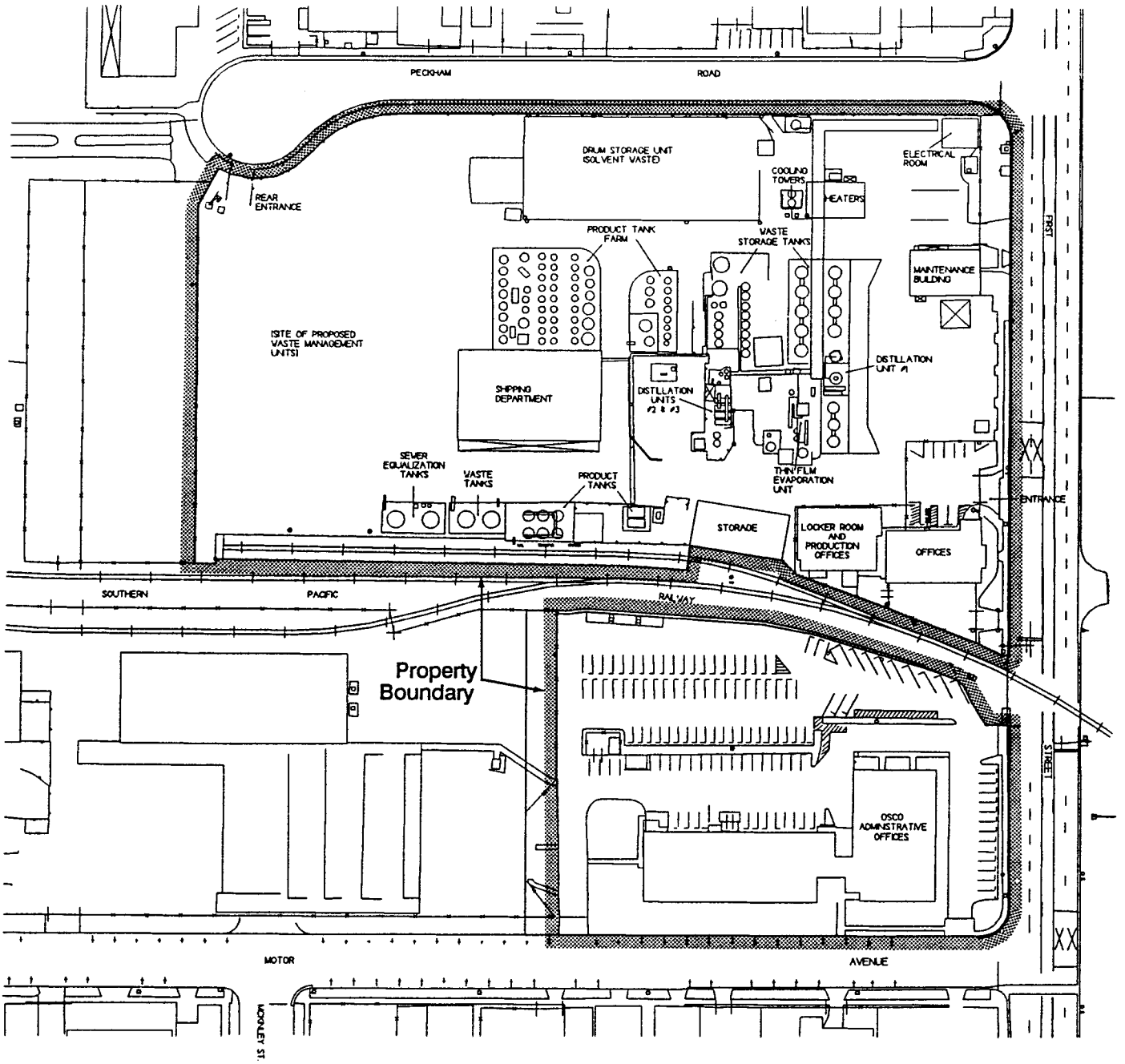
2.4 PRESENT FACILITY OPERATIONS

The OSCO facility provides solvent recycling services for various manufacturing and waste-generating industries in the State of California and other nearby states. Spent solvent wastes arrive at the site in containerized or bulk form and are unloaded at a drum storage area or into bulk waste storage/treatment tanks, respectively. Reusable solvent products are reclaimed by means of settling, physical separation, distillation/thin film evaporation, and dewatering -- activities that produce aqueous and sludge waste byproducts. Recycled solvents are sold or exchanged for reuse; non-recyclable wastes and wastes generated by recycling activities are manifested off-site for use as supplemental fuels, for destructive incineration, or for disposal by other means. OSCO also markets virgin solvents and operates a solvent distribution, collection, and recycling service for off-site parts cleaning operations under the trade name OSCO SOLVE.

A facility site plan developed from a recent (July 1991) aerial flyover and cartographic survey is provided as Figure 2-2 herein. Although the facility presently is undergoing a modernization program (see Section 2.5.3 herein), the layout represents the maximum extent of historical operations and is relatively unchanged from the original facility design. A review of historical aerial photographs indicates that the locations of storage tanks and solvent distillation equipment have remained the same during the entire existence the site; drum storage areas may have been more expansive than they are presently (USEPA, 1988).

Operational waste management units at the site presently include 1) thirty above ground waste storage/ treatment tanks, ranging in capacities from 250 to 30,000 gallons, 2) a drum storage area with a capacity of 3,306 55-gallon drums, 3) four solvent distillation units (one thin film evaporator), and 4) a rail transfer station for on-loading/off-loading of solvent wastes and products. Additionally bulk and containerized solvent products are transferred and stored within product tank drum storage and shipping areas (Figure 2-2).

Management of solvent wastes and products involves the storage of solvents in tanks and containers and requires that solvents be pumped or otherwise transferred among facility storage and treatment equipment, and to and from trucks and rail cars used for incoming/outgoing transport. A detailed description of the facility's waste management areas and operational procedures is provided in the "Operation Plan/Part B Permit Application" (OSCO, 1991).



N

APPROXIMATE SCALE
0 100 FEET

MEREDITH/BOLI & ASSOCIATES, INC.

OIL & SOLVENT PROCESS COMPANY

OSCO FACILITY LAYOUT

FIGURE 2-2

1990-211

11/15/91

2.5 OSCO FACILITY HISTORY

2.5.1 Early Historical Records (1953-1979)

OSCO was founded in 1935 when Mr. Stanley S. Peckham built a small processing and recycling plant at 3540 East Mercy Street, Los Angeles. In 1940, OSCO moved its operations to 539 South First Avenue, Bassett, California (near La Puente). Records indicate that South First Avenue was renamed Basetdale Avenue some time during the 1940s. In 1953, OSCO moved to its present location at 1704 West First Street, Azusa, California and commenced operations during April of the following year.

In 1954, West First Street was an unpaved, dead-end road and the land where the OSCO facility now stands was unoccupied. The original property purchase comprised about 4 acres, which was expanded to a total of 7 acres by separate 1-acre purchases during 1959, 1963, and 1965 (Ecology and Environment, Inc., 1984). Long-time facility employees report that the tank farms have had concrete foundations and secondary containment dikes since they were installed (O'Morrow, 1991). Waste treatment (i.e., distillation) units similarly were installed on concrete pads, although secondary containment for these units was not provided until about 1980. The existing drum storage unit (concrete pad and walled containment) was constructed during 1980 (O'Morrow, 1991). With the exception of the southernmost one-third of the site, which has never been used for solvent recycling operations, all facility operational areas presently are paved with concrete or asphalt.

The Los Angeles County Engineers Industrial Waste (IW) Division granted IW Permit No. 1051 to OSCO on 30 November 1953, which subsequently was adopted by the RWQCB on 14 January 1954 (Hatel, 1980). The IW permit established conditions and limitations on the collection, storage, and disposal of liquid and sludge wastes generated during the solvent recycling process. The permit required that facility wastes "be collected in impervious containers and hauled to a legal disposal site." Rinse waters were to be collected and discharged to an off-site sewage point until such time as a permanent on-site connection became available. Finally, the IW permit stated that "in no event shall toxic or highly pollutionable wastes be permitted to flow on the surface of the ground or in drainage channels or in unlined sumps."

Monthly inspections were conducted by the Los Angeles County Engineers to enforce the permit during the period 15 June 1954 through 2 April 1959. No permit violations were reported and agency records focus on the methods used to manage the facility's wastes (Hatel, 1980). The records indicate that liquid waste was collected in a concrete-lined sump (location not identified), the contents of which were emptied periodically by a vacuum truck and removed off-site for disposal. A single sample of the contents of the sump was taken by the Los Angeles County Engineers during November 1954, but was not analyzed for any organic compounds other than oil and grease (which was detected at a concentration of 2,646 parts per million; ppm). It is unclear whether or not this sump was one of the sumps removed in the late 1980s (see Section 4.3 herein).

In December 1954, the off-site disposal facility being used by OSCO announced that it no longer was able to accept bulk wastes from the facility. From that point on, the Los Angeles County Engineers' record indicates that residual treatment sludges were collected in containers for off-site disposal and liquid wastewaters were discharged to an off-site sewer location under approval from the Los Angeles County Sanitation Districts (Hatel, 1980).

General facility housekeeping during the period 1954-1959 is described in monthly inspection reports. Example comments documented in RWQCB files include:

- "Plant was repaired and cleaned up over the week and looked excellent" (30 April 1956)
- "Site very clean" (27 February 1957)
- "All items of permit #1051 are in compliance" (24 July 1958).

The inspection records do not indicate any spills or waste discharges at the site that would constitute sources of site contamination.

During the period between 2 April 1959 and 21 January 1964, no inspection records are available for the OSCO facility. After discovering that the County no longer was inspecting the facility, the RWQCB began periodic inspections during 1964. RWQCB records during the 1960s and 1970s indicate the following:

- Sanitary wastes were being discharged to a septic tank
- "Liquid wastes" were collected in an on-site concrete sump and eventually removed to an off-site sanitary sewer at the rate of about 1,000 gallons/day. By 1966, the facility began recirculating the process wastewater to reduce the volume of this discharge. Inspection records for 19 March 1970 indicate that "wastewater was treated in [a] four stage clarifier and recirculated [with] no evidence of leakage or dumping of any waste on the premises" (Hatel, 1980)
- No permit violations were reported in any of the inspection reports.

In concluding his review of all available inspection reports between 1954 and 1979, Hatel (1980) comments that the files contain "no mention or record of any major spillage or ground discharge of wastes at OSCO."

2.5.2 Middle Years (1979-1986)

In 1980, the RWQCB issued a Clean Up and Abatement Order to remove ponded liquids and contaminated soils that had collected at the south end of the OSCO facility during late 1979. The activities associated with this action are recounted in detail in Section 4.1 herein.

On 19 August 1983, OSCO received one of the first RCRA "Part B" Hazardous Waste Facility Permits (No. CAD008302903) issued by DHS (now Cal EPA). The facility had submitted an Operation Plan (i.e., a permit application) on 13 January 1983 for the continued operation of a hazardous waste storage and treatment facility, pursuant to Federal and State regulations. The permit required OSCO to provide each hazardous waste storage area (tanks and containers) with a containment structure consisting of an impervious, continuous base that constrained surface water run-off and spills and excluded surface water run-on. The permit also directed that hazardous waste not be disposed of at the facility and that all equipment, pipes, and lines used to handle, transfer, or store hazardous waste be maintained so as to prevent leaks or spills.

RCRA interim status/permitting requirements after 1980 triggered much greater enforcement involvement by DHS. An interim status compliance inspection conducted by this agency on 28 September

1981 reported no violations for 211 facility items inspected. Subsequent inspections conducted between 1983 and 1986 reported no permit violations and described the facility as "well managed and clean" with "good to excellent" ratings for all inspection categories (Cal EPA, 1986).

On 13 September 1985, a one-time permit variance was granted by DHS to treat a load of PCB-contaminated waste (25 to 27 ppm) that inadvertently had been accepted at the facility. This was the only time PCB wastes are known to have been present at the site.

2.5.3 CWM Purchase and Recent Events (1986-Present)

CWM purchased the OSCO facility from a consortium of individuals headed by Donald A. Peckham on 29 December 1986. CWM embarked immediately on a long-term plan to completely modernize the facility by replacing the existing hazardous waste storage tanks with new tanks, building a new drum storage area, installing/replacing distillation equipment, etc. New waste management units, including an Aqueous Waste Treatment Unit, Oil Recycling Unit, Glycol Recycling Unit, and Waste Storage and Transfer Station, also have been proposed for the site. The development of the planned facility modifications coincided with the expiration of the facility's 1983 RCRA Permit, and the proposed changes were documented fully in the "Operation Plan/Part B Permit Application" for permit renewal that was submitted on 19 February 1988 (OSCO, 1991).

OSCO received its renewed permit from DHS/USEPA on 29-30 November 1989. Since that time, certain proposed facility modifications have been implemented, including:

- Replacement of one of the distillation units (No. 1)
- Replacement of 13 old storage/rundown tanks with 12 new tanks
- Replacement and relocation of the cooling towers and oil heating unit
- Addition of new air pollution control systems to reduce vapor losses from facility equipment
- Construction of new administration offices.

During the course of replacing existing waste management units, OSCO's RCRA Closure Plan requires specific soil sampling to be performed. Sampling and analysis that were performed in connection with the closure of Distillation Unit No. 1 and associated tanks are discussed in Section 4.6 herein. As other existing facility units are replaced, required soil testing is expected to provide further data regarding the possible presence of contaminant releases from historical facility operations.

2.5.4 Historical Solvent Use

Historically and presently, the chemicals managed at the OSCO facility have consisted of new and used solvents from industries that include automotive, metal cleaning, packaging, chemical, petroleum, and paint. The solvents are both halogenated and non-halogenated and include such common constituents as acetone, isopropyl alcohol, methyl ethyl ketone, methylene chloride, mineral spirits, trichloroethene, perchloroethene, toluene, 1,1,1-trichloroethane, and xylenes.

Although the facility's 1983 RCRA Permit limited waste receipts to USEPA-designated waste codes D001, F001, F002, F003, F005, and 15 miscellaneous "U"-coded wastes, it is reasonable to assume that historical

operations have involved the recycling of virtually any solvent for which commercial recovery was economically feasible. Presently, there are very few restrictions on the types and quantities of solvent wastes that can be accepted at the facility. PCB-contaminated wastes never have been accepted knowingly (nor are they allowed by the facility's permit). Also, notwithstanding the company's name, oil has not been recycled since 1950, prior to the establishment of the facility at its present site (Ecology and Environment, Inc., 1984).

There are no comprehensive records of the volumes of trichloroethene (TCE) that historically have been managed at the OSCO facility. Prior to 1966, OSCO estimated that it was recycling between 96,000 and 120,000 gallons of TCE per year (Hatel, undated). A decline in TCE use and sales followed implementation of the South Coast Air Quality Management District's (SCAQMD's) Rule 66 ("Organic Solvents") in 1966. By 1979, TCE sales represented only 0.0004% of total annual solvent sales, or 20,217 gallons (Peckham, 1980a). Subsequent to the discovery of groundwater contamination in the San Gabriel Valley and the 1980 Clean Up and Abatement Order (see Section 4.1 herein), OSCO notified its customers that it no longer would accept TCE for recycling as of 30 January 1980 (Peckham, 1980b).

3.0 GEOLOGY AND HYDROGEOLOGY

3.1 PHYSIOGRAPHY AND TOPOGRAPHY

The OSCO facility is located in the center of the San Gabriel Valley in eastern Los Angeles County. The valley occupies a large sedimentary basin, the San Gabriel Basin, that has had a geologic history spanning most of the Cenozoic Era. The term San Gabriel Basin also refers to the triangular, nearly closed drainage area northeast from the Los Angeles Basin; it is bounded on three sides by upland bedrock terrains (Jenkins, 1967). The San Gabriel Valley is bounded on the north by the San Gabriel Mountains and on the southeast and southwest by the Repetto, Merced, Puente, and San Jose Hills (Figures 3-1 and 3-2 herein). The San Gabriel Mountains rise in elevation to over 10,000 feet above mean sea level (msl). The elevations of the hills range to approximately 500 feet above the floor of the basin.

Surface water drainage from the adjacent mountains and hills serves to recharge two major river systems -- the Rio Hondo and San Gabriel Rivers. The main channels of these two rivers occupy the central portion of the valley and both drain through a narrow topographic gap referred to as the Whittier Narrows, a 1.5-mile flood plain that occurs between the Merced and Puente Hills. The pattern of basin infilling and distribution of bedrock areas control the distribution and movement of groundwater (Yerkes, et al., 1965).

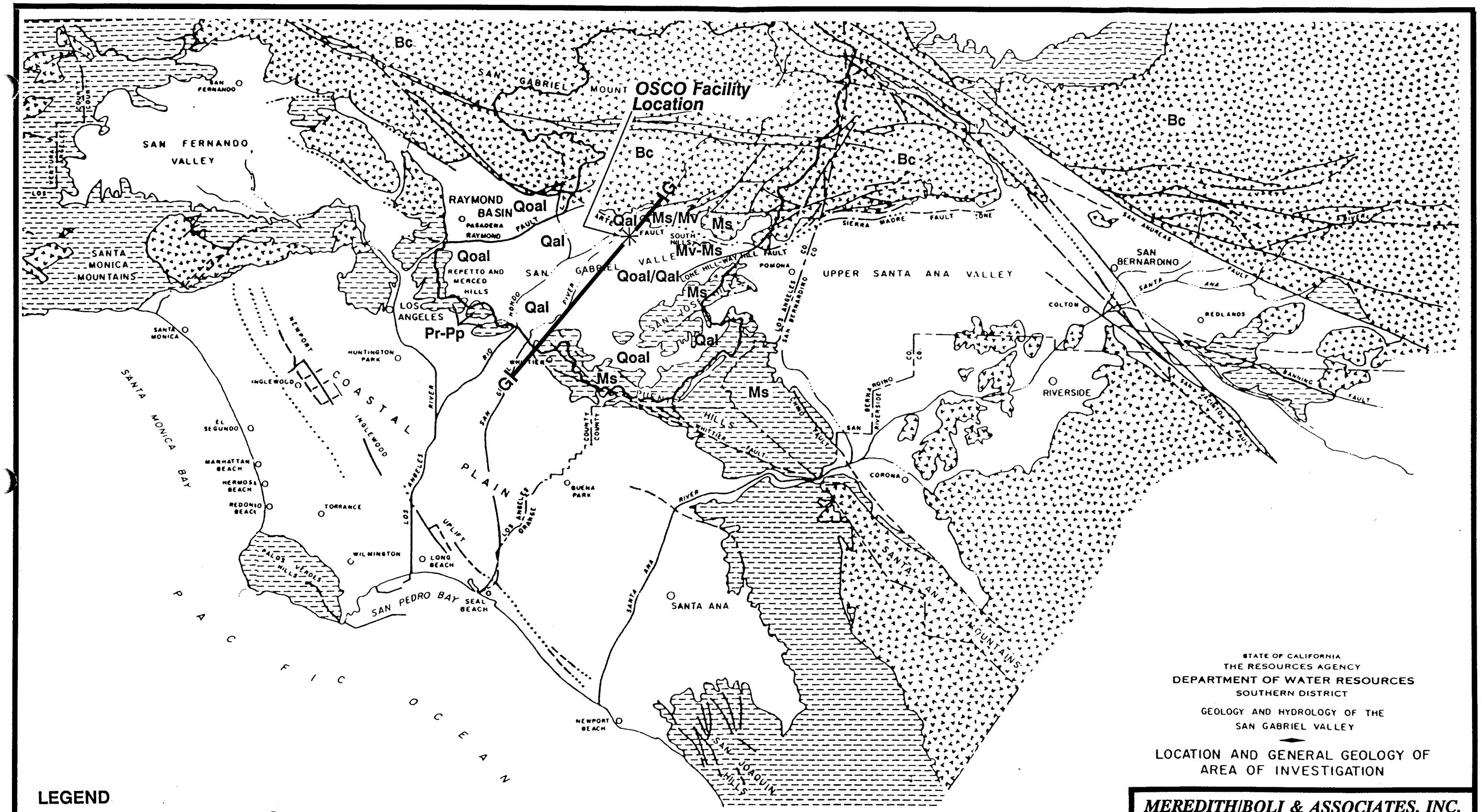
The valley floor elevation ranges from 725 feet msl near the base of the San Gabriel Mountains to 200 feet msl at the Whittier Narrows. The OSCO facility slopes gently from the northeast to the southwest, and ranges in elevation from 527.4 to 514.7 feet msl (Figure 3-3 herein).

3.2 GEOLOGIC HISTORY

Crystalline rocks crop out in the San Gabriel Mountains and in the northern Puente and San Jose Hills. These rocks represent the pre-Cretaceous basement underlying both the San Gabriel and Los Angeles Basins. Prior to the inception of structural deformation and basin development in the middle Miocene, these areas were the site of shallow marine deposition. This depositional phase is preserved only beneath the Los Angeles Basin, as pre-Miocene rocks are not known to occur beneath the San Gabriel Basin (Yerkes, et al., 1965). Basin formation was the result of differential subsidence and complex regional deformation resulting in continued rapid uplift of the San Gabriel Mountains and Puente Hills and fault dissection of the basement and early Tertiary sedimentary formations. Beneath the fill sequence of sedimentary formations and unconsolidated deposits of the San Gabriel Basin is a closed elliptical basement surface with a maximum depth of 12,000 feet adjacent to the Whittier Narrows. This surface is unconformably overlain by Miocene volcanic and sedimentary rocks that reflect the intermittent incursion of marine waters into the basin during the late Tertiary.

Downwarping occurred principally from late Miocene to early Pleistocene with infilling of the basin by marine and nonmarine sedimentary deposits. By the end of the early Pleistocene, the regional shoreline occurred north and east from the present day Whittier Narrows, where a low coastal plain merged northeastward with large coalescing alluvial fans extending from the San Gabriel Mountains (Yerkes, et al., 1965). The deformation and infilling process continues into modern times as shown by the warping of Recent sedimentary deposits, uplift of highland areas, and earthquakes (Yerkes, et al., 1965).

At the junction of the San Gabriel Valley and the San Gabriel Mountains is the Sierra Madre Fault System. This system is made up of five to six smaller faults, of which the closest to the OSCO facility is the Duarte Fault. The Sierra Madre Fault System is seismically active (Yerkes, et al., 1965).



STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SOUTHERN DISTRICT

GEOLOGY AND HYDROLOGY OF THE SAN GABRIEL VALLEY

LOCATION AND GENERAL GEOLOGY OF AREA OF INVESTIGATION

LEGEND

N

APPROXIMATE SCALE
0 — 10 MILES

- Investigational Area
- Known Faults
- Inferred Faults
- Concealed Faults

- Qal, Qat, Qoal — Alluvium and Associated Deposits of Recent or Pleistocene Age
- Mv — Glendora Volcanics
- Ms — Puente Formation
- Pp — Pico Formation
- Pr — Repetto Formation
- Sedimentary Rocks of Marine Origin, Mainly Tertiary with Some Cretaceous
- Bc — Basement Complex: Crystalline and Metamorphic Rocks, Jurassic or Older; Some Tertiary Rocks

MEREDITH/BOLI & ASSOCIATES, INC.

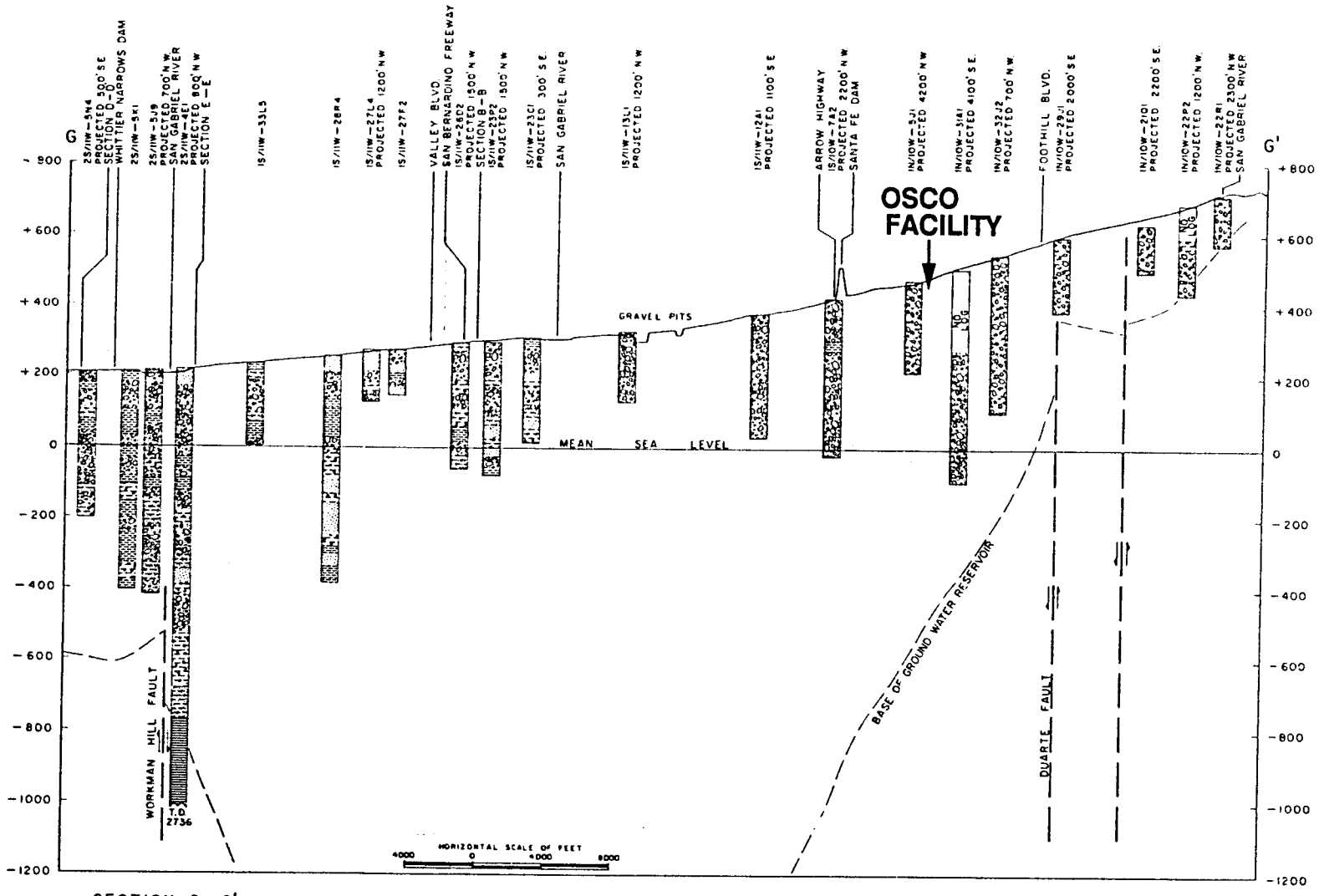
OIL & SOLVENT PROCESS COMPANY

REGIONAL GEOLOGY

FIGURE **3-1**

1990-211

11/15/91



SECTION G—G'—WHITTER NARROWS NORTHEASTERLY TO SAN GABRIEL CANYON ALONG SAN GABRIEL RIVER

SAND
GRAVEL OR GRAVEL AND SAND
CLAY
SANDY CLAY
GRAVELY CLAY
SEDIMENTARY BEDROCK
CRYSTALLINE BEDROCK
FAULTS

NOTE: LOCATIONS OF WELL LOG SECTIONS ARE SHOWN ON PLATE 13

MODIFIED FROM: State of California Resources Agency
Department of Water Resources Southern District

MEREDITH/BOLI & ASSOCIATES, INC.

OIL & SOLVENT PROCESS COMPANY

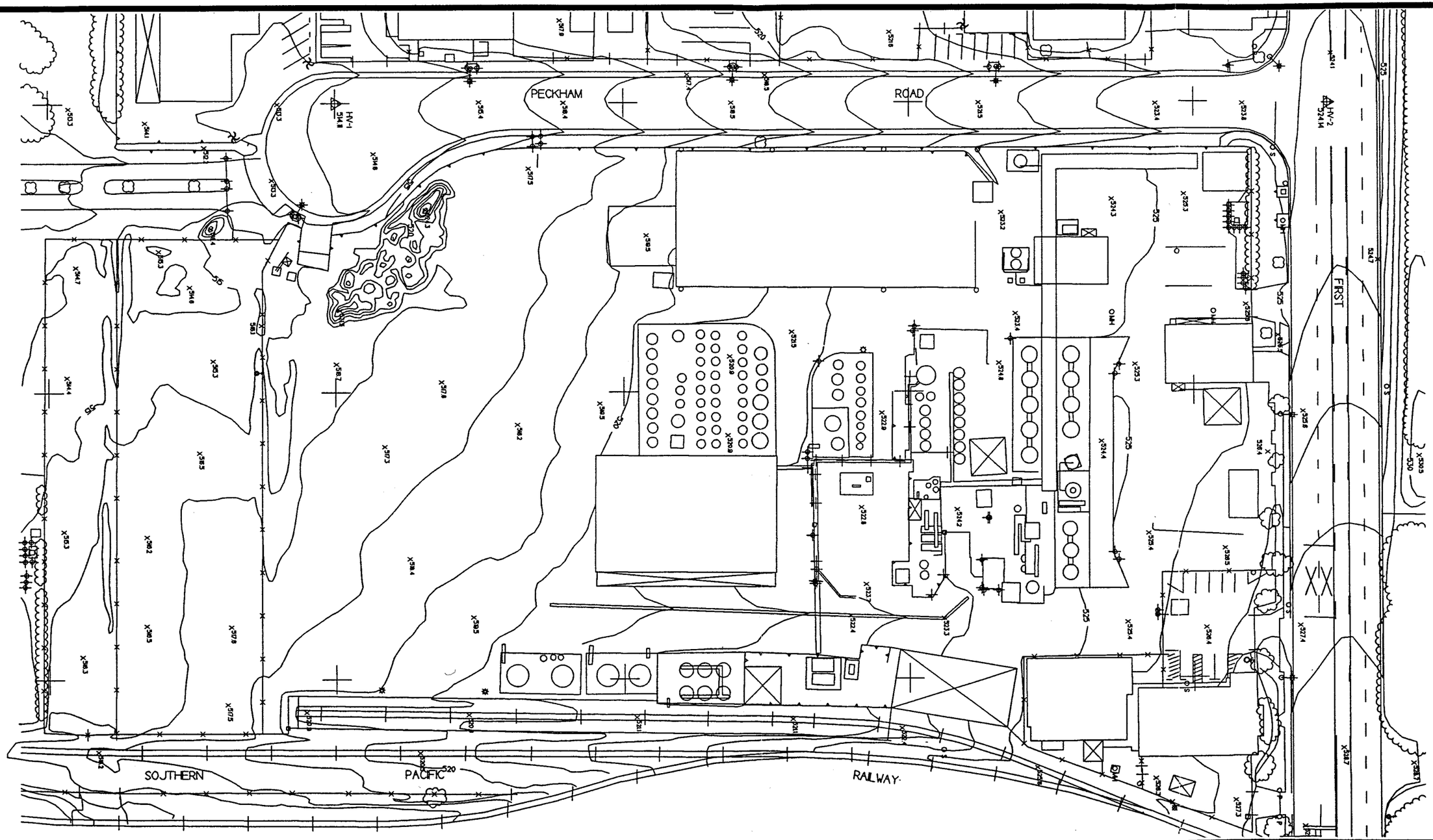
GEOLOGY AND HYDROGEOLOGY OF THE SAN GABRIEL VALLEY

GEOLOGIC SECTION G-G'

FIGURE 3-2

1990-211

11/15/91



APPROXIMATE SCALE 0 100 FEET

SOURCE: Airborne Systems Inc., July 1991

MEREDITH/BOLI & ASSOCIATES, INC.

OIL & SOLVENT PROCESS COMPANY

OSCO FACILITY TOPOGRAPHIC MAP

FIGURE 3-3

1990-211

11/15/91

3.3 REGIONAL PROVENANCE AND VALLEY INFILLING

The San Gabriel Mountains are an igneous and metamorphic crystalline massif characterized by high relief and rugged terrain. Thousands of feet high and extending 60 miles from San Fernando Pass in the west to San Bernardino County in the east, the range is one of several west to east trending mountain belts that make up the Transverse Ranges Geologic Province. Formation and uplift of the San Gabriel Mountains has developed through a complex history beginning in the late Cretaceous and continuing into recent time (Oakeshott, 1975).

The northern boundary between the mountains and the valley coincides with an extreme topographic break and several relatively young faults collectively referred to as the Sierra Madre fault system (Figure 3-1 herein). The northwestern boundary of the valley generally is placed along the Raymond Fault, which extends from the Repetto Hills to the base of the San Gabriel Mountains (DWR, 1966). Surface water runoff from the San Gabriel Mountains occurs through numerous deeply cut canyons, which also direct eroded alluvial debris to several fans in the valley. The low hills bounding the remainder of the valley are composed of folded Tertiary age sedimentary and volcanic rocks. Erosion by surface water runoff from these areas also contributes some alluvial debris to the valley infilling process.

Adjacent to most of these upland areas the valley floor is covered by older alluvial debris and large coalescing Quaternary fan deposits. These deposits give way to recent alluvium in the valley center. A notable exception occurs in the northeast portion of the valley, where the primary tributary of the San Gabriel River emerges from the San Gabriel Mountains south of Morris Reservoir. In this area, continued high depositional rates have produced a large Holocene alluvial fan that extends south into the central portion of the valley and the Irwindale area. These alluvial deposits consist of angular to subrounded continental debris ranging in size from silt to boulders over 6 feet in diameter. In the Irwindale area, these sediments have not undergone any significant weathering and clay material is not present (DWR, 1966). Weakly stratified deposits of gravel are interbedded with gravelly sand and rare silty sand layers. Clasts of igneous plutonic and metamorphic rocks freshly derived from the San Gabriel Mountains dominate the assemblage of rock types found throughout the valley and basin fill sequence.

3.4 AQUIFER DEFINITION AND DIMENSIONS

The upper 1,200 to 2,500 feet of sediments in the central San Gabriel Valley can be characterized as a large single aquifer, bounded on all sides by upland bedrock terrains. The bedrock terrains can produce relatively limited amounts of water (5 to 15 gallons per minute; gpm), and are considered regionally as non-water bearing when compared to the typical yields from the valley aquifer (100 to 4,000 gpm). The California Department of Water Resources (DWR) defines the effective base of the groundwater reservoir as coinciding with the base of unconsolidated sediments (DWR, 1966), which at the OSCO facility is estimated to occur at -700 feet msl. The average depth to water in the Irwindale area presently is about 300 feet below ground surface (bgs). Thus, the total saturated thickness of the San Gabriel Valley aquifer adjacent to the site is approximately 900 feet. The saturated thickness increases to greater than 1,500 feet south from the facility (DWR, 1966).

3.5 GROUNDWATER FLOW

Recharge to the valley occurs from incident precipitation and runoff from the surrounding mountainous bedrock terrains. Tributaries of the Rio Hondo River drain the San Gabriel Mountains, Repetto Hills, and Merced Hills and tributaries of the San Gabriel River, San Jose Wash, and Walnut Creek drain the San Gabriel Mountains, San Jose Hills, and Puente Hills. The entire valley aquifer discharges into the

Los Angeles groundwater basin through the Whittier Narrows. On a regional scale, groundwater flow patterns mimic surface water movement. Groundwater moves away from upland recharge areas toward the center of the aquifer (Figure 3-4 herein). In the central part of the valley aquifer, flow is primarily southwest toward Whittier Narrows.

Groundwater flow rates and directions at the OSCO facility can be approximated by studies performed at the nearby Azusa Land Reclamation Landfill (Law Environmental, 1990, 1991a, 1991b, 1991c; LeRoy Crandall and Associates, 1987). A summary of precipitation and groundwater flow directions developed for the landfill site during the period April 1985 to March 1987 is provided on Table 3-1 herein. Analysis for monthly groundwater elevation data obtained from wells screened between 145 and 385 feet bgs reveals a range of flow directions between west and south-southeast. The predominant gradient directions are west and southwest and occur during the drier months of the year. During wet months, the flow in the San Gabriel River and the retention and recharge that occurs via the Santa Fe Flood Control Basin cause a temporary shift in groundwater flow to the south, after which the predominant west-southwest flow direction is re-established.

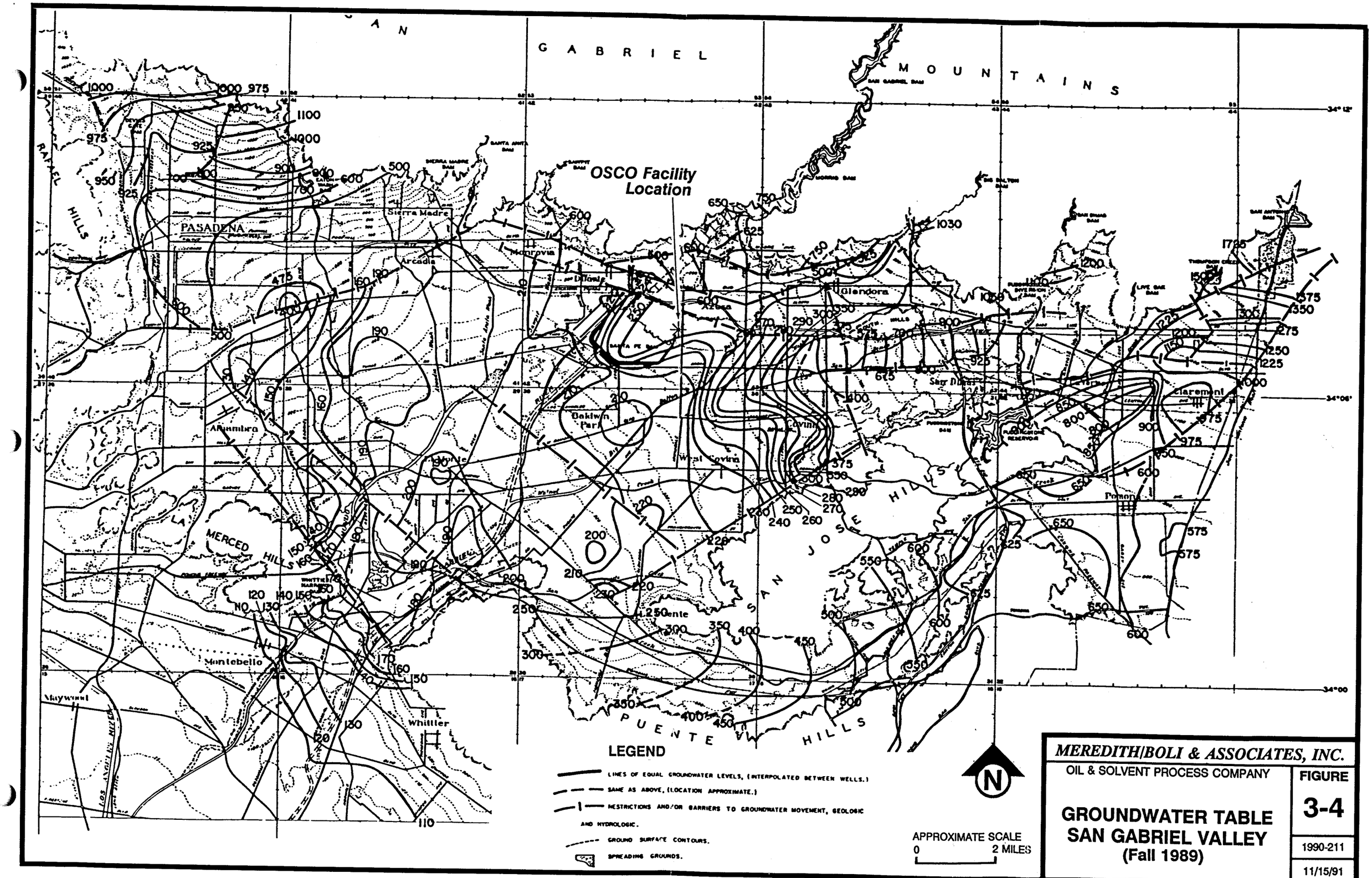
Groundwater elevation contours prepared from Azusa Land Reclamation Landfill data for the months of February and May 1991 are shown in Figure 3-5 herein. Between these two months, heavy rains occurred (during March 1991), which caused groundwater elevations to rise an average of 3.4 feet (Law Environmental, 1991c). The additional recharge apparently caused the groundwater flow direction to shift from the west to the southwest. Groundwater flow velocities during February and May 1991 were calculated to be 1.84 and 1.41 feet/day, respectively (Law Environmental, 1991b, 1991c).

3.6 GROUNDWATER QUALITY AND USE

More than 400 water supply wells in the San Gabriel Valley are used to extract approximately 240,000 acre-feet of groundwater per year for industrial, commercial, and domestic purposes (CH2M Hill, 1990). Forty-five (45) different water purveyors operating in the San Gabriel Valley provide drinking water to approximately one million persons.

As discussed in Section 1.2 herein, volatile organic contamination is known to be pervasive throughout the San Gabriel Valley groundwater basin. Concentrations of these contaminants have been detected at levels that exceed USEPA's Maximum Contaminant Levels (MCLs) and/or Cal EPA State Action Levels in almost 20% of the basin area (as a lateral surface expression -- the extent of vertical contamination is not well known) (CH2M Hill, 1990). In addition, elevated nitrate concentrations attributable to agricultural practices and leaking septic tanks have been a historical problem in the basin. Water purveyors with contaminated wells have been required to take wells out of production, employ treatment measures, or blend the contaminated water with other water supplies to ensure that the contaminant concentrations are below State Action Levels.

A coordinated program for the collection, storage, and analysis of groundwater quality data for the San Gabriel Valley was initiated in 1983-1984 with the RWQCB's 1803 Program and USEPA's Supplemental Sampling Program (SSP). The first comprehensive report of groundwater quality conditions summarizes sampling results from 119 wells sampled during the AB 1803 Program and 43 wells sampled during the SSP (CH2M Hill, 1988). As part of the SSP, fourteen wells located in and around Azusa, California were sampled pursuant to a "source sampling program." The samples were analyzed for volatile organics (USEPA Method 624), semi-volatile organics (USEPA Method 625), agricultural compounds (i.e., pesticides), and specific chemical compounds that reportedly have been used or disposed of in the area (e.g., Freon 113, hydrazine, perchlorate, selenium, etc.).



MEREDITH/BOLI & ASSOCIATES, INC.

OIL & SOLVENT PROCESS COMPANY

GROUNDWATER TABLE SAN GABRIEL VALLEY (Fall 1989)

FIGURE 3-4

1990-211

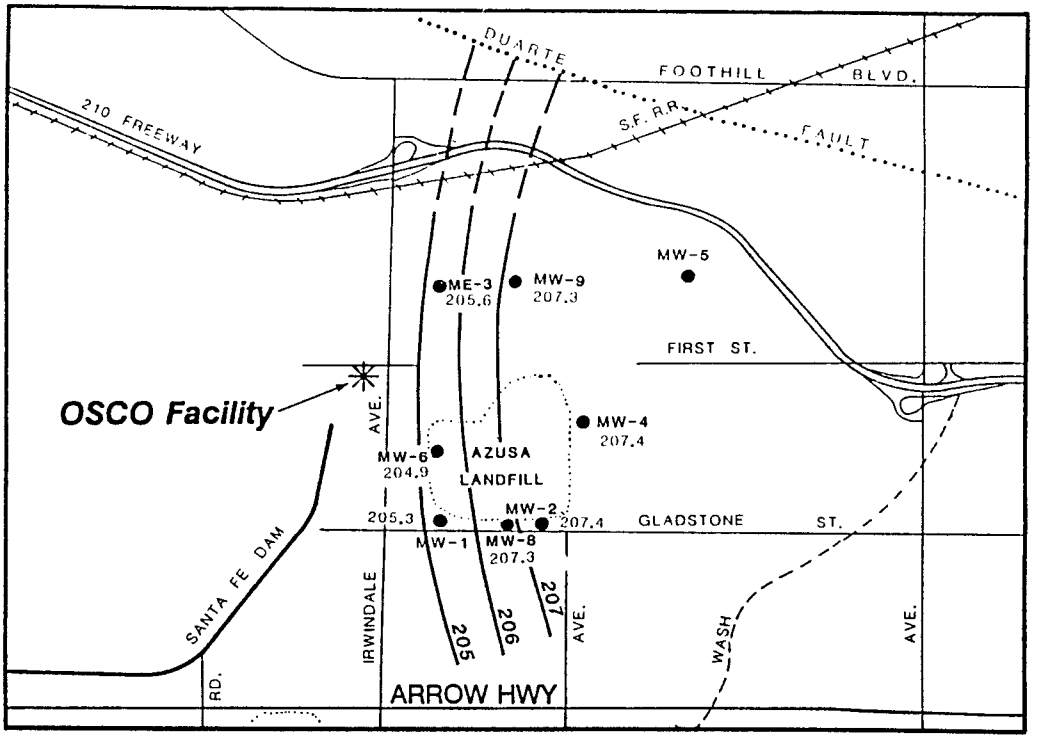
11/15/91

TABLE 3-1

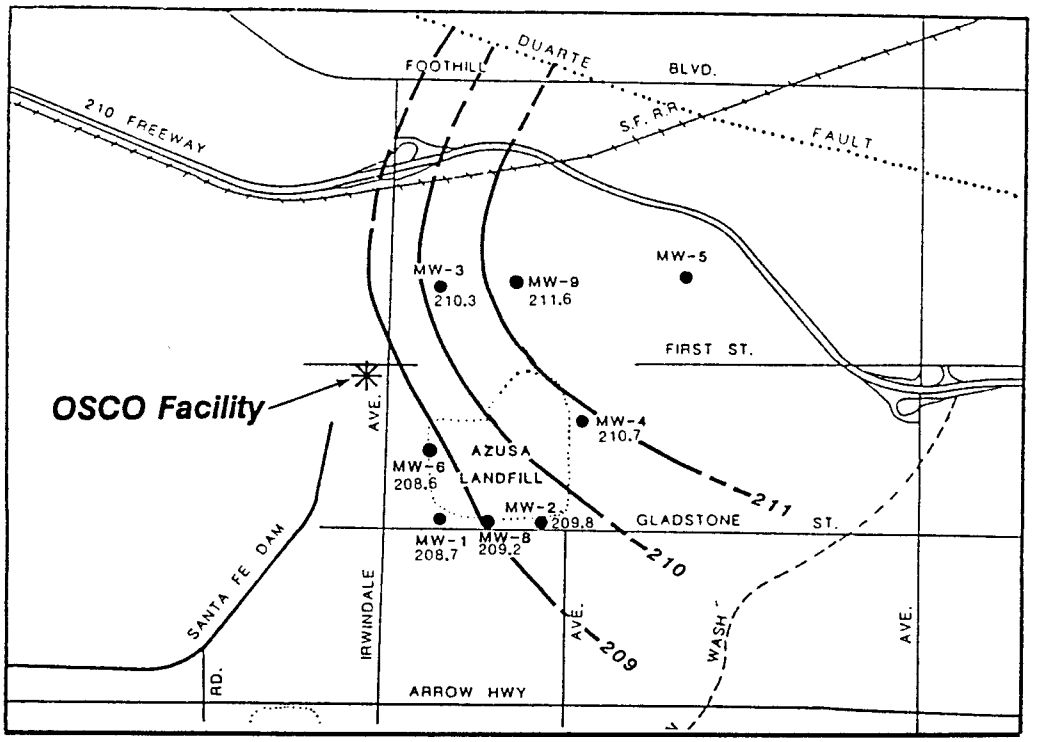
GROUNDWATER FLOW DIRECTIONS DETERMINED FOR THE AZUSA LAND RECLAMATION LANDFILL (APRIL 1985-MARCH 1987)[a]

Date	Precipitation (inches)[b]	Groundwater Flow Direction
April 1985	0.00	West
May 1985	0.23	West
June 1985	0.00	West
July 1985	0.01	Southwest
August 1985	0.00	West
September 1985	0.36	West
October 1985	0.65	Southwest
November 1985	4.36	Southwest
December 1985	0.29	Southwest
January 1986	3.29	South-Southwest
March 1986	6.47	South-Southeast
May 1986	0.00	Southeast
July 1986	0.10	West
September 1986	2.47	West
November 1986	1.33	West
January 1987	1.75	Southwest
March 1987	1.44	Southwest

[a] Source: LeRoy Crandall and Associates, 1987.
[b] Source: NOAA (monthly meteorological reports for California).



3-5a Elevation Contours Developed for February 1991



3-5b Elevation Contours Developed for March 1991

N

207 Groundwater Contour

0 2000 FEET

SOURCE: Law Environmental , 1991b, 1991c

MEREDITH/BOLI & ASSOCIATES, INC.

OIL & SOLVENT PROCESS COMPANY

GROUNDWATER ELEVATIONS AT THE AZUSA LAND RECLAMATION LANDFILL

FIGURE **3-5**

1990-211

11/15/91

A summary of the compounds detected in the 14 source sampling wells is presented on Table 3-2 herein. A total of nine volatile and two semivolatile organic compounds were detected in one or more of the wells. Trichloroethene (TCE) was the most frequently detected contaminant, ranging in concentration from 1 to 1,100 ug/l. Other compounds detected at significant concentrations include 1,1,1-trichloroethane (1,1,1-TCA; 12 to 170 ug/l), 1,1-dichloroethene (1,1-DCE; 1 to 96 ug/l), and perchloroethene (PCE; 29 to 500 ug/l). The contaminant concentrations are observed to decrease as the plume moves to the southwest.

The SSP report, as revised to 1988, depicts the contamination in the Azusa area as originating about 1.5 miles northeast from the OSCO facility (CH2M Hill, 1988). Groundwater contamination is shown as plumes of TCE, PCE, and carbon tetrachloride (CCl_4) that extend to the southwest, passing to the east of the OSCO facility border. None of the projected groundwater contamination contours indicates that groundwater beneath the OSCO facility is contaminated. However, more recent data indicate that this interpretation may be an artifact of the limited availability of sampling points near the OSCO facility during previous sampling events.

An ongoing groundwater monitoring program at the Azusa Land Reclamation Landfill provides the most comprehensive evaluation of groundwater conditions near the OSCO facility. The landfill is located approximately 0.5 mile east from the site and is considered upgradient. Since 24 August 1985, eight groundwater monitoring wells at the landfill (Figure 3-5) have been monitored for organic parameters via three USEPA test methods: 1) Method 8240 (volatiles); 2) Method 8270 (semi-volatiles); and 3) Method 8080 (pesticides and PCBs). Inorganic data (i.e., anions, cations, and metals) also are collected at the site. A summary of selected organic contaminants that have been detected is provided on Table 3-3 herein. Three monitoring wells (MW-6, MW-8, and MW-9) were sampled for the first time in February 1991; the remaining wells comprise the original monitoring network.

Compounds other than the organic contaminants summarized on Table 3-3 have been detected at the Azusa Land Reclamation Landfill site, including 1-1-dichloroethane (1,1-DCA), 1,4-dichlorobenzene (1,4-DCB), 1,1,1-TCA, trichlorofluoromethane, chloroform, toluene, benzene, chlorobenzene, ethylbenzene, and DDT (Law Environmental, 1990, 1991a). Six-year data trends indicate that some compound concentrations at some wells are decreasing (e.g., TCE and PCE at Wells MW-2 and MW-4), while other wells exhibit increasing contaminant concentrations over time (e.g., 1,1-DCE at Wells MW-1 and MW-4 and PCE at Well MW-3).

During May 1991, a single round of groundwater data was reported for The Norac Company, Inc., located approximately 0.3 mile south from the OSCO facility (England, Shahin & Associates, 1991). Given the predominant west-southwest groundwater flow direction, this location is neither upgradient nor directly downgradient from the site. However, temporary shifts in groundwater flow direction during the rainy season may position the Norac facility downgradient from the OSCO facility for short periods of time (see Section 3.5 herein). The results of the single round of groundwater analyses at the Norac facility are summarized on Table 3-4 herein.

In summary, presently available local groundwater quality data and groundwater flow directions suggest that groundwater beneath the OSCO site likely is contaminated with various volatile organic hydrocarbons originating from off-site sources. Data from nearby facilities indicate that TCE, PCE, and 1,1-DCE are the predominant compounds present in the area-wide groundwater contamination.

TABLE 3-2

SUMMARY OF COMPOUNDS DETECTED IN
USEPA'S 1986 SOURCE SAMPLING PROGRAM

Compound	No. of Wells Detected[a]	Range of Reported Concentrations (ug/l)
Volatiles		
1,2-Dichloroethane	1	4
1,1,1-Trichloroethane	3	12-170
1,1-Dichloroethene	4	1-96
Trans-1,2-Dichloroethene	2	5-110
Trichloroethene	6	1-1,100
Perchloroethene	3	29-500
Carbon Tetrachloride	2	5-6
Chloroform	4	1-25
Acetone	1	100
Semi-volatiles		
Bis (2-Ethylhexyl) Phthalate	3	60
Di-n-Butylphthalate	3	10
Other Compounds		
Freon-113	1	10

[a] A total of fourteen wells were included in the source sampling program.

Source: CH2M Hill, 1988.

TABLE 3-3

SUMMARY OF SELECTED ORGANIC GROUNDWATER DATA
COLLECTED FROM THE AZUSA LAND RECLAMATION LANDFILL
(August 1984-May 1991)

Well	No. of Samples	Range (ug/l)	Average (ug/l)[a]	May 1991 Results (ug/l)
TCE				
MW-1	40	7-1,000	359	99
MW-2	40	6-660	179	2
MW-3	38	1-1,200	442	960
MW-4	36	27-940	366	27
MW-5	38	<1-25	4	<1
MW-6	2	52-200	126	200
MW-8	2	13-27	20	13
MW-9	2	75-120	98	120
PCE				
MW-1	39	<2-49	19	18
MW-2	40	<1-280	64	<1
MW-3	39	<1-330	52	200
MW-4	36	6-700	240	6
MW-5	39	<1-14	1	1
MW-6	2	<13-150	78	150
MW-8	2	3-5	4	3
MW-9	2	9	9	9
1,2-DCA				
MW-1	38	<1-28	7	<1
MW-2	40	<1-10	2	<1
MW-3	38	<1-10	4	<5
MW-4	35	<1-2	2	<1
MW-5	38	<1	<1	<1
MW-6	2	<1	<1	<1

TABLE 3-3

SUMMARY OF SELECTED ORGANIC GROUNDWATER DATA
COLLECTED FROM THE AZUSA LAND RECLAMATION LANDFILL
(August 1984-May 1991)
(concluded)

Well	No. of Samples	Range (ug/l)	Average (ug/l)[a]	May 1991 Results (ug/l)
MW-8	2	<1	<1	<1
MW-9	2	<1	<1	<1
1,1-DCE				
MW-1	38	<1-230	75	190
MW-2	40	6-200	75	6
MW-3	38	<1-12	4	<5
MW-4	36	<1-350	101	110
MW-5	38	<1-2	<1	<1
MW-6	2	<1	<1	<1
MW-8	2	38-120	79	38
MW-9	2	<1	<1	<1
$CC1_4$				
MW-1	39	<1-7	2	<1
MW-2	41	<1-7	2	<1
MW-3	40	<1-28	9	10
MW-4	36	<1-16	3	<1
MW-5	41	<1	<1	<1
MW-6	2	<1-2	1	2
MW-8	2	<1	<1	<1
MW-9	2	<1	<1	<1

[a] Less than (<) values were assumed to be one-half the reported detection limit for averaging purposes.

Sources: Law Environmental, 1991a, 1991b, 1991c.

TABLE 3-4

ORGANIC COMPOUNDS DETECTED IN GROUNDWATER
AT THE NORAC COMPANY, INC.
(19 March 1991)

Compound	Concentration (ug/l)	
	Bailer	Pump
Carbon Tetrachloride	9.8	6.9
Chloroform	19	12
1,1-Dichloroethane	9.7	3
1,2-Dichloroethane	4	3
1,1-Dichloroethene	23	11
cis-1,2-Dichloroethene	11	5.7
Methylene Chloride	2	1
Tetrachloroethene	68	52
Toluene	4	NA
1,1,1-Trichloroethane	29	12
Trichloroethene	270	300
Trichlorfluoromethane	6.5	2

NA = Not analyzed.

Bailer = Sample obtained directly from the water table approximately 12 hours after the completion of pumping using a Teflon bailer.

Pump = Sample obtained from a dedicated sampling port at the top of the discharge pipe leading from the pump.

Source: England, Shahin & Associates, 1991.

OSCO recently submitted a Groundwater Monitoring Plan for Phase III of the RFI (M/B&A, 1991). Present plans envision the installation of four groundwater monitoring wells at the site. The primary purposes of the program will be to determine 1) site specific groundwater gradients and 2) the quality of groundwater entering (upgradient) and leaving (downgradient) the facility property. In this way, the potential for degradation of the groundwater due to historical facility operations can be evaluated. Secondary objectives of the program are to determine groundwater flow characteristics, both temporal and spatial, and to contribute to the growing body of data for the San Gabriel Valley CERCLA investigation.

4.0 PREVIOUS FIELD INVESTIGATIONS AT THE OSCO FACILITY

Several field investigations have been performed at the OSCO facility since 1980 that provide data useful for characterizing the existence and distribution of contamination at the site. The purposes for collecting field data have varied, but generally fall into three categories: 1) confirmation sampling performed after a spill or cleanup action; 2) sampling performed as part of a closure action (e.g., underground tank, facility operational unit, etc.); and 3) sampling performed during a general or specific site characterization effort, including the present RFI field investigations.

Data gathered from these previous field activities are summarized herein. The purpose of this review is to determine precise or approximate locations of suspected contamination, information which then can be used to direct further work at the site. For the present effort, locations for the recently completed deep soil borings were selected after reviewing existing data to determine the most likely areas and sources of contamination.

4.1 RETENTION POND SAMPLING AND CLEANUP (1980)

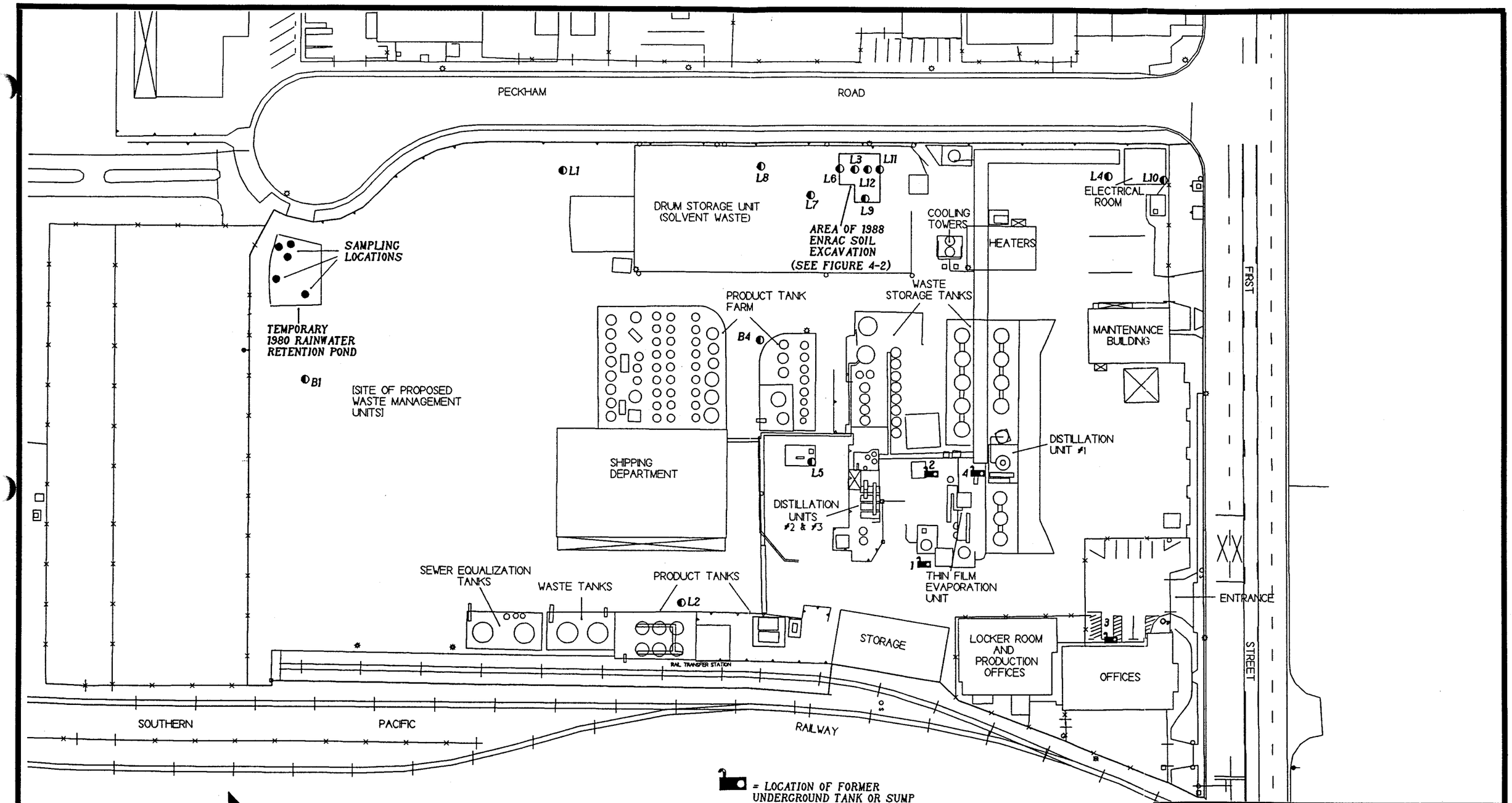
The first evidence of field data being collected at the OSCO facility is found in the resolution of a Clean Up and Abatement Order (No. 80-1) issued by the RWQCB on 24 January 1980. In response to a neighbor's complaint of soil erosion, OSCO had constructed a dirt berm in the southeast corner of its property during May 1979 to collect and contain rainwater runoff from the facility (Figure 4-1 herein). During a site inspection by the RWQCB on 8 January 1980, a sample of the water that had collected behind the berm revealed the presence of TCE at a concentration of 115 ug/l. Consequently, a Clean Up and Abatement Order was issued that required OSCO to empty the pond immediately and remove the water and any underlying soil that may be contaminated. According to estimates prepared by the RWQCB inspector, the maximum dimensions of the pond were approximately 50 feet by 50 feet by 2 feet deep.

After the water had been removed, a soil sampling program was designed and submitted to the RWQCB for approval. TCE was the only contaminant tested, and the RWQCB indicated that soil with a concentration of 5 ug/kg or less would be considered "clean." Soil samples were obtained from two locations within the boundaries of the former pond at depths ranging from the surface to 9 feet. Four duplicate samples were taken at each level, with two supplied to the DHS laboratory and two retained by OSCO for contract analysis. Plans for subsequent testing at three other locations were described in RWQCB correspondence, but the results of this testing, if any, were not found in a review of agency files.

The results of the soil sampling program (Table 4-1 herein) indicate that the TCE concentration did not exceed 1 ug/kg at depths below 2 feet and that very little contamination was found below the surface. Based on these findings, approximately 8 to 10 cubic yards of soil (to a depth of 1 foot) were removed to a Class I landfill. After a review of the sampling data, cleanup activities, and a follow-up site inspection, the RWQCB found the problem to be corrected and rescinded the Clean Up and Abatement Order on 2 May 1980.

4.2 HISTORY OF SPILLS (1984-Present)

Historical records of spills are valuable for identifying potential areas of soil contamination. The Corrective Action Plan for the OSCO facility (OSCO, 1991) provides a summary of spills recorded at the site since June 1984. It includes information regarding spill dates, location, type, approximate quantity, authorities contacted (if any), and cleanup actions taken. Although the original spill reports are sometimes vague, it appears that all reported spills during this time period occurred on paved facility areas or within secondary containment structures -- no releases to bare soil were reported.



MEREDITH/BOLI & ASSOCIATES, INC.

OIL & SOLVENT PROCESS COMPANY

HISTORICAL OSCO INVESTIGATION SOIL SAMPLING LOCATIONS

FIGURE **4-1**

1990-211

11/15/91

TABLE 4-1

RESULTS OF RETENTION POND
SOIL ANALYSES
(1980)

Test Hole	Sample Identification	Depth (ft bgs)	TCE Concentration (ug/kg)	
			OSCO Lab	DHS Lab/Duplicate
1	S-1	Surface	9	21.5/100
1	S-2	0.5	0.7	2.0
1	S-3	1.0	1.5	6.6/2.4
1	S-4	1.5	4.4	4.4
1	S-5	2.0	0.2	1.0
2	SS-1	Surface	1.2	<1.0
2	SS-2	1.0	0.2	<1.0
2	SS-3	2.0	0.4	<1.0
2	SS-5	5.0	<0.2	<1.0

Notes:

Hole No. 1: Both labs reported less than 1 ug/kg of TCE below 2.0 feet.
Hole No. 2: Both labs reported 1.2 ug/kg or less of TCE throughout the entire depth of the hole (9.0 feet).

Source: RWQCB files for the OSCO facility, report from PJB Laboratories, Pasadena, California, Lab No. P80-02-026, 6 February 1980.

While no spill records are available for pre-1984 operations, it is reasonable to conclude that there were instances of spills and releases in the production, shipping, loading, and drum storage areas similar or identical to those documented subsequent to 1984. One recent spill that deserves special mention because of its volume and occurrence outside of containment is a release of approximately 9,600 gallons of wastewater from a holding tank at the facility's Rail Transfer Station on 21 April 1989. Efforts to contain the spill and remediate impacted areas are documented by Environmental Solutions (1989).

4.3 REMOVAL OF UNDERGROUND TANKS (1986 AND 1989)

OSCO presently does not have any underground tanks or sumps at its facility. In the past, underground tanks or sumps have existed at four locations (Figure 4-1). These features were removed during the period 1986-1989, at which time soil sampling was performed. At the time of removal and follow-up remediation, there was no indication that significant contamination remained beneath the tanks or sumps.

Descriptions of each of the underground tanks and sumps are provided below:

- Underground Fuel Tank -- OSCO installed this 3,000 gallon tank around 1955. It was constructed of mild steel approximately 1/4 inch in thickness. The tank was a standard gasoline tank, such as those installed in gasoline stations at the time, complete with a pump and hose for vehicle fueling. The tank contained regular grade gasoline fuel for OSCO's trucks until about 1975, after which time it was used to store diesel fuel.

- Underground Laboratory Tank -- This tank was installed in 1968 to collect wastewater from the laboratory sinks (e.g., rinsewater generated from washing glassware, etc.). It was constructed of about 4-inch thick concrete and was about 900 gallons in capacity. Operating practices dictated that concentrated solvent samples and chemical reagents not be introduced into the tank. The dilute aqueous wastewaters that collected were treated as hazardous waste and disposed of by manifesting them to an approved off-site facility.

- Underground Sump No. 1 -- An underground sump was installed around 1956 for the collection of rinsewater generated during periodical cleaning of distillation unit heat exchanger tubes. The rinsewater was generated by running tap water to cool drill bits used to ream resin and varnish buildup from the inside of the tubes. Rinsewater that collected in the sump was filtered and recirculated back through the heat exchangers until it no longer could be reused. At that point, it was collected and disposed of at an approved off-site facility. The sump was built of about 4-inch thick concrete and had dimensions of 6 feet by 12 feet by 3.5 feet deep (approximately 1,250-gallon capacity with freeboard).

- Underground Sump No. 2 -- A sump was constructed within the distillation unit containment area to collect incident precipitation. The sump was approximately 2-feet deep, 1 foot of which was below grade, with a 1-foot wall above grade. The bottom of the sump was constructed of concrete and the walls were built from mortar and cinder blocks. Surface runoff entered the sump through designed openings in the block wall.

Integrity tests of underground tanks and sumps were not performed during their operational life. OSCO employees did not observe any inventory losses or other indications that the tanks or sumps may have leaked (Stahlecker, 1988). In response to the promulgation of new regulations governing underground storage tanks, OSCO contracted for the removal of the first three tanks/sumps during April and May of 1986; Underground Sump No. 2 was removed concurrently with the closure of Distillation Unit No. 1 (see Section 4.6 herein).

Tank removal activities performed in 1986 were documented in a letter report prepared by Environmental Protection Group (Koutsky, 1986). After removal of each tank, two soil samples were taken from the base of the excavations. Samples were analyzed for total petroleum hydrocarbons (TPH; USEPA Method 5020) and, for the laboratory tank and sump, for acetone and isopropyl alcohol (USEPA Method 8015). Laboratory results are summarized on Table 4-2 herein.

One of the samples taken from beneath the concrete sump indicated the presence of TPH at a concentration of 790 mg/kg. Approximately 2.5 cubic yards of soil were removed from the affected area and subjected to on-site bioremediation. A sample taken from the base of the excavation revealed a TPH concentration of 36 milligrams per kilogram (mg/kg). After about 1.5 months of biotreatment, the TPH concentration of a sample of the excavated soil was reported to be 2.2 mg/kg.

Based on the prior use of the tank, local environmental conditions, and the results of the soil sampling program, the tank removal firm concluded that the likelihood of contaminant migration to groundwater was "effectively nonexistent" and the leakage appeared to be localized (Koutsky, 1986). The Los Angeles County Department of Public Works concurred with this conclusion in issuing the following statement:

> "We find that based on the information submitted, no further subsurface investigation is necessary. The storage tanks listed within the subject permit [Hazardous Materials Underground Storage Closure Permit Nos. 697B, 698B] are considered closed upon disposal of excavated soil as indicated below: The use of soils removed (if any) during tank excavation is unrestricted and/or may be disposed of at an unclassified disposal facility." (Tidemanson, 1986)

Inspection and sampling of Underground Sump No. 2 was performed during September 1989, prior to the closure of Distillation Unit No. 1. The inspector reported "[n]o cracks or other signs of the loss of integrity of the sump" (Slatten, 1989). After the concrete was removed from the lowest point on the bottom of the sump, a sample of the immediately underlying soil was collected in a 2-inch by 6-inch brass sleeve. The sample was analyzed using USEPA Methods 8240, 8270, 8080, metals, total organic carbon, pH, and percent moisture. Concentrations of the organic compounds that were detected are summarized on Table 4-3 herein; soil pH was reported to be 10.0 units and moisture content was 12%. Copies of the original laboratory reports are included in Appendix A hereto.

4.4 EMCON SITE ASSESSMENT (1986)

In November 1986, EMCON Associates (EMCON) was contracted by CWM to perform a shallow soil sampling program to assess whether or not facility operations had impacted soils at the site. The investigation was conducted during November and December 1986 and the results, summarized herein, were forwarded to DHS (EMCON, 1987). Activities included 1) a survey of water wells located in the vicinity of the site (16 were identified within a 1-mile radius), 2) an aerial photograph review, 3) interviews with OSCO employees, 4) discrete soil sampling, and 5) geophysical investigations using electromagnetic and ground penetrating radar techniques.

Based on a site reconnaissance and historical review, fourteen locations were selected for shallow soil sampling (Figure 4-1). Samples were taken at two locations (B-1 and B-4) using hollow stem auger drilling equipment and advancing a split spoon sampler beyond the tip of the auger. The presence of large cobbles and boulders would not allow penetration of the hollow stem auger at the remaining twelve locations (L-1 through L-12), which were sampled by trenching 5-foot excavations with a backhoe and manually driving brass liners into the base and walls of the excavation.

TABLE 4-2

RESULTS OF UNDERGROUND TANK/SUMP
SOIL ANALYSES
(1986)

Sample Location	Sample Date	Concentration (mg/kg)		
		TPH	Acetone	Isopropyl Alcohol
Laboratory Underground Tank	04/01/86	<0.5	<0.1	<0.1
Underground Fuel Tank (west end)	04/01/86	29	NA	NA
Underground Fuel Tank (east end)	04/01/86	<0.5	NA	NA
Underground Sump No. 1 (north end)	04/01/86	16	<0.1	<0.1
Underground Sump No.1 (south end)	04/01/86	790	3.2	0.3
Underground Sump No. 1 (south end)	04/22/86	36	<0.5	<0.5
Excavated Material (from sump)	05/07/86	2.2	NA	NA

NA = Not analyzed.

Source: Koutsky, 1986.

TABLE 4-3

SUMMARY OF ORGANIC COMPOUNDS DETECTED
DURING THE SAMPLING EVENT
FOR UNDERGROUND SUMP NO. 2
(18 September 1989)

Parameter	Test Method	Concentration (mg/kg)
Total organic carbon	Not identified	3,300
Bis (2-ethylhexyl) phthalate	8270	2
Naphthalene	8270	0.5
1,1,1-Trichloroethane	8240	2.2
Ethylbenzene	8240	7.4
Tetrachloroethylene	8240	44
Trichloroethylene	8240	1.8
Toluene	8240	8
Total xylenes	8240	110
Semi-Quantified Results	(8270)	
- Second hydrocarbon		7
- C11 hydrocarbon		20
- C7 to C13 hydrocarbon matrix		400
- Saturated hydrocarbon		20
Semi-Quantified Results	(8240)	
- C4 substituted benzene		200
- C5 substituted benzene		100
- Cyclic C10 hydrocarbon		100
- Unsaturated C11 hydrocarbon		60

Source: Slatten, 1989.

A total of 21 samples were collected at depths ranging from 2 to 5 feet bgs and analyzed using USEPA Method 8240. The analytical results, summarized on Table 4-4 herein and included in Appendix A hereto, indicate that thirteen of the fourteen sample locations exhibited low or non-detectable volatile organic compound (VOC) concentrations, with detected values equal to or less than 220 ug/kg for any one compound. At one location (L-3), anomalously high concentrations (i.e., 2,200 to 38,000 ug/kg) of five organic compounds were detected at a sample depth of 2.5 feet. Sampling at two other locations within 5 feet of L-3 (i.e., L-6 and L-12) did not demonstrate this level of contamination.

EMCON concluded that "[t]he data indicated that a uniform, low-level contamination has occurred at the site" and "[t]he one area of high concentration may represent a localized spillage of solvents" (EMCON, 1987). The geophysical surveys and a limited excavation program did not identify any undocumented underground tanks or pipelines at the site.

4.5 ENRAC SOIL EXCAVATION AND SAMPLING PROGRAM (1988)

The ENRAC division of CWM (ENRAC) prepared a plan to clean up the contaminated soils around EMCON sampling location L-3 in the drum storage area (see previous section), which was submitted to DHS and RWQCB on 15 July 1987. Excavation and sampling activities occurred on 12 July and 19 July 1988. The results are documented in a report prepared by Meredith/Boli & Associates, Inc. (M/B&A, 1988).

After two phases of excavation and sampling, 176 square feet of surface area had been excavated to depths of 4 to 6 feet bgs, resulting in the removal of approximately 27 cubic yards of soil. A total of 20 samples were taken by ENRAC/M/B&A along the base and walls of the excavation; USEPA collected an additional 13 samples, including samples of the excavated soil stockpile and background samples. Samples were collected in pre-labeled glass jars and analyzed using USEPA Method 8240. Sampling locations are depicted in Figures 4-1 and 4-2; results are summarized on Table 4-5 herein. Copies of original laboratory reports are provided in Appendix A hereto.

The sampling corroborated the PCE results for EMCON location L-3, but did not detect any of the other reported contaminants except for 1,1,1-TCA. PCE concentrations ranged from below detection limits to a maximum of 24,000 ug/kg (at a depth of 4 feet). 1,1,1-TCA contamination, which ranged in concentration from below detection limits to 2,500 ug/kg (at a depth of 2 feet), appeared to be more localized. The report concluded that contamination remained at depth (i.e., 6 feet), but appeared to show signs of attenuation (M/B&A, 1988).

4.6 DISTILLATION UNIT NO. 1 PARTIAL CLOSURE (1990)

Distillation Unit No. 1, including the solvent distillation tower, several storage and rundown tanks, associated piping and support structures, and asphalt and concrete pads, was decommissioned and removed during early 1990 in accordance with the facility's RCRA Closure Plan (OSCO, 1991). The area affected is located in the north-central operational area of the facility (Figure 4-1). At the time of closure, samples were collected on a grid pattern from the soils immediately underlying the distillation unit to evaluate for the presence of contamination. Results of this sampling effort are reported by Western Technologies Inc. (1990d).

TABLE 4-4

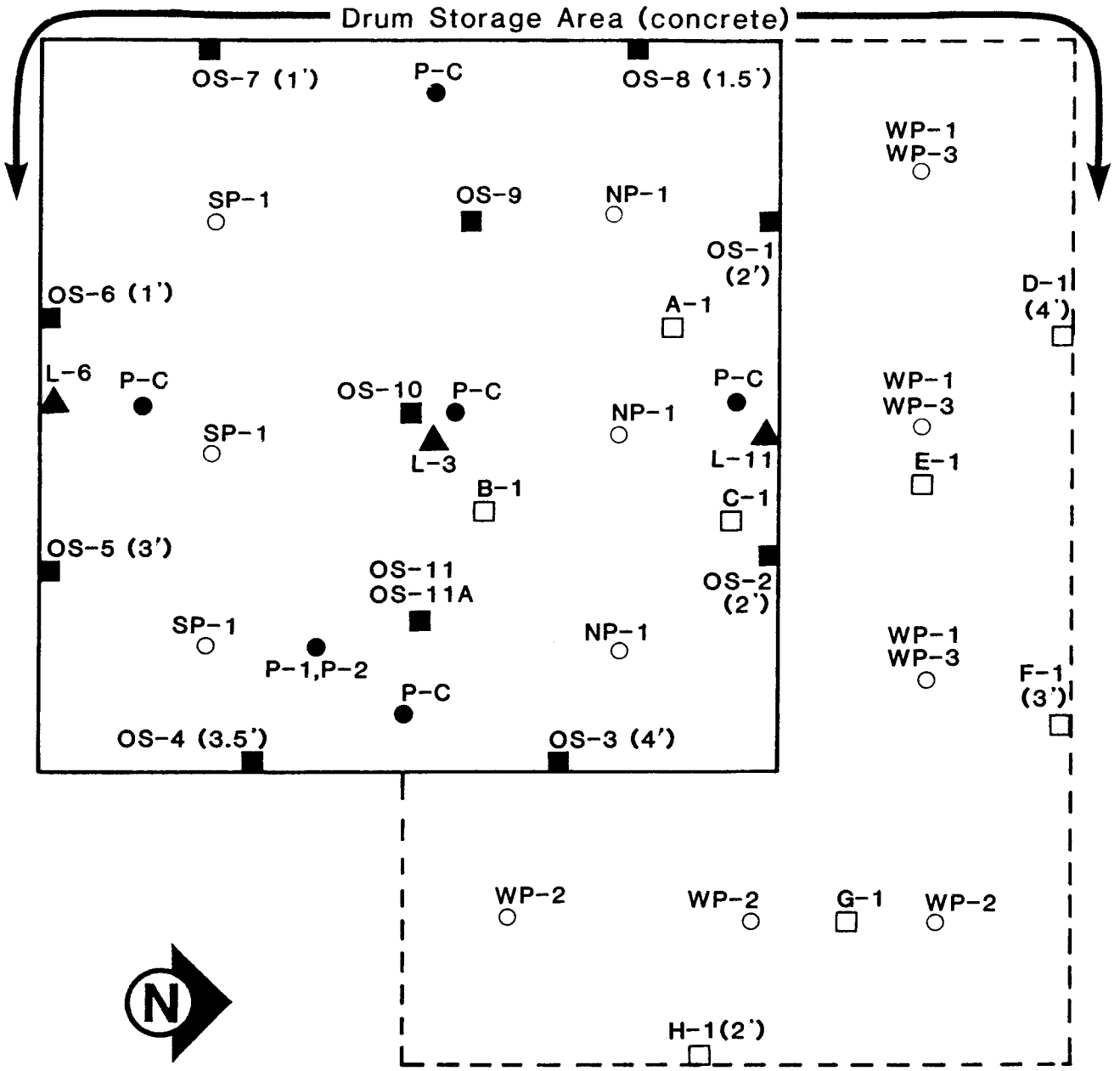
RESULTS OF EMCON SHALLOW SOIL SAMPLING PROGRAM
(1986)

Sample Location	Depth (ft bgs)	Concentration (ug/kg)							
		PCE	1,1,1-TCA	TCE	Toluene	Acetone	Xylenes	Ethyl-benzene	MEK
B-1	3.5	3	--	--	17	37	--	--	--
B-4	2	5	--	--	7	43	--	--	--
L-1	3.5	--	--	--	5	10	--	--	--
L-2	2.5	--	--	--	--	--	--	--	--
L-3	2.5	38,000	4,000	--	2,200	--	2,900	3,700	--
L-4	2.5	10	--	--	30	--	--	--	--
L-5	2.5	10	--	--	9	--	--	--	18
L-6	3	--	--	--	9	--	--	--	--
L-6	5	--	--	--	20	--	--	--	--
L-7	2.5	--	--	--	33	--	--	--	--
L-7	4.5	10	5	2	61	--	2	--	--
L-8	3	2	--	--	14	--	--	--	--
L-8	5	--	2	--	15	--	--	--	--
L-9	3	--	--	--	9	--	--	--	--
L-9	5	--	--	--	4	--	--	--	--
L-10	2.5	--	--	--	3	--	--	--	--
L-10	4	--	--	--	--	--	--	--	--
L-11	3	220	4	--	36	--	--	--	--
L-11	5	130	12	--	35	--	--	--	--
L-12	3	4	--	--	5	--	--	--	--
L-12	4.5	16	3	--	9	--	--	--	--

-- = Below detection limit

Source: EMCON, 1987.

PCE = Perchloroethene (Tetrachloroethene)
TCE = Trichloroethene
1,1,1-TCA = 1,1,1-Trichloroethane
MEK = Methyl ethyl ketone (2-Butanone)



LEGEND

▲ L-3 EMCON Soil Sampling Location

■ OS-1(12 July 1988) ENRAC Soil Sampling Location
□ A-1 (19 July 1988) (Depth of Sidewall Sample Indicated in Parentheses)

● P-1 (12 July 1988) EPA Soil Sampling
○ SP-1(19 July 1988) Location (Identical Sample Designations Indicate a Composite Sample)

0 2 FEET

——— Limits of Initial Excavation
– – – – Limits of Expanded Excavation

MEREDITH/BOLI & ASSOCIATES, INC.

OIL & SOLVENT PROCESS COMPANY

SOIL SAMPLING LOCATIONS DURING 1988 ENRAC EXCAVATION

FIGURE **4-2**

1990-211

11/15/91

TABLE 4-5

RESULTS OF ENRAC EXCAVATION AND SAMPLING PROGRAM
(12 and 19 July 1988)

Sample Location	Depth (ft bgs)	Concentration (ug/kg)			
		PCE	1,1,1-TCA	Styrene	Methylene Chloride
ENRAC SAMPLES					
OS-1	2	6,400	2,500	300	--
OS-2	2	2,300	--	--	--
OS-3	4	6,800	--	--	--
OS-4	3.5	300	--	--	--
OS-5	3	--	--	--	--
OS-6	1	--	--	--	--
OS-7	1	--	--	--	--
OS-8	1.5	--	--	--	--
OS-9	4	12,000	300	--	--
OS-10	4	24,000	800	--	--
OS-11	4	700	--	--	--
OS-11A	4	400	--	--	--
A-1	6	580	--	--	--
B-1	6	31	--	--	--
C-1	6	29	--	--	--
D-1	4	20	--	--	--
E-1	6	5.7	--	--	--
F-1	3	24	--	--	--
G-1	6	16,000	--	--	--
H-1	2	33	--	--	--

TABLE 4-5

RESULTS OF ENRAC EXCAVATION AND SAMPLING PROGRAM
(12 and 19 July 1988)
(concluded)

Sample Location	Depth (ft bgs)	Concentration (ug/kg)			
		PCE	1,1,1-TCA	Styrene	Methylene Chloride
USEPA SAMPLES					
P-1	4	700	--	--	--
P-2	4	--	--	--	--
P-C	4	4,600	--	--	--
T-1	Truck	8,200	600	--	--
X-1	Background	--	--	--	--
SP-1	6	6,700	--	--	--
NP-1	6	8,900	--	--	--
WP-1	6	800	--	--	4,700
WP-2	6	1,500	--	--	--
WP-3	6	5,300	--	--	--
SF-1	Truck	34,000	--	--	--
NF-1	Truck	5,500	--	--	--
B-1	Background	--	--	--	--

-- = Below detection limit
PCE = Perchloroethene (Tetrachloroethene)
1,1,1-TCA = 1,1,1-Trichloroethane
Truck = Samples of excavated material removed from loaded truck prior to off-site removal
Background = Surficial soil samples taken from non-operational facility areas

Source: M/B&A, 1988.

After excavation and off-site disposal of the top 6 inches of soil beneath the distillation unit, samples were collected from eight locations (Grid 1 through Grid 8). Locations were selected based on the observation of topographic low points, discolored or stained areas, or elevated screening measurements using an organic vapor monitor (OVM). Five background samples (T-6 through T-10) also were collected at a location east from the OSCO facility from an area apparently not impacted by site activities. Finally, five test pits that were part of the RFI Phase IIa shallow soil investigation (see Section 4.8 herein) also were sampled at that time due to their temporary accessibility. Test pit sampling results are reported in Section 4.8 of this report.

Samples were collected in glass jars using a stainless steel, decontaminated trowel. USEPA Method 8240 was performed on all samples. The results of the samples taken from the initial depth of 6 inches beneath the distillation unit indicated the presence of several organic contaminants (Table 4-6 herein). Consequently, in accordance with the RCRA Closure Plan, the area was excavated to depths ranging from 3 to 5 feet bgs and the base of the excavation was sampled using the same grid pattern. Results of the resampling event are presented on Table 4-6 herein.

Resampling of the excavated Distillation Unit No. 1 area revealed the presence of only a single contaminant at one sampling location (i.e., PCE at 14 ug/kg). This relatively low concentration is consistent with background levels, as reported by Western Technologies Inc., and demonstrates that most, if not all, of the contamination had been removed by the remedial activities. A new distillation unit and associated tank farm has been constructed within a sealed concrete secondary containment area at this facility location.

4.7 RFI PHASE I -- SOIL GAS SURVEY (1990)

Section VI.6.A of the OSCO facility's RCRA Permit requires that a soil gas survey be performed at the site in accordance with a workplan submitted to USEPA by Western Technologies, Inc. (WTI, 1989). The survey was performed by Tracer Research Corporation during the period 16-25 October 1989, with the results documented in a Western Technologies Inc. report (WTI, 1990a).

Soil gas samples were collected at 76 equidistant locations (on approximately 100-foot centers), which provided laterally comprehensive coverage of the site. One additional background sample was taken in the office parking lot approximately 300 feet west from the operations facility. One and one-half-inch diameter probes were advanced using a van-mounted hydraulic hammer until refusal, which generally occurred at depths ranging from 2.5 to 5 feet bgs. At that point, soil gas samples were collected for analysis.

Analytical parameters selected included PCE, TCE, 1,1,1-TCA, benzene, toluene, ethylbenzene, xylenes, and TPH. Analyses were performed using an on-site Varian 3300 gas chromatograph, equipped with a flame ionization detector (FID) and an electron capture detector (ECD). Benzene, toluene, ethylbenzene, and xylenes concentrations were below method detection limits for all but a few locations. Toluene was detected at two locations at concentrations of 0.4 and 0.2 ug/l and benzene was found at one location at a concentration of 0.1 ug/l. Xylenes were measured at a location on the northwest corner of the drum storage unit at a concentration of 73 ug/l.

TABLE 4-6

SUMMARY OF ORGANIC PARAMETERS DETECTED
DURING CLOSURE OF DISTILLATION UNIT NO. 1
(1990)

Sample Location	Depth (ft bgs)	Concentration (ug/kg)						
		PCE	1,1,1-TCA	1,2-DCB	1,4-DCB	Ethyl-benzene	Toluene	Xylenes
GRID 1	0.5	24	--	--	--	--	--	--
GRID 2	0.5	31	--	14	5	--	--	--
GRID 3	0.5	120	--	--	--	--	--	--
GRID 4	0.5	17	--	7	6	--	--	--
GRID 5	0.5	18	10	50	18	110	41	1,500
GRID 6	0.5	8.1	--	--	--	--	--	5
GRID 7	0.5	7.5	--	--	--	--	--	--
GRID 8	0.5	95	--	--	--	--	--	--
GRID 1	5.5	--	--	--	--	--	--	--
GRID 2	3.5	--	--	--	--	--	--	--
GRID 3	5.5	14	--	--	--	--	--	--
GRID 4	5.5	--	--	--	--	--	--	--
GRID 5	5.5	--	--	--	--	--	--	--
GRID 6	5.5	--	--	--	--	--	--	--
GRID 7	5.5	--	--	--	--	--	--	--
GRID 8	5.5	--	--	--	--	--	--	--
Background Samples:								
T-6	0.5	6	--	--	--	--	--	--
T-7	0.5	--	--	--	--	--	--	--
T-8	0.5	15	--	--	--	--	--	--
T-9	0.5	--	--	--	--	--	--	--
T-10	0.5	9	--	--	--	--	--	--

-- = Below detection limit
PCE = Perchloroethene (Tetrachloroethene)
1,1,1-TCA = 1,1,1-Trichloroethane
1,2-DCB = 1,2-Dichlorobenzene
1,4-DCB = 1,4-Dichlorobenzene

Source: WTI, 1990d.

Soil gas concentrations for the other parameters generally were above detection limits, with maximum reported values of 5,100 ug/l for PCE, 2,000 ug/l for 1,1,1-TCA, 940 ug/l for TPH (all of which were detected near Distillation Unit Nos. 2 and 3), and 220 ug/l for TCE (detected at the northwest corner of the drum storage unit). Based on the analytical results, rough isoconcentration contours were developed for TCE, PCE, and 1,1,1-TCA (see Figures 4-3 through 4-5 herein). These contour maps indicate the presence of potential contaminant sources at locations near Distillation Unit Nos. 2 and 3 and beneath the drum storage unit. After reviewing the data, Western Technologies Inc. (WTI, 1990a) concluded:

> "Elevated concentrations of VOC's appear to be associated with large horizontal gradients indicating that the constituents have not been exceptionally mobile in the horizontal direction or that the volume of discharge causing the elevated levels was not particularly large to begin with." (page 10)

4.8 RFI PHASE IIa -- SHALLOW SOIL SAMPLING (1990)

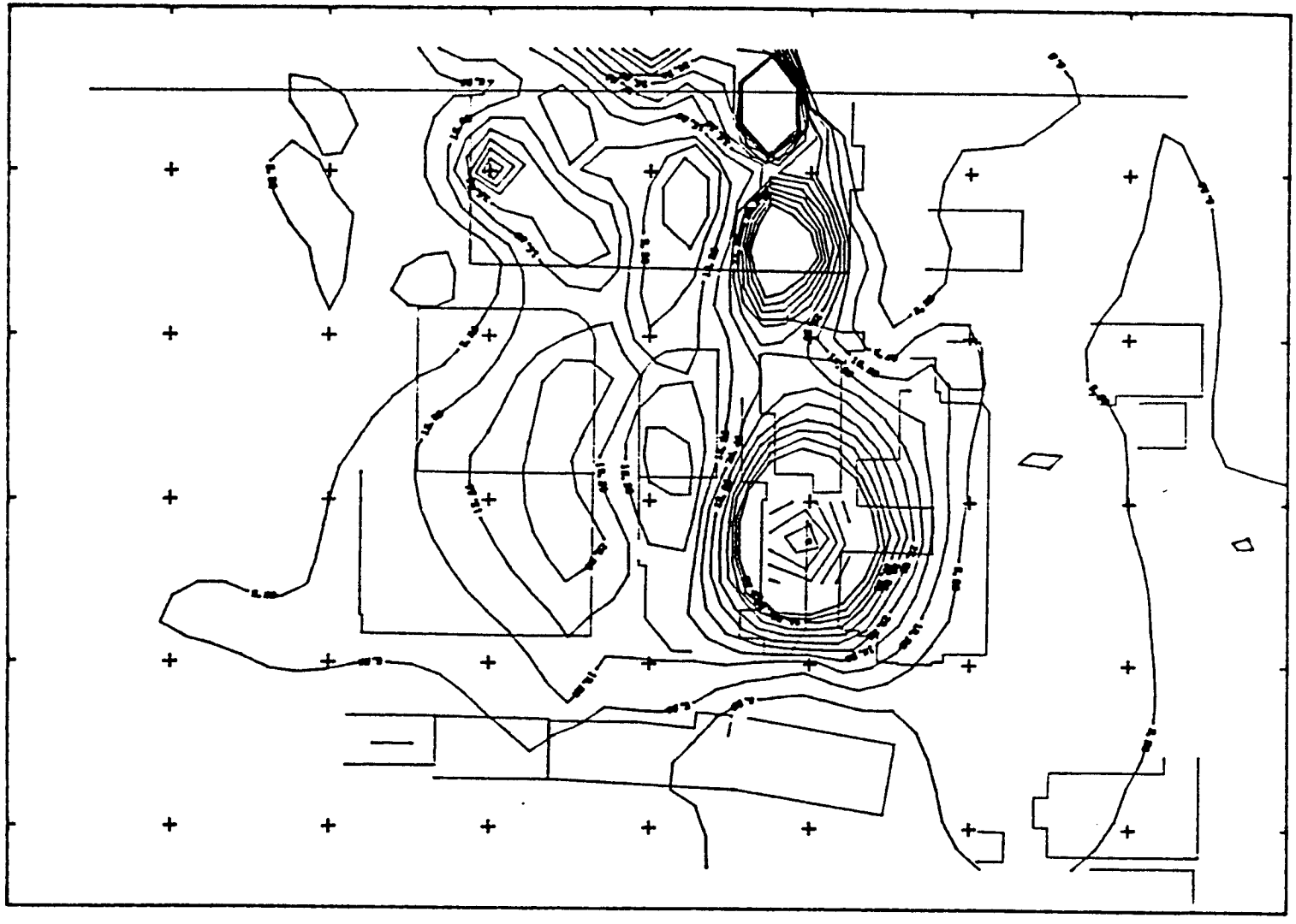
Section VI.6.B of the RCRA Permit dictates that shallow and deep soil sampling be conducted at the OSCO facility. Sampling locations are to include 1) areas requested by USEPA (based on its interpretive review of aerial photographs for the site), 2) areas of suspected contamination determined from the soil gas survey, 3) areas beneath facility units being closed (i.e., Distillation Unit No. 1), and 4) current and historical surface water drainage pathways. A workplan to perform the shallow soil sampling program was prepared and implemented by Western Technologies Inc. (WTI, 1990b). The results of the investigation, as presented by Western Technologies Inc. (WTI, 1990c), are summarized below.

Chemical and geological data were collected from fourteen test pits, or trenches, including five that were excavated under Distillation Unit No. 1 during closure of that unit (see Section 4.6 herein). Sampling locations, designated TP-1 through TP-14, are depicted in Figure 4-6 herein. The test pits were excavated to depths of 3 to 5.5 feet using a backhoe and samples were obtained from nominal depths of 1, 3, and 5 feet bgs (from the test pit walls or base). Samples were collected using stainless steel trowels and spoons and placed in pre-labeled sample bottles.

Priority pollutant metals were analyzed for in all samples collected at the 1-foot depth. Samples from the 3- and 5-foot depths at TP-11 also were analyzed for mercury based on the presence of this element at the 1-foot depth (3.2 mg/kg). Samples from the 1-foot depth were analyzed for semi-volatile organics (USEPA Method 8270) and all samples collected were analyzed for VOCs (USEPA Method 8240). Additionally, a total of eight duplicates and three trip blanks were analyzed for quality assurance/quality control (QA/QC) purposes.

The results of the chemical analysis are summarized on Table 4-7 herein (metals) and Table 4-8 herein (organics) herein. Metal concentrations were found to be relatively uniform across the site. All of the soil samples contained chromium, copper, nickel, zinc, and arsenic. The remaining metals were detected in as few as one sample (antimony and mercury) to as many as eleven samples (selenium).

A background sample was not obtained for metals analysis, however, the uniformity of the metal concentrations appear to reflect background conditions. None of the metal concentrations exceeded their Total Threshold Limit Concentration (TTLC) found at Title 22 of the California Code of Regulations (CCR), Section 66699. Similarly, none of the values would have exceeded the Soluble Threshold Limit



N

APPROXIMATE SCALE
0 100 FEET

SOURCE: Western Technologies Inc., 1990a

MEREDITH/BOLI & ASSOCIATES, INC.

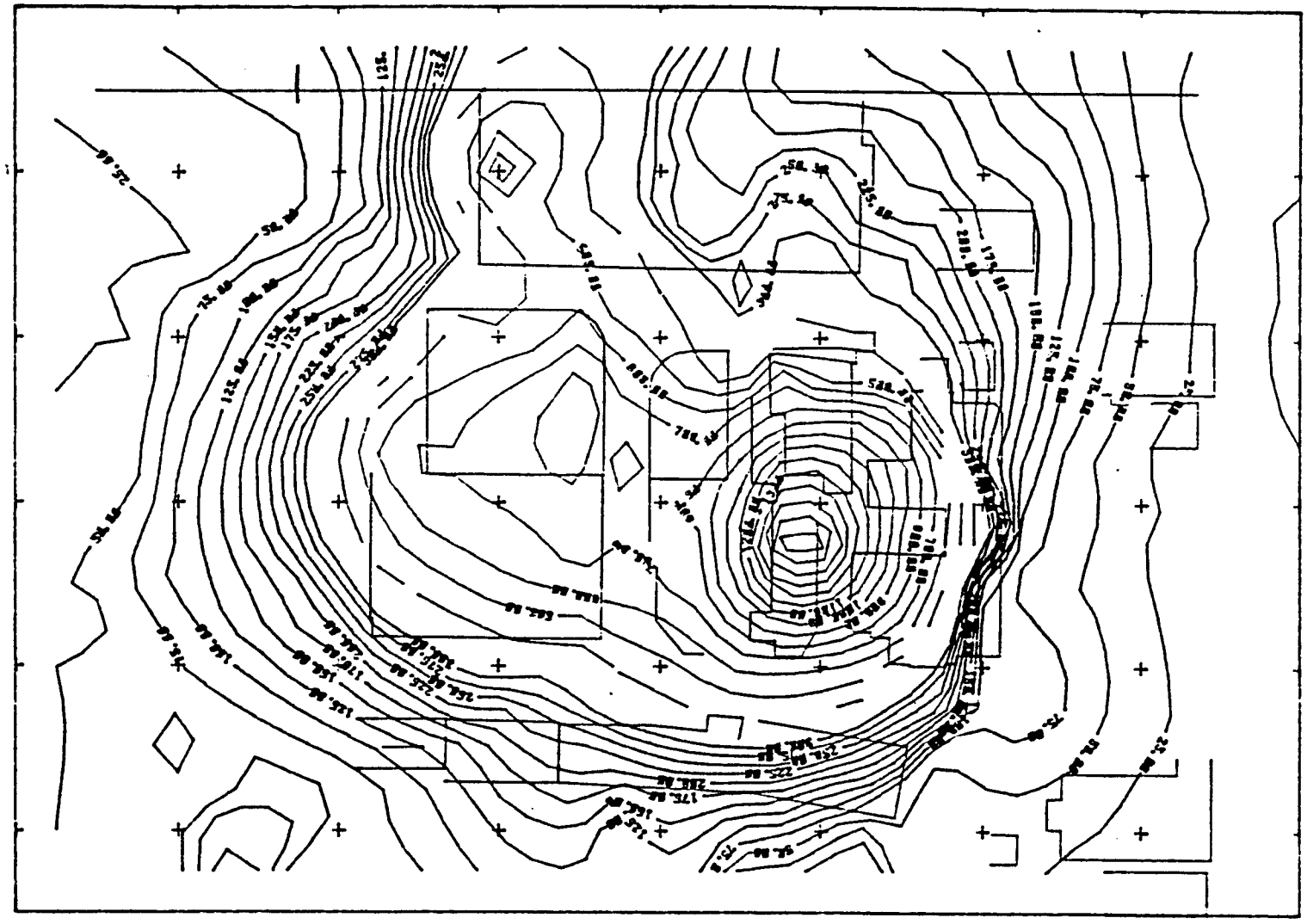
OIL & SOLVENT PROCESS COMPANY

SOIL GAS TCE CONCENTRATIONS JANUARY 1990

FIGURE **4-3**

1990-211

11/15/91



APPROXIMATE SCALE
0 100 FEET

SOURCE: Western Technologies Inc., 1990a

MEREDITH/BOLI & ASSOCIATES, INC.

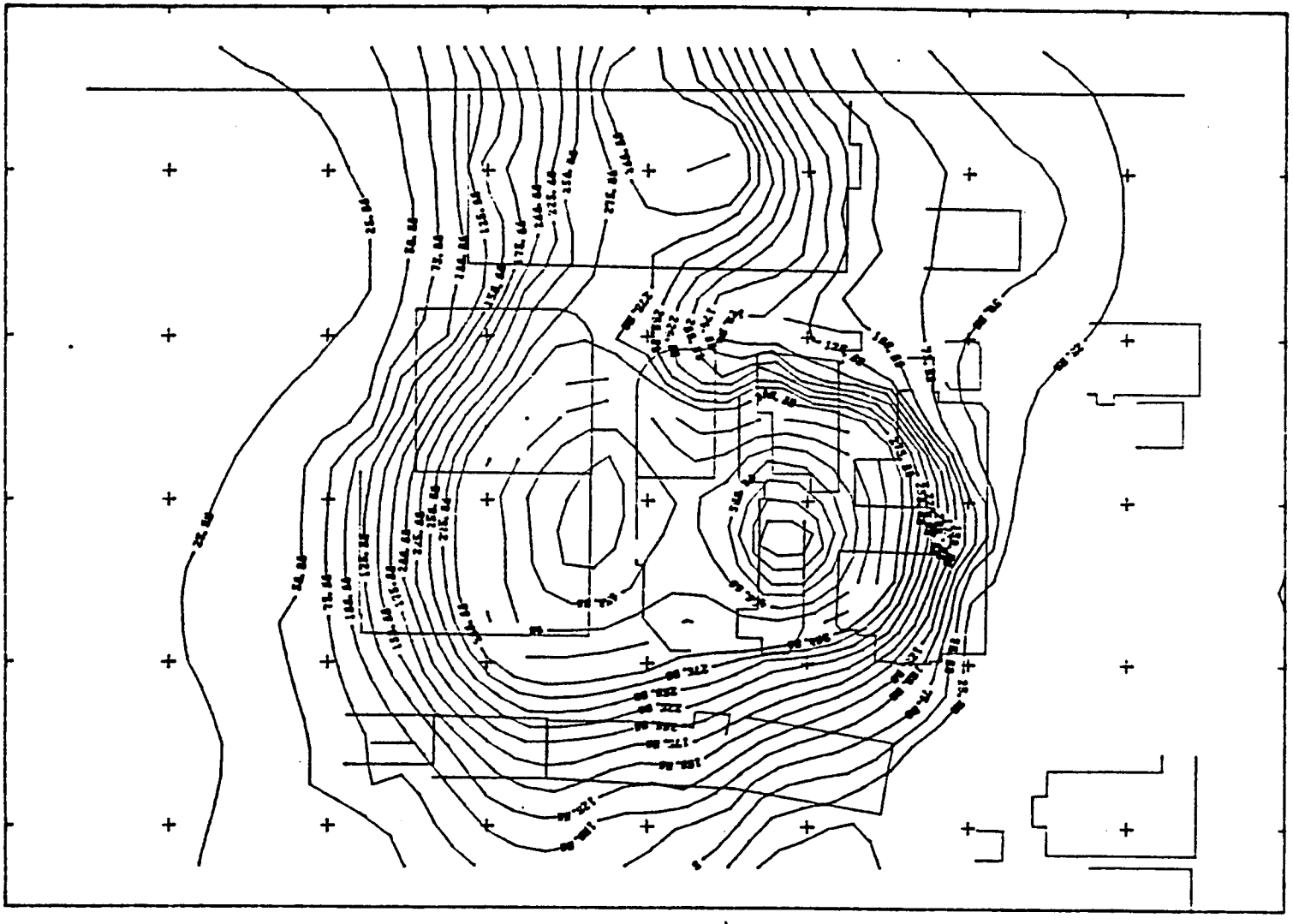
OIL & SOLVENT PROCESS COMPANY

SOIL GAS PCE CONCENTRATIONS JANUARY 1990

FIGURE 4-4

1990-211

11/15/91



N

APPROXIMATE SCALE
0 100 FEET

SOURCE: Western Technologies Inc., 1990a

MEREDITH/BOLI & ASSOCIATES, INC.

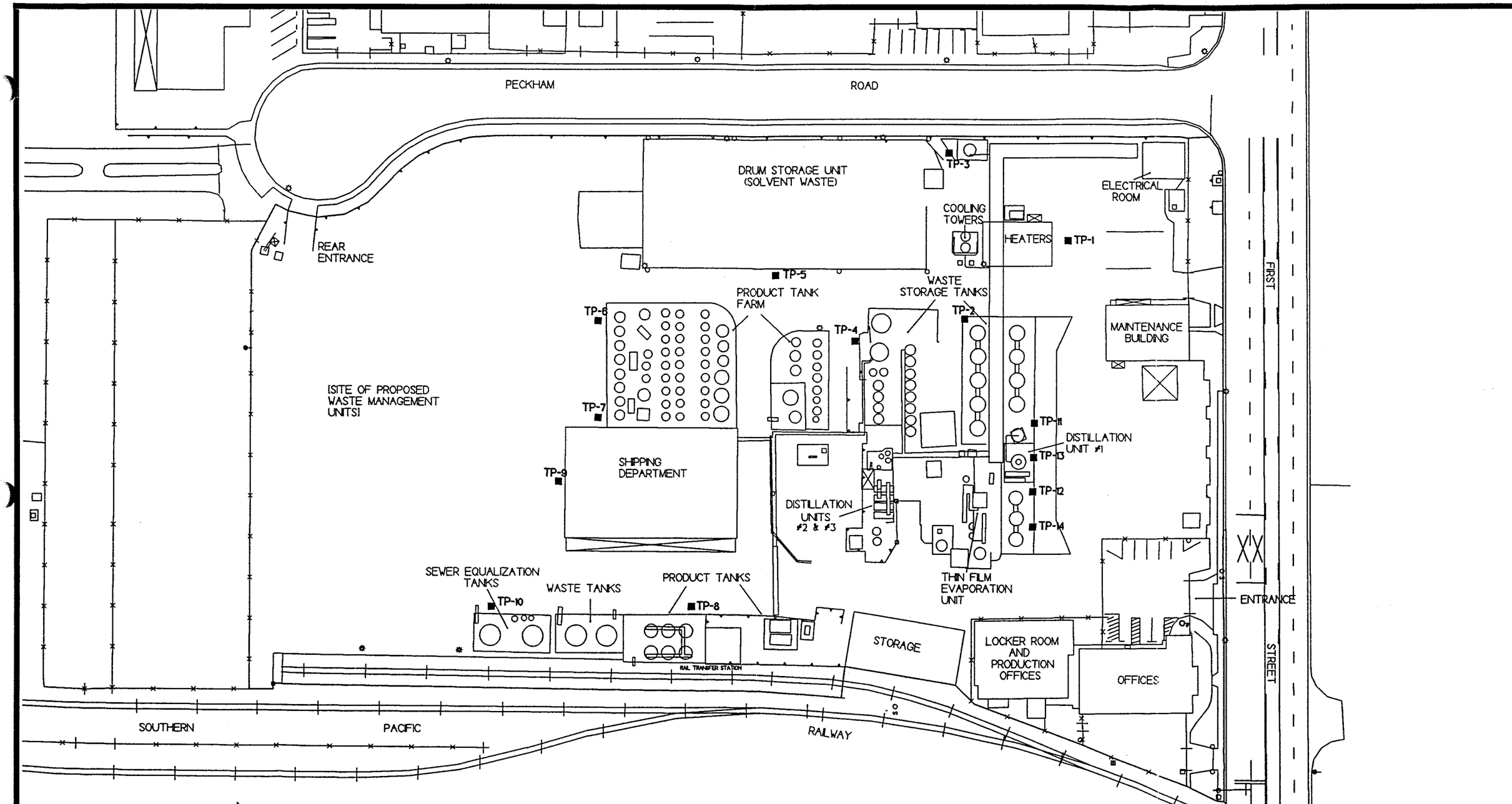
OIL & SOLVENT PROCESS COMPANY

SOIL GAS 1,1,1-TCA CONCENTRATIONS JANUARY 1990

FIGURE 4-5

1990-211

11/15/91



TP-1 ■ Test Pit

APPROXIMATE SCALE 0 100 FEET

MEREDITH/BOLI & ASSOCIATES, INC.

OIL & SOLVENT PROCESS COMPANY

LOCATIONS OF RFI PHASE IIa TEST PITS

FIGURE **4-6**

1990-211

11/15/91

TABLE 4-7

SUMMARY OF METALS DETECTED DURING THE RFI
SHALLOW SOIL SAMPLING PROGRAM

Sample Location	Sample Date	Sample Depth (ft bgs)	Concentration (mg/kg)										
			As	Sb	Cd	Cr	Cu	Pb	Hg	Ni	Se	Tl	Zn
TP-1	08/08/90	1	2.2	--	--	18	20	5.5	--	12	0.6	--	56
TP-2	07/25/90	1	3.2	--	--	11	14	2.4	--	6.6	1.0	--	29
TP-3	08/08/90	1	1.9	0.5	--	9.3	11	--	--	9	0.5	--	26
TP-4	08/08/90	1	3.2	--	--	26	29	--	--	19	0.8	--	42
TP-5	08/08/90	1	2.4	--	--	17	220	--	--	13	0.6	--	22
TP-6	08/09/90	1	1.4	--	--	11	12	4.1	--	4	--	--	34
TP-7	08/09/90	1	1.4	--	--	17	20	10	--	10	--	--	54
TP-8	08/08/90	1	2.9	--	--	24	24	--	--	14	--	--	48
TP-9	08/08/90	1	2.8	--	0.07	15	18	10	--	9	0.7	--	40
TP-10	08/07/90	1	7.7	--	0.21	29	30	26	--	15	0.6	--	56
TP-11	07/24/90	1	3.1	--	--	11	17	1.7	3.2	8.2	0.8	--	29
TP-12	07/24/90	1	5.1	--	0.07	20	24	17	--	14	1.2	9.1	62
TP-13	07/24/90	1	3.0	--	--	6.9	15	3.5	--	7.9	1.2	6.0	29
TP-14	07/24/90	1	3.0	--	--	9.7	13	1.7	--	8.8	1.1	--	24

TABLE 4-7

SUMMARY OF METALS DETECTED DURING THE RFI
SHALLOW SOIL SAMPLING PROGRAM
(concluded)

Sample Location	Sample Date	Sample Depth (ft bgs)	Concentration (mg/kg)										
			As	Sb	Cd	Cr	Cu	Pb	Hg	Ni	Se	Tl	Zn
Duplicate Analysis													
TP-5	08/09/90	1	4.6	--	2.8	42	65	100	--	15	1.0	--	140
TP-6	08/07/90	1	15	--	0.07	28	41	9.8	--	21	--	--	63
TP-10	08/08/90	1	2.2	--	--	18	270	--	--	11	0.7	--	16

Detection Limits:

Sb = 0.2
Cd = 0.06
Pb = 0.8
Hg = 0.2
Se = 0.4/0.5
Tl = 0.8

-- = Below detection limit

Source: WTI, 1990c.

TABLE 4-8

SUMMARY OF ORGANIC COMPOUNDS DETECTED DURING THE RFI SHALLOW SOIL SAMPLING PROGRAM

Sample Location	Sample Date	Sample Depth (ft bgs)	Concentration (ug/kg)					
			PCE	1,2-DCB	Xylenes	Ethyl-Benzene	Toluene	Acetone
TP-1	08/08/90	1	11	--	--	--	--	--
	08/08/90	3	--	--	--	--	--	--
	08/08/90	5	--	--	--	--	--	--
TP-2	07/25/90	1	--	--	--	--	--	--
	07/25/90	3	--	--	--	--	--	--
	07/25/90	5	--	--	--	--	--	--
TP-3	08/08/90	1	--	--	--	--	--	--
	08/08/90	3	--	--	--	--	--	--
	08/08/90	5	5	--	--	--	--	--
TP-4	08/08/90	1	--	27	35	--	--	70
	08/08/90	3	--	--	--	--	--	--
	08/08/90	5	400	900	12,000	7,000	200	--
TP-5	08/08/90	1	--	--	--	--	--	--
	08/08/90	3	--	--	--	--	--	--
	08/08/90	5	--	--	--	--	--	--
TP-6	08/09/90	1	43	--	--	--	--	--
	08/09/90	3	--	--	--	--	--	--
	08/09/90	5	--	--	--	--	--	--
TP-7	08/09/90	1	8	--	--	--	--	--
	08/09/90	3	7	--	--	--	--	--
	08/09/90	5	7	--	--	--	--	--
TP-8	08/08/90	1	96	--	--	--	--	--
	08/08/90	3	6	--	--	--	--	--
	08/08/90	5	830	--	--	--	--	--
TP-9	08/08/90	1	--	--	--	--	--	--
	08/08/90	3	--	--	--	--	--	--

TABLE 4-8

SUMMARY OF ORGANIC COMPOUNDS DETECTED DURING THE RFI SHALLOW SOIL SAMPLING PROGRAM
(concluded)

Sample Location	Sample Date	Sample Depth (ft bgs)	Concentration (ug/kg)					
			PCE	1,2-DCB	Xylenes	Ethyl-Benzene	Toluene	Acetone
TP-9	08/08/90	5	31	--	--	--	--	--
TP-10	08/07/90	1	11	--	--	--	--	--
	08/07/90	3	110	--	--	--	--	--
	08/07/90	5	--	--	--	--	--	--
TP-11	07/24/90	1	75	5	--	--	--	--
	07/24/90	3	48	--	--	--	--	--
	07/24/90	5	17	--	--	--	--	--
TP-12	07/24/90	1	19	--	--	--	--	--
	07/24/90	3	28	--	--	--	--	--
	07/24/90	5	11	--	--	--	--	--
TP-13	07/24/90	1	--	--	--	--	--	--
	07/24/90	3	--	--	--	--	--	--
	07/24/90	5	--	--	--	--	--	--
TP-14	07/24/90	1	--	--	--	--	--	--
	07/24/90	3	--	--	--	--	--	--
	07/24/90	5	--	--	--	--	--	--
Duplicate Samples								
T-5	08/08/90	1	--	--	--	--	--	--
T-6	08/09/90	1	40	--	--	--	--	--
T-12	08/07/90	1	--	--	--	--	--	--
T-10[a]	07/25/90	3	150	--	--	--	--	--

[a] TCE also was detected in this duplicate sample at concentration of 6 ug/kg.

-- = Below detection limit
PCE = Perchloroethene (Tetrachloroethene)
1,2-DCB = 1,2-Dichlorobenzene

Source: WTI, 1990c.

Concentration (STLC) established for metals, based on a ten-fold reduction to account for dilution of the sample.

The only semi-volatile organic compound detected, bis(2-ethylhexyl)phthalate at 1 ug/kg (at the 1-foot depth in TP-12 and TP-14), is reported by the laboratory to be a suspected laboratory contaminant. VOCs were detected at various depths in ten of the fourteen test pits, with PCE being the most commonly reported contaminant. When detected, PCE was measured at concentrations ranging from 5 to 830 ug/kg. No other contaminant was detected at more than three sampling locations/depths. TP-4 exhibited the greatest number of contaminants (6) and the highest concentrations. The detection of PCE at a concentration of 830 ug/kg at the 5-foot depth from TP-8 also is considered significant.

Material removed from the test pits was scanned for organic vapors using a Model 580A Environmental Instruments OVM. The breathing space within the pits and locations approximately 3 inches from the pit walls also were tested for organic vapors. The highest concentrations reported for these analyses are summarized on Table 4-9 herein.

Boring logs for the fourteen trenches prepared by Western Technologies Inc. indicate that most areas of the OSCO site are covered with 1 to 5 feet of engineered fill material. A 0.5- to 1.5-foot layer of native silty sand is present beneath the fill. Below this layer, unconsolidated, cobble material characteristic of this portion of the San Gabriel Valley is found to the total depth of the test pits. Reported field estimates of moisture content range from 5% to 25% (WTI, 1990c).

TABLE 4-9

HIGHEST OVM READINGS OBTAINED DURING THE
RFI SHALLOW SOIL SAMPLING PROGRAM

Sample Location	Date	OVM Reading (ppm)
TP-1	08/08/90	0.7
TP-2	07/25/90	1.4
TP-3	08/08/90	0.7
TP-4	08/08/90	20.4
TP-5	08/08/90	4.4
TP-6	08/09/90	0.7
TP-7	08/09/90	0.7
TP-8	08/08/90	1.4
TP-9	08/08/90	1.4
TP-10	08/07/90	0.7
TP-11	07/24/90	0.7
TP-12	07/24/90	0.7
TP-13	07/24/90	1.4
TP-14	07/24/90	0.7

Source: WTI, 1990c.

5.0 DEEP SOIL SAMPLING METHODOLOGIES

5.1 INVESTIGATION OBJECTIVES

Both Phase I (soil gas survey) and Phase IIa (shallow soil sampling) of the RFI identified the presence of certain VOCs in soil at the OSCO facility. The VOCs of particular concern are PCE, TCE, and 1,1,1-TCA, all of which have detected in the shallow soil beneath the site as well as in the groundwater of the San Gabriel basin. The primary objective of the Phase IIb RFI (deep soil sampling) was to determine the extent of vertical and horizontal VOC contamination beneath the facility. A second important objective was the characterization of the subsurface lithology at the site and the development of a contaminant migration model. The following investigation tasks were performed to achieve these objectives:

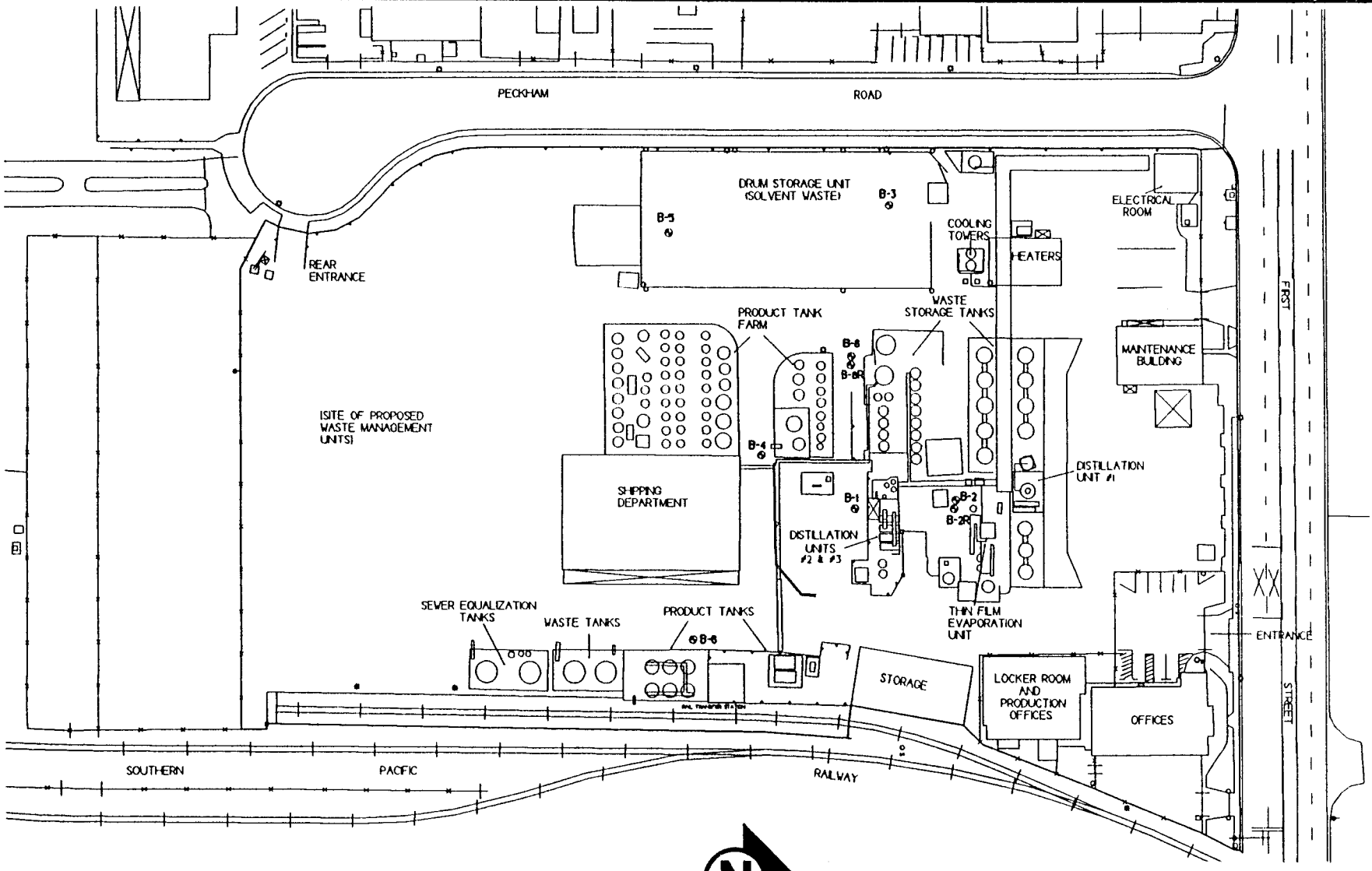
- A total of nine soil borings were drilled at seven on-site locations either until refusal or until contaminant concentrations in soil samples were below detection limits
- The lithologic subsurface conditions were logged visually by a geologist and seven of the nine boreholes were logged geophysically with neutron and gamma probes
- Soil samples were collected and analyzed for chemical and physical parameters by on-site mobile and off-site commercial laboratories
- Soil vapor probes were installed at one or more depths in all nine boreholes
- Soil vapor was extracted from the probes and analyzed for selected organic parameters. Subsequently, testing was performed to characterize vadose zone air permeabilities.

5.2 SOIL BORINGS

5.2.1 Location Selection

Potential boring locations were identified based on the results of the previous RFI investigations as well as historical investigations conducted at the OSCO facility (see Section 4.0 herein). Borings were drilled in areas of relatively higher soil gas concentrations or confirmed shallow soil contamination (Figure 5-1 herein). The soil gas survey identified two large and two smaller areas of relatively higher VOC readings (Figures 4-3 through 4-5 herein). One large area is located near Distillation Unit Nos. 2 and 3. This area exhibited concentrations of PCE, TCE, 1,1,1-TCA, and total petroleum hydrocarbons (TPH) that typically are an order of magnitude higher than any other site location. The center of the other large area is located at the juncture of the shipping department and the two main product tank farms. Elevated measurements of PCE, 1,1,1-TCA, and TPH were obtained in this second area. The two smaller areas of VOC contamination detected during the shallow soil gas survey were encountered beneath the drum storage pad on the west side of the site. The northernmost of these areas had relatively higher concentrations of PCE, TCE, 1,1,1-TCA, and TPH; the southern pad location had relatively higher concentrations of PCE, 1,1,1-TCA, and TPH.

Shallow soil contamination in the northwest corner of the drum pad had been detected during the ENRAC excavation and sampling (see Section 4.5 herein) and during the RFI Phase IIa investigation (at Test Pit TP-3). The VOCs having the highest concentrations at this location were PCE and 1,1,1-TCA. Test pits excavated as part of the Phase IIa investigation also detected relatively higher concentrations



B-1 Deep Soil Boring

APPROXIMATE SCALE
0 100 FEET

MEREDITH/BOLI & ASSOCIATES, INC.

OIL & SOLVENT PROCESS COMPANY

LOCATIONS OF RFI PHASE IIb DEEP SOIL BORINGS

FIGURE

5-1

1990-211

10/30/91

of PCE and aromatic hydrocarbons (i.e., xylenes, toluene, and ethylbenzene) at location TP-4 in the west-central area and relatively higher concentrations of PCE at TP-8 in the eastern side of the site.

As shown on Figure 5-1 herein, nine borings were drilled at seven locations. Borings B-2 and B-2R (former sump location), B-3 (drum pad excavation location), B-6 (TP-8), and B-8 and B-8R (TP-4) were drilled through the areas where shallow soil contamination had been detected. The other three borings, B-1, B-4, and B-5, were drilled in areas of relatively higher soil gas readings. All drilling was performed between 8 February and 27 May 1991.

5.2.2 Drilling Methods

Auger drilling is acknowledged to be a preferable drilling method for retrieving undisturbed, representative soil samples for environmental investigations. However, due the very coarse nature of the sediments (coarse sand, gravels, cobbles, and boulders), auger rigs have been unable to drill very deep in the OSCO facility region. Nevertheless, an attempt was made to drill the boreholes using a CME- 95 auger rig operated by Layne Environmental Services, Inc. (Fontana, California). The drill rig, equipped with a 10-inch diameter auger, attempted to drill the first two borings (B-2 and B-8). The rig met refusal at both locations (43 and 57.5 feet bgs, respectively) before investigation of the full vertical extent of contamination could be completed.

A dual wall, reverse air circulation, downhole hammer rig with a 9-inch diameter bit was used to drill Borings B-2R and B-8R. These two new borings were located within 5 feet of the original B-2 and B-8, respectively. The AP-1000 percussion hammer drill rig, which employs a diesel hammer drive, was operated by Layne Environmental Services, Inc. The diesel hammer rig was unable to advance to targeted termination depths in Boring B-2R. Consequently, a larger casing hammer rig, a Becker 520 operated by Beylik Drilling, Inc. (La Habra, California), was employed to complete Boring B-2R and to drill the remainder of the borings. The Beylik rig used a hydraulic percussion hammer and an 11-inch diameter casing. All soil samples were collected with split spoon samplers driven ahead of the drill bits (both auger and drive casings).

The dual wall, reverse air circulation drill rigs use compressed air to lift the drill cuttings up through the center of the drill pipe. The cuttings are discharged through a material handling hose into a cyclone, which separates the air from the cuttings. Cuttings from OSCO drilling activities were discharged from the cyclone into 55-gallon drums, which were labeled and disposed of based on the results of soil chemical analyses.

All drilling equipment was steam-cleaned prior to and between each boring, so as not to introduce possible cross-contamination into a clean borehole. Likewise, the stainless steel screens and risers and PVC casing also were steam-cleaned prior to emplacement in the borings.

5.2.3 Geophysical Logging

To maximize the recovery of available data from the borings, gamma and neutron geophysical logging was performed in each of the borings except B-2 and B-8. Because of the friability of the subsurface materials, the boreholes were too unstable to remove the drill casing for logging. Consequently, it was not possible to use other geophysical methods that cannot be run in a steel-cased hole, such as resistivity or spontaneous potential. The steel drill casing had only a limited effect on the gamma and neutron logs.

Gamma logs measure the natural radiation in the geologic formation that occurs primarily from the radioactive isotopes of potassium and, to a lesser extent, from elements in the uranium and thorium series. At the OSCO facility, gamma logs were used as an aid in stratigraphic correlation among borings.

Unlike gamma logs, neutron logs record radioactivity emitted by the formation in response to bombardment by a radioactive source. The formation's response to the neutron probe typically is a good indicator of porosity in saturated sediments. Because the borings at the OSCO facility were logged in the unsaturated zone, the neutron probe response was used to evaluate the relative moisture content of the borehole.

5.3 SOIL SAMPLING

5.3.1 Sampling Frequency

The original deep soil sampling workplan called for soil samples to be collected at every 5 feet of depth for the first 20 feet, every 10 feet to a depth of 50 feet, and every 20 feet thereafter. Initial attempts to implement this plan proved impractical. Boulders, cobbles, and gravels often occurred at the targeted sampling intervals and prevented sample retrieval. Consequently, the sampling plan was revised to collect samples whenever the drilling operations encountered significant zones of finer grained sediments. This modification to the sampling protocol resulted in a larger number of soil samples being collected than originally proposed.

5.3.2 Sampling Methods

Coarse subsurface materials made sampling very difficult. Gravel-size material often would occlude the opening of the 1.5-inch diameter split spoon and prevent the collection of any additional soil from that interval. In other instances, the sampler merely bounced on top of a large cobble or boulder, also preventing the retrieval of any soil sample. Several variations of the sampling method were attempted to achieve maximum efficiency in retrieving soil samples. Variations in the sampling protocol included sampling with and without brass liners in the split spoon, using 40-milliliter (ml) vials for soil sample preservation, using sand catchers, adjusting the rig's air pressure near the sampling interval, driving the sampler with a pneumatic percussion apparatus and rigid drive rods, and driving the sampler with a 140-pound drop hammer attached to a sand line and winch system.

The method that yielded the best return consisted of 1) reducing the drill rig's air pressure at an elevation 1 to 2 feet above the targeted sampling interval, 2) driving the split spoon sampler with a sand catcher, but no brass liners, 3) driving the sampler with a 140-pound drop hammer attached to a sand line and winch system, and 4) transferring the finer portion of the retrieved sample to a 40-ml vial. The sample vial was packed to capacity to minimize head space, labeled, and preserved on ice pending chemical analysis. Detailed descriptions of the sampling and decontamination protocols are presented in Appendix B hereto. Also presented in this appendix is a table showing where, when, and how each sample was collected.

5.3.3 Documentation

Drive samples were collected from a total of 140 discrete sampling depths within the nine borings. Drive samples and samples taken from the drill cutting discharge were described by the field geologist in field notes and boring logs in terms of soil classification (Unified Soil Classification System), color, grain size,

grading, and moisture content. The geologist's field records also noted sample intervals, sample identification numbers, and OVM readings.

Photographs were taken of the drilling and sampling operations and compiled into an annotated photograph album. Due to the number of photographs, the album has not been included as part of this report. However, selected photographs have been assembled to depict the principal aspects of the investigation activities (see Appendix C hereto).

5.3.4 Soil Sample Analyses

Soil samples collected from the nine borings were analyzed for a target list of organic compounds that had been selected based on the results of the Phase I and Phase IIa investigations. An on-site mobile laboratory operated by Enseco (Garden Grove, California) analyzed the soil samples using USEPA-approved methods for detecting purgeable halogenated volatile organics (USEPA Method 8010) and aromatic volatile organics (USEPA Method 8020). Approximately 8% of the soil samples were split into duplicates and sent to an off-site commercial laboratory (BC Analytical, Glendale, California) for confirmatory analysis. During analyses of the samples by the mobile laboratory, additional peaks on the chemical chromatograms that were not identifiable by the 8010 method were observed. In these instances, a scan for purgeable volatile organic compounds using gas chromatography/mass spectrometry (GC/MS; USEPA Method 8240) was performed by Enseco's off-site laboratory.

Throughout the drilling and sampling operations, the drill cuttings and drive samples were monitored for VOC content with an OVM. The OVM, which uses a photoionization detector, measures organic vapors in the 0 to 500 parts per million (ppm) range. The OVM was calibrated periodically with a 100 ppm concentration of isobutylene gas to ensure consistent readings. Soil samples from the cyclone (i.e., drill cuttings) were sealed in a plastic bag and set in the sun to expidite the volatilization of any VOCs that may be present in the sample. After 15 to 30 minutes, the tip of the OVM was inserted into the bag and a measurement was taken and recorded.

In addition to chemical analyses of the soil, certain physical parameters also were tested. Three samples, one from Boring B-5 and two from Boring B-6, were analyzed for grain size distribution and total organic carbon content.

5.3.5 QA/QC Procedures

Sampling QA/QC procedures entailed the collection of duplicate samples for on-site and off-site analysis (19 total) and the periodic analysis of sampling tool decontamination rinsate to ensure that cross contamination was not occurring. Laboratory QA/QC reports are provided with the analytical results in Appendix H hereto. Laboratory QA/QC procedures consisted of surrogate recoveries, sample blanks, and matrix spikes.

5.3.6 Rationale for Borehole Termination

The goal of the deep boring program was to drill to the base of confirmed contamination, as delimited by soil sample analytical results. This goal was met for all but two borings -- ketones were detected at the bottom of Boring B-1 and PCE was detected at slightly above detection limits at the base of Boring B-6. A boring was terminated if any of the following conditions were met:

- Three consecutive samples collected over a 15-foot interval had analytical "non-detects" for targeted analytes. Also, OVM readings were at background levels and, if measurable, showed progressively lower concentrations with depth

- The drill was advanced to a depth of at least 50 feet and physically was unable to penetrate any further

- Groundwater was encountered (although a criterion, drilling refusal precluded this consideration).

5.4 SOIL VAPOR PROBE INSTALLATION

5.4.1 Purposes of Soil Vapor Probes

In each boring, a probe was installed near the bottom of the hole to compare soil chemistry with soil vapor analyses and, if possible, to verify the "non-detect" soil chemistry results. Probes were placed at the lowest interval that could be sealed against a finer grained unit directly above the vapor probe. Additionally, probes were placed at higher elevations in the boreholes within stratigraphic horizons known to be contaminated. These upper borehole probes were designed to:

- Compare soil vapor chemistry in each borehole with soil samples taken from the same interval

- Compare soil vapor chemistry at a roughly uniform depth across the site, based on borehole probes installed at equal depths

- Permit the estimation and comparison of horizontal versus vertical soil air permeabilities.

5.4.2 Soil Vapor Probe Design

Each boring was fitted with one to three soil vapor probes. The borings, depths, and number of probes at each location are listed on Table 5-1 herein. The probes were constructed with a 1-inch diameter, 5-foot long stainless steel well screen (0.02-inch slots) with a 5-foot long stainless steel riser above the screen and a 1-inch diameter Schedule 80 PVC riser to the ground surface. A typical completion diagram for a two-probe boring is provided as Figure 5-2 herein; as-built completion diagrams and specifications for all nine borings are provided in Appendix D hereto. One probe each was installed in Borings B-2 and B-8. Boring B-8R is fitted with three vapor probes and the remaining borings have two probes each.

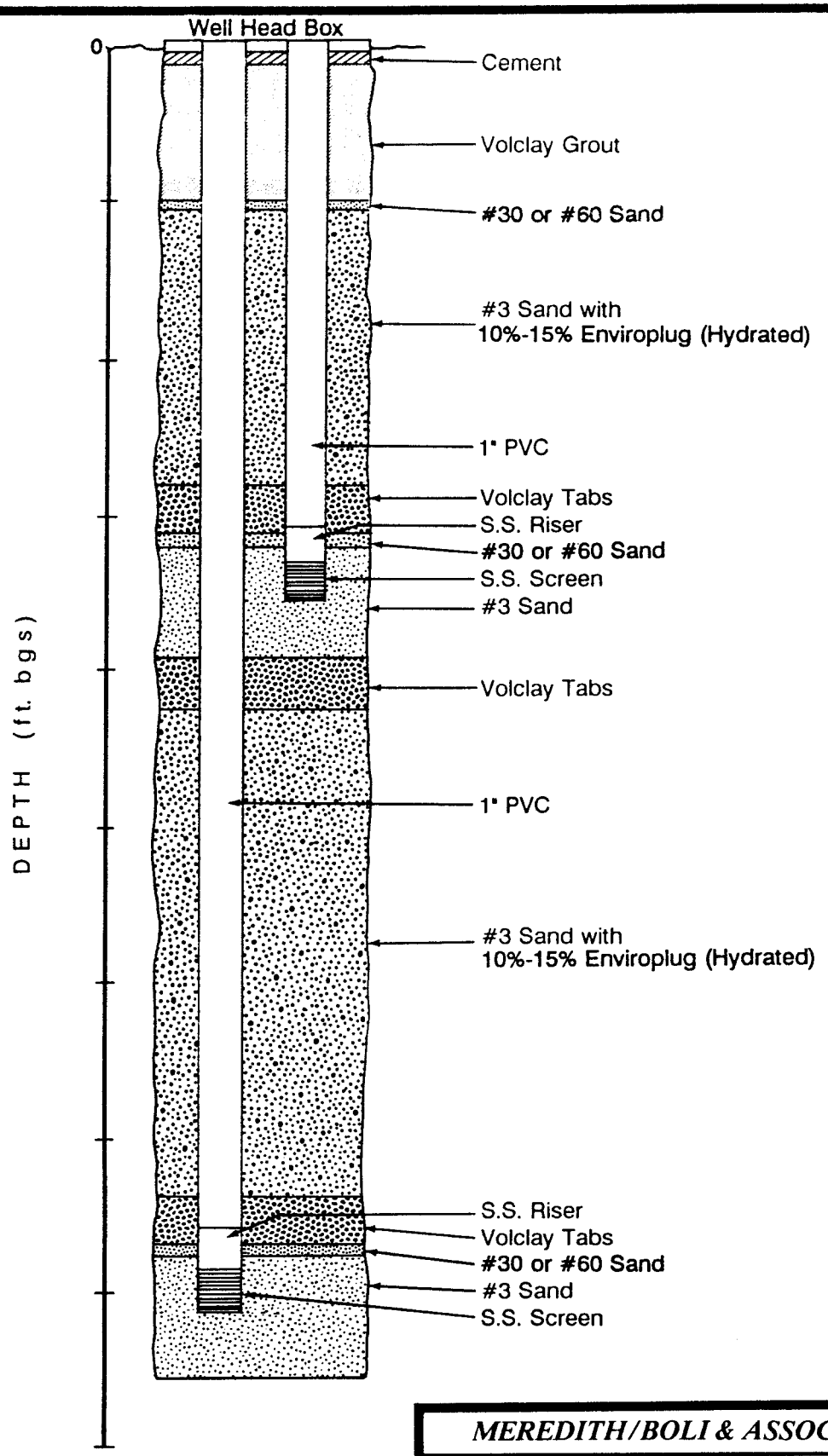
Vapor probes were constructed in the dual tube drive casing. After the deepest screen and blank casing were set at the desired depth, a sandpack (#3 sand) was set around the well screen. The drive casing was withdrawn incrementally from the borehole as the sandpack, bentonite, and grout materials were placed in the boring.

The screens placed in borings fitted with multiple probes were separated by a 6- to 8-foot layer of hydrated bentonite pellets topped by a layer of variable thickness containing a mixture of #3 graded sand and 10 to 15% hydrated Enviroplug. The exact positions of the well screens were selected by evaluating geophysical logs and the geologist's lithologic descriptions. If possible, the screens and sandpacks were set between stratigraphic zones containing finer grained sediments. The purpose of this arrangement was to place the screens in relatively high permeability zones (i.e., gravels) that are separated, at least to some extent, from other high permeability zones by finer grained intervals. The upper portions of the boreholes were sealed with a volclay grout and a concrete surface seal to provide a barrier to the downward movement of surface liquids. A traffic-rated locking well box (i.e., "Christy" box) was installed over the well head of each boring. The well box was raised approximately 2 inches higher than the surrounding surface to prevent surface waters from seeping into the box.

TABLE 5-1

CONSTRUCTION DETAILS FOR SOIL VAPOR PROBES

Boring No.	Total Depth (ft bgs)	No. of Probes	Probe Depth Interval(s) (ft bgs)
B-1	140	2	66-71 131-136
B-2	43	1	17-22
B-2R	174	2	66-71 157-162
B-3	106.5	2	63-68 99-104
B-4	186.5	2	70-75 170-175
B-5	166.5	2	62-67 155-160
B-6	197	2	65-70 185-190
B-8	57.5	1	36-41
B-8R	122.5	3	40-45 67-72 106-111



MEREDITH/BOLI & ASSOCIATES, INC.

OIL & SOLVENT PROCESS COMPANY

TYPICAL SOIL BORING COMPLETION DIAGRAM

FIGURE 5-2

1990-211

11/15/91

5.5 SOIL VAPOR INVESTIGATIONS

At the conclusion of the drilling and soil sampling program, the decision was made to retain a recognized expert in the fields of soil gas studies and contaminant transport in the vadose zone to assist the project team in designing, implementing, and interpreting the results from a soil vapor investigation. Dr. Donn L. Marrin, Principal Scientist for InterPhase (San Diego, California) was contracted for this role. Dr. Marrin has designed and interpreted the results from scores of soil gas investigations throughout the United States. He also has performed several organic contaminant fate and transport studies and conducted pilot tests for soil vapor extraction (SVE) systems. His primary areas of expertise include hydrology, hydrochemistry, and the analysis of the behavior of volatile hydrocarbons in the subsurface environment.

A workplan for a soil vapor study was prepared by InterPhase (1991a) and implemented beginning 19 August 1991. The study was devised as a two-phase investigation, as summarized below:

- Phase 1 -- The purpose of this phase was to collect soil vapor from the area immediately surrounding each well screen in order to confirm the presence or absence of contamination measured in soil samples taken at these lithologic intervals. This was accomplished by sampling each soil vapor probe (17 total) by applying a low vacuum to the system (5 to 12 standard cubic feet per minute; scfm).

- Phase 2 -- The purpose of this phase was to assess subsurface air flow dynamics and to evaluate further the relationship between VOC concentrations in the soil and vapor phases in the vadose zone. Soil vapor from the shallow vapor probe in Boring B-1 was evacuated at relatively high flow rates (up to 54 scfm) while induced vacuums at adjacent observation points (Borings B-2R, B-4, and B-8R) were monitored. These measurements allowed calculations to be made for vadose zone permeability and radii of influence under constant flow conditions.

5.5.1 Soil Vapor Extraction Procedures

Soil vapor was withdrawn from the vapor probes by connecting the 1-inch diameter PVC well riser to either a positive displacement Rotron blower (used for low volume sampling) or a constant volume vacuum pump (used for high volume sampling). The connection was achieved through the use of reducing bushings and valves.

Flow rates were measured via an in-line pressure drop probe and vacuum pressures were measured with either a Magnahelic flow gauge or an incline manometer. Steady vacuums were applied to the probes and measurements were performed until apparent steady state conditions were attained. During Phase 2, a step test was performed by varying the wellhead vacuum pressure and observing the corresponding change in air flow rate. These data were used to plot a flow/vacuum curve, which was necessary to evaluate the flow parameters at the extraction well.

5.5.2 Soil Vapor Sampling

Vapor exhaust samples were collected from a sampling port on the exhaust side of the blower or vacuum pump. Additional grab samples were collected from ambient air in the vicinity of the test locations. Vapor samples were withdrawn using a 10-cubic centimeter (cc) glass syringe and immediately transferred to the on-site mobile analytical laboratory. An additional sample was taken in a Tedlar bag for a QA/QC check and to analyze for compounds not included in the on-site program. This sample was submitted to

Performance Analytical Inc. (Canoga Park, California) for analysis by USEPA modified test method TO-14 (a GC/MS analysis).

During the Phase 1 time test at Boring B-4, samples were collected approximately every 15 minutes; Phase 2 samples were withdrawn every 15 to 30 minutes. Syringe samples were analyzed immediately and the Tedlar bag sample was analyzed within 24 hours. Upon completion of testing a vapor probe, non-dedicated or reusable components of the extraction system were checked for contamination by drawing atmospheric air through the system and subjecting it to chemical analysis. Sampling syringes were decontaminated by washing with a mild detergent, followed by a solvent rinse and purging with an inert gas. The final gas purge was analyzed for organic contaminants prior to reuse to ensure proper decontamination.

As part of the sampling procedure, boring locations and screened intervals were recorded on a site map and field forms. In addition, field data forms were used to record observations regarding sample identification, sample location and depth, flow and vacuum conditions under which the sample was collected, and time of collection. The procedures and conditions under which the flow/vacuum characteristics of the soil were tested (e.g., initial conditions, changes in flow rate, vacuum pressures at the extraction and observation wells, test periods, etc.) also were recorded on the field data forms.

5.5.3 Soil Vapor Analyses

The 10-cc syringe soil vapor samples were subsampled according to analytical requirements, and duplicates were injected into the gas chromatograph (GC; Varian 3400 or Hewlett-Packard 5890) for documentation of reproducibility. The number of required injections was dependent on the reproducibility of results as well as the success in separating individual compounds during a GC run.

Analytes were identified by their respective elution times through the various columns and detectors. Retention or elution times were compared with external gas phase standards and analyte concentrations estimated by comparing the detector response for a known concentration of the external standard with the detector response for the sample. Calibration curves were computer-generated by plotting the detector response for external standards, which vary over a 100-fold range in concentration. Detector response was checked periodically to ensure that calibration curves were accurate.

Vapor sampled from the soil vapor probes was analyzed for total volatile hydrocarbons (TVH as hexane), C_8 aromatics (xylenes and ethylbenzene), toluene, acetone, MEK, PCE, TCE, 1,1,1-TCA, carbon dioxide, oxygen, and methane. These compounds were analyzed using a combination of electron capture (EC), flame ionization (FI), and thermal conductivity (TC) detectors. Detection limits were less than 0.1 ppmv for the aromatic hydrocarbons, less than 1 ppmv for TVH and the ketones, less than 0.1 ppbv for the chlorinated solvents, and 0.1% for the fixed and biogenic gases.

USEPA Method TO-14, the method used to analyze the Tedlar bag sample, is described in the "Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air," USEPA 600/4-84-041, April 1984 and May 1988. The analysis was performed using a Finnigan Model 4500C GC/MS with a direct cryogenic trapping technique.

6.0 DEEP SOIL SAMPLING RESULTS

6.1 LITHOLOGY

The upper 200 feet of vadose zone at the OSCO facility comprise a relatively homogenous assemblage of coarse sediments consisting of interbeds and lenticular layers of sand and gravel with inclusions of cobble- and boulder-size clasts. The Unified Soil Classification Symbols for these materials (in decreasing order of occurrence) are:

- GW -- well-graded gravel
- GP -- poorly-graded gravel
- SW -- well-graded sand
- SP -- poorly-graded sand.

The most commonly encountered sediment types were sandy gravels and gravelly sands. Although trace amounts of silt were detected occasionally within the sands and gravels, no coherent fine grained units that could be classified as silts or clays were detected. The finest grained sedimentary units encountered in the subsurface were fine grained sands. These fine, poorly graded sand units ranged in thickness from less than 1 foot to a maximum of 3 feet. The coarser units commonly were pebble- to cobble-size gravels within a sand matrix. Beds of cobbles or boulder-size clasts with little sand matrix, while uncommon, occasionally were encountered. Based on the lithologic logs, the 50- to 80-foot and 100- to 120-foot depth intervals appear to have more sand than the other subsurface depths.

Pebble-, cobble-, and boulder-size sediments most commonly were very hard clasts of quartz diorite, granodiorite, granitic gneiss, and schist. Clast shapes ranged from subangular to rounded. Moisture content in the vadose zone was observed to be very low. Some of the finer grained units could be described as damp or (occasionally) moist, but the majority of the sediments typically were characterized as dry. The vast majority of zones described as damp or moist were the sand-bearing units. Most damp to moist units were identified in either the upper 30 feet of the borings or in the 50- to 85-foot interval. Boring B-6 is relatively damp in the 145- to 185-foot interval. None of the encountered sediments could be classified as wet or saturated. The color of the subsurface material typically was light to dark brown, tan, or gray.

Physical analyses were performed on three soil samples taken from Borings B-5 and B-6. Samples were collected at the cyclone discharge point and placed in sealed plastic bags. Clasts more than 1.5 inches in diameter were removed from the sample. Insufficient recovery from drive sampling prevented analysis of undisturbed samples. Consequently, the samples could not be analyzed for moisture content. The samples were tested for gradation (ASTM procedure D422) and total organic carbon (TOC; ASA-SSA, Chapter 29); a test for Atterberg Limits also was requested, but due to the coarseness of the sample, this test could not be performed. Laboratory reports for physical analyses are included in Appendix H hereto.

Because the samples were collected from the cyclone, a significant amount of rock flour (fine, crushed rock powder generated from the drilling process) was incorporated into the sample. The three samples yielded a fines content (i.e., small enough to pass through a #200 sieve) of 10 to 16%. However, based on the geologist's description of the undisturbed samples obtained for chemical analysis, the actual

percentage of fines in these samples is estimated to be considerably less, perhaps in the range of 0 to 2%. With the rock flour incorporated into the gradation analyses, the samples can be classified as follows:

B-5 (65 feet)	Poorly graded sand-silty sand (SP-SM)	11% fines
B-6 (86 feet)	Silty sand (SM)	16% fines
B-6 (97 feet)	Well graded sand-silty sand (SW-SM)	10% fines

All soil samples tested negative for TOC, with a reported test method detection limit of 0.1% (1,000 mg/kg).

Due to the similarity of lithologic types, it often was difficult to detect subtle changes in the subsurface lithology during drilling. To augment the interpretation of subsurface conditions, gamma logs were run to aid in distinguishing sand from gravels, and neutron logs were run to distinguish moister from drier zones. Those two geophysical methods were used because the logs could be ran through the steel drill casing, which had to be left in place to prevent collapse of the boring. The thickening of the steel casing at the points of segment connection caused spurious peaks on the neutron probe logs, which were accounted for when interpreting the logs.

Neither geophysical logging method detected any well defined units that could be correlated across the site. However, roughly defined lithologic zones and moisture zones seemed to be correlatable among most of the boreholes. In general, gamma logs detected sandier zones in the boreholes in the upper 10 feet, from 25 to 40 feet, 50 to 80 feet, 120 to 135 feet, and 145 to 160 feet of depth. The neutron logs detected moister zones in the borehole in the upper 10 to 15 feet, from 50 to 80 feet, 100 to 120 feet, and 140 to 170 feet of depth. Boring logs, which contain geophysical logging and selected soil chemistry results, are presented in Appendix E hereto.

The presence of zones of finer grained materials and higher moisture content are of particular interest for determining subsurface movement because these zones will influence contaminant transport in fairly predictable ways. Generally, finer grained sediments inhibit the downward movement of VOCs by encouraging lateral dispersion via the processes of limited capillary suction and comparatively greater adsorption, due primarily to the relatively greater available surface area of the lithologic unit. The addition of moisture to these zones magnifies this effect by creating menisci between the sand grains (i.e., in the interstitial pores), thereby deflecting the VOC pathway horizontally.

6.2 SOIL CHEMISTRY

One or more VOCs were detected at six of the seven Phase IIb investigation areas (i.e., all except for Boring B-3). Detected VOC concentrations for 206 soil samples collected from the nine borings (including drive samples, cutting samples, and duplicates) are summarized on Table 6-1 herein; a more comprehensive data summary is included in Appendix F hereto. Copies of laboratory reports generated during the field investigation are provided in Appendix H hereto. The more common chemical constituents detected in the subsurface are PCE (31 hits), toluene (28 hits), acetone (27 hits), MEK (23 hits), xylenes (16 hits), ethylbenzene (15 hits), 1,1,1-TCA (13 hits), and MIBK (11 hits). Acetone, MEK, and MIBK were detected in the soil only in Borings B-1 and B-4.

TABLE 6-1

SUMMARY OF DETECTED ORGANIC COMPOUNDS FOR NINE DEEP SOIL BORINGS[a]

OSCO FACILITY, AZUSA, CALIFORNIA

Boring No.	Concentration Range of Detected Compounds[b] (ug/kg)								Other Detected Compounds (concentration in ug/kg)
	TCE	PCE	1,1,1-TCA	Toluene	Xylenes	Acetone	MEK	MIBK	
B-1	BDL	BDL	10-21	5-22	BDL	23-2,000	17-720	10-36	Methylene chloride (6-7); cis-1,2-Dichloroethene (9)
B-2	BDL	40	BDL	BDL	62,000	NA	NA	NA	Ethylbenzene (4,000); 1,2-Dichlorobenzene (700)
B-2R	6-8	5-470	6-8	5-300	8-3,200	NA	NA	NA	Ethylbenzene (5-1,100); 1,4-Dichlorobenzene (64-180)
B-3	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	
B-4	BDL	5-150	8-23	7-39	20-57	13-6,600	18-5,100	41-200	Benzene (6); Ethylbenzene (5-15); 1,1,2-Trichloroethane (6); trans-1,2-Dichloroethene (6)
B-5	BDL	6	BDL	6	38	BDL	BDL	BDL	Ethylbenzene (7); Methylene chloride (5-7)
B-6	BDL	5-32	BDL	BDL	BDL	BDL	BDL	BDL	
B-8	6	BDL	BDL	BDL	BDL	NA	NA	NA	1,1-Dichloroethene (24)
B-8R	BDL	7-33	BDL	BDL	BDL	NA	NA	NA	trans-1,2-Dichloroethene (8)

[a] A comprehensive data summary, including concentration profiles with depth, is provided in Appendix F hereto.
[b] Includes only the detected values for the identified compounds.

BDL = Below detection limit.
NA = Not analyzed; although quantitative analyses were not performed for ketones at these locations, on-site laboratory chromatograms for USEPA Methods 8010/8020 indicated that they were not present.

PCE appears to be the most pervasive chemical present in the subsurface, being detected in six of the nine borings, although it was not detected at a concentration higher than 470 ug/kg (in Boring B-2R at the 14-foot depth). Only 2 of the 31 PCE detections were greater than 100 ug/kg and the majority (24) were measured at less than 35 ug/kg. In both borings that had PCE concentrations greater than 100 ug/kg (B-2R and B-4), a distinct attenuation of PCE concentrations was evident with increasing depth and PCE was not detected in the last three soil samples taken from these borings.

1,1,1-TCA was detected in three borings at a maximum concentration of 23 ug/kg. This organic compound was not detected in any of the borings below a depth of 99 feet. TCE was detected in only two borings and the maximum concentration was measured at 8 ug/kg. The deepest measured occurrence of TCE was in Boring B-8 at a depth of 50 feet.

Aromatic compounds of benzene, toluene, xylenes, and ethylbenzene (BTXE) were detected in Borings B-1, B-2, B-2R, B-4, and B-5. Benzene was detected in only one sample (Boring B-4 at 74 feet) at a concentration of 6 ug/kg. Except for the upper 20 feet in the old sump location (Borings B-2 and B-2R), concentrations for individual BTXE constituents did not exceed 57 ug/kg.

The chromatograms for soil samples from Borings B-1 and B-4 contained peaks that were not quantifiable using the 8010/8020 analytical methods. USEPA Method 8240 (scan for purgeable VOCs using GC/MS) was used to identify and quantify these unknowns. Three ketones were identified using Method 8240 -- acetone, MEK, and MIBK. Acetone concentrations were recorded as high as 6,600 ug/kg in Boring B-4 (99 feet) and 2,000 ug/kg in Boring B-1 (123 feet). MEK was found in Boring B-4 at concentrations up to 5,100 ug/kg (99 feet) and in Boring B-1 at 720 ug/kg (12 feet). MIBK was detected at much lower concentrations -- 200 ug/kg in Boring B-4 (98 feet) and 36 ug/kg in Boring B-1 (101.5 feet). Boring B-4 penetrated beneath the deepest measured occurrence of ketone contamination. Ketones were detected in the deepest soil sample collected from Boring B-1 (137 feet), but the concentrations of ketones attenuated with depth.

OVM readings taken on drill cuttings retrieved from the cyclone discharge are plotted as a function of elevation on the individual boring logs (see Appendix E hereto). In general, OVM readings correlate reasonably well with the chemical results of drive samples obtained from the same interval.

6.3 SOIL VAPOR INVESTIGATION RESULTS

Results of the soil vapor investigations are summarized in an InterPhase (1991b) report, included in Appendix G hereto. Phase 1 results indicate that chlorinated and oxygenated hydrocarbons are present in soil vapor at considerably higher concentrations than are aromatic hydrocarbons. While none of the aromatic solvents (i.e., toluene and xylenes/ethylbenzene) exceeded 143 ppmv, PCE was encountered at a maximum concentration of 1,100 ppmv (at the B-4 shallow probe) and MEK was present at levels as high as 13,000 ppmv (at the B-1 deep probe). In general, the highest soil vapor VOC concentrations were recorded at Boring B-1.

With few exceptions, soil vapor constituents and relative VOC levels correspond to the soil analytical results (Table 6-2 herein). In cases where VOCs were detected in soil, soil vapor concentrations generally were relatively high. Soil samples where VOCs were reported as being below detection limits generally corresponded with relatively low soil vapor readings. Perhaps the most significant deviations from this trend are in Boring B-6 (shallow and deep), where soil vapor concentrations indicate the likely presence of 1,1,1-TCA in adjacent soil, and in Boring B-1 (shallow), where soil vapor analysis indicates that PCE likely is present.

TABLE 6-2

COMPARISON OF SOIL AND SOIL VAPOR
ANALYTICAL RESULTS FOR SELECTED ORGANIC COMPOUNDS

OSCO FACILITY, AZUSA, CALIFORNIA

Boring Location	Probe Depth	1,1,1-TCA		PCE		Toluene		MEK	
		Soil[a] (ug/kg)	Soil Vapor (ppmv)	Soil[a] (ug/kg)	Soil Vapor (ppmv)	Soil[a] (ug/kg)	Soil Vapor (ppmv)	Soil[a] (ug/kg)	Soil Vapor (ppmv)
B-1	Shallow	12	1,000	BDL	320	16	140	29	520
	Deep	BDL	47	BDL	17	5	75	720	13,000
B-2	--	BDL	32	BDL	13	BDL	41	BDL	BDL
B-2R	Shallow	6	15	5	10	28	4	NA	BDL
	Deep	BDL	8	BDL	10	BDL	2	NA	BDL
B-3	Shallow	BDL	92	BDL	56	BDL	BDL	NA	BDL
	Deep	BDL	85	BDL	40	BDL	BDL	NA	BDL
B-4[b]	Shallow	23	330	150	1,100	29	130	350	10,000
	Deep	BDL	62	13	220	BDL	8	BDL	BDL
B-5	Shallow	BDL	47	BDL	22	BDL	BDL	NA	BDL
	Deep	BDL	35	BDL	21	BDL	BDL	BDL	BDL
B-6	Shallow	BDL	760	32	300	BDL	BDL	BDL	BDL
	Deep	BDL	630	6	290	BDL	BDL	BDL	BDL
B-8	--	BDL	34	BDL	82	BDL	1	NA	BDL
B-8R	Shallow	BDL	35	BDL	150	BDL	2	NA	BDL
	Middle	BDL	63	33	720	BDL	1	NA	BDL
	Deep	BDL	52	16	280	BDL	BDL	NA	BDL

[a] The highest soil concentration for the screened interval of the probe is reported.
[b] Time tests were conducted at Boring B-4 with samples collected on approximate 15 minute intervals. The reported soil vapor concentration represents the maximum value reported, after VOC concentrations had stabilized.

BDL = Below detection limit
NA = Not analyzed; although quantitative analyses were not performed for MEK at these locations, on-site laboratory chromatograms for USEPA Methods 8010/8020 indicated that ketones were not present.

InterPhase estimated that the average "capture zone" that was being sampled during Phase 1 tests extended radially to a distance of about 1 meter (3 feet) from the probe. Thus, the soil vapor results can be considered representative of contaminant conditions immediately adjacent to the screened probe interval. Calculations of VOC concentrations in soils based on observed vapor concentrations, soil properties, and partitioning models, suggest that soil VOC concentrations likely are higher than those detected during the soil sampling program.

The first attempt to create observable vacuum effects at observation wells during Phase 2 was unsuccessful because a sufficient vacuum pressure could not be induced at the extraction well (Boring B-1 shallow probe). A larger vacuum subsequently was applied, and effects were measured at Borings B-2R, B-4, and B-8R. Based on these measurements, InterPhase calculated that subsurface air permeablities range from 44 to 47 darcys. The radius of influence obtained during vapor extraction at Boring B-1 at a flow rate of 37 scfm was estimated to range from 23.3 to 34.3 meters (76 to 113 feet).

Concentrations of VOCs detected in Boring B-1 during the first Phase 2 test, when vacuum pressures were relatively low, generally corresponded with Phase 1 results (except for PCE). However, during the second Phase 2 test, when extraction rates were much higher and soil vapors were being drawn from greater distances, soil vapor concentrations were considerably higher. In particular, PCE, C_8 aromatics acetone, and MEK were measured at concentrations 10 to 15 times higher than during Phase 1 tests.

The laboratory results for the Tedlar bag sample are included in Appendix H hereto. For compounds analyzed by both the on-site and off-site laboratories, the correlation between reported concentrations was relatively good. Three compounds were detected in the soil vapor sample analyzed by the off-site laboratory that had not been detected previously in the deep boring program. They are trichlorotrifluoroethane (Freon-113; 110 ppmv), 1,1-dichloroethane (7.5 ppmv), and styrene (1.2 ppmv).

6.4 AERIAL FLYOVER AND SURVEY

During July 1991, an aerial flyover and survey of the OSCO facility was performed to 1) develop location and topographic maps for the site and 2) survey in the precise locations of RFI Phase IIa test pits and Phase IIb deep soil borings. Coordinates and elevations (in feet msl) for the fourteen test pits and nine deep soil borings are presented on Table 6-3 herein.

TABLE 6-3

SURVEYED BORING AND TEST PIT COORDINATES[a]

OSCO FACILITY, AZUSA, CALIFORNIA

Boring/Test Pit[b] Number	Coordinates		Elevation[c] (feet msl)
	North	East	
B-1	5391.892	5285.021	522.8
B-2	5462.412	5274.482	524.18
B-2R	5461.932	5278.883	524.18
B-3	5417.611	5069.716	522.55
B-4	5322.068	5237.236	521.87
B-5	5249.016	5081.553	519.58
B-6	5274.607	5375.507	521.66
B-8	5390.699	5181.145	522.76
B-8R	5390.271	5185.930	522.79
TP-1	5554.791	5105.117	524.68
TP-2	5473.321	5164.976	524.16
TP-3	5463.354	5045.667	523.16
TP-4	5394.070	5185.354	522.70
TP-5	5334.513	5132.286	521.44
TP-6	5202.318	5166.949	519.59
TP-7	5202.401	5234.162	519.96
TP-8	5274.818	5377.246	521.81
TP-9	5178.774	5286.357	520.03
TP-10	5129.620	5378.848	520.21
TP-11	5526.831	5241.474	523.97
TP-12	5526.599	5292.373	523.96
TP-13	5526.672	5266.636	523.96
TP-14	5526.562	5318.794	523.95

[a] Reference Benchmark: Los Angeles County DPW No. DG-4448 Elevation 529.915 (feet msl).
[b] B = Boring (Phase IIb) TP = Test Pit (Phase IIa)
[c] Boring Elevation = Measured at center of well head box cover.
Test Pit Elevation = Measured at current ground surface.

7.0 EVALUATION AND INTERPRETATION OF INVESTIGATION RESULTS

The body of environmental data for the OSCO facility is sufficient to allow interpretations to be made regarding contaminant sources and subsurface transport processes. However, the ability to understand and delimit ultimate contaminant fate beneath the site is a direct function of the quantity and quality of the available data. It should be recognized that the data collected during the past several years at this site are relatively extensive and involved several complementary investigative approaches, including shallow and deep soil gas sampling, shallow soil sampling, deep soil chemical and physical sampling, geophysical data collection, and detailed source identification efforts (e.g., aerial photograph review, historical file searches, etc.). However, it also should be understood that interpretation of the existing data base must reflect 1) the need to interpret soil sample analytical results cautiously (and in the context of other field information) due to the difficulty in retrieving competent, representative samples and 2) the present lack of information regarding the lowermost one-third of the vadose zone and site-specific groundwater conditions. The interpretations presented in the following sections are presented with the correspondingly appropriate level of scientific caution.

7.1 IDENTIFICATION OF CONTAMINANT SOURCES

Prior to implementation of the deep soil boring program, available field data for the OSCO facility were reviewed to identify all locations that could be considered potential sources of significant contamination. Based primarily on the results of 1) aerial photographic interpretation (USEPA, 1988), 2) investigation of the historical presence of sumps and underground tanks, 3) the 1988 ENRAC excavation/sampling effort, 4) the shallow soil gas survey, and 5) the shallow soil sampling program, seven locations were selected for deep vadose zone investigation.

Some of the previous field investigations at the OSCO facility have revealed areas of surficial soil contamination, which, due to their relatively low contaminant concentrations and limited vertical extent, are not believed to represent threats to underlying groundwater. In fact, it appears that low concentrations of solvent contaminants may be widespread in shallow soils (i.e., $\leq$ 5 feet bgs) at and in the general vicinity of the OSCO facility, as evidenced by the results of background soil sampling (e.g., WTI, 1990) and screening level investigations (e.g., EMCON, 1987). In particular, the presence of TCE in the 1980 retention pond illustrates the ability of precipitation and surface drainage to disperse low level, surficial contamination on an area-wide basis.

While absolute certainty that every minor contaminant source has been identified is not possible, it is reasonable to conclude that the major contaminant sources (that could have resulted in substantial vertical penetration of the vadose zone) at the OSCO facility have been ascertained and investigated in this latest phase of the RFI program. Certainly, the RFI has been designed to investigate potential contamination sources thoroughly and to ensure, to the extent practicable, that no significant unidentified sources remain at or near the surface.

One of the major assumptions that has been made in developing this interpretative summary is that the worst-case contaminant conditions present at the OSCO facility (i.e., the highest contaminant concentrations and the greatest migration depths) were observed during the deep boring program. Given the extensive source identification and reconciliation efforts, as well as the geological and physical conditions that control contaminant movement in the vadose zone (see Section 7.3 herein), this assumption is scientifically reasonable. Further, due to the depth to groundwater (approximately 300 feet bgs) and the propensity for a certain degree of lateral contaminant spreading to occur as a function of depth, pinpoint accuracy in locating surficial contaminant sources is not necessary to ensure their

detection at depth. Accordingly, it is unlikely that a significant source/area that could have contributed to past or present groundwater contamination remains undetected at the site now that the Phase IIb RFI program has been performed.

7.2 PRESENCE AND SIGNIFICANCE OF DEEP BORING CONTAMINATION

In any subsurface investigation, the presence of contaminants at various intervals in the boring column provides evidence of the vertical extent of contamination. Similarly, the spacing and number of borings allows judgments to be made regarding the horizontal distribution of contamination. Attenuation of individual constituents with depth provides insight into contamination migration patterns and distances. Under ideal circumstances, sufficient information regarding each of these vertical and horizontal profiles is available to develop a three-dimensional boundary that delimits known or projected contamination.

At the OSCO facility, certain data limitations preclude a confident understanding of the contaminant boundary conditions at this time. One limitation is the need to rely partially on indirect measurements (i.e., soil vapor analyses) to help understand the presence and/or concentration of contaminants in the soil. This limitation is imposed by the difficulty in retrieving representative soil samples from the OSCO geologic environment, even with use of the best investigation tools and techniques currently available. Other limitations include present gaps in information regarding 1) exact source concentrations and volumes, 2) precipitation recharge patterns at the site, and 3) geologic, physical, and soil chemistry conditions within approximately the lowermost 100 feet of the vadose zone. It is emphasized that these data limitations, in part, are caused by the unique environmental conditions at the OSCO facility (as explained elsewhere in this report) and occur despite best professional efforts to characterize the site during the RFI Phase IIb program.

Notwithstanding these limitations, an attempt is made herein to assess the nature and extent of subsurface contamination at the OSCO facility. Contaminant conditions for each of the seven boring locations are evaluated in the following paragraphs based on the results of both the soil chemistry and near-boring (i.e., Phase 1) vapor analyses. Further interpretation of relevant subsurface contaminant transport mechanisms are provided in the remainder of this section.

Boring B-1 -- Boring B-1 was drilled where soil gas survey results indicated the presence of relatively high PCE, TCE, and 1,1,1-TCA contamination. It is adjacent to two distillation units and is central to historical and present facility operations. Although the exact mechanism of contamination in this area is unknown, it can be speculated that it may be due to a spill/release originating from the distillation units or their associated rundown tanks.

Contamination at Boring B-1 can be characterized as consisting of various ketones (i.e., acetone, MEK, and MIBK), the concentrations of which increase with depth. BTXE components (particularly toluene) also are present throughout the soil column, although some attenuation with increasing depth is noted. Additionally, chlorinated hydrocarbons (particularly 1,1,1-TCA) are present within the shallow zones (55 to 77 feet bgs), but soil and soil vapor readings indicate that these contaminants have attenuated to below detection limits at the base of the boring (137 feet bgs). Thus, this boring location cannot be discounted as a potential source of groundwater contamination for ketones and, less probably, BTXE constituents.

Borings B-2 and B-2R -- Borings B-2 and B-2R were drilled through the location of a previously existing sump. Although sampling conducted during closure of the sump in 1986 indicated that subsurface contamination posed no significant risk to groundwater, that sampling program was very limited in scope and does not appear to have targeted most of the contaminants of concern. Because of 1) the operation

of a concrete lined, but unsealed, sump during a period of several years, 2) the location of the sump central to solvent recycling activities, and 3) the proximity of the sump to the shallow soil gas contamination noted near Boring B-1, this location was considered a candidate for investigation and its inclusion in the RFI program was requested by USEPA.

BTXE constituents, except benzene, are measured at relatively high concentrations at Boring B-2 and in the upper zone of Boring B-2R (to a depth of 128 feet bgs), but deeper soil and soil vapor readings (174 feet bgs) indicate that these contaminants have attenuated to below detection limits at depth. Chlorinated solvents are present at relatively lower concentrations to a depth of 99 feet bgs, but also appear to be absent at greater depth. Acetone soil vapor measurements do not correspond to soil chemistry results at this location, and may reflect vapor migration from ketone contamination detected at Boring B-1. In summary, field data indicate that this boring location should not be considered a potential source of groundwater contamination.

Boring B-3 -- Boring B-3 was drilled where contamination had been detected during the 1986 EMCON investigation and subsequent 1988 ENRAC excavation, which was unable to remove all contaminated soil. Contamination at this location also was suspected based on the shallow soil gas measurements obtained for TCE (see Figure 4-3 herein). The lack of opportunity for high volume releases at this location, which presumably would be limited to the contents of 55-gallon waste containers, suggests that extensive contamination at depth should not be encountered.

Organic contaminants were below detection limits in all soil samples taken from throughout the 90-foot depth of this boring. Soil vapor sample results are considered too low to indicate the presence of contamination with certainty. Marginally elevated PCE and 1,1,1-TCA vapor concentrations (40 and 85 ppmv, respectively) may reflect gas phase contaminant migration from upper boring zones (i.e., the residual shallow soil contamination, which contained both of these compounds) or nearby areas. In summary, field data indicate that this boring location should not be considered a potential source of groundwater contamination.

Boring B-4 -- Boring B-4 was located at a site between two product tank farms based on the indication from shallow soil gas survey data that chlorinated solvent contamination may be present. Soil contamination has not been detected in this area of the facility and nearby operations (i.e., contained tank storage) do not indicate a particularly high risk for a large volume spill. However, solvent transfer operations to and from trucks may have resulted in a release outside of secondary containment.

As with Boring B-1, relatively high concentrations of ketones were detected at Boring B-4. Ketone concentrations increased with depth to about 100 feet bgs, after which they tapered off abruptly at 138 feet bgs. Soil vapor data corroborate soil sampling results, which indicate that ketones are not present at depth (184 feet bgs). BTXE constituents also were present in the upper zones of this boring, but both soil and soil vapor analyses indicate that these contaminants attenuate to below detection limits by about 108 feet bgs.

Soil analyses show the presence of chlorinated solvents at depths ranging to 155 feet bgs, after which point no further evidence of contamination is noted. However, soil vapor concentrations from the deep probe in Boring B-4 indicate that these contaminants (particularly PCE at a maximum concentration of 220 ppmv) may be present at depth (184 feet bgs). An alternative explanation is that the chlorinated organic vapors have been drawn down from the upper zones of contamination, either via an ineffective probe seal or during completion of the boring. At this time, it is not possible to discount this boring location as a potential source of groundwater contamination.

Boring B-5 -- Boring B-5 was drilled within the drum storage pad at an area of suspected PCE/TCE contamination, based on results from the shallow soil gas survey. As with Boring B-3, large volume releases would not be expected in this area of the facility and extensive contamination at depth was not anticipated. However, this location represents a low point in the drum storage pad, and precipitation has collected in this area at various times since secondary containment was installed in 1980.

BTXE constituents (except benzene) and PCE were detected in soil samples taken at the 90- to 103-foot bgs interval from this boring. Otherwise, both the soil and soil vapor analyses indicate that contamination is unlikely to be present at depth. Consequently, this boring location should not be considered a potential source of groundwater contamination.

Boring B-6 -- Boring B-6 was drilled at an RFI Phase IIa shallow soil sampling area (TP-8) where PCE contamination (830 ug/kg) was detected at a depth of 5 feet bgs. It is near the rail transfer station and a product tank farm, where high volume material transfers frequently occur between trucks, tanks, and railcars. Occurrence of a significant release at this location is possible and, in fact, a 9,600-gallon spill occurred nearby in 1989 (see Section 4.2 herein).

Only one contaminant, PCE, was detected in soil samples taken from Boring B-6. Although detected at relatively low concentrations (6 to 24 ug/kg), PCE was detected throughout the entire 191-foot boring column. Soil vapor analysis suggested the presence of PCE in the upper and lower zones and indicated that 1,1,1-TCA and TCE contamination may be present at depth as well. Neither the soil nor soil vapor concentrations exhibited signs of attenuation at depth. Therefore, this boring location cannot be discounted as a potential source of groundwater contamination.

Borings B-8 and B-8R -- Borings B-8 and B-8R were drilled at TP-4, where BTXE constituents and PCE were detected during the RFI Phase IIa shallow soil investigation. This location is between product and waste tank farms where high volume transfers to and from tanks occur/have occurred.

Soil sampling results for these two borings did not indicate the presence of any BTXE constituents, but did show chlorinated organic contamination (primarily PCE) to a depth of 102 feet bgs at Boring B-8R. Soil vapor data corroborated the lack of BTXE contamination, and indicated that PCE contamination may be present at depth (122 feet bgs). Alternatively, soil vapor concentrations detected in the deep probe may be measuring gas phase migration of PCE soil contamination from the upper zone of the boring. As measured by both soil and soil vapor analyses, PCE concentrations were highest around 75 feet bgs and appeared to be attenuating with depth. At this time, it is not possible to discount this boring location as a potential source of groundwater contamination.

In summary, Boring B-1 is a potential source of ketone and possibly BTXE groundwater contamination. Given the available data, it is possible that chlorinated organic contamination detected in Borings B-4, B-6, and/or B-8/B-8R may extend to groundwater. However, groundwater contamination from these sources is considered less likely than from Boring B-1, due to the relative contaminant concentrations (both soil and soil vapor) observed at depth in each of the borings. In any case, projection of contamination to groundwater is purely speculative at this time and only can be resolved by the acquisition of additional data. Data from the groundwater monitoring program, and possibly from future, additional vadose zone investigation at the OSCO facility, should be evaluated in the context of these potential contaminant types and sources.

7.3 GEOLOGIC INFLUENCES ON CONTAMINANT MIGRATION

The OSCO facility is underlain by very coarse sediments deposited as part of a large coalescing alluvial fan environment. The sedimentary structures found in a given subsurface environment affect both the vertical and horizontal movement of gases and fluids. The types of sedimentary structures found in an alluvial fan are dependent on the area of the fan in which they are located. In the case of the OSCO facility, the underlying sediments appear to have been deposited in the mid-fan region. Sediments in a mid-fan portion typically are deposited as braided channels radiating outward and downward from the larger inner fan valley (Nilsen, 1982). These channels are filled with coarser sediments (e.g., gravels) than the surrounding overbank deposits, which consist of finer grained sediments such as sands, silts, and clays. No silt or clay layers have been identified beneath the OSCO facility, thus the overbank deposits in this area appear to consist of fine- to coarse-grained sands.

As a consequence of this depositional environment, north-south to northwest-southeast trending, coarse-grained, lenticular channels occur beneath the OSCO facility. The channels do not appear to be laterally continuous over significant distances, as evidenced by the poor geologic correlation among the Phase IIb boring logs. Neither do they attain extensive thicknesses; discernable lithologic units generally are reported to be less than a few feet thick and typically are comprised of multiple, interbedded sequences. Under certain conditions, the higher permeability channels may provide preferential pathways for fluid and vapor movement in the vadose zone and could facilitate horizontal transport within the aligned channel direction. However, these geologic features are much less significant for controlling fluid transport through the vadose zone than they are for influencing vapor phase migration (see Section 7.4 herein).

The interbedding of the finer and coarser sediments affects the "shape" of the vertical fluid migration pathway through the vadose zone. Although the sediments at the OSCO facility generally are coarse, migrating fluids would not flow entirely in a straight-walled, column-like manner without some degree of horizontal motion. Lateral dispersion of fluids in sands has been documented by numerous researchers (e.g., Villaume, 1985; Schwille, 1988; and Hunt et al., 1988). Upon reaching a relatively finer grained, moister unit, a downward migrating front will tend to spread horizontally, until sufficient fluid accumulates to overcome interstitial pressures of the resident pore water. This particular effect is more pronounced for immiscible fluids (e.g., halogenated solvents) than for aqueous fronts, due primarily to their lower viscosities, which induce a mechanical disadvantage for displacing the more "sticky" pore water molecules. In addition, the higher capillarity (soil suction) of finer grained materials resulting from smaller effective pore spaces -- to the extent that they are not already occupied by water -- will enhance lateral contaminant spreading.

Thus, a vadose zone section comprised of alternating layers with even subtle grain size, pore size, and moisture contrasts will result in more lateral spreading than that which would occur in entirely homogenous, coarse, dry sediments. In this regard, halogenated solvents (as contrasted with ketones and aromatic compounds) will tend to migrate somewhat more rapidly through the coarse, dry gravels beneath the OSCO facility than would predominantly aqueous plumes due to their comparatively higher densities, lower viscosities, and higher hydrophobicities.

Although capillary action will spread a contaminant front horizontally, the overall coarseness of the vadose zone sediments beneath the OSCO facility points to the likelihood that the magnitude of the horizontal component will be modest. It is crucial to note that the so-called "tortuous flow path" that has been described for some lithologically heterogeneous regimes does not exist beneath the OSCO facility. Laterally discontinuous, impermeable confining layers (i.e., silts and clays) are absent and, hence,

"stairstepping" contaminant movement is not a factor in the lateral migration component discussed herein. In summary, the sediments that are most likely to laterally spread (albeit, to a limited extent) or trap downward migrating contaminants are the finer grained, moister sands.

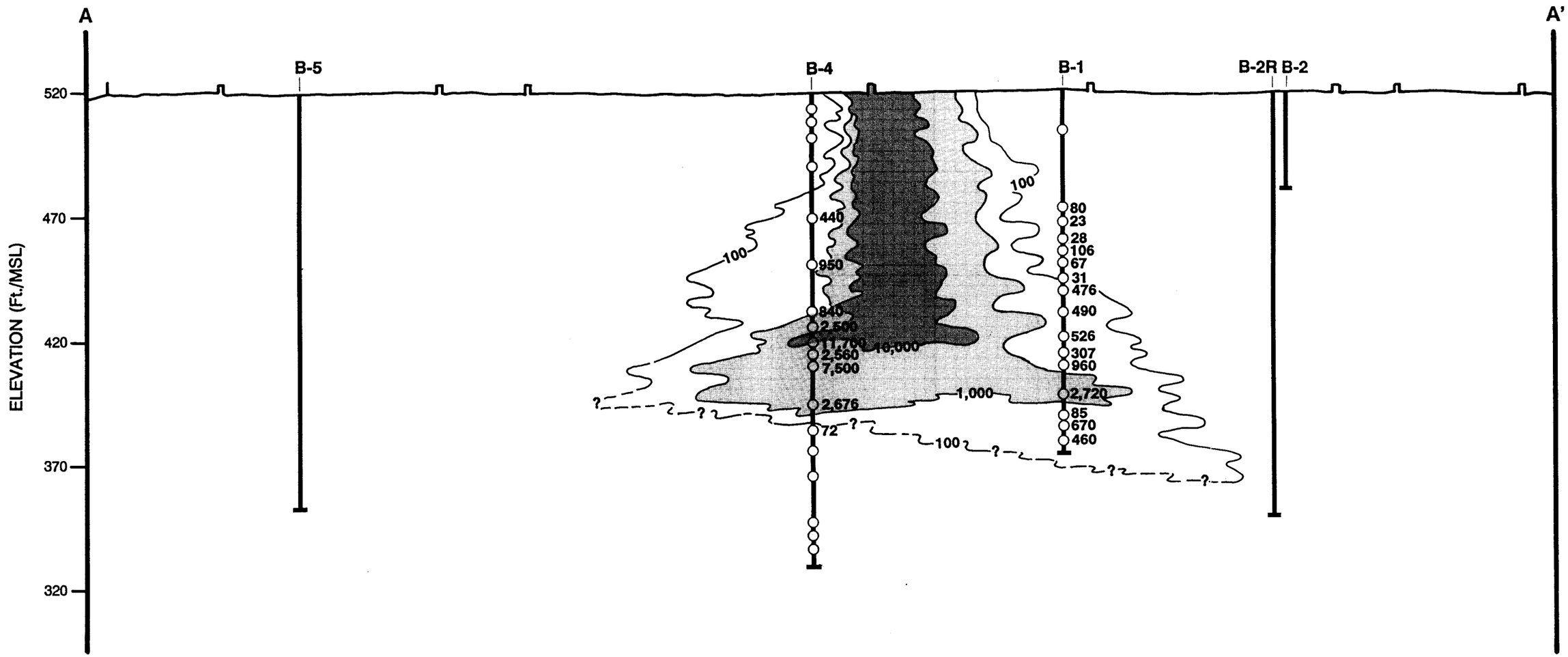
By applying the principles that control fluid and vapor migration in the vadose zone to the OSCO facility, it is possible to predict the fate and transport of contaminant releases at the site. Geologic field observations indicate that sufficient numbers of finer grained and moister sand units exist at the OSCO facility to cause some horizontal spreading of contaminant plumes with depth. Although this spreading would not be as pronounced as would occur in geologic environments comprised of finer-grained units, it is sufficient to allow the detection of suspected contaminant plumes at the site, given the relative proximities of the Phase IIb borings to the sources of contamination and their depths. It also is worth noting that, with the exception of the sump location (Borings B-2/B-2R), most contaminant sources are likely to be areal spills rather than pinpoint releases. A larger source "footprint" will result in a more laterally extensive plume, which further will ensure the likelihood of contaminant detection.

The 50- to 80-foot depth interval at the OSCO facility comprises a zone of relatively moister and sandier materials. As discussed previously, it would be expected that the downward migration of contaminants would be impeded to a greater degree by these sediments (relative to the coarser grained, drier materials) and greater horizontal spreading would occur at this depth. Further, some amount of VOCs will be retained as solubilized constituents of the aqueous phase (in relatively more abundant interstitial pore water) and, as a result, will be more resistant to volatilization during drilling and sampling. Thus, one would expect this vadose zone interval to yield the most soil samples with detectable VOCs in proportion to their respective tendencies to partition to the mineral and aqueous phases. This phenomenon indeed was observed during the deep soil boring program.

In general, it is believed that each boring at the OSCO facility has intercepted contaminant concentrations (at depth) from a single source. However, because of 1) the relative proximity of Borings B-1, B-4, and B-8R to each other and to facility operational areas, 2) the presence or likely presence of contamination at depth at these locations, and 3) the probability that the contamination originated from areal rather than point sources, these borings may be monitoring common contaminant plumes. For example, it is possible that the ketones detected in Borings B-1 and B-4 may have originated from a single source, as hypothetically represented in Figure 7-1 herein.

The high formation permeabilities undoubtedly facilitate the dispersion of VOC contamination in the soil vapor phase and, as discussed in Section 7.4 herein, soil vapor contamination appears to be present throughout the study area. The previous geologic discussion suggests that contamination in the gas phase would tend to move (or spread) in a north-south to northwest-southeast direction, in accordance with the orientation of subsurface alluvial channels of higher permeability. In fact, this phenomenon appears to be occurring at the site, as evidenced by the contaminant isoconcentration contours developed for the shallow probe Phase 1 vapor sampling results (see Figures 7-2 through 7-5 herein). These drawings also mimic the contours developed for the shallow soil gas survey and reflect the presence of soil contamination at a depth of 50 to 80 feet bgs at boring locations B-1 and B-4.

As a final note, it should be explained that geologic cross sections were not developed for the site during this phase of the investigation because of the lack of well defined stratigraphic units that could be correlated among borings. Even with the assistance of geophysical logging techniques, the supervising geologist did not believe that meaningful lithologic correlations could be discerned. The subtle variations in soil types and apparent lenticular nature of the stratigraphy (which is comprised of units that "pinch



○ Drilling Program Soil Chemistry Results for Total Ketones (Acetone, MEK, and MIBK)

100 Isoconcentration Contour

MEREDITH/BOLI & ASSOCIATES, INC.

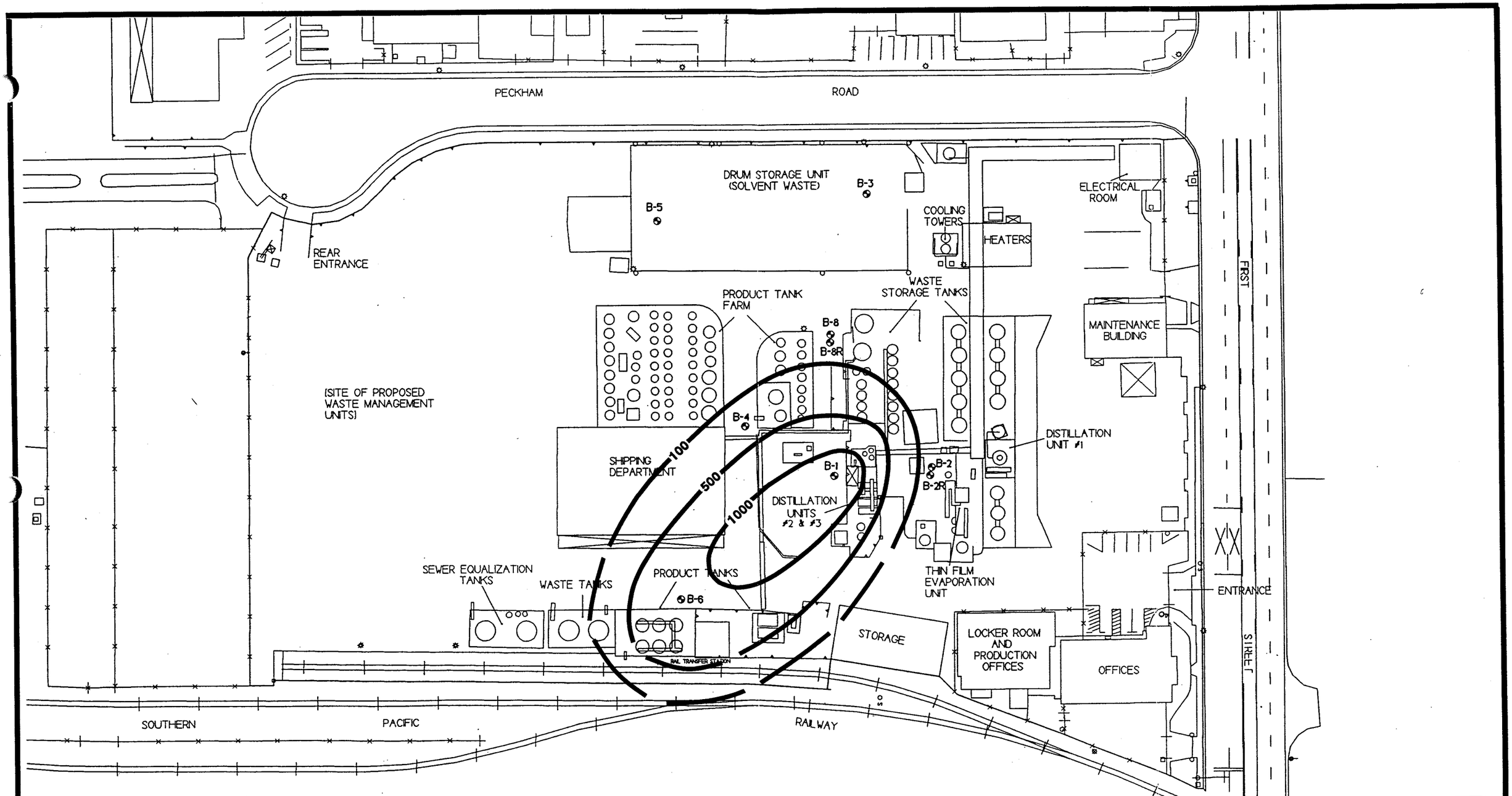
OIL & SOLVENT PROCESS COMPANY

HYPOTHETICAL CONTAMINANT PLUME CONFIGURATION BASED ON OBSERVED KETONE CONCENTRATIONS

FIGURE 7-1

1990-211

11/15/91



MEREDITH/BOLI & ASSOCIATES, INC.

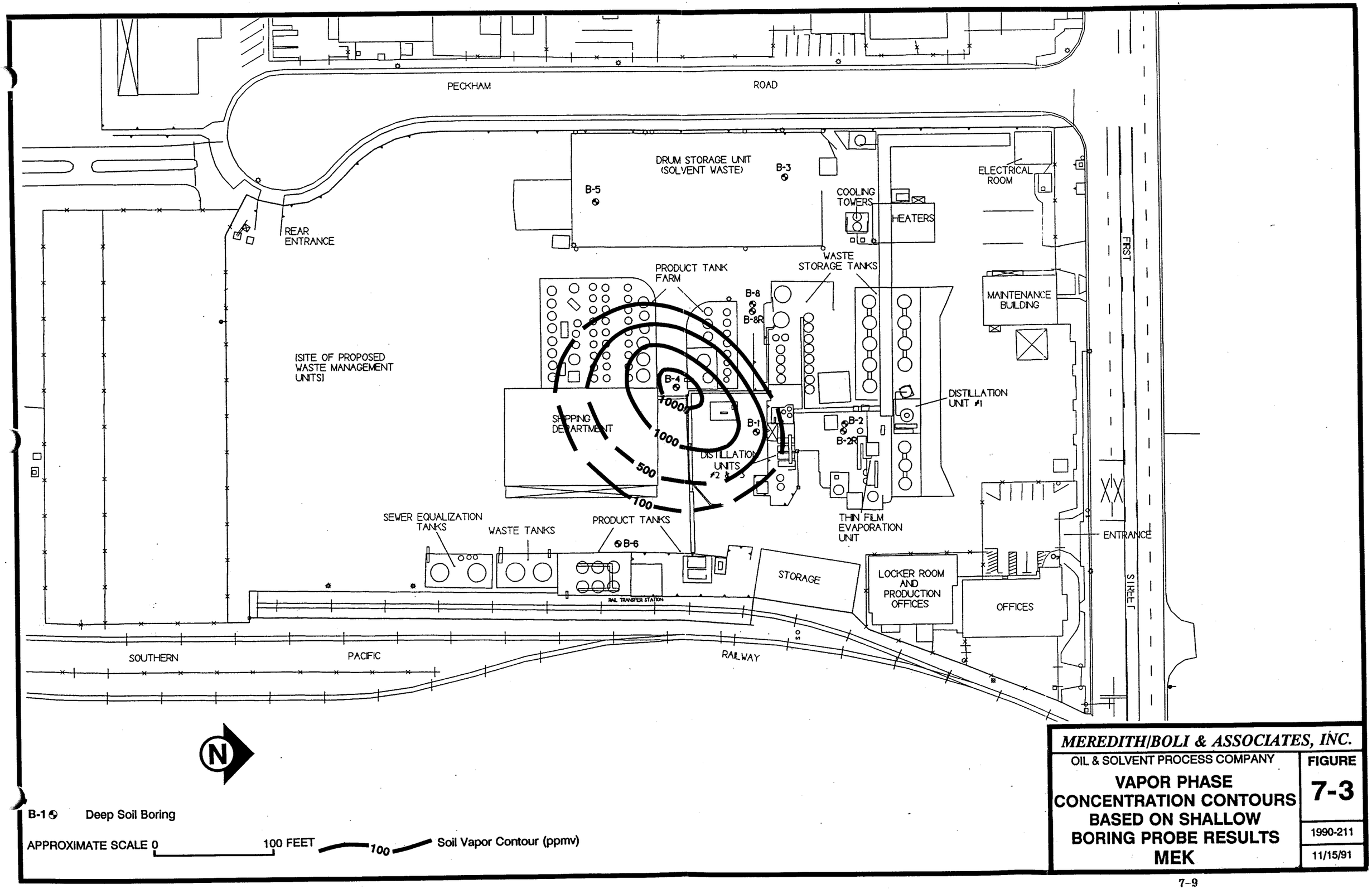
OIL & SOLVENT PROCESS COMPANY

VAPOR PHASE CONCENTRATION CONTOURS BASED ON SHALLOW BORING PROBE RESULTS 1,1,1-TCA

FIGURE 7-2

1990-211

11/15/91



MEREDITH/BOLI & ASSOCIATES, INC.

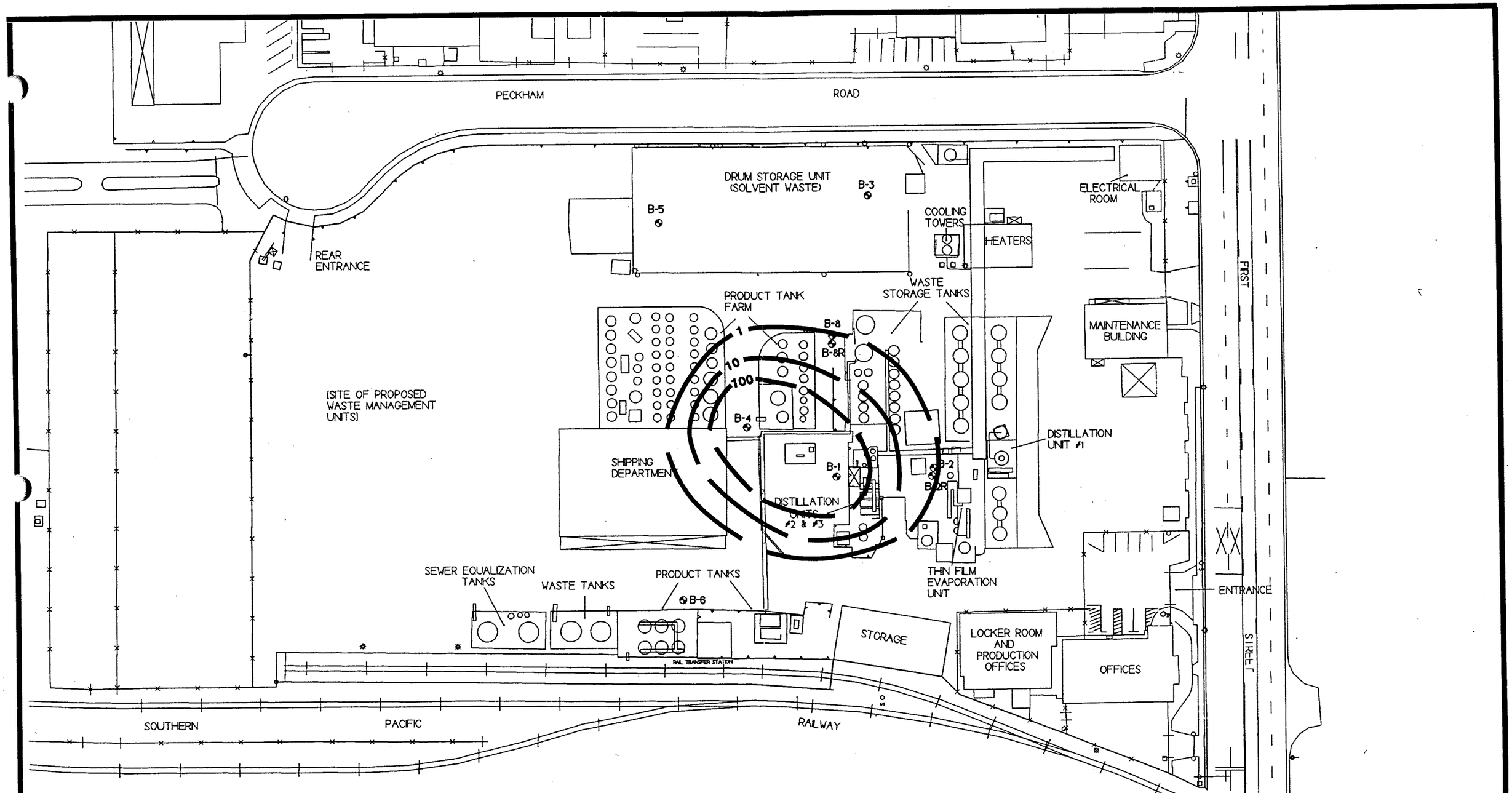
OIL & SOLVENT PROCESS COMPANY

VAPOR PHASE CONCENTRATION CONTOURS BASED ON SHALLOW BORING PROBE RESULTS MEK

FIGURE 7-3

1990-211

11/15/91



B-1 Deep Soil Boring

APPROXIMATE SCALE 0 100 FEET

100 Soil Vapor Contour (ppmv)

MEREDITH/BOLI & ASSOCIATES, INC.

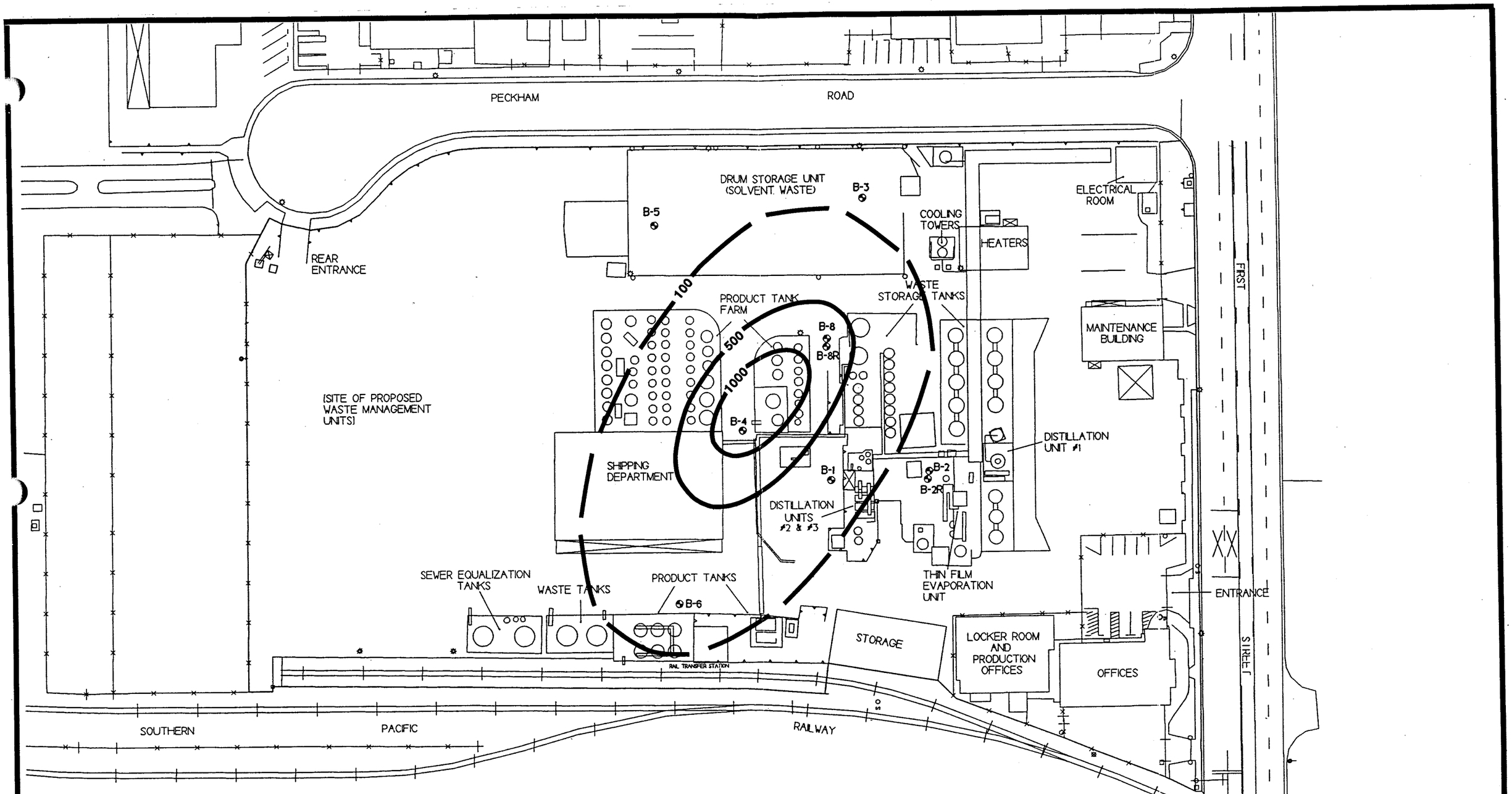
OIL & SOLVENT PROCESS COMPANY

VAPOR PHASE CONCENTRATION CONTOURS BASED ON SHALLOW BORING PROBE RESULTS TOLUENE

FIGURE 7-4

1990-211

11/15/91



B-1 Deep Soil Boring

APPROXIMATE SCALE 0 100 FEET

100 Soil Vapor Contour (ppmv)

MEREDITH/BOLI & ASSOCIATES, INC.

OIL & SOLVENT PROCESS COMPANY

VAPOR PHASE CONCENTRATION CONTOURS BASED ON SHALLOW BORING PROBE RESULTS PCE

FIGURE 7-5

1990-211

11/15/91

out" over relatively short distances) are factors that contribute to the inability to develop conventional geologic maps and cross sections.

7.4 INTERPRETATION OF SOIL VAPOR STUDY RESULTS

The results of the two-phased soil vapor study performed by InterPhase are summarized in Section 6.3 herein and are included in their entirety in Appendix G hereto. The most important study objective was to generate data regarding the presence and location of subsurface contamination, and to compare this information with the results of the deep soil sampling program. In general, the soil vapor results indicate that subsurface contamination is present at the locations identified during the boring program, although at concentrations that may be significantly higher than values measured in the soil samples. Additionally, soil vapor analyses suggest the possible presence of contamination at two locations that were considered uncontaminated based on soil analysis results (i.e., at the lower probes of Borings B-4 and B-8R; see Section 7.2 herein). The significance of these and other findings are discussed below.

During Phase 1 of the soil vapor study, soil gases were drawn from the area immediately surrounding the vapor probe, estimated by InterPhase to be about 1 meter (3.25 feet). VOC concentrations in the extracted vapor increased markedly before stabilizing after about 15 minutes, which probably corresponded to the removal of atmospheric air from the system and withdrawal of gas from the native soil. Concurrent measurements from probes within the same boring during vapor extraction did not reveal a discernable vacuum increase. This suggests that the boring does not provide a vertical connection among horizontal strata (i.e., VOCs from upper or deeper zones are not transported preferentially through the annular space of the well). However, such a transport pathway cannot be ruled out based on the limited flow conditions of the Phase 1 test.

The Phase 1 soil vapor data are reported by InterPhase to represent conditions in the adjacent annular space and soil. Phase 2 chemical results also are believed to represent near-boring contaminant conditions, with the "capture zone" associated with the highest vacuum pressure applied having an estimated capture radius of 5.8 meters (18.85 feet). Relatively higher VOC concentrations in vapor extracted during Phase 2 tests (compared to Phase 1 tests) can be attributed to the relatively higher proportion of vapor being drawn from native soil relative to vapor extracted from the annular space. Although contributions from nearby sources of higher VOC concentration cannot be discounted, InterPhase concluded that it is unlikely that "VOC slugs" from distant sources (i.e., other boring locations) were being measured in the Phase 2 vapor samples.

If one assumes that soil vapor analytical results are representative of near-boring conditions, it becomes possible to use the vapor data as a surrogate for the soil data collected during the drilling program. Interpretation of soil vapor data relies as much on distinguishing relative VOC concentration profiles as it does on evaluating absolute concentrations. VOC levels in soil vapor, by themselves, do not indicate whether or not VOCs are present in the soil at the sampled location, or whether they have migrated from a distant source in the gas phase. As distance from a source increases, soil vapor VOC concentrations will tend to decrease. Thus, relatively higher VOC concentrations are more likely to represent vapor from adjacent, contaminated soils, while samples with lower concentrations probably are measuring VOCs dispersed in the gas phase from more distant contaminant sources.

By applying this principle to the OSCO facility data, the significance of the soil vapor results can be evaluated. It is reasonable to assume that the relatively higher VOC concentrations reported by InterPhase reflect vapor that is being drawn from immediately adjacent contaminated soils, whereas the lower vapor concentrations are measuring VOCs in the gas phase from more distant sources. Qualitative

evaluation of the soil vapor data indicates that this distinction occurs at a concentration of about 100 ppmv. VOC concentrations in soil vapor at levels exceeding 100 ppmv normally are observed near structures (e.g., sumps, tanks, clarifiers, etc) or adjacent to contaminated soil or groundwater, where diffusion has resulted in a minimal attenuation of the equilibrium vapor concentration established at the source.

The high air permeabilities of the soils underlying the OSCO facility (44 to 47 darcys) facilitate the dispersion of VOCs in the gas phase, as evidenced by the shallow and deep soil vapor investigation results. Migration of VOCs via soil vapor occurs by either diffusion or advection. InterPhase concluded that the large differences in VOC concentrations over relatively short vertical and horizontal distances observed at the OSCO facility are more indicative of migration by localized diffusion (due to steep concentration gradients) than by regional, pressure-driven advective processes in the vadose zone.

It appears that chlorinated organic compounds are present in soil vapor throughout the RFI Phase IIb study area, while ketone and aromatic VOCs are more localized. This corresponds with the more frequent detection of the chlorinated solvents in soil samples and their greater distribution among and within the deep soil borings. It also may be due partially to the fact that ketones are more retarded (relative to chlorinated and aromatic solvents) during vapor phase transport because of their higher affinity for the aqueous and mineral fractions of the soil. The relative concentrations of VOCs in the soil and soil vapor indicate that ketones are present in the soil column at much higher concentrations than are the chlorinated and aromatic solvents.

InterPhase performed a soil/vapor partitioning modeling analysis that attempted to estimate soil concentrations that would be expected based on observed soil vapor measurements. This was intended to estimate the VOC loss that may have occurred from soil samples during the drilling process as the result of pressurized air- and heat-induced volatilization. The analysis is based on the principle that, under equilibrium conditions, a given VOC will partition fairly predictably into mineral, organic, aqueous, and vapor phases in a manner that is controlled by the physical characteristics of the soil (e.g., grain size distribution, moisture content, organic carbon content, etc.). Based on its analysis, InterPhase concluded that the reported VOC concentrations in deep boring soil samples probably underestimate actual levels, possibly by as much as two to five orders of magnitude. Although some loss in VOC concentrations must be assumed because of the conditions under which the soil samples were obtained, attempts to quantify this loss must be interpreted with caution. In particular, the InterPhase partitioning model necessarily relied heavily on generic assumptions of soil properties rather than actual field measurements. Minor changes to these assumptions could affect the modeled results significantly.

7.5 CONCLUSIONS

Based on the foregoing, the following conclusions can be drawn regarding subsurface contamination at the OSCO facility:

- It is highly likely that all major sources of contamination at the OSCO facility have been identified and investigated during this latest phase of the RFI program

- Fluids from spills or releases (either area or point sources) will tend to spread horizontally with depth in response to physical processes related to capillary tension, pore pressure, and moisture content. Although this spreading will not be as pronounced as it would be in finer-grained geologic environments, lateral dispersion is sufficiently extensive to allow the detection of contaminant sources at depth, if not at the surface or near surface

- Certain borings (i.e., Borings B-1, B-4, and B-8R) may be detecting contamination from a common plume, but most borings are believed to be measuring contamination from a single source

- Soil vapor analyses can be used to predict the possible presence and to estimate concentrations of VOCs in near-boring soils. The soil vapor study performed for this phase of the investigation suggests that contamination may be vertically more extensive and present at higher concentrations than would be indicated by the soil chemistry results alone

- Based on the data accumulated to date, it is not possible to determine whether or not the OSCO facility has contributed to groundwater contamination. Three of the seven sampling locations of the deep soil boring program are considered to be free from contamination at depth, while soil and/or soil vapor contamination is evident at the bases of the four remaining borings. The deepest that contamination has been detected (191 feet bgs at Boring B-6) is approximately 110 feet above groundwater.

8.0 RECOMMENDATIONS

The RFI program has been designed to gather environmental data at the OSCO facility in a phased, logical approach that ultimately will yield a comprehensive understanding of site conditions. The implementation of a groundwater monitoring program, which will occur in the near future, represents the last planned major investigation phase. At this time, it is worthwhile to reassess RFI needs and goals and to adjust the program based on the information obtained to date. Accordingly, the following recommendations are provided for CWM's/USEPA's/Cal EPA's consideration:

- The groundwater monitoring program should be implemented in accordance with the proposed Groundwater Monitoring Plan (RFI Phase III; M/B&A, 1991). Groundwater wells should be installed both upgradient and downgradient from the facility to measure water quality changes as groundwater passes beneath the site. This next phase is an essential step in the scientific process to evaluate the potential contribution of groundwater contamination from the OSCO facility. The numbers and locations of wells should be sufficient to enable site-specific groundwater flow conditions (i.e., direction and velocity) to be established over time, and to ensure that representative upgradient and downgradient locations are being monitored. If necessary, additional wells can be added to the monitoring system after the initial groundwater data have been evaluated.

- Given the absence of physical, chemical, and geologic data from the lowermost 100 feet of the vadose zone, soil and/or soil vapor sampling in this subsurface interval during groundwater well installation, if feasible and practical, should be considered. Additionally, the retrieval of samples from the lowermost section of the vadose zone should be considered if a soil vapor extraction (SVE) system is installed and if such sampling is consistent with the design and installation of the SVE system.

- A previous study (EMCON, 1987) reported the absence of underground tanks and pipelines for a defined facility investigation area. Underground pipelines (that no longer are active) reportedly may be present near or beneath Distillation Unit Nos. 2 and 3 (Oney, 1991). This area should be screened by geophysical means to ascertain if any pipelines exist.

- Site-specific precipitation recharge characteristics should be evaluated at the site to determine surface water penetration rates relative to rainfall amounts. This can be accomplished by field measurements (using lysimeters) or by theoretical calculations using hydrologic models for specific storm events. Information obtained would aid in understanding the ability of precipitation (historically and currently) to mobilize contamination in the vadose zone.

9.0 REFERENCES

California Department of Water Resources (DWR). 1966. Planned Utilization of Groundwater Basins, San Gabriel Valley, Bulletin 104-2 Appendix A: Geohydrology.

California Environmental Protection Agency (Cal EPA). 1986. Inspection Records on File for the OSCO Facility, 28 September 1981 to 21 January 1986.

Cavagrotti, Ronald R. 1991. Letter from Ronald R. Cavagrotti, Meredith/Boli & Associates, Inc. to Tom Kelly, USEPA, dated 8 January 1991.

Chambers Group, Inc. 1990. Final Environmental Impact Report: OSCO Proposed Phase 2 of the Master Plan for Upgrading and Expansion of Solvent Recycling Facility in the City of Azusa, California, SCH No. 89051709, July 1990.

CH2M Hill. 1988. Draft San Gabriel Supplemental Sampling Program Report, San Gabriel Basin, Los Angeles, California, Project WA 105.9L27.1, 19 May 1986 (revised May 1988).

CH2M Hill. 1990. Basinwide Technical Plan Report, San Gabriel Basin, Los Angeles, California (Public Review Draft), Project No. LAO62440.TP, 17 April 1990.

Ecology and Environment, Inc. 1984. Site Inspection: Oil and Solvent Process Company, Azusa, California, Report No. C (84) C337, July 1984.

EMCON Associates (EMCON). 1987. Site Assessment Report, Oil and Solvent Process Company, 1704 West First Street, Azusa, California, Project 243-01.01, May 1987.

England, Shahin & Associates. 1991. Phase II Subsurface Investigation and Phase III Workplan, The Norac Company, Inc., Azusa, California, Project No. 151-9004, May 1991.

Environmental Solutions. 1989. Draft Site Investigation Workplan for OSCO Spill Remediation Activities, May 1989.

Hatel, R. M. Undated. Handwritten Internal Letter Regarding TCE Recycling at the OSCO Facility Prior to 1966, RWQCB Files.

Hatel, R. M. 1980. Handwritten Internal Letter Summarizing Los Angeles County Engineers Files on the OSCO Facility (1953-1959), RWQCB Files, 26 January 1980.

Hunt, James R., Sitar, Nicholas, and Udell, Kent S. 1988. "Nonaqueous Phase Liquid Transport and Cleanup, 1. Analysis of Mechanisms" in Water Resources Research, Vol. 24, No. 8, pp. 1247-1258, August 1988.

InterPhase. 1991a. Workplan for Soil Vapor Study, Chemical Waste Management, Inc. OSCO Facility, Azusa, California, 9 August 1991 (draft).

InterPhase. 1991b. Soil Vapor Research Study, Chemical Waste Management, Inc. (OSCO Facility), Azusa, California, Project #9122, 14 November 1991.

Jenkins, O. P. (ed.). 1967. Geologic Map of California, Los Angeles and San Bernardino Sheets, compiled by T.H. Rogers.

Koutsky, Joseph. 1986. Letter from Environmental Protection Group, Brea, California to Richard Walls, Los Angeles County Engineers, regarding Closure of Underground Tanks/Sumps at the OSCO site, 15 May 1986.

Law Environmental. 1990. Ground Water Monitoring: 1989 Annual Report, Azusa Land Reclamation Landfill, Azusa, California, Project No. 58-9667, 18 April 1990.

Law Environmental. 1991a. 1990 Annual Report Waste Disposal and Groundwater Water Monitoring: Azusa Land Reclamation Landfill, Azusa, California, Project No. 58-9667, 28 January 1991.

Law Environmental. 1991b. Ground Water Monitoring and Waste Disposal Report, First Quarter: Azusa Land Reclamation Landfill, Azusa, California, Project No. 58-9667, 29 April 1991.

Law Environmental. 1991c. Ground Water Monitoring and Waste Disposal Report, Second Quarter 1991: Azusa Land Reclamation Landfill, Azusa, California, Project No. 58-9667, 11 July 1991.

LeRoy Crandall and Associates. 1987. Water SWAT Report for the Azusa Land Reclamation Landfill, 30 June 1987.

Meredith/Boli & Associates, Inc. (M/B&A). 1988. Soil Excavation and Sampling Program, Oil & Solvent Process Company, Azusa, California, Project No. MB-1982-2(115), 29 September 1988.

M/B&A. 1991. Groundwater Monitoring Plan, OSCO Phase III RCRA Facility Investigation, Project No. MB-1990-211, 15 October 1991.

National Oceanic and Atmospheric Administration (NOAA). 1982. Monthly Normals of Temperature, Precipitation, and Heating and Cooling Days 1951-80, California, September 1982.

Nilsen, T. H. 1982. "Alluvial Fan Deposits," in P.A. Scholle and D. Spearing: Sandstone Depositional Environments, AAPG Memoir 31. pp. 49-86.

Oakeshott, G.B. (ed.). 1975. San Fernando, California Earthquake of 9 February 1971, California Division of Mines and Geology Bulletin 196. 463 pp. with 5 plates.

Oil & Solvent Process Company (OSCO). 1991. Operation Plan/Part B Permit Application (2 Volumes), 19 February 1988 (last revised 1 August 1991).

O'Morrow, Ken. 1991. Personal communication between Sunita Sharma, OSCO and Ken O'Morrow (former facility employee), 6 November 1991.

Oney, George. 1991. Personal communication between Michael Cloud, M/B&A and George Oney (current facility employee), May 1991.

Peckham, Raymond. 1980a. Letter to Joshua Workman, RWQCB Regarding OSCO Solvent Volumes, RWQCB Files, 30 January 1980.

Peckham, Raymond. 1980b. Letter to TCE Customers Notifying them of Discontinued Recycling Services, RWQCB Files, 31 January 1980.

San Gabriel Valley Daily Tribune. 1990. "Azusa Firms Linked to Pollution," p. A-1, 1 May 1990.

Schwille, Friedrich. 1988. Dense Chlorinated Solvents in Porous and Fractured Media, Model Experiments, translated by James F. Pankow.

Slatten, Mark H. 1989. Internal Brown and Caldwell Consulting Engineers (Pasadena, California) Letter Report Addressed to Hal Cochran, 20 September 1989.

Stahlecker, Leo. 1988. CERCLA Response Letter to Heather Stone, USEPA, 20 May 1988.

Tidemanson, T. A. 1986. Letter from Los Angeles County Department of Public Works to K. O'Morrow, OSCO, 9 June 1986.

US Environmental Protection Agency (USEPA). 1986. San Gabriel Basin Sites: EPA Investigates Groundwater Contamination; Releases Supplemental Sampling Program Report (Fact Sheet), June 1986.

USEPA. 1988. Aerial Photographic Analysis of the OSCO Site, Azusa, California, Environmental Monitoring Systems Laboratory, TS-PIC-SM927, June 1988.

USEPA. 1989. San Gabriel Valley Superfund Sites: EPA to Propose Basinwide Technical Plan (Fact Sheet 7), August 1989.

Villaume, James F. 1985. "Investigations at Sites Contaminated with Dense, Non-Aqueous Phase Liquids (NAPL's)," in Ground Water Monitoring Review, Spring 1985.

Western Technologies, Inc. (WTI). 1989. Phase I Work Plan for the OSCO Facility, Azusa, California, Project No. 219-9J-005, 2 March 1989.

WTI. 1990a. Phase I-1A Soil Gas Investigation, OSCO Facility, Azusa, California, Job No. 219-9J-005, 19 January 1990.

WTI. 1990b. Phase II Work Plan for the OSCO Facility, Azusa, California, Job No. 219-9J-005, 2 March 1990 (revised 3 April 1990).

WTI. 1990c. Shallow Soil Sampling Report, OSCO Facility, Azusa, California, Project No. 751-OK-714, 5 October 1990.

WTI. 1990d. Chemical Waste Management, OSCO Unit 1 Partial Closure, 8 November 1990.

Yerkes, R.F., T.H. McCulloh, J.E. Schoellhamer, and J.G. Vedder. 1965. Geology of the Los Angeles Basin California - an Introduction, U.S. Geological Survey Professional Paper 420-A.

APPENDIX A

LABORATORY REPORTS FOR PREVIOUS FIELD INVESTIGATIONS

Appendix A.1 -- Laboratory Reports for the 1989 Underground Sump No. 2 Sampling

Appendix A.2 -- Laboratory Reports for the 1986 EMCON Site Assessment

Appendix A.3 -- Laboratory Reports for the 1988 ENRAC Excavation and Sampling

Appendix A.4 -- Laboratory Reports for the RFI Shallow Soil Sampling Program (Phase IIa)

APPENDIX A.1

LABORATORY REPORTS FOR THE 1989 UNDERGROUND SUMP NO. 2 SAMPLING

BROWN AND CALDWELL LABORATORIES
801 WESTERN AVENUE, GLENDALE, CA 91201
(818) 247-5737
FAX: (818) 247-9797

ANALYTICAL REPORT

LOG NO: G89-09-261

Received: 18 SEP 89
Reported: 03 OCT 89

Mr. Bob Cathel
Oil & Solvent Process Company
1704 West First Street
Azusa, CA 91702

CC: Mr. Mark Slatten

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
09-261-1	Soil	18 SEP 89

PARAMETER	09-261-1
Total Organic Carbon, mg/kg	3300
pH, Units	10.0
Moisture, Percent	12
Aluminum, mg/kg	10000
Arsenic, mg/kg	4.3
Barium, mg/kg	99
Cadmium, mg/kg	<0.4
Chromium, mg/kg	18
Copper, mg/kg	30
Lead, mg/kg	<4
Manganese, mg/kg	290
Mercury, mg/kg	<0.2
Nickel, mg/kg	7.9
Zinc, mg/kg	54
Nitric Acid Digestion, Date	09/20/89

BROWN AND CALDWELL LABORATORIES
801 WESTERN AVENUE, GLENDALE, CA 91201
(818) 247-5737
FAX: (818) 247-9797

ANALYTICAL REPORT

LOG NO: G89-09-261

Received: 18 SEP 89
Reported: 03 OCT 89

Mr. Bob Cathel
Oil & Solvent Process Company
1704 West First Street
Azusa, CA 91702

CC: Mr. Mark Slatten

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
09-261-1	Soil	18 SEP 89

PARAMETER	09-261-1
Pesticides/PCBs (EPA 8080)	
Date Analyzed	09/26/89
Date Extracted	09/19/89
Dilution Factor, Times 1	2
p,p'-DDD, mg/kg	<0.005
p,p'-DDE, mg/kg	<0.005
p,p'-DDT, mg/kg	<0.005
Aldrin, mg/kg	<0.005
Chlordane, mg/kg	<0.5
Dieldrin, mg/kg	<0.005
Endosulfan I, mg/kg	<0.005
Endosulfan II, mg/kg	<0.005
Endosulfan Sulfate, mg/kg	<0.02
Endrin, mg/kg	<0.01
Endrin Aldehyde, mg/kg	<0.01
Heptachlor Epoxide, mg/kg	<0.005
Heptachlor, mg/kg	<0.005
Methoxychlor, mg/kg	<0.02
Aroclor 1016, mg/kg	<0.03
Aroclor 1221, mg/kg	<0.03
Aroclor 1232, mg/kg	<0.03
Aroclor 1242, mg/kg	<0.03
Aroclor 1248, mg/kg	<0.03
Aroclor 1254, mg/kg	<0.03
Aroclor 1260, mg/kg	<0.03
Aroclor 1262, mg/kg	<0.03
Toxaphene, mg/kg	<0.05

BROWN AND CALDWELL LABORATORIES

801 WESTERN AVENUE, GLENDALE, CA 91201
(818) 247-5737

FAX: (818) 247-9797

ANALYTICAL REPORT

LOG NO: G89-09-261

Received: 18 SEP 89
Reported: 03 OCT 89

Mr. Bob Cathal
Oil & Solvent Process Company
1704 West First Street
Azusa, CA 91702

CC: Mr. Mark Slatten

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
09-261-1	Soil	18 SEP 89

PARAMETER	09-261-1
BHC, alpha isomer, mg/kg	<0.005
BHC, beta isomer, mg/kg	<0.005
BHC, delta isomer, mg/kg	<0.005
BHC, gamma isomer (Lindane), mg/kg	<0.005

BROWN AND CALDWELL LABORATORIES

801 WESTERN AVENUE, GLENDALE, CA 91201
(818) 247-5737

FAX: (818) 247-9797

ANALYTICAL REPORT

LOG NO: G89-09-261

Received: 18 SEP 89
Reported: 03 OCT 89

Mr. Bob Cathel
Oil & Solvent Process Company
1704 West First Street
Azusa, CA 91702

CC: Mr. Mark Slatten

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
09-261-1	Soil	18 SEP 89

PARAMETER	09-261-1
B/N,A Ext.Pri.Poll. (EPA-8270)	
Date Extracted	09/19/89
Date Analyzed	09/25/89
Dilution Factor (Times)	1
1,2,4-Trichlorobenzene, mg/kg	<1
1,2-Dichlorobenzene, mg/kg	<1
1,2-Diphenylhydrazine, mg/kg	<1
1,3-Dichlorobenzene, mg/kg	<1
1,4-Dichlorobenzene, mg/kg	<1
2,4,6-Trichlorophenol, mg/kg	<1
2,4-Dichlorophenol, mg/kg	<1
2,4-Dimethylphenol, mg/kg	<1
2,4-Dinitrotoluene, mg/kg	<2
2,4-Dinitrophenol, mg/kg	<1
2,6-Dinitrotoluene, mg/kg	<1
2-Chloronaphthalene, mg/kg	<1
2-Methylnaphthalene, mg/kg	<1
2-Methyl Phenol, mg/kg	<1
2-Nitrophenol, mg/kg	<5
2-Nitroaniline, mg/kg	<1
2,4,5-Trichlorophenol, mg/kg	<1
2-Chlorophenol, mg/kg	<5
2-Methyl-4,6-dinitrophenol, mg/kg	<1
3,3'-Dichlorobenzidine, mg/kg	<5
3-Nitroaniline, mg/kg	<1
4-Bromophenylphenylether, mg/kg	<1
4-Chloro-3-methylphenol, mg/kg	

BROWN AND CALDWELL LABORATORIES

801 WESTERN AVENUE, GLENDALE, CA 91201
(818) 247-5737

FAX: (818) 247-9797

ANALYTICAL REPORT

LOG NO: G89-09-261

Received: 18 SEP 89
Reported: 03 OCT 89

Mr. Bob Cathel
Oil & Solvent Process Company
1704 West First Street
Azusa, CA 91702

CC: Mr. [illegible]

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
09-261-1	Soil	18 SEP 89

PARAMETER	09-261-1
4-Chlorophenylphenylether, mg/kg	<1
4-Chloroaniline, mg/kg	<2
4-Methyl Phenol, mg/kg	<1
4-Nitrophenol, mg/kg	<2
4-Nitroaniline, mg/kg	<5
Acenaphthene, mg/kg	<1
Acenaphthylene, mg/kg	<1
Aniline, mg/kg	<2
Anthracene, mg/kg	<1
Bis(2-ethylhexyl)phthalate, mg/kg	2
Benzidine, mg/kg	<4
Benzoic Acid, mg/kg	<5
Benzyl Alcohol, mg/kg	<2
Bis(2-chloroethyl) Ether, mg/kg	<1
Bis(2-Chloroisopropyl)ether, mg/kg	<1
Bis(2-chloroethoxy)methane, mg/kg	<1
Benzo(a)anthracene, mg/kg	<1
Benzo(a)pyrene, mg/kg	<1
Benzo(b)fluoranthene, mg/kg	<1
Benzo(g,h,i)perylene, mg/kg	<1
Benzo(k)fluoranthene, mg/kg	<1
Butylbenzylphthalate, mg/kg	<1
Chrysene, mg/kg	<1
Di-n-octylphthalate, mg/kg	<1
Dibenzo(a,h)anthracene, mg/kg	<1
Dibutylphthalate, mg/kg	<5
Diethylphthalate, mg/kg	<1

BROWN AND CALDWELL LABORATORIES
801 WESTERN AVENUE, GLENDALE, CA 91201
(818) 247-5737
FAX: (818) 247-9797

ANALYTICAL REPORT

LOG NO: G89-09-261

Received: 18 SEP 89
Reported: 03 OCT 89

Mr. Bob Cathel
Oil & Solvent Process Company
1704 West First Street
Azusa, CA 91702

cc: Mr. Mark Simpson

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
09-261-1	Soil	18 SEP 89

PARAMETER	09-261-1
Dimethylphthalate, mg/kg	<2
Dibenzofuran, mg/kg	<1
Fluorene, mg/kg	<1
Fluoranthene, mg/kg	<1
Hexachlorobenzene, mg/kg	<1
Hexachlorobutadiene, mg/kg	<1
Hexachlorocyclopentadiene, mg/kg	<1
Hexachloroethane, mg/kg	<1
Indeno(1,2,3-c,d)Pyrene, mg/kg	<1
Isophorone, mg/kg	<4
N-Nitrosodi-n-propylamine, mg/kg	<8
N-Nitrosodimethylamine, mg/kg	<1
N-Nitrosodiphenylamine, mg/kg	0.5
Naphthalene, mg/kg	<1
Nitrobenzene, mg/kg	<1
Pentachlorophenol, mg/kg	<1
Phenanthrene, mg/kg	<1
Phenol, mg/kg	<1
Pyrene, mg/kg	
Semi-Quantified Results **	
A 2nd Hydrocarbon, mg/kg	7
A C11 Hydrocarbon, mg/kg	20
A C7 To C13 Hydrocarbon Matrix, mg/kg	400
A Saturated Hydrocarbon, mg/kg	20

** Quantification based upon comparison of total ion count of the compound with that of the nearest internal standard.

BROWN AND CALDWELL LABORATORIES

801 WESTERN AVENUE, GLENDALE, CA 91201
(818) 247-5737

FAX: (818) 247-9797

ANALYTICAL REPORT

LOG NO: G89-09-261

Received: 18 SEP 89
Reported: 03 OCT 89

Mr. Bob Cathel
Oil & Solvent Process Company
1704 West First Street
Azusa, CA 91702

CC: Mr. Mark Slatten

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
09-261-1	Soil	18 SEP 89

PARAMETER	09-261-1
Chloroform, mg/kg	<0.4
Chloromethane, mg/kg	<0.8
Carbon Disulfide, mg/kg	<0.8
Dibromochloromethane, mg/kg	<0.4
Ethylbenzene, mg/kg	7.4
Freon 113, mg/kg	<0.4
Methyl Isobutyl Ketone, mg/kg	<2
Methyl Ethyl Ketone, mg/kg	<4
Methylene Chloride, mg/kg	<0.4
Tetrachloroethylene, mg/kg	43
Styrene, mg/kg	<0.4
Trichloroethylene, mg/kg	1.8
Trichlorofluoromethane, mg/kg	<0.4
Toluene, mg/kg	8
Vinyl Acetate, mg/kg	<2
Vinyl Chloride, mg/kg	<0.4
Total Xylene Isomers, mg/kg	110
trans-1,2-Dichloroethylene, mg/kg	<0.4
trans-1,3-Dichloropropene, mg/kg	<0.4
Other Vol.Pri.Poll. (EPA-8240)	
Semi-Quantified Results **	
C4 Substituted Benzene, mg/kg	200
C5 Substituted Benzene, mg/kg	100
Cyclic C10 Hydrocarbon, mg/kg	100
Unsaturated C11 H.C., mg/kg	60

BROWN AND CALDWELL LABORATORIES
801 WESTERN AVENUE, GLENDALE, CA 91201
(818) 247-5737
FAX: (818) 247-9797

ANALYTICAL REPORT

LOG NO: G89-09-261

Received: 18 SEP 89
Reported: 03 OCT 89

Mr. Bob Cathel
Oil & Solvent Process Company
1704 West First Street
Azusa, CA 91702

cc: Mr. Mark Slattery

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
09-261-1	Soil	18 SEP 89

PARAMETER	09-261-1
Vol.Pri.Poll. (EPA-8240)	
Date Extracted	09/18/89
Date Analyzed	09/28/89
Dilution Factor, Times 1	4
1,1,1-Trichloroethane, mg/kg	2.3
1,1,2,2-Tetrachloroethane, mg/kg	<0.4
1,1,2-Trichloroethane, mg/kg	<0.4
1,1-Dichloroethane, mg/kg	<0.4
1,1-Dichloroethylene, mg/kg	<0.4
1,2-Dichloroethane, mg/kg	<0.4
1,2-Dichlorobenzene, mg/kg	<0.4
1,2-Dichloropropane, mg/kg	<0.4
1,3-Dichlorobenzene, mg/kg	<0.4
cis-1,3-Dichloropropene, mg/kg	<0.4
1,4-Dichlorobenzene, mg/kg	<0.4
2-Chloroethylvinylether, mg/kg	<0.4
2-Hexanone, mg/kg	<4
Acetone, mg/kg	<4
Acrolein, mg/kg	<8
Acrylonitrile, mg/kg	<8
Bromodichloromethane, mg/kg	<0.4
Bromomethane, mg/kg	<0.4
Benzene, mg/kg	<0.4
Chlorobenzene, mg/kg	<0.4
Carbon Tetrachloride, mg/kg	<0.4
Chloroethane, mg/kg	<0.4
Bromoform, mg/kg	<0.4

APPENDIX A.2

LABORATORY REPORTS FOR THE 1986 EMCON SITE ASSESSMENT

ANAMETRIX
GC/MS SPECIALISTS
ENVIRONMENTAL • ANALYTICAL SERVICES
2754 AIELLO DRIVE • SAN JOSE CA 95111 • (408) 629 1132

EMCON
NOV 24 1986

November 21, 1986
Work Order Number 8611019
Date Received 11/20/86
PO No. 12133

Keoni Murphy
Emcon Associates
1921 Ringwood Avenue
San Jose, CA 95131

Seven soil samples were received for analysis of volatiles by GC/MS, using the following EPA method(s):

ANAMETRIX I.D.	SAMPLE I.D.	METHOD(S)	DATE SAMPLED	DATE ANALYZED
8611019-01	243-01.01 B-1	8240	11/20/86	11/20/86
-02	" B-4	"	"	"
-03	" L-1	"	"	"
-04	" L-2	"	"	"
-05	" L-3	"	"	11/21/86
-06	" L-4	"	"	"
-07	" L-5	"	"	"

RESULTS

See enclosed data sheets, Forms 1-1 thru 1-7.

EXTRA COMPOUNDS

See enclosed data sheet, Form 3-1.

If there is any more that we can do, please give us a call. Thank you for using ANAMETRIX.

Sincerely,

Burt Sutherland

Burt Sutherland
Laboratory Manager

ANAMETRIX, INC. (408) 629-1132
2754 AIELLO DRIVE, SAN JOSE, CA 95111

ORGANICS ANALYSIS DATA SHEET - VOLATILE COMPOUNDS

Lab Name :243-01.01 B-1
Lab ID # :8611019-01
Matrix :SOIL
Released : 11/21/86

Case No :NA
Tape # :NA
Rcv'd :11/20/86
Analyst :BWS BWS

CAS #		ug/kg	
74-87-3	* Chloromethane	<7	U
74-83-9	* Bromomethane	<7	U
75-01-4	* Vinyl Chloride	<7	U
75-00-3	* Chloroethane	<7	U
75-09-2	* Methylene Chloride	<2	U
67-64-1	**Acetone	37	+
79-69-4	* Trichlorofluoromethane	<2	U
75-15-0	**Carbondisulfide	<2	U
75-35-4	* 1,1-Dichloroethene	<2	U
75-34-3	* 1,1-Dichloroethane	<2	U
156-60-5	* Trans-1,2-Dichloroethene	<2	U
67-66-3	* Chloroform	<2	U
76-13-1	Trichlorotrifluoroethane	<2	U
107-06-2	* 1,2-Dichloroethane	<2	U
78-93-3	**2-Butanone	<10	U
71-55-6	* 1,1,1-Trichloroethane	<2	U
56-23-5	* Carbon Tetrachloride	<2	U
108-05-4	**Vinyl Acetate	<10	U
75-27-4	* Bromodichloromethane	<2	U
78-87-5	* 1,2-Dichloropropane	<2	U
10061-02-6	* Trans-1,3-Dichloropropene	<2	U
79-01-6	* Trichloroethene	<2	U
124-48-1	* Dibromochloromethane	<2	U
79-00-5	* 1,1,2-Trichloroethane	<2	U
71-43-2	* Benzene	<2	U
10061-01-5	* cis-1,3-Dichloropropene	<2	U
110-75-8	* 2-Chloroethylvinylether	<2	U
75-25-2	* Bromoform	<2	U
591-78-6	**2-Hexanone	<10	U
108-10-1	**4-Methyl-2-Pentanone	<10	U
127-18-4	* Tetrachloroethene	3	+
79-34-5	* 1,1,2,2-Tetrachloroethane	<2	U
108-88-3	* Toluene	17	+
108-90-7	* Chlorobenzene	<2	U
100-41-4	* Ethylbenzene	<2	U
100-42-5	**Styrene	<2	U
	**Total Xylenes	<2	U
541-73-1	* 1,3-Dichlorobenzene	<2	U
95-50-1	* 1,2-Dichlorobenzene	<2	U
106-46-7	* 1,4-Dichlorobenzene	<2	U

Data Reporting Qualifiers

* Indicates 624/8240 approved compound (Federal Register 10/26/84)
** Indicates US EPA CLP Hazardous Substance List Compound (HSL)
No indication refers to compounds added by Anametrix, Inc.

For reporting purposes, the following qualifiers are used:
Value + : Indicates a value greater than the instrument detection limit.
U : Indicates instrument detection limit.

Form 1-1.

ANAMETRIX, INC. (408) 629-1132
2754 AIELLO DRIVE, SAN JOSE, CA 95111

ORGANICS ANALYSIS DATA SHEET - VOLATILE COMPOUNDS

Lab Name :243-01.01 L-1
Lab ID # :8611019-03
Matrix :SOIL
Released : 11/21/86

Case No :NA
Tape # :NA
Rcv'd :11/20/86
Analyst :BWS BWS

CAS #		ug/kg	
74-87-3	* Chloromethane	<7	U
74-83-9	* Bromomethane	<7	U
75-01-4	* Vinyl Chloride	<7	U
75-00-3	* Chloroethane	<7	U
75-09-2	* Methylene Chloride	<2	U
67-64-1	**Acetone	10	+
79-69-4	* Trichlorofluoromethane	<2	U
75-15-0	**Carbondisulfide	<2	U
75-35-4	* 1,1-Dichloroethene	<2	U
75-34-3	* 1,1-Dichloroethane	<2	U
156-60-5	* Trans-1,2-Dichloroethene	<2	U
67-66-3	* Chloroform	<2	U
76-13-1	Trichlorotrifluoroethane	<2	U
107-06-2	* 1,2-Dichloroethane	<2	U
78-93-3	**2-Butanone	<10	U
71-55-6	* 1,1,1-Trichloroethane	<2	U
56-23-5	* Carbon Tetrachloride	<2	U
108-05-4	**Vinyl Acetate	<10	U
75-27-4	* Bromodichloromethane	<2	U
78-87-5	* 1,2-Dichloropropane	<2	U
10061-02-6	* Trans-1,3-Dichloropropene	<2	U
79-01-6	* Trichloroethene	<2	U
124-48-1	* Dibromochloromethane	<2	U
79-00-5	* 1,1,2-Trichloroethane	<2	U
71-43-2	* Benzene	<2	U
10061-01-5	* cis-1,3-Dichloropropene	<2	U
110-75-8	* 2-Chloroethylvinylether	<2	U
75-25-2	* Bromoform	<2	U
591-78-6	**2-Hexanone	<10	U
108-10-1	**4-Methyl-2-Pentanone	<10	U
127-18-4	* Tetrachloroethene	<2	U
79-34-5	* 1,1,2,2-Tetrachloroethane	<2	U
108-88-3	* Toluene	5	+
108-90-7	* Chlorobenzene	<2	U
100-41-4	* Ethylbenzene	<2	U
100-42-5	**Styrene	<2	U
	**Total Xylenes	<2	U
541-73-1	* 1,3-Dichlorobenzene	<2	U
95-50-1	* 1,2-Dichlorobenzene	<2	U
106-46-7	* 1,4-Dichlorobenzene	<2	U

Data Reporting Qualifiers

* Indicates 624/8240 approved compound (Federal Register 10/26/84)
** Indicates US EPA CLP Hazardous Substance List Compound (HSL)
No indication refers to compounds added by Anametrix, Inc.
For reporting purposes, the following qualifiers are used:
Value + : Indicates a value greater than the instrument detection limit.
U : Indicates instrument detection limit.

Form 1-3.

ANAMETRIX, INC. (408) 629-1132
2754 AIELLO DRIVE, SAN JOSE, CA 95111

ORGANICS ANALYSIS DATA SHEET - VOLATILE COMPOUNDS

Lab Name :243-01.01 B-4
Lab ID # :8611019-02
Matrix :SOIL
Released : 11/21/86

Case No :NA
Tape # :NA
Rcv'd :11/20/86
Analyst :BWS BWS

CAS #		ug/kg	
74-87-3	* Chloromethane	<7	U
74-83-9	* Bromomethane	<7	U
75-01-4	* Vinyl Chloride	<7	U
75-00-3	* Chloroethane	<7	U
75-09-2	* Methylene Chloride	<2	U
67-64-1	**Acetone	43	+
79-69-4	* Trichlorofluoromethane	<2	U
75-15-0	**Carbondisulfide	<2	U
75-35-4	* 1,1-Dichloroethene	<2	U
75-34-3	* 1,1-Dichloroethane	<2	U
156-60-5	* Trans-1,2-Dichloroethene	<2	U
67-66-3	* Chloroform	<2	U
76-13-1	Trichlorotrifluoroethane	<2	U
107-06-2	* 1,2-Dichloroethane	<2	U
78-93-3	**2-Butanone	<10	U
71-55-6	* 1,1,1-Trichloroethane	<2	U
56-23-5	* Carbon Tetrachloride	<2	U
108-05-4	**Vinyl Acetate	<10	U
75-27-4	* Bromodichloromethane	<2	U
78-87-5	* 1,2-Dichloropropane	<2	U
10061-02-6	* Trans-1,3-Dichloropropene	<2	U
79-01-6	* Trichloroethene	<2	U
124-48-1	* Dibromochloromethane	<2	U
79-00-5	* 1,1,2-Trichloroethane	<2	U
71-43-2	* Benzene	<2	U
10061-01-5	* cis-1,3-Dichloropropene	<2	U
110-75-8	* 2-Chloroethylvinylether	<2	U
75-25-2	* Bromoform	<2	U
591-78-6	**2-Hexanone	<10	U
108-10-1	**4-Methyl-2-Pentanone	<10	U
127-18-4	* Tetrachloroethene	5	+
79-34-5	* 1,1,2,2-Tetrachloroethane	<2	U
108-88-3	* Toluene	7	+
108-90-7	* Chlorobenzene	<2	U
100-41-4	* Ethylbenzene	<2	U
100-42-5	**Styrene	<2	U
	**Total Xylenes	<2	U
541-73-1	* 1,3-Dichlorobenzene	<2	U
95-50-1	* 1,2-Dichlorobenzene	<2	U
106-46-7	* 1,4-Dichlorobenzene	<2	U

Data Reporting Qualifiers

* Indicates 624/8240 approved compound (Federal Register 10/26/84)
** Indicates US EPA CLP Hazardous Substance List Compound (HSL)
No indication refers to compounds added by Anametrix, Inc.

For reporting purposes, the following qualifiers are used:
Value + : Indicates a value greater than the instrument detection limit.
U : Indicates instrument detection limit.

Form 1-2.

ANAMETRIX, INC. (408) 629-1132
2754 AIELLO DRIVE, SAN JOSE, CA 95111

ORGANICS ANALYSIS DATA SHEET - VOLATILE COMPOUNDS

Lab Name :243-01.01 L-2
Lab ID # :8611019-04
Matrix :SOIL
Released : 11/21/86

Case No :NA
Tape # :NA
Rcv'd :11/20/86
Analyst :BWS BWS

CAS #		ug/kg	
74-87-3	* Chloromethane	<7	U
74-83-9	* Bromomethane	<7	U
75-01-4	* Vinyl Chloride	<7	U
75-00-3	* Chloroethane	<7	U
75-09-2	* Methylene Chloride	<2	U
67-64-1	**Acetone	<10	U
79-69-4	* Trichlorofluoromethane	<2	U
75-15-0	**Carbondisulfide	<2	U
75-35-4	* 1,1-Dichloroethene	<2	U
75-34-3	* 1,1-Dichloroethane	<2	U
156-60-5	* Trans-1,2-Dichloroethene	<2	U
67-66-3	* Chloroform	<2	U
76-13-1	Trichlorotrifluoroethane	<2	U
107-06-2	* 1,2-Dichloroethane	<2	U
78-93-3	**2-Butanone	<10	U
71-55-6	* 1,1,1-Trichloroethane	<2	U
56-23-5	* Carbon Tetrachloride	<2	U
108-05-4	**Vinyl Acetate	<10	U
75-27-4	* Bromodichloromethane	<2	U
78-87-5	* 1,2-Dichloropropane	<2	U
10061-02-6	* Trans-1,3-Dichloropropene	<2	U
79-01-6	* Trichloroethene	<2	U
124-48-1	* Dibromochloromethane	<2	U
79-00-5	* 1,1,2-Trichloroethane	<2	U
71-43-2	* Benzene	<2	U
10061-01-5	* cis-1,3-Dichloropropene	<2	U
110-75-8	* 2-Chloroethylvinylether	<2	U
75-25-2	* Bromoform	<2	U
591-78-6	**2-Hexanone	<10	U
108-10-1	**4-Methyl-2-Pentanone	<10	U
127-18-4	* Tetrachloroethene	<2	U
79-34-5	* 1,1,2,2-Tetrachloroethane	<2	U
108-88-3	* Toluene	<2	U
108-90-7	* Chlorobenzene	<2	U
100-41-4	* Ethylbenzene	<2	U
100-42-5	**Styrene	<2	U
	**Total Xylenes	<2	U
541-73-1	* 1,3-Dichlorobenzene	<2	U
95-50-1	* 1,2-Dichlorobenzene	<2	U
106-46-7	* 1,4-Dichlorobenzene	<2	U

Data Reporting Qualifiers

* Indicates 624/8240 approved compound (Federal Register 10/26/84)
** Indicates US EPA CLP Hazardous Substance List Compound (HSL)
No indication refers to compounds added by Anametrix, Inc.
For reporting purposes, the following qualifiers are used:
Value + : Indicates a value greater than the instrument detection limit.
U : Indicates instrument detection limit.

Form 1-4.

ORGANICS ANALYSIS DATA SHEET - VOLATILE COMPOUNDS

Sample I.D. :243-01.01 L-3
Matrix :SOIL
Date sampled :11/20/86
Date analyzed :11/21/86
Dilution :1:1000

Anametrix I.D. :8611019-0
Analyst : BWS
Supervisor : BWS
Date released :5/05/87

CAS #	Compound Name	Det. Limit (ug/kg)	(ug/kg)	Q
74-87-3	* Chloromethane	7000		U
74-83-9	* Bromomethane	7000		U
75-01-4	* Vinyl Chloride	7000		U
75-00-3	* Chloroethane	7000		U
75-09-2	* Methylene Chloride	2000		U
67-64-1	**Acetone	10,000		U
79-69-4	* Trichlorofluoromethane	2000		U
75-15-0	**Carbondisulfide	2000		U
75-35-4	* 1,1-Dichloroethene	2000		U
75-34-3	* 1,1-Dichloroethane	2000		U
156-60-5	* Total-1,2-Dichloroethene	2000		U
67-66-3	* Chloroform	2000		U
76-13-1	# Trichlorotrifluoroethane	2000		U
107-06-2	* 1,2-Dichloroethane	2000		U
78-93-3	**2-Butanone	10,000		U
71-55-6	* 1,1,1-Trichloroethane	2000	4000	+
56-23-5	* Carbon Tetrachloride	2000		U
108-05-4	**Vinyl Acetate	10,000		U
75-27-4	* Bromodichloromethane	2000		U
78-87-5	* 1,2-Dichloropropane	2000		U
10061-02-6	* Trans-1,3-Dichloropropene	2000		U
79-01-6	* Trichloroethene	2000		U
124-48-1	* Dibromochloromethane	2000		U
79-00-5	* 1,1,2-Trichloroethane	2000		U
71-43-2	* Benzene	2000		U
10061-01-5	* cis-1,3-Dichloropropene	2000		U
110-75-8	* 2-Chloroethylvinylether	2000		U
75-25-2	* Bromoform	2000		U
591-78-6	**2-Hexanone	10,000		U
108-10-1	**4-Methyl-2-Pentanone	10,000		U
127-18-4	* Tetrachloroethene	2000	38,000	+
79-34-5	* 1,1,2,2-Tetrachloroethane	2000		U
108-88-3	* Toluene	2000	2200	+
108-90-7	* Chlorobenzene	2000		U
100-41-4	* Ethylbenzene	2000	3700	+
100-42-5	**Styrene	2000		U
	**Total Xylenes	2000	2900	+
541-73-1	* 1,3-Dichlorobenzene	2000		U
95-50-1	* 1,2-Dichlorobenzene	2000		U
106-46-7	* 1,4-Dichlorobenzene	2000		U

* A 624/8240 approved compound (Federal Register, 10/26/84)
** A compound on the U.S. EPA CLP Hazardous Substance List (HSL)
\# A compound added by Anametrix, Inc.

For reporting purposes, the following qualifiers (Q) are used:
+ : A value greater than or equal to the method detection limit.
U : The compound was analyzed for but was not detected.

Form 1-1.

ANAMETRIX, INC. (408) 629-1132
2754 AIELLO DRIVE, SAN JOSE, CA 95111

ORGANICS ANALYSIS DATA SHEET - VOLATILE COMPOUNDS

Lab Name :243-01.01 L-4
Lab ID # :8611019-06
Matrix :SOIL
Released : 11/21/86

Case No :NA
Tape # :NA
Rcv'd :11/20/86
Analyst :BWS BWS

CAS #		ug/kg	
74-87-3	* Chloromethane	<7	U
74-83-9	* Bromomethane	<7	U
75-01-4	* Vinyl Chloride	<7	U
75-00-3	* Chloroethane	<7	U
75-09-2	* Methylene Chloride	<2	U
67-64-1	**Acetone	<10	U
79-69-4	* Trichlorofluoromethane	<2	U
75-15-0	**Carbondisulfide	<2	U
75-35-4	* 1,1-Dichloroethene	<2	U
75-34-3	* 1,1-Dichloroethane	<2	U
156-60-5	* Trans-1,2-Dichloroethene	<2	U
67-66-3	* Chloroform	<2	U
76-13-1	Trichlorotrifluoroethane	<2	U
107-06-2	* 1,2-Dichloroethane	<2	U
78-93-3	**2-Butanone	<10	U
71-55-6	* 1,1,1-Trichloroethane	<2	U
56-23-5	* Carbon Tetrachloride	<2	U
108-05-4	**Vinyl Acetate	<10	U
75-27-4	* Bromodichloromethane	<2	U
78-87-5	* 1,2-Dichloropropane	<2	U
10061-02-6	* Trans-1,3-Dichloropropene	<2	U
79-01-6	* Trichloroethene	<2	U
124-48-1	* Dibromochloromethane	<2	U
79-00-5	* 1,1,2-Trichloroethane	<2	U
71-43-2	* Benzene	<2	U
10061-01-5	* cis-1,3-Dichloropropene	<2	U
110-75-8	* 2-Chloroethylvinylether	<2	U
75-25-2	* Bromoform	<2	U
591-78-6	**2-Hexanone	<10	U
108-10-1	**4-Methyl-2-Pentanone	<10	U
127-18-4	* Tetrachloroethene	10	+
79-34-5	* 1,1,2,2-Tetrachloroethane	<2	U
108-88-3	* Toluene	30	+
108-90-7	* Chlorobenzene	<2	U
100-41-4	* Ethylbenzene	<2	U
100-42-5	**Styrene	<2	U
	**Total Xylenes	<2	U
541-73-1	* 1,3-Dichlorobenzene	<2	U
95-50-1	* 1,2-Dichlorobenzene	<2	U
106-46-7	* 1,4-Dichlorobenzene	<2	U

Data Reporting Qualifiers

* Indicates 624/8240 approved compound (Federal Register 10/26/84)
** Indicates US EPA CLP Hazardous Substance List Compound (HSL)
No indication refers to compounds added by Anametrix, Inc.

For reporting purposes, the following qualifiers are used:
Value + : Indicates a value greater than the instrument detection limit.
U : Indicates instrument detection limit.

Form 1-6.

ANAMETRIX, INC. (408) 629-1132
2754 AIELLO DRIVE, SAN JOSE, CA 95111

ORGANICS ANALYSIS DATA SHEET - VOLATILE COMPOUNDS

Lab Name :243-01.01 L-5
Lab ID # :8611019-07
Matrix :SOIL
Released : 11/21/86

Case No :NA
Tape # :NA
Rcv'd :11/20/86
Analyst :BWS BWS

CAS #		ug/kg	
74-87-3	* Chloromethane	<7	U
74-83-9	* Bromomethane	<7	U
75-01-4	* Vinyl Chloride	<7	U
75-00-3	* Chloroethane	<7	U
75-09-2	* Methylene Chloride	<2	U
67-64-1	**Acetone	<10	U
79-69-4	* Trichlorofluoromethane	<2	U
75-15-0	**Carbondisulfide	<2	U
75-35-4	* 1,1-Dichloroethene	<2	U
75-34-3	* 1,1-Dichloroethane	<2	U
156-60-5	* Trans-1,2-Dichloroethene	<2	U
67-66-3	* Chloroform	<2	U
76-13-1	Trichlorotrifluoroethane	<2	U
107-06-2	* 1,2-Dichloroethane	<2	U
78-93-3	**2-Butanone	18	+
71-55-6	* 1,1,1-Trichloroethane	<2	U
56-23-5	* Carbon Tetrachloride	<2	U
108-05-4	**Vinyl Acetate	<10	U
75-27-4	* Bromodichloromethane	<2	U
78-87-5	* 1,2-Dichloropropane	<2	U
10061-02-6	* Trans-1,3-Dichloropropene	<2	U
79-01-6	* Trichloroethene	<2	U
124-48-1	* Dibromochloromethane	<2	U
79-00-5	* 1,1,2-Trichloroethane	<2	U
71-43-2	* Benzene	<2	U
10061-01-5	* cis-1,3-Dichloropropene	<2	U
110-75-8	* 2-Chloroethylvinylether	<2	U
75-25-2	* Bromoform	<2	U
591-78-6	**2-Hexanone	<10	U
108-10-1	**4-Methyl-2-Pentanone	<10	U
127-18-4	* Tetrachloroethene	10	+
79-34-5	* 1,1,2,2-Tetrachloroethane	<2	U
108-88-3	* Toluene	9	+
108-90-7	* Chlorobenzene	<2	U
100-41-4	* Ethylbenzene	<2	U
100-42-5	**Styrene	<2	U
	**Total Xylenes	<2	U
541-73-1	* 1,3-Dichlorobenzene	<2	U
95-50-1	* 1,2-Dichlorobenzene	<2	U
106-46-7	* 1,4-Dichlorobenzene	<2	U

Data Reporting Qualifiers

* Indicates 624/8240 approved compound (Federal Register 10/26/84)
** Indicates US EPA CLP Hazardous Substance List Compound (HSL)
No indication refers to compounds added by Anametrix, Inc.
For reporting purposes, the following qualifiers are used:
Value + : Indicates a value greater than the instrument detection limit.
U : Indicates instrument detection limit.

Form 1-7.

ORGANICS ANALYSIS DATA SHEET
Tentatively Identified Extra Compounds

CLIENT ID: 243-01.01 L-4 ANAMETRIX NO: 8611019-06

SCAN #	NAME	Estimated Concentration UG/KG
437	unknown	5

Form 3-1.

ANAMETRIX
GC/MS SPECIALISTS
ENVIRONMENTAL • ANALYTICAL SERVICES
2754 AIELLO DRIVE • SAN JOSE, CA 95111 • (408) 629-1132

EMCON
DEC 10 1986

December 8, 1986
Work Order Number 8612003
Date Received 12/03/86
PO No. 12162

Keoni Murphy
Emcon Associates
1921 Ringwood Avenue
San Jose, CA 95131

Ten soil samples were received for analysis of volatiles by GC/MS, using the following EPA method(s):

ANAMETRIX I.D.	SAMPLE I.D.	METHOD(S)	DATE SAMPLED	DATE ANALYZED
8612003-01	243-01.01 L-6 3'	8240	11/26/86	12/03/86
-02	" L-6 5'	"	"	"
-03	" L-7 2.5'	"	"	"
-04	" L-7 4.5'	"	"	12/04/86
-05	" L-8 3'	"	"	12/06/86
-06	" L-8 5'	"	"	12/04/86
-07	" L-9 3'	"	"	"
-08	" L-9 5'	"	"	12/06/86
-09	" L-10 2.5'	"	"	"
-10	" L-10 4'	"	"	"

RESULTS

See enclosed data sheets, Forms 1-1 thru 1-10.

EXTRA COMPOUNDS

None detected.

If there is any more that we can do, please give us a call. Thank you for using ANAMETRIX.

Sincerely,

Burt Sutherland

Burt Sutherland
Laboratory Manager

ANAMETRIX, INC. (408) 629-1132
2754 AIELLO DRIVE, SAN JOSE, CA 95111

ORGANICS ANALYSIS DATA SHEET - VOLATILE COMPOUNDS

Lab Name :243-01.01 L-6 3'
Lab ID # :8612003-01
Matrix :SOIL
Released : 12/08/86

Case No:NA
Tape # :NA
Rcv'd :12/03/86
Analyst:BWS BWS

CAS #		ug/kg	
74-87-3	* Chloromethane	<7	U
74-83-9	* Bromomethane	<7	U
75-01-4	* Vinyl Chloride	<7	U
75-00-3	* Chloroethane	<7	U
75-09-2	* Methylene Chloride	<2	U
67-64-1	**Acetone	<10	U
79-69-4	* Trichlorofluoromethane	<2	U
75-15-0	**Carbondisulfide	<2	U
75-35-4	* 1,1-Dichloroethene	<2	U
75-34-3	* 1,1-Dichloroethane	<2	U
156-60-5	* Trans-1,2-Dichloroethene	<2	U
67-66-3	* Chloroform	<2	U
76-13-1	Trichlorotrifluoroethane	<2	U
107-06-2	* 1,2-Dichloroethane	<2	U
78-93-3	**2-Butanone	<10	U
71-55-6	* 1,1,1-Trichloroethane	<2	U
56-23-5	* Carbon Tetrachloride	<2	U
108-05-4	**Vinyl Acetate	<10	U
75-27-4	* Bromodichloromethane	<2	U
78-87-5	* 1,2-Dichloropropane	<2	U
10061-02-6	* Trans-1,3-Dichloropropene	<2	U
79-01-6	* Trichloroethene	<2	U
124-48-1	* Dibromochloromethane	<2	U
79-00-5	* 1,1,2-Trichloroethane	<2	U
71-43-2	* Benzene	<2	U
10061-01-5	* cis-1,3-Dichloropropene	<2	U
110-75-8	* 2-Chloroethylvinylether	<2	U
75-25-2	* Bromoform	<2	U
591-78-6	**2-Hexanone	<10	U
108-10-1	**4-Methyl-2-Pentanone	<10	U
127-18-4	* Tetrachloroethene	<2	U
79-34-5	* 1,1,2,2-Tetrachloroethane	<2	U
108-88-3	* Toluene	9	+
108-90-7	* Chlorobenzene	<2	U
100-41-4	* Ethylbenzene	<2	U
100-42-5	**Styrene	<2	U
	**Total Xylenes	<2	U
541-73-1	* 1,3-Dichlorobenzene	<2	U
95-50-1	* 1,2-Dichlorobenzene	<2	U
106-46-7	* 1,4-Dichlorobenzene	<2	U

Data Reporting Qualifiers

* Indicates 624/8240 approved compound (Federal Register 10/26/84)
** Indicates US EPA CLP Hazardous Substance List Compound (HSL)
No indication refers to compounds added by Anametrix, Inc.
For reporting purposes, the following qualifiers are used:
Value + : Indicates a value greater than the instrument detection limit.
U : Indicates instrument detection limit.

Form 1-1.

ANAMETRIX, INC. (408) 629-1132
2754 AIELLO DRIVE, SAN JOSE, CA 95111

ORGANICS ANALYSIS DATA SHEET - VOLATILE COMPOUNDS

Lab Name :243-01.01 L-6 5' Case No:NA
Lab ID # :8612003-02 Tape # :NA
Matrix :SOIL Rcv'd :12/03/86
Released : 12/08/86 Analyst:BWS BWS

CAS #		ug/kg	
74-87-3	* Chloromethane	<7	U
74-83-9	* Bromomethane	<7	U
75-01-4	* Vinyl Chloride	<7	U
75-00-3	* Chloroethane	<7	U
75-09-2	* Methylene Chloride	<2	U
67-64-1	**Acetone	<10	U
79-69-4	* Trichlorofluoromethane	<2	U
75-15-0	**Carbondisulfide	<2	U
75-35-4	* 1,1-Dichloroethene	<2	U
75-34-3	* 1,1-Dichloroethane	<2	U
156-60-5	* Trans-1,2-Dichloroethene	<2	U
67-66-3	* Chloroform	<2	U
76-13-1	Trichlorotrifluoroethane	<2	U
107-06-2	* 1,2-Dichloroethane	<2	U
78-93-3	**2-Butanone	<10	U
71-55-6	* 1,1,1-Trichloroethane	<2	U
56-23-5	* Carbon Tetrachloride	<2	U
108-05-4	**Vinyl Acetate	<10	U
75-27-4	* Bromodichloromethane	<2	U
78-87-5	* 1,2-Dichloropropane	<2	U
10061-02-6	* Trans-1,3-Dichloropropene	<2	U
79-01-6	* Trichloroethene	<2	U
124-48-1	* Dibromochloromethane	<2	U
79-00-5	* 1,1,2-Trichloroethane	<2	U
71-43-2	* Benzene	<2	U
10061-01-5	* cis-1,3-Dichloropropene	<2	U
110-75-8	* 2-Chloroethylvinylether	<2	U
75-25-2	* Bromoform	<2	U
591-78-6	**2-Hexanone	<10	U
108-10-1	**4-Methyl-2-Pentanone	<10	U
127-18-4	* Tetrachloroethene	<2	U
79-34-5	* 1,1,2,2-Tetrachloroethane	<2	U
108-88-3	* Toluene	20	+
108-90-7	* Chlorobenzene	<2	U
100-41-4	* Ethylbenzene	<2	U
100-42-5	**Styrene	<2	U
	**Total Xylenes	<2	U
541-73-1	* 1,3-Dichlorobenzene	<2	U
95-50-1	* 1,2-Dichlorobenzene	<2	U
106-46-7	* 1,4-Dichlorobenzene	<2	U

Data Reporting Qualifiers

* Indicates 624/8240 approved compound (Federal Register 10/26/84)
** Indicates US EPA CLP Hazardous Substance List Compound (HSL)
No indication refers to compounds added by Anametrix, Inc.
For reporting purposes, the following qualifiers are used:
Value + : Indicates a value greater than the instrument detection limit.
U : Indicates instrument detection limit.

Form 1-2.

ANAMETRIX, INC. (408) 629-1132
2754 AIELLO DRIVE, SAN JOSE, CA 95111

ORGANICS ANALYSIS DATA SHEET - VOLATILE COMPOUNDS

Lab Name :243-01.01 L-7 2.5' Case No:NA
Lab ID # :8612003-03 Tape # :NA
Matrix :SOIL Rcv'd :12/03/86
Released : 12/08/86 Analyst:BWS BWS

CAS #		ug/kg	
74-87-3	* Chloromethane	<7	U
74-83-9	* Bromomethane	<7	U
75-01-4	* Vinyl Chloride	<7	U
75-00-3	* Chloroethane	<7	U
75-09-2	* Methylene Chloride	<2	U
67-64-1	**Acetone	<10	U
79-69-4	* Trichlorofluoromethane	<2	U
75-15-0	**Carbondisulfide	<2	U
75-35-4	* 1,1-Dichloroethene	<2	U
75-34-3	* 1,1-Dichloroethane	<2	U
156-60-5	* Trans-1,2-Dichloroethene	<2	U
67-66-3	* Chloroform	<2	U
76-13-1	Trichlorotrifluoroethane	<2	U
107-06-2	* 1,2-Dichloroethane	<2	U
78-93-3	**2-Butanone	<10	U
71-55-6	* 1,1,1-Trichloroethane	<2	U
56-23-5	* Carbon Tetrachloride	<2	U
108-05-4	**Vinyl Acetate	<10	U
75-27-4	* Bromodichloromethane	<2	U
78-87-5	* 1,2-Dichloropropane	<2	U
10061-02-6	* Trans-1,3-Dichloropropene	<2	U
79-01-6	* Trichloroethene	<2	U
124-48-1	* Dibromochloromethane	<2	U
79-00-5	* 1,1,2-Trichloroethane	<2	U
71-43-2	* Benzene	<2	U
10061-01-5	* cis-1,3-Dichloropropene	<2	U
110-75-8	* 2-Chloroethylvinylether	<2	U
75-25-2	* Bromoform	<2	U
591-78-6	**2-Hexanone	<10	U
108-10-1	**4-Methyl-2-Pentanone	<10	U
127-18-4	* Tetrachloroethene	<2	U
79-34-5	* 1,1,2,2-Tetrachloroethane	<2	U
108-88-3	* Toluene	33	+
108-90-7	* Chlorobenzene	<2	U
100-41-4	* Ethylbenzene	<2	U
100-42-5	**Styrene	<2	U
	**Total Xylenes	<2	U
541-73-1	* 1,3-Dichlorobenzene	<2	U
95-50-1	* 1,2-Dichlorobenzene	<2	U
106-46-7	* 1,4-Dichlorobenzene	<2	U

Data Reporting Qualifiers

* Indicates 624/8240 approved compound (Federal Register 10/26/84)
** Indicates US EPA CLP Hazardous Substance List Compound (HSL)
No indication refers to compounds added by Anametrix, Inc.
For reporting purposes, the following qualifiers are used:
Value + : Indicates a value greater than the instrument detection limit.
U : Indicates instrument detection limit.

Form 1-3.

ANAMETRIX, INC. (408) 629-1132
2754 AIELLO DRIVE, SAN JOSE, CA 95111

ORGANICS ANALYSIS DATA SHEET - VOLATILE COMPOUNDS

Lab Name :243-01.01 L-7 4.5'
Lab ID # :8612003-04
Matrix :SOIL
Released : 12/08/86

Case No:NA
Tape # :NA
Rcv'd :12/03/86
Analyst:BWS BWS

CAS #		ug/kg	
74-87-3	* Chloromethane	<7	U
74-83-9	* Bromomethane	<7	U
75-01-4	* Vinyl Chloride	<7	U
75-00-3	* Chloroethane	<7	U
75-09-2	* Methylene Chloride	<2	U
67-64-1	**Acetone	<10	U
79-69-4	* Trichlorofluoromethane	<2	U
75-15-0	**Carbondisulfide	<2	U
75-35-4	* 1,1-Dichloroethene	<2	U
75-34-3	* 1,1-Dichloroethane	<2	U
156-60-5	* Trans-1,2-Dichloroethene	<2	U
67-66-3	* Chloroform	<2	U
76-13-1	Trichlorotrifluoroethane	<2	U
107-06-2	* 1,2-Dichloroethane	<2	U
78-93-3	**2-Butanone	<10	U
71-55-6	* 1,1,1-Trichloroethane	5	+
56-23-5	* Carbon Tetrachloride	<2	U
108-05-4	**Vinyl Acetate	<10	U
75-27-4	* Bromodichloromethane	<2	U
78-87-5	* 1,2-Dichloropropane	<2	U
10061-02-6	* Trans-1,3-Dichloropropene	<2	U
79-01-6	* Trichloroethene	2	+
124-48-1	* Dibromochloromethane	<2	U
79-00-5	* 1,1,2-Trichloroethane	<2	U
71-43-2	* Benzene	<2	U
10061-01-5	* cis-1,3-Dichloropropene	<2	U
110-75-8	* 2-Chloroethylvinylether	<2	U
75-25-2	* Bromoform	<2	U
591-78-6	**2-Hexanone	<10	U
108-10-1	**4-Methyl-2-Pentanone	<10	U
127-18-4	* Tetrachloroethene	10	+
79-34-5	* 1,1,2,2-Tetrachloroethane	<2	U
108-88-3	* Toluene	61	+
108-90-7	* Chlorobenzene	<2	U
100-41-4	* Ethylbenzene	<2	U
100-42-5	**Styrene	<2	U
	**Total Xylenes	2	+
541-73-1	* 1,3-Dichlorobenzene	<2	U
95-50-1	* 1,2-Dichlorobenzene	<2	U
106-46-7	* 1,4-Dichlorobenzene	<2	U

Data Reporting Qualifiers

* Indicates 624/8240 approved compound (Federal Register 10/26/84)
** Indicates US EPA CLP Hazardous Substance List Compound (HSL)
No indication refers to compounds added by Anametrix, Inc.
For reporting purposes, the following qualifiers are used:
Value + : Indicates a value greater than the instrument detection limit.
U : Indicates instrument detection limit.

Form 1-4.

ANAMETRIX, INC. (408) 629-1132
2754 AIELLO DRIVE, SAN JOSE, CA 95111

ORGANICS ANALYSIS DATA SHEET - VOLATILE COMPOUNDS

Lab Name :243-01.01 L-8 3'
Lab ID # :8612003-05
Matrix :SOIL
Released : 12/08/86

Case No:NA
Tape # :NA
Rcv'd :12/03/86
Analyst:BWS BWS

CAS #		ug/kg	
74-87-3	* Chloromethane	<7	U
74-83-9	* Bromomethane	<7	U
75-01-4	* Vinyl Chloride	<7	U
75-00-3	* Chloroethane	<7	U
75-09-2	* Methylene Chloride	<2	U
67-64-1	**Acetone	<10	U
79-69-4	* Trichlorofluoromethane	<2	U
75-15-0	**Carbondisulfide	<2	U
75-35-4	* 1,1-Dichloroethene	<2	U
75-34-3	* 1,1-Dichloroethane	<2	U
156-60-5	* Trans-1,2-Dichloroethene	<2	U
67-66-3	* Chloroform	<2	U
76-13-1	Trichlorotrifluoroethane	<2	U
107-06-2	* 1,2-Dichloroethane	<2	U
78-93-3	**2-Butanone	<10	U
71-55-6	* 1,1,1-Trichloroethane	<2	U
56-23-5	* Carbon Tetrachloride	<2	U
108-05-4	**Vinyl Acetate	<10	U
75-27-4	* Bromodichloromethane	<2	U
78-87-5	* 1,2-Dichloropropane	<2	U
10061-02-6	* Trans-1,3-Dichloropropene	<2	U
79-01-6	* Trichloroethene	<2	U
124-48-1	* Dibromochloromethane	<2	U
79-00-5	* 1,1,2-Trichloroethane	<2	U
71-43-2	* Benzene	<2	U
10061-01-5	* cis-1,3-Dichloropropene	<2	U
110-75-8	* 2-Chloroethylvinylether	<2	U
75-25-2	* Bromoform	<2	U
591-78-6	**2-Hexanone	<10	U
108-10-1	**4-Methyl-2-Pentanone	<10	U
127-18-4	* Tetrachloroethene	2	+
79-34-5	* 1,1,2,2-Tetrachloroethane	<2	U
108-88-3	* Toluene	14	+
108-90-7	* Chlorobenzene	<2	U
100-41-4	* Ethylbenzene	<2	U
100-42-5	**Styrene	<2	U
	**Total Xylenes	<2	U
541-73-1	* 1,3-Dichlorobenzene	<2	U
95-50-1	* 1,2-Dichlorobenzene	<2	U
106-46-7	* 1,4-Dichlorobenzene	<2	U

Data Reporting Qualifiers

* Indicates 624/8240 approved compound (Federal Register 10/26/84)
** Indicates US EPA CLP Hazardous Substance List Compound (HSL)
No indication refers to compounds added by Anametrix, Inc.
For reporting purposes, the following qualifiers are used:
Value + : Indicates a value greater than the instrument detection limit.
U : Indicates instrument detection limit.

Form 1-5.

ANAMETRIX, INC. (408) 629-1132
2754 AIELLO DRIVE, SAN JOSE, CA 95111

ORGANICS ANALYSIS DATA SHEET - VOLATILE COMPOUNDS

Lab Name :243-01.01 L-8 5'
Lab ID # :8612003-06
Matrix :SOIL
Released : 12/08/86

Case No:NA
Tape # :NA
Rcv'd :12/03/86
Analyst:BWS BWS

CAS #		ug/kg	
74-87-3	* Chloromethane	<7	U
74-83-9	* Bromomethane	<7	U
75-01-4	* Vinyl Chloride	<7	U
75-00-3	* Chloroethane	<7	U
75-09-2	* Methylene Chloride	<2	U
67-64-1	**Acetone	<10	U
79-69-4	* Trichlorofluoromethane	<2	U
75-15-0	**Carbondisulfide	<2	U
75-35-4	* 1,1-Dichloroethene	<2	U
75-34-3	* 1,1-Dichloroethane	<2	U
156-60-5	* Trans-1,2-Dichloroethene	<2	U
67-66-3	* Chloroform	<2	U
76-13-1	Trichlorotrifluoroethane	<2	U
107-06-2	* 1,2-Dichloroethane	<2	U
78-93-3	**2-Butanone	<10	U
71-55-6	* 1,1,1-Trichloroethane	2	+
56-23-5	* Carbon Tetrachloride	<2	U
108-05-4	**Vinyl Acetate	<10	U
75-27-4	* Bromodichloromethane	<2	U
78-87-5	* 1,2-Dichloropropane	<2	U
10061-02-6	* Trans-1,3-Dichloropropene	<2	U
79-01-6	* Trichloroethene	<2	U
124-48-1	* Dibromochloromethane	<2	U
79-00-5	* 1,1,2-Trichloroethane	<2	U
71-43-2	* Benzene	<2	U
10061-01-5	* cis-1,3-Dichloropropene	<2	U
110-75-8	* 2-Chloroethylvinylether	<2	U
75-25-2	* Bromoform	<2	U
591-78-6	**2-Hexanone	<10	U
108-10-1	**4-Methyl-2-Pentanone	<10	U
127-18-4	* Tetrachloroethene	<2	U
79-34-5	* 1,1,2,2-Tetrachloroethane	<2	U
108-88-3	* Toluene	15	+
108-90-7	* Chlorobenzene	<2	U
100-41-4	* Ethylbenzene	<2	U
100-42-5	**Styrene	<2	U
	**Total Xylenes	<2	U
541-73-1	* 1,3-Dichlorobenzene	<2	U
95-50-1	* 1,2-Dichlorobenzene	<2	U
106-46-7	* 1,4-Dichlorobenzene	<2	U

Data Reporting Qualifiers

* Indicates 624/8240 approved compound (Federal Register 10/26/84)
** Indicates US EPA CLP Hazardous Substance List Compound (HSL)
No indication refers to compounds added by Anametrix, Inc.
For reporting purposes, the following qualifiers are used:
Value + : Indicates a value greater than the instrument detection limit.
U : Indicates instrument detection limit.

Form 1-6.

ANAMETRIX, INC. (408) 629-1132
2754 AIELLO DRIVE, SAN JOSE, CA 95111

ORGANICS ANALYSIS DATA SHEET - VOLATILE COMPOUNDS

Lab Name :243-01.01 L-9 3' Case No:NA
Lab ID # :8612003-07 Tape # :NA
Matrix :SOIL Rcv'd :12/03/86
Released : 12/08/86 Analyst:BWS BWS

CAS #		ug/kg	
74-87-3	* Chloromethane	<7	U
74-83-9	* Bromomethane	<7	U
75-01-4	* Vinyl Chloride	<7	U
75-00-3	* Chloroethane	<7	U
75-09-2	* Methylene Chloride	<2	U
67-64-1	**Acetone	<10	U
79-69-4	* Trichlorofluoromethane	<2	U
75-15-0	**Carbondisulfide	<2	U
75-35-4	* 1,1-Dichloroethene	<2	U
75-34-3	* 1,1-Dichloroethane	<2	U
156-60-5	* Trans-1,2-Dichloroethene	<2	U
67-66-3	* Chloroform	<2	U
76-13-1	Trichlorotrifluoroethane	<2	U
107-06-2	* 1,2-Dichloroethane	<2	U
78-93-3	**2-Butanone	<10	U
71-55-6	* 1,1,1-Trichloroethane	<2	U
56-23-5	* Carbon Tetrachloride	<2	U
108-05-4	**Vinyl Acetate	<10	U
75-27-4	* Bromodichloromethane	<2	U
78-87-5	* 1,2-Dichloropropane	<2	U
10061-02-6	* Trans-1,3-Dichloropropene	<2	U
79-01-6	* Trichloroethene	<2	U
124-48-1	* Dibromochloromethane	<2	U
79-00-5	* 1,1,2-Trichloroethane	<2	U
71-43-2	* Benzene	<2	U
10061-01-5	* cis-1,3-Dichloropropene	<2	U
110-75-8	* 2-Chloroethylvinylether	<2	U
75-25-2	* Bromoform	<2	U
591-78-6	**2-Hexanone	<10	U
108-10-1	**4-Methyl-2-Pentanone	<10	U
127-18-4	* Tetrachloroethene	<2	U
79-34-5	* 1,1,2,2-Tetrachloroethane	<2	U
108-88-3	* Toluene	9	+
108-90-7	* Chlorobenzene	<2	U
100-41-4	* Ethylbenzene	<2	U
100-42-5	**Styrene	<2	U
	**Total Xylenes	<2	U
541-73-1	* 1,3-Dichlorobenzene	<2	U
95-50-1	* 1,2-Dichlorobenzene	<2	U
106-46-7	* 1,4-Dichlorobenzene	<2	U

Data Reporting Qualifiers

* Indicates 624/8240 approved compound (Federal Register 10/26/84)
** Indicates US EPA CLP Hazardous Substance List Compound (HSL)
No indication refers to compounds added by Anametrix, Inc.
For reporting purposes, the following qualifiers are used:
Value + : Indicates a value greater than the instrument detection limit.
U : Indicates instrument detection limit.

Form 1-7.

ANAMETRIX, INC. (408) 629-1132
2754 AIELLO DRIVE, SAN JOSE, CA 95111

ORGANICS ANALYSIS DATA SHEET - VOLATILE COMPOUNDS

Lab Name :243-01.01 L-9 5' Case No:NA
Lab ID # :8612003-08 Tape # :NA
Matrix :SOIL Rcv'd :12/03/86
Released : 12/08/86 Analyst:BWS BWS

CAS #		ug/kg	
74-87-3	* Chloromethane	<7	U
74-83-9	* Bromomethane	<7	U
75-01-4	* Vinyl Chloride	<7	U
75-00-3	* Chloroethane	<7	U
75-09-2	* Methylene Chloride	<2	U
67-64-1	**Acetone	<10	U
79-69-4	* Trichlorofluoromethane	<2	U
75-15-0	**Carbondisulfide	<2	U
75-35-4	* 1,1-Dichloroethene	<2	U
75-34-3	* 1,1-Dichloroethane	<2	U
156-60-5	* Trans-1,2-Dichloroethene	<2	U
67-66-3	* Chloroform	<2	U
76-13-1	Trichlorotrifluoroethane	<2	U
107-06-2	* 1,2-Dichloroethane	<2	U
78-93-3	**2-Butanone	<10	U
71-55-6	* 1,1,1-Trichloroethane	<2	U
56-23-5	* Carbon Tetrachloride	<2	U
108-05-4	**Vinyl Acetate	<10	U
75-27-4	* Bromodichloromethane	<2	U
78-87-5	* 1,2-Dichloropropane	<2	U
10061-02-6	* Trans-1,3-Dichloropropene	<2	U
79-01-6	* Trichloroethene	<2	U
124-48-1	* Dibromochloromethane	<2	U
79-00-5	* 1,1,2-Trichloroethane	<2	U
71-43-2	* Benzene	<2	U
10061-01-5	* cis-1,3-Dichloropropene	<2	U
110-75-8	* 2-Chloroethylvinylether	<2	U
75-25-2	* Bromoform	<2	U
591-78-6	**2-Hexanone	<10	U
108-10-1	**4-Methyl-2-Pentanone	<10	U
127-18-4	* Tetrachloroethene	<2	U
79-34-5	* 1,1,2,2-Tetrachloroethane	<2	U
108-88-3	* Toluene	4	+
108-90-7	* Chlorobenzene	<2	U
100-41-4	* Ethylbenzene	<2	U
100-42-5	**Styrene	<2	U
	**Total Xylenes	<2	U
541-73-1	* 1,3-Dichlorobenzene	<2	U
95-50-1	* 1,2-Dichlorobenzene	<2	U
106-46-7	* 1,4-Dichlorobenzene	<2	U

Data Reporting Qualifiers

* Indicates 624/8240 approved compound (Federal Register 10/26/84)
** Indicates US EPA CLP Hazardous Substance List Compound (HSL)
No indication refers to compounds added by Anametrix, Inc.
For reporting purposes, the following qualifiers are used:
Value + : Indicates a value greater than the instrument detection limit.
U : Indicates instrument detection limit.

Form 1-8.

ANAMETRIX, INC. (408) 629-1132
2754 AIELLO DRIVE, SAN JOSE, CA 95111

ORGANICS ANALYSIS DATA SHEET - VOLATILE COMPOUNDS

Lab Name :243-01.01 L-10 2.5' Case No:NA
Lab ID # :8612003-09 Tape # :NA
Matrix :SOIL Rcv'd :12/03/86
Released : 12/08/86 Analyst:BWS BWS

CAS #		ug/kg	
74-87-3	* Chloromethane	<7	U
74-83-9	* Bromomethane	<7	U
75-01-4	* Vinyl Chloride	<7	U
75-00-3	* Chloroethane	<7	U
75-09-2	* Methylene Chloride	<2	U
67-64-1	**Acetone	<10	U
79-69-4	* Trichlorofluoromethane	<2	U
75-15-0	**Carbondisulfide	<2	U
75-35-4	* 1,1-Dichloroethene	<2	U
75-34-3	* 1,1-Dichloroethane	<2	U
156-60-5	* Trans-1,2-Dichloroethene	<2	U
67-66-3	* Chloroform	<2	U
76-13-1	Trichlorotrifluoroethane	<2	U
107-06-2	* 1,2-Dichloroethane	<2	U
78-93-3	**2-Butanone	<10	U
71-55-6	* 1,1,1-Trichloroethane	<2	U
56-23-5	* Carbon Tetrachloride	<2	U
108-05-4	**Vinyl Acetate	<10	U
75-27-4	* Bromodichloromethane	<2	U
78-87-5	* 1,2-Dichloropropane	<2	U
10061-02-6	* Trans-1,3-Dichloropropene	<2	U
79-01-6	* Trichloroethene	<2	U
124-48-1	* Dibromochloromethane	<2	U
79-00-5	* 1,1,2-Trichloroethane	<2	U
71-43-2	* Benzene	<2	U
10061-01-5	* cis-1,3-Dichloropropene	<2	U
110-75-8	* 2-Chloroethylvinylether	<2	U
75-25-2	* Bromoform	<2	U
591-78-6	**2-Hexanone	<10	U
108-10-1	**4-Methyl-2-Pentanone	<10	U
127-18-4	* Tetrachloroethene	<2	U
79-34-5	* 1,1,2,2-Tetrachloroethane	<2	U
108-88-3	* Toluene	3	+
108-90-7	* Chlorobenzene	<2	U
100-41-4	* Ethylbenzene	<2	U
100-42-5	**Styrene	<2	U
	**Total Xylenes	<2	U
541-73-1	* 1,3-Dichlorobenzene	<2	U
95-50-1	* 1,2-Dichlorobenzene	<2	U
106-46-7	* 1,4-Dichlorobenzene	<2	U

Data Reporting Qualifiers

* Indicates 624/8240 approved compound (Federal Register 10/26/84)
** Indicates US EPA CLP Hazardous Substance List Compound (HSL)
No indication refers to compounds added by Anametrix, Inc.
For reporting purposes, the following qualifiers are used:
Value + : Indicates a value greater than the instrument detection limit.
U : Indicates instrument detection limit.

Form 1-9.

ANAMETRIX, INC. (408) 629-1132
2754 AIELLO DRIVE, SAN JOSE, CA 95111

ORGANICS ANALYSIS DATA SHEET - VOLATILE COMPOUNDS

Lab Name :243-01.01 L-10 4' Case No:NA
Lab ID # :8612003-10 Tape # :NA
Matrix :SOIL Rcv'd :12/03/86
Released : 12/08/86 Analyst:BWS BWS

CAS #		ug/kg	
74-87-3	* Chloromethane	<7	U
74-83-9	* Bromomethane	<7	U
75-01-4	* Vinyl Chloride	<7	U
75-00-3	* Chloroethane	<7	U
75-09-2	* Methylene Chloride	<2	U
67-64-1	**Acetone	<10	U
79-69-4	* Trichlorofluoromethane	<2	U
75-15-0	**Carbondisulfide	<2	U
75-35-4	* 1,1-Dichloroethene	<2	U
75-34-3	* 1,1-Dichloroethane	<2	U
156-60-5	* Trans-1,2-Dichloroethene	<2	U
67-66-3	* Chloroform	<2	U
76-13-1	Trichlorotrifluoroethane	<2	U
107-06-2	* 1,2-Dichloroethane	<2	U
78-93-3	**2-Butanone	<10	U
71-55-6	* 1,1,1-Trichloroethane	<2	U
56-23-5	* Carbon Tetrachloride	<2	U
108-05-4	**Vinyl Acetate	<10	U
75-27-4	* Bromodichloromethane	<2	U
78-87-5	* 1,2-Dichloropropane	<2	U
10061-02-6	* Trans-1,3-Dichloropropene	<2	U
79-01-6	* Trichloroethene	<2	U
124-48-1	* Dibromochloromethane	<2	U
79-00-5	* 1,1,2-Trichloroethane	<2	U
71-43-2	* Benzene	<2	U
10061-01-5	* cis-1,3-Dichloropropene	<2	U
110-75-8	* 2-Chloroethylvinylether	<2	U
75-25-2	* Bromoform	<2	U
591-78-6	**2-Hexanone	<10	U
108-10-1	**4-Methyl-2-Pentanone	<10	U
127-18-4	* Tetrachloroethene	<2	U
79-34-5	* 1,1,2,2-Tetrachloroethane	<2	U
108-88-3	* Toluene	<2	U
108-90-7	* Chlorobenzene	<2	U
100-41-4	* Ethylbenzene	<2	U
100-42-5	**Styrene	<2	U
	**Total Xylenes	<2	U
541-73-1	* 1,3-Dichlorobenzene	<2	U
95-50-1	* 1,2-Dichlorobenzene	<2	U
106-46-7	* 1,4-Dichlorobenzene	<2	U

Data Reporting Qualifiers

* Indicates 624/8240 approved compound (Federal Register 10/26/84)
** Indicates US EPA CLP Hazardous Substance List Compound (HSL)
No indication refers to compounds added by Anametrix, Inc.
For reporting purposes, the following qualifiers are used:
Value + : Indicates a value greater than the instrument detection limit.
U : Indicates instrument detection limit.

Form 1-10.

EMCON
DEC 11 1986

ANAMETRIX
GC/MS SPECIALISTS
ENVIRONMENTAL • ANALYTICAL SERVICES
2754 AIELLO DRIVE • SAN JOSE, CA 95111 • (408) 629-1132

December 11, 1986
Work Order Number 8612012
Date Received 12/10/86
PO No. 12507

Keoni Murphy
Emcon Associates
1921 Ringwood Avenue
San Jose, CA 95131

Four soil samples were received for analysis of volatiles by GC/MS, using the following EPA method(s):

ANAMETRIX I.D.	SAMPLE I.D.	METHOD(S)	DATE SAMPLED	DATE ANALYZED
8612012-01	243-01.01 L-11 3'	8240	12/09/86	12/10/86
-02	" L-11 5'	"	"	"
-03	" L-12 3'	"	"	"
-04	" L-12 5'	"	"	"

RESULTS

See enclosed data sheets, Forms 1-1 thru 1-4.

EXTRA COMPOUNDS

See enclosed data sheets, Forms 2-1 thru 2-2.

If there is any more that we can do, please give us a call. Thank you for using ANAMETRIX.

Sincerely,

Burt Sutherland

Burt Sutherland
Laboratory Manager

ANAMETRIX, INC. (408) 629-1132
2754 AIELLO DRIVE, SAN JOSE, CA 95111

ORGANICS ANALYSIS DATA SHEET - VOLATILE COMPOUNDS

Lab Name :243-01.01 L-11 3' Case No:NA
Lab ID # :8612012-01 Tape # :NA
Matrix :SOIL Rcv'd :12/10/86
Released : 12/11/86 Analyst:BWS BWS

CAS #		ug/kg	
74-87-3	* Chloromethane	<7	U
74-83-9	* Bromomethane	<7	U
75-01-4	* Vinyl Chloride	<7	U
75-00-3	* Chloroethane	<7	U
75-09-2	* Methylene Chloride	<2	U
67-64-1	**Acetone	<10	U
79-69-4	* Trichlorofluoromethane	<2	U
75-15-0	**Carbondisulfide	<2	U
75-35-4	* 1,1-Dichloroethene	<2	U
75-34-3	* 1,1-Dichloroethane	<2	U
156-60-5	* Trans-1,2-Dichloroethene	<2	U
67-66-3	* Chloroform	<2	U
76-13-1	Trichlorotrifluoroethane	<2	U
107-06-2	* 1,2-Dichloroethane	<2	U
78-93-3	**2-Butanone	<10	U
71-55-6	* 1,1,1-Trichloroethane	4	+
56-23-5	* Carbon Tetrachloride	<2	U
108-05-4	**Vinyl Acetate	<10	U
75-27-4	* Bromodichloromethane	<2	U
78-87-5	* 1,2-Dichloropropane	<2	U
10061-02-6	* Trans-1,3-Dichloropropene	<2	U
79-01-6	* Trichloroethene	<2	U
124-48-1	* Dibromochloromethane	<2	U
79-00-5	* 1,1,2-Trichloroethane	<2	U
71-43-2	* Benzene	<2	U
10061-01-5	* cis-1,3-Dichloropropene	<2	U
110-75-8	* 2-Chloroethylvinylether	<2	U
75-25-2	* Bromoform	<2	U
591-78-6	**2-Hexanone	<10	U
108-10-1	**4-Methyl-2-Pentanone	<10	U
127-18-4	* Tetrachloroethene	220	+
79-34-5	* 1,1,2,2-Tetrachloroethane	<2	U
108-88-3	* Toluene	36	+
108-90-7	* Chlorobenzene	<2	U
100-41-4	* Ethylbenzene	<2	U
100-42-5	**Styrene	<2	U
	**Total Xylenes	<2	U
541-73-1	* 1,3-Dichlorobenzene	<2	U
95-50-1	* 1,2-Dichlorobenzene	<2	U
106-46-7	* 1,4-Dichlorobenzene	<2	U

Data Reporting Qualifiers

* Indicates 624/8240 approved compound (Federal Register 10/26/84)
** Indicates US EPA CLP Hazardous Substance List Compound (HSL)
No indication refers to compounds added by Anametrix, Inc.
For reporting purposes, the following qualifiers are used:
Value + : Indicates a value greater than the instrument detection limit.
U : Indicates instrument detection limit.

Form 1-1.

ANAMETRIX, INC. (408) 629-1132
2754 AIELLO DRIVE, SAN JOSE, CA 95111

ORGANICS ANALYSIS DATA SHEET - VOLATILE COMPOUNDS

Lab Name :243-01.01 L-11 5' Case No:NA
Lab ID # :8612012-02 Tape # :NA
Matrix :SOIL Rcv'd :12/10/86
Released : 12/11/86 Analyst:BWS BWS

CAS #		ug/kg	
74-87-3	* Chloromethane	<7	U
74-83-9	* Bromomethane	<7	U
75-01-4	* Vinyl Chloride	<7	U
75-00-3	* Chloroethane	<7	U
75-09-2	* Methylene Chloride	<2	U
67-64-1	**Acetone	<10	U
79-69-4	* Trichlorofluoromethane	<2	U
75-15-0	**Carbondisulfide	<2	U
75-35-4	* 1,1-Dichloroethene	<2	U
75-34-3	* 1,1-Dichloroethane	<2	U
156-60-5	* Trans-1,2-Dichloroethene	<2	U
67-66-3	* Chloroform	<2	U
76-13-1	Trichlorotrifluoroethane	<2	U
107-06-2	* 1,2-Dichloroethane	<2	U
78-93-3	**2-Butanone	<10	U
71-55-6	* 1,1,1-Trichloroethane	12	+
56-23-5	* Carbon Tetrachloride	<2	U
108-05-4	**Vinyl Acetate	<10	U
75-27-4	* Bromodichloromethane	<2	U
78-87-5	* 1,2-Dichloropropane	<2	U
10061-02-6	* Trans-1,3-Dichloropropene	<2	U
79-01-6	* Trichloroethene	<2	U
124-48-1	* Dibromochloromethane	<2	U
79-00-5	* 1,1,2-Trichloroethane	<2	U
71-43-2	* Benzene	<2	U
10061-01-5	* cis-1,3-Dichloropropene	<2	U
110-75-8	* 2-Chloroethylvinylether	<2	U
75-25-2	* Bromoform	<2	U
591-78-6	**2-Hexanone	<10	U
108-10-1	**4-Methyl-2-Pentanone	<10	U
127-18-4	* Tetrachloroethene	130	+
79-34-5	* 1,1,2,2-Tetrachloroethane	<2	U
108-88-3	* Toluene	35	+
108-90-7	* Chlorobenzene	<2	U
100-41-4	* Ethylbenzene	<2	U
100-42-5	**Styrene	<2	U
	**Total Xylenes	<2	U
541-73-1	* 1,3-Dichlorobenzene	<2	U
95-50-1	* 1,2-Dichlorobenzene	<2	U
106-46-7	* 1,4-Dichlorobenzene	<2	U

Data Reporting Qualifiers

* Indicates 624/8240 approved compound (Federal Register 10/26/84)
** Indicates US EPA CLP Hazardous Substance List Compound (HSL)
No indication refers to compounds added by Anametrix, Inc.
For reporting purposes, the following qualifiers are used:
Value + : Indicates a value greater than the instrument detection limit.
U : Indicates instrument detection limit.

Form 1-2.

ANAMETRIX, INC. (408) 629-1132
2754 AIELLO DRIVE, SAN JOSE, CA 95111

ORGANICS ANALYSIS DATA SHEET - VOLATILE COMPOUNDS

Lab Name :243-01.01 L-12 3'
Lab ID # :8612012-03
Matrix :SOIL
Released : 12/11/86

Case No:NA
Tape # :NA
Rcv'd :12/10/86
Analyst:BWS BWS

CAS #		ug/kg	
74-87-3	* Chloromethane	<7	U
74-83-9	* Bromomethane	<7	U
75-01-4	* Vinyl Chloride	<7	U
75-00-3	* Chloroethane	<7	U
75-09-2	* Methylene Chloride	<2	U
67-64-1	**Acetone	<10	U
79-69-4	* Trichlorofluoromethane	<2	U
75-15-0	**Carbondisulfide	<2	U
75-35-4	* 1,1-Dichloroethene	<2	U
75-34-3	* 1,1-Dichloroethane	<2	U
156-60-5	* Trans-1,2-Dichloroethene	<2	U
67-66-3	* Chloroform	<2	U
76-13-1	Trichlorotrifluoroethane	<2	U
107-06-2	* 1,2-Dichloroethane	<2	U
78-93-3	**2-Butanone	<10	U
71-55-6	* 1,1,1-Trichloroethane	<2	U
56-23-5	* Carbon Tetrachloride	<2	U
108-05-4	**Vinyl Acetate	<10	U
75-27-4	* Bromodichloromethane	<2	U
78-87-5	* 1,2-Dichloropropane	<2	U
10061-02-6	* Trans-1,3-Dichloropropene	<2	U
79-01-6	* Trichloroethene	<2	U
124-48-1	* Dibromochloromethane	<2	U
79-00-5	* 1,1,2-Trichloroethane	<2	U
71-43-2	* Benzene	<2	U
10061-01-5	* cis-1,3-Dichloropropene	<2	U
110-75-8	* 2-Chloroethylvinylether	<2	U
75-25-2	* Bromoform	<2	U
591-78-6	**2-Hexanone	<10	U
108-10-1	**4-Methyl-2-Pentanone	<10	U
127-18-4	* Tetrachloroethene	4	+
79-34-5	* 1,1,2,2-Tetrachloroethane	<2	U
108-88-3	* Toluene	5	+
108-90-7	* Chlorobenzene	<2	U
100-41-4	* Ethylbenzene	<2	U
100-42-5	**Styrene	<2	U
	**Total Xylenes	<2	U
541-73-1	* 1,3-Dichlorobenzene	<2	U
95-50-1	* 1,2-Dichlorobenzene	<2	U
106-46-7	* 1,4-Dichlorobenzene	<2	U

Data Reporting Qualifiers

* Indicates 624/8240 approved compound (Federal Register 10/26/84)
** Indicates US EPA CLP Hazardous Substance List Compound (HSL)
No indication refers to compounds added by Anametrix, Inc.
For reporting purposes, the following qualifiers are used:
Value + : Indicates a value greater than the instrument detection limit.
U : Indicates instrument detection limit.

Form 1-3.

ANAMETRIX, INC. (408) 629-1132
2754 AIELLO DRIVE, SAN JOSE, CA 95111

ORGANICS ANALYSIS DATA SHEET - VOLATILE COMPOUNDS

Lab Name :243-01.01 L-12 5' Case No:NA
Lab ID # :8612012-04 Tape # :NA
Matrix :SOIL Rcv'd :12/10/86
Released : 12/11/86 Analyst:BWS BWS

CAS #		ug/kg	
74-87-3	* Chloromethane	<7	U
74-83-9	* Bromomethane	<7	U
75-01-4	* Vinyl Chloride	<7	U
75-00-3	* Chloroethane	<7	U
75-09-2	* Methylene Chloride	<2	U
67-64-1	**Acetone	<10	U
79-69-4	* Trichlorofluoromethane	<2	U
75-15-0	**Carbondisulfide	<2	U
75-35-4	* 1,1-Dichloroethene	<2	U
75-34-3	* 1,1-Dichloroethane	<2	U
156-60-5	* Trans-1,2-Dichloroethene	<2	U
67-66-3	* Chloroform	<2	U
76-13-1	Trichlorotrifluoroethane	<2	U
107-06-2	* 1,2-Dichloroethane	<2	U
78-93-3	**2-Butanone	<10	U
71-55-6	* 1,1,1-Trichloroethane	3	+
56-23-5	* Carbon Tetrachloride	<2	U
108-05-4	**Vinyl Acetate	<10	U
75-27-4	* Bromodichloromethane	<2	U
78-87-5	* 1,2-Dichloropropane	<2	U
10061-02-6	* Trans-1,3-Dichloropropene	<2	U
79-01-6	* Trichloroethene	<2	U
124-48-1	* Dibromochloromethane	<2	U
79-00-5	* 1,1,2-Trichloroethane	<2	U
71-43-2	* Benzene	<2	U
10061-01-5	* cis-1,3-Dichloropropene	<2	U
110-75-8	* 2-Chloroethylvinylether	<2	U
75-25-2	* Bromoform	<2	U
591-78-6	**2-Hexanone	<10	U
108-10-1	**4-Methyl-2-Pentanone	<10	U
127-18-4	* Tetrachloroethene	16	+
79-34-5	* 1,1,2,2-Tetrachloroethane	<2	U
108-88-3	* Toluene	9	+
108-90-7	* Chlorobenzene	<2	U
100-41-4	* Ethylbenzene	<2	U
100-42-5	**Styrene	<2	U
	**Total Xylenes	<2	U
541-73-1	* 1,3-Dichlorobenzene	<2	U
95-50-1	* 1,2-Dichlorobenzene	<2	U
106-46-7	* 1,4-Dichlorobenzene	<2	U

Data Reporting Qualifiers

* Indicates 624/8240 approved compound (Federal Register 10/26/84)
** Indicates US EPA CLP Hazardous Substance List Compound (HSL)
No indication refers to compounds added by Anametrix, Inc.
For reporting purposes, the following qualifiers are used:
Value + : Indicates a value greater than the instrument detection limit.
U : Indicates instrument detection limit.

Form 1-4.

ORGANICS ANALYSIS DATA SHEET
Tentatively Identified Extra Compounds

CLIENT ID: 243-01.01 L-11 3' ANAMETRIX NO: 8612012-01

SCAN #	NAME	Estimated Concentration UG/KG
442	unknown	40

Form 2-1.

ORGANICS ANALYSIS DATA SHEET
Tentatively Identified Extra Compounds

CLIENT ID: 243-01.01 L-12 5' ANAMETRIX NO: 8612012-04

SCAN #	NAME	Estimated Concentration UG/KG
113	unknown	7

Form 2-2.

APPENDIX A.3

LABORATORY REPORTS FOR THE 1988 ENRAC EXCAVATION AND SAMPLING

BROWN AND CALDWELL
PASADENA, CALIFORNIA

LABORATO
ORD

PAGE 1

ORDER DATE 12 JUL 88
PRINT DATE 12 JUL 88 11:04PM

ORDER NO P88-07-1

LABORATORY ORDER
ACKNOWLEDGEMENT
CUSTOMER COPY

REPORT TO: Chemical Waste Management
5445 E. La Palma Ave.
Anaheim, California 92807
ATTN: Chris Hannon

DUE: 14 JU

PHONE: 714/970-797

INVOICE: Chemical Waste Management
5445 E. La Palma Ave.
Anaheim, California 92807
ATTN: Accounts Payable

PO: 30558

PROJECT: 1024.
PHONE: 714/970-797

SAMPLED BY: CLIENT

DELIVERED BY: CLIENT

DISPOSE AFTER 11 AU

ITEM	LOG NUMBER	DESCRIPTION OF SAMPLE	SAMPLED DATE/TIME	RECEIVED	TYP
1	07-192-1	OS-1	12 JUL	12 JUL	S
	07-192-2	OS-2	12 JUL		
	07-192-3	OS-3	12 JUL		
	07-192-4	OS-4	12 JUL		
	07-192-5	OS-5	12 JUL		
	07-192-6	OS-6	12 JUL		
	07-192-7	OS-7	12 JUL		
	07-192-8	OS-8	12 JUL		
	07-192-9	OS-9	12 JUL		
	07-192-10	OS-10	12 JUL		
	07-192-11	OS-11	12 JUL		
	07-192-12	OS-11A	12 JUL		

DETERMINATION	CODE	DEPT	QTY	PRICE	AMOUNT
Vol.Pri.Poll. (EPA-8240)	8240.HSL	MS	12	412.50	4950.00

ITEM NOTES: RUSH SAMPLE , NEEDED BY 14 JUL

ORDER NOTE: DO NOT START WORK WITHOUT A PO NUMBER FROM CLIENT
THIS IS AT CLIENTS REQUEST
P.O. AND PROJECT # MUST BE ON THE INVOICE. 3.28.88

INVOICE TO READ:

TOTAL AMOUNT DUE $4,950.00
INVOICE: WITH REPORT

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE PASADENA, CA 91105 • (818) 795-7553 • FAX (818) 795-8579

ANALYTICAL REPORT

LOG NO: P88-07-192

Received: 12 JUL 88
Reported: 14 JUL 88

Chris Hannon
Chemical Waste Management, Enrac-Anaheim
5445 E. La Palma Ave.
Anaheim, California 92807

Purchase Order: 305584

Project: 1024.1

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-192-1	OS-1	12 JUL 88
07-192-2	OS-2	12 JUL 88
07-192-3	OS-3	12 JUL 88
07-192-4	OS-4	12 JUL 88
07-192-5	OS-5	12 JUL 88

PARAMETER	07-192-1	07-192-2	07-192-3	07-192-4	07-192-5
Vol.Pri.Poll. (EPA-8240)					
Date Extracted	07/12/88	07/12/88	07/12/88	07/12/88	07/12/88
Dilution Factor, Times 1	1	1	1	1	1
1,1,1-Trichloroethane, mg/kg	2.5	<0.3	<0.3	<0.3	<0.3
1,1,2,2-Tetrachloroethane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
1,1,2-Trichloroethane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
1,1-Dichloroethane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
1,1-Dichloroethylene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
1,2-Dichloroethane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
1,2-Dichlorobenzene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
1,2-Dichloropropane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
1,3-Dichlorobenzene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,3-Dichloropropene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
1,4-Dichlorobenzene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
2-Chloroethylvinylether, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
2-Hexanone, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Acetone, mg/kg	<3	<3	<3	<3	<3
Acrolein, mg/kg	<3	<3	<3	<3	<3
Acrylonitrile, mg/kg	<3	<3	<3	<3	<3
Bromodichloromethane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Bromomethane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Benzene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Chlorobenzene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE PASADENA, CA 91105 • (818) 795-7553 • FAX (818) 795-8579

ANALYTICAL REPORT

LOG NO: P88-07-192

Received: 12 JUL 88
Reported: 14 JUL 88

Chris Hannon
Chemical Waste Management, Enrac-Anaheim
5445 E. La Palma Ave.
Anaheim, California 92807

Purchase Order: 305584

Project: 1024.1

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-192-1	OS-1	12 JUL 88
07-192-2	OS-2	12 JUL 88
07-192-3	OS-3	12 JUL 88
07-192-4	OS-4	12 JUL 88
07-192-5	OS-5	12 JUL 88

PARAMETER	07-192-1	07-192-2	07-192-3	07-192-4	07-192-5
Carbon Tetrachloride, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Chloroethane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Bromoform, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Chloroform, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Chloromethane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Carbon Disulfide, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Dibromochloromethane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Ethylbenzene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Freon 113, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Methyl Isobutyl Ketone, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Methyl Ethyl Ketone, mg/kg	<3	<3	<3	<3	<3
Methylene Chloride, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Tetrachloroethylene, mg/kg	6.4	2.3	6.8	0.3	<0.3
Styrene, mg/kg	0.3	<0.3	<0.3	<0.3	<0.3
Trichloroethylene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Trichlorofluoromethane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Toluene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Vinyl Acetate, mg/kg	<3	<3	<3	<3	<3
Vinyl Chloride, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Total Xylene Isomers, mg/kg	<3	<3	<3	<3	<3
trans-1,2-Dichloroethylene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
trans-1,3-Dichloropropene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE PASADENA, CA 91105 • (818) 795-7553 • FAX (818) 795-8579

ANALYTICAL REPORT

LOG NO: P88-07-192

Received: 12 JUL 88
Reported: 14 JUL 88

Chris Hannon
Chemical Waste Management, Enrac-Anaheim
5445 E. La Palma Ave.
Anaheim, California 92807

Purchase Order: 305584

Project: 1024.1

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-192-6	OS-6	12 JUL 88
07-192-7	OS-7	12 JUL 88
07-192-8	OS-8	12 JUL 88
07-192-9	OS-9	12 JUL 88
07-192-10	OS-10	12 JUL 88

PARAMETER	07-192-6	07-192-7	07-192-8	07-192-9	07-192-10
Vol.Pri.Poll. (EPA-8240)					
Date Extracted	07/12/88	07/12/88	07/12/88	07/12/88	07/12/88
Dilution Factor, Times 1	1	1	1	1	1
1,1,1-Trichloroethane, mg/kg	<0.3	<0.3	<0.3	0.3	0.8
1,1,2,2-Tetrachloroethane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
1,1,2-Trichloroethane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
1,1-Dichloroethane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
1,1-Dichloroethylene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
1,2-Dichloroethane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
1,2-Dichlorobenzene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
1,2-Dichloropropane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
1,3-Dichlorobenzene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,3-Dichloropropene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
1,4-Dichlorobenzene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
2-Chloroethylvinylether, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
2-Hexanone, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Acetone, mg/kg	<3	<3	<3	<3	<3
Acrolein, mg/kg	<3	<3	<3	<3	<3
Acrylonitrile, mg/kg	<3	<3	<3	<3	<3
Bromodichloromethane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Bromomethane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Benzene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Chlorobenzene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE PASADENA, CA 91105 • (818) 795-7553 • FAX (818) 795-8579

ANALYTICAL REPORT

LOG NO: P88-07-192

Received: 12 JUL 88
Reported: 14 JUL 88

Chris Hannon
Chemical Waste Management, Enrac-Anaheim
5445 E. La Palma Ave.
Anaheim, California 92807

Purchase Order: 305584

Project: 1024.1

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-192-6	OS-6	12 JUL 88
07-192-7	OS-7	12 JUL 88
07-192-8	OS-8	12 JUL 88
07-192-9	OS-9	12 JUL 88
07-192-10	OS-10	12 JUL 88

PARAMETER	07-192-6	07-192-7	07-192-8	07-192-9	07-192-10
Carbon Tetrachloride, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Chloroethane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Bromoform, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Chloroform, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Chloromethane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Carbon Disulfide, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Dibromochloromethane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Ethylbenzene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Freon 113, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Methyl Isobutyl Ketone, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Methyl Ethyl Ketone, mg/kg	<3	<3	<3	<3	<3
Methylene Chloride, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Tetrachloroethylene, mg/kg	<0.3	<0.3	<0.3	12	24
Styrene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Trichloroethylene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Trichlorofluoromethane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Toluene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Vinyl Acetate, mg/kg	<3	<3	<3	<3	<3
Vinyl Chloride, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Total Xylene Isomers, mg/kg	<3	<3	<3	<3	<3
trans-1,2-Dichloroethylene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
trans-1,3-Dichloropropene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3

BROWN AND CALDWELL LABORATORIES
373 SOUTH FAIR OAKS AVENUE PASADENA, CA 91105 • (818) 795-7553 • FAX (818) 795-8579

ANALYTICAL REPORT

LOG NO: P88-07-192

Received: 12 JUL 88
Reported: 14 JUL 88

Chris Hannon
Chemical Waste Management, Enrac-Anaheim
5445 E. La Palma Ave.
Anaheim, California 92807

Purchase Order: 305584

Project: 1024.1

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-192-11	OS-11	12 JUL 88
07-192-12	OS-11A	12 JUL 88

PARAMETER	07-192-11	07-192-12
Vol.Pri.Poll. (EPA-8240)		
Date Extracted	07/12/88	07/12/88
Dilution Factor, Times 1	1	1
1,1,1-Trichloroethane, mg/kg	<0.3	<0.3
1,1,2,2-Tetrachloroethane, mg/kg	<0.3	<0.3
1,1,2-Trichloroethane, mg/kg	<0.3	<0.3
1,1-Dichloroethane, mg/kg	<0.3	<0.3
1,1-Dichloroethylene, mg/kg	<0.3	<0.3
1,2-Dichloroethane, mg/kg	<0.3	<0.3
1,2-Dichlorobenzene, mg/kg	<0.3	<0.3
1,2-Dichloropropane, mg/kg	<0.3	<0.3
1,3-Dichlorobenzene, mg/kg	<0.3	<0.3
cis-1,3-Dichloropropene, mg/kg	<0.3	<0.3
1,4-Dichlorobenzene, mg/kg	<0.3	<0.3
2-Chloroethylvinylether, mg/kg	<0.3	<0.3
2-Hexanone, mg/kg	<0.3	<0.3
Acetone, mg/kg	<0.3	<0.3
Acrolein, mg/kg	<3	<3
Acrylonitrile, mg/kg	<3	<3
Bromodichloromethane, mg/kg	<3	<3
Bromomethane, mg/kg	<0.3	<0.3
Benzene, mg/kg	<0.3	<0.3
Chlorobenzene, mg/kg	<0.3	<0.3
Carbon Tetrachloride, mg/kg	<0.3	<0.3
Chloroethane, mg/kg	<0.3	<0.3
Bromoform, mg/kg	<0.3	<0.3

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE PASADENA, CA 91105 • (818) 795-7553 • FAX (818) 795-8579

ANALYTICAL REPORT

LOG NO: P88-07-192

Received: 12 JUL 88
Reported: 14 JUL 88

Chris Hannon
Chemical Waste Management, Enrac-Anaheim
5445 E. La Palma Ave.
Anaheim, California 92807

Purchase Order: 305584

Project: 1024.1

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-192-11	OS-11	12 JUL 88
07-192-12	OS-11A	12 JUL 88

PARAMETER	07-192-11	07-192-12
Chloroform, mg/kg	<0.3	<0.3
Chloromethane, mg/kg	<0.3	<0.3
Carbon Disulfide, mg/kg	<0.3	<0.3
Dibromochloromethane, mg/kg	<0.3	<0.3
Ethylbenzene, mg/kg	<0.3	<0.3
Freon 113, mg/kg	<0.3	<0.3
Methyl Isobutyl Ketone, mg/kg	<0.3	<0.3
Methyl Ethyl Ketone, mg/kg	<3	<3
Methylene Chloride, mg/kg	<0.3	<0.3
Tetrachloroethylene, mg/kg	0.7	0.4
Styrene, mg/kg	<0.3	<0.3
Trichloroethylene, mg/kg	<0.3	<0.3
Trichlorofluoromethane, mg/kg	<0.3	<0.3
Toluene, mg/kg	<0.3	<0.3
Vinyl Acetate, mg/kg	<3	<3
Vinyl Chloride, mg/kg	<0.3	<0.3
Total Xylene Isomers, mg/kg	<3	<3
trans-1,2-Dichloroethylene, mg/kg	<0.3	<0.3
trans-1,3-Dichloropropene, mg/kg	<0.3	<0.3

Jeffrey A. Erion, Laboratory Manager

BROWN AND CALDWELL
PASADENA, CALIFORNIA

LABORATO:
ORD:

PAGE 1

ORDER DATE 12 JUL 88
PRINT DATE 12 JUL 88 11:19PM

ORDER NO P88-07-1

LABORATORY ORDER
ACKNOWLEDGEMENT
CUSTOMER COPY

DUE: 26 JU

PORT TO: Chemical Waste Management
5445 E. La Palma Ave.
Anaheim, California 92807
ATTN: Chris Hannon

PHONE: 714/970-79

INVOICE: Chemical Waste Management
5445 E. La Palma Ave.
Anaheim, California 92807
ATTN: Accounts Payable

PO: 30558

PROJECT: OSC
PHONE: 714/970-79

SAMPLED BY: CLIENT

DELIVERED BY: CLIENT

DISPOSE AFTER 11 AU

ITEM	LOG NUMBER	DESCRIPTION OF SAMPLE	SAMPLED DATE/TIME	RECEIVED	TYP
1	07-193-1	T-1 (CLP)	12 JUL	12 JUL	S
	07-193-2	P-1 (CLP)	12 JUL		
	07-193-3	P-C (CLP)	12 JUL		
	07-193-4	P-2 (CLP)	12 JUL		
	07-193-5	X-1 (CLP)	12 JUL		

DETERMINATION	CODE	DEPT	QTY	PRICE	AMOUNT
Vol.Pri.Poll. (EPA-8240)	8240.HSL	MS	5	275.00	1375.00

DER NOTE: DO NOT START WORK WITHOUT A PO NUMBER FROM CLIENT
THIS IS AT CLIENTS REQUEST
P.O. AND PROJECT # MUST BE ON THE INVOICE. 3.28.88

ICE TO READ:

TOTAL AMOUNT DUE $1,375.00
INVOICE: WITH REPORT

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE PASADENA, CA 91105 • (818) 795-7553 • FAX (818) 795-8579

ANALYTICAL REPORT

LOG NO: P88-07-193

Received: 12 JUL 88
Reported: 27 JUL 88

Chris Hannon
Chemical Waste Management, Enrac-Anaheim
5445 E. La Palma Ave.
Anaheim, California 92807

Purchase Order: 305584

Project: OSCO

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-193-1	T-1 (CLP)	12 JUL 88
07-193-2	P-1 (CLP)	12 JUL 88
07-193-3	P-C (CLP)	12 JUL 88
07-193-4	P-2 (CLP)	12 JUL 88
07-193-5	X-1 (CLP)	12 JUL 88

PARAMETER	07-193-1	07-193-2	07-193-3	07-193-4	07-193-5
Vol.Pri.Poll. (EPA-8240)					
Date Extracted	07/25/88	07/19/88	07/21/88	07/19/88	07/19/88
Dilution Factor, Times 1	1	1	1	1	1
1,1,1-Trichloroethane, mg/kg	0.6	<0.3	<0.3	<0.3	<0.3
1,1,2,2-Tetrachloroethane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
1,1,2-Trichloroethane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
1,1-Dichloroethane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
1,1-Dichloroethylene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
1,2-Dichloroethane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
1,2-Dichlorobenzene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
1,2-Dichloropropane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
1,3-Dichlorobenzene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
cis-1,3-Dichloropropene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
1,4-Dichlorobenzene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
2-Chloroethylvinylether, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
2-Hexanone, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Acetone, mg/kg	<3	<3	<3	<3	<3
Acrolein, mg/kg	<3	<3	<3	<3	<3
Acrylonitrile, mg/kg	<3	<3	<3	<3	<3
Bromodichloromethane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Bromomethane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Benzene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Chlorobenzene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE PASADENA, CA 91105 • (818) 795-7553 • FAX (818) 795-8579

ANALYTICAL REPORT

LOG NO: P88-07-193

Received: 12 JUL 88
Reported: 27 JUL 88

Chris Hannon
Chemical Waste Management, Enrac-Anaheim
5445 E. La Palma Ave.
Anaheim, California 92807

Purchase Order: 305584

Project: OSCO

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-193-1	T-1 (CLP)	12 JUL 88
07-193-2	P-1 (CLP)	12 JUL 88
07-193-3	P-C (CLP)	12 JUL 88
07-193-4	P-2 (CLP)	12 JUL 88
07-193-5	X-1 (CLP)	12 JUL 88

PARAMETER	07-193-1	07-193-2	07-193-3	07-193-4	07-193-5
Carbon Tetrachloride, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Chloroethane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Bromoform, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Chloroform, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Chloromethane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Carbon Disulfide, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Dibromochloromethane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Ethylbenzene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Freon 113, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Methyl Isobutyl Ketone, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Methyl Ethyl Ketone, mg/kg	<3	<3	<3	<3	<3
Methylene Chloride, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Tetrachloroethylene, mg/kg	8.2	0.7	4.6	<0.3	<0.3
Styrene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Trichloroethylene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Trichlorofluoromethane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Toluene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Vinyl Acetate, mg/kg	<3	<3	<3	<3	<3
Vinyl Chloride, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Total Xylene Isomers, mg/kg	<3	<3	<3	<3	<3
trans-1,2-Dichloroethylene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
trans-1,3-Dichloropropene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3

Jeffrey A. Ejion, Laboratory Manager

BROWN AND CALDWELL
PASADENA, CALIFORNIA

LABORATO
ORD

PAGE 1

ORDER DATE 19 JUL 88
PRINT DATE 20 JUL 88 08:30PM

ORDER NO P88-07-4

REPORT TO: Chemical Waste Management
5445 E. La Palma Ave.
Anaheim, California 92807
ATTN: Chris Hannon

DUE: 02 A

PHONE: 800/442-52

INVOICE: Chemical Waste Management
5445 E. La Palma Ave.
Anaheim, California 92807
ATTN: Accounts Payable

LABORATORY ORDER
ACKNOWLEDGEMENT
CUSTOMER COPY

PO: 3055
REQ: 1024

PHONE: 800/442-52

SAMPLED BY: CLIENT

DELIVERED BY: FREIGHT

DISPOSE AFTER 18 A

ITEM	LOG NUMBER	DESCRIPTION OF SAMPLE	SAMPLED DATE/TIME	RECEIVED	TY
1	07-404-1	A-1	19 JUL	19 JUL	
	07-404-2	B-1	19 JUL		
	07-404-3	C-1	19 JUL		
	07-404-4	D-1	19 JUL		
	07-404-5	E-1	19 JUL		
	07-404-6	F-1	19 JUL		
	07-404-7	G-1	19 JUL		
	07-404-8	H-1	19 JUL		

DETERMINATION	CODE	DEPT	QTY	PRICE	AMOUNT
Vol.Halocarbons (EPA-8010)	8010	GC	8	125.00	1000.00

ORDER NOTE: DO NOT START WORK WITHOUT A PO NUMBER FROM CLIENT
THIS IS AT CLIENTS REQUEST
P.O. AND PROJECT # MUST BE ON THE INVOICE. 3.28.88

INVOICE TO READ:

TOTAL AMOUNT DUE $1,000.(
INVOICE: WITH REPOR

LOG NO: P88-07-404

Received: 19 JUL 88
Reported: 09 AUG 88

Chris Hannon
Chemical Waste Management
107 South Motor
Azusa, CA 90702

Purchase Order: 305594

Requisition: 1024.1

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-404-1	A-1	19 JUL 88
07-404-2	B-1	19 JUL 88
07-404-3	C-1	19 JUL 88
07-404-4	D-1	19 JUL 88
07-404-5	E-1	19 JUL 88

PARAMETER	07-404-1	07-404-2	07-404-3	07-404-4	07-404-5
Vol.Halocarbons (EPA-8010)					
Date Extracted	08/03/88	08/02/88	08/02/88	08/02/88	08/03/88
Dilution Factor, Times 1	100	1	1	1	1
1,1,2,2-Tetrachloroethane, ug/kg	<500	<5.0	<5.0	<5.0	<5.0
1,1,2-Trichloroethane, ug/kg	<500	<5.0	<5.0	<5.0	<5.0
1,1-Dichloroethane, ug/kg	<500	<5.0	<5.0	<5.0	<5.0
1,1-Dichloroethene, ug/kg	<500	<5.0	<5.0	<5.0	<5.0
1,2-Dichloroethane, ug/kg	<500	<5.0	<5.0	<5.0	<5.0
trans-1,2-Dichloroethene, ug/kg	<500	<5.0	<5.0	<5.0	<5.0
1,2-Dichloropropane, ug/kg	<500	<5.0	<5.0	<5.0	<5.0
2-Chloroethylvinylether, ug/kg	<500	<5.0	<5.0	<5.0	<5.0
Bromodichloromethane, ug/kg	<500	<5.0	<5.0	<5.0	<5.0
Bromomethane, ug/kg	<500	<5.0	<5.0	<5.0	<5.0
Bromoform, ug/kg	<500	<5.0	<5.0	<5.0	<5.0
Chlorobenzene, ug/kg	<500	<5.0	<5.0	<5.0	<5.0
Carbon Tetrachloride, ug/kg	<500	<5.0	<5.0	<5.0	<5.0
Chloroethane, ug/kg	<500	<5.0	<5.0	<5.0	<5.0
Chloroform, ug/kg	<500	<5.0	<5.0	<5.0	<5.0
Chloromethane, ug/kg	<500	<5.0	<5.0	<5.0	<5.0
Dibromochloromethane, ug/kg	<500	<5.0	<5.0	<5.0	<5.0
Dichlorodifluoromethane, ug/kg	<500	<5.0	<5.0	<5.0	<5.0
Methylene chloride, ug/kg	<500	<5.0	<5.0	<5.0	<5.0
Tetrachloroethene, ug/kg	580	31	29	20	5.7

LOG NO: P88-07-404

Received: 19 JUL 88
Reported: 09 AUG 88

Chris Hannon
Chemical Waste Management
107 South Motor
Azusa, CA 90702

Purchase Order: 305594

Requisition: 1024.1

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-404-1	A-1	19 JUL 88
07-404-2	B-1	19 JUL 88
07-404-3	C-1	19 JUL 88
07-404-4	D-1	19 JUL 88
07-404-5	E-1	19 JUL 88

PARAMETER	07-404-1	07-404-2	07-404-3	07-404-4	07-404-5
1,1,1-Trichloroethane, ug/kg	<500	<5.0	<5.0	<5.0	<5.0
Trichloroethylene, ug/kg	<500	<5.0	<5.0	<5.0	<5.0
Trichlorofluoromethane, ug/kg	<500	<5.0	<5.0	<5.0	<5.0
Vinyl chloride, ug/kg	<500	<5.0	<5.0	<5.0	<5.0
cis-1,3-Dichloropropene, ug/kg	<500	<5.0	<5.0	<5.0	<5.0
trans-1,3-Dichloropropene, ug/kg	<500	<5.0	<5.0	<5.0	<5.0

LOG NO: P88-07-404

Received: 19 JUL 88
Reported: 09 AUG 88

Chris Hannon
Chemical Waste Management
107 South Motor
Azusa, CA 90702

Purchase Order: 305594

Requisition: 1024.1

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-404-6	F-1	19 JUL 88
07-404-7	G-1	19 JUL 88
07-404-8	H-1	19 JUL 88

PARAMETER	07-404-6	07-404-7	07-404-8
Vol.Halocarbons (EPA-8010)			
Date Extracted	07/29/88	08/04/88	08/02/88
Dilution Factor, Times 1	1	100	1
1,1,2,2-Tetrachloroethane, ug/kg	<5.0	<500	<5.0
1,1,2-Trichloroethane, ug/kg	<5.0	<500	<5.0
1,1-Dichloroethane, ug/kg	<5.0	<500	<5.0
1,1-Dichloroethene, ug/kg	<5.0	<500	<5.0
1,2-Dichloroethane, ug/kg	<5.0	<500	<5.0
trans-1,2-Dichloroethene, ug/kg	<5.0	<500	<5.0
1,2-Dichloropropane, ug/kg	<5.0	<500	<5.0
2-Chloroethylvinylether, ug/kg	<5.0	<500	<5.0
Bromodichloromethane, ug/kg	<5.0	<500	<5.0
Bromomethane, ug/kg	<5.0	<500	<5.0
Bromoform, ug/kg	<5.0	<500	<5.0
Chlorobenzene, ug/kg	<5.0	<500	<5.0
Carbon Tetrachloride, ug/kg	<5.0	<500	<5.0
Chloroethane, ug/kg	<5.0	<500	<5.0
Chloroform, ug/kg	<5.0	<500	<5.0
Chloromethane, ug/kg	<5.0	<500	<5.0
Dibromochloromethane, ug/kg	<5.0	<500	<5.0
Dichlorodifluoromethane, ug/kg	<5.0	<500	<5.0
Methylene chloride, ug/kg	<5.0	<500	<5.0
Tetrachloroethene, ug/kg	24	16000	33
1,1,1-Trichloroethane, ug/kg	<5.0	<500	<5.0
Trichloroethylene, ug/kg	<5.0	<500	<5.0

LOG NO: P88-07-404

Received: 19 JUL 88
Reported: 09 AUG 88

Chris Hannon
Chemical Waste Management
107 South Motor
Azusa, CA 90702

Purchase Order: 305594

Requisition: 1024.1

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-404-6	F-1	19 JUL 88
07-404-7	G-1	19 JUL 88
07-404-8	H-1	19 JUL 88

PARAMETER	07-404-6	07-404-7	07-404-8
Trichlorofluoromethane, ug/kg	<5.0	<500	<5.0
Vinyl chloride, ug/kg	<5.0	<500	<5.0
cis-1,3-Dichloropropene, ug/kg	<5.0	<500	<5.0
trans-1,3-Dichloropropene, ug/kg	<5.0	<500	<5.0

Jeffrey A. Brion, Laboratory Manager

BROWN AND CALDWELL
PASADENA, CALIFORNIA

LABORATC
ORI

PAGE 1

ORDER DATE 19 JUL 88
PRINT DATE 20 JUL 88 08:30PM

ORDER NO P88-07-4

REPORT TO: Chemical Waste Management
5445 E. La Palma Ave.
Anaheim, California 92807
ATTN: Chris Hannon

DUE: 02 A

PHONE: 800/442-52

INVOICE: Chemical Waste Management
5445 E. La Palma Ave.
Anaheim, California 92807
ATTN: Accounts Payable

LABORATORY ORDER
ACKNOWLEDGEMENT
CUSTOMER COPY

PO: 3055
REQ: 1024

PHONE: 800/442-52

SAMPLED BY: CLIENT

DELIVERED BY: FREIGHT

DISPOSE AFTER 18 A

ITEM	LOG NUMBER	DESCRIPTION OF SAMPLE	SAMPLED DATE/TIME	RECEIVED	TY
1	07-403-1	SF-1	19 JUL	19 JUL	
	07-403-2	SP-1	19 JUL		
	07-403-3	NF-1	19 JUL		
	07-403-4	NP-1	19 JUL		
	07-403-5	WP-1	19 JUL		
	07-403-6	WP-2	19 JUL		
	07-403-7	WP-3	19 JUL		
	07-403-8	B-1	19 JUL		

DETERMINATION	CODE	DEPT	QTY	PRICE	AMOUNT
Vol.Pri.Poll. (EPA-8240)	8240.HSL	MS	8	275.00	2200.00

ORDER NOTE: DO NOT START WORK WITHOUT A PO NUMBER FROM CLIENT
THIS IS AT CLIENTS REQUEST
P.O. AND PROJECT # MUST BE ON THE INVOICE. 3.28.88

INVOICE TO READ:

TOTAL AMOUNT DUE $2,200.0
INVOICE: WITH REPOR

BROWN AND CALDWELL LABORATORIES
373 SOUTH FAIR OAKS AVENUE PASADENA, CA 91105 • (818) 795-7553 • FAX (818) 795-8579

ANALYTICAL REPORT

LOG NO: P88-07-403

Received: 19 JUL 88
Reported: 27 JUL 88

Chris Hannon
Chemical Waste Management, Enrac-Anaheim
5445 E. La Palma Ave.
Anaheim, California 92807

Purchase Order: 305594

Requisition: 1024.1

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-403-1	SF-1	19 JUL 88
07-403-2	SP-1	19 JUL 88
07-403-3	NF-1	19 JUL 88
07-403-4	NP-1	19 JUL 88
07-403-5	WP-1	19 JUL 88

PARAMETER	07-403-1	07-403-2	07-403-3	07-403-4	07-403-5
Vol.Pri.Poll. (EPA-8240)					
Date Extracted	07/20/88	07/20/88	07/20/88	07/20/88	07/20/88
Dilution Factor, Times 1	2	1	1	1	1
1,1,1-Trichloroethane, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3
1,1,2,2-Tetrachloroethane, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3
1,1,2-Trichloroethane, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3
1,1-Dichloroethane, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3
1,1-Dichloroethylene, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3
1,2-Dichloroethane, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3
1,2-Dichlorobenzene, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3
1,2-Dichloropropane, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3
1,3-Dichlorobenzene, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3
cis-1,3-Dichloropropene, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3
1,4-Dichlorobenzene, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3
2-Chloroethylvinylether, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3
2-Hexanone, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3
Acetone, mg/kg	<6	<3	<3	<3	<3
Acrolein, mg/kg	<0.6	<0.3	<3	<3	<3
Acrylonitrile, mg/kg	<0.6	<0.3	<3	<3	<3
Bromodichloromethane, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3
Bromomethane, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3
Benzene, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3
Chlorobenzene, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3

BROWN AND CALDWELL LABORATORIES

373 SOUTH FAIR OAKS AVENUE PASADENA, CA 91105 • (818) 795-7553 • FAX (818) 795-8579

ANALYTICAL REPORT

LOG NO: P88-07-403

Received: 19 JUL 88
Reported: 27 JUL 88

Chris Hannon
Chemical Waste Management, Enrac-Anaheim
5445 E. La Palma Ave.
Anaheim, California 92807

Purchase Order: 305594

Requisition: 1024.1

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-403-1	SF-1	19 JUL 88
07-403-2	SP-1	19 JUL 88
07-403-3	NF-1	19 JUL 88
07-403-4	NP-1	19 JUL 88
07-403-5	WP-1	19 JUL 88

PARAMETER	07-403-1	07-403-2	07-403-3	07-403-4	07-403-5
Carbon Tetrachloride, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3
Chloroethane, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3
Bromoform, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3
Chloroform, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3
Chloromethane, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3
Carbon Disulfide, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3
Dibromochloromethane, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3
Ethylbenzene, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3
Freon 113, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3
Methyl Isobutyl Ketone, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3
Methyl Ethyl Ketone, mg/kg	<6	<3	<3	<3	<3
Methylene Chloride, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3
Tetrachloroethylene, mg/kg	34	6.7	5.5	8.9	4.7
Styrene, mg/kg	<0.6	<0.3	<0.3	<0.3	0.8
Trichloroethylene, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3
Trichlorofluoromethane, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3
Toluene, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3
Vinyl Acetate, mg/kg	<6	<3	<3	<3	<3
Vinyl Chloride, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3
Total Xylene Isomers, mg/kg	<6	<3	<3	<3	<3
trans-1,2-Dichloroethylene, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3
trans-1,3-Dichloropropene, mg/kg	<0.6	<0.3	<0.3	<0.3	<0.3

BROWN AND CALDWELL LABORATORIES
373 SOUTH FAIR OAKS AVENUE PASADENA, CA 91105 • (818) 795-7553 • FAX (818) 795-8579

ANALYTICAL REPORT

LOG NO: P88-07-403

Received: 19 JUL 88
Reported: 27 JUL 88

Chris Hannon
Chemical Waste Management, Enrac-Anaheim
5445 E. La Palma Ave.
Anaheim, California 92807

Purchase Order: 305594

Requisition: 1024.1

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-403-6	WP-2	19 JUL 88
07-403-7	WP-3	19 JUL 88
07-403-8	B-1	19 JUL 88

PARAMETER	07-403-6	07-403-7	07-403-8
Vol.Pri.Poll. (EPA-8240)			
Date Extracted	07/20/88	07/20/88	07/22/88
Dilution Factor, Times 1	1	1	1
1,1,1-Trichloroethane, mg/kg	<0.3	<0.3	<0.3
1,1,2,2-Tetrachloroethane, mg/kg	<0.3	<0.3	<0.3
1,1,2-Trichloroethane, mg/kg	<0.3	<0.3	<0.3
1,1-Dichloroethane, mg/kg	<0.3	<0.3	<0.3
1,1-Dichloroethylene, mg/kg	<0.3	<0.3	<0.3
1,2-Dichloroethane, mg/kg	<0.3	<0.3	<0.3
1,2-Dichlorobenzene, mg/kg	<0.3	<0.3	<0.3
1,2-Dichloropropane, mg/kg	<0.3	<0.3	<0.3
1,3-Dichlorobenzene, mg/kg	<0.3	<0.3	<0.3
cis-1,3-Dichloropropene, mg/kg	<0.3	<0.3	<0.3
1,4-Dichlorobenzene, mg/kg	<0.3	<0.3	<0.3
2-Chloroethylvinylether, mg/kg	<0.3	<0.3	<0.3
2-Hexanone, mg/kg	<0.3	<0.3	<0.3
Acetone, mg/kg	<3	<3	<3
Acrolein, mg/kg	<3	<3	<3
Acrylonitrile, mg/kg	<3	<3	<3
Bromodichloromethane, mg/kg	<0.3	<0.3	<0.3
Bromomethane, mg/kg	<0.3	<0.3	<0.3
Benzene, mg/kg	<0.3	<0.3	<0.3
Chlorobenzene, mg/kg	<0.3	<0.3	<0.3
Carbon Tetrachloride, mg/kg	<0.3	<0.3	<0.3
Chloroethane, mg/kg	<0.3	<0.3	<0.3

BROWN AND CALDWELL LABORATORIES
373 SOUTH FAIR OAKS AVENUE PASADENA, CA 91105 • (818) 795-7553 • FAX (818) 795-8579

ANALYTICAL REPORT

LOG NO: P88-07-403

Received: 19 JUL 88
Reported: 27 JUL 88

Chris Hannon
Chemical Waste Management, Enrac-Anaheim
5445 E. La Palma Ave.
Anaheim, California 92807

Purchase Order: 305594

Requisition: 1024.1

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-403-6	WP-2	19 JUL 88
07-403-7	WP-3	19 JUL 88
07-403-8	B-1	19 JUL 88

PARAMETER	07-403-6	07-403-7	07-403-8
Bromoform, mg/kg	<0.3	<0.3	<0.3
Chloroform, mg/kg	<0.3	<0.3	<0.3
Chloromethane, mg/kg	<0.3	<0.3	<0.3
Carbon Disulfide, mg/kg	<0.3	<0.3	<0.3
Dibromochloromethane, mg/kg	<0.3	<0.3	<0.3
Ethylbenzene, mg/kg	<0.3	<0.3	<0.3
Freon 113, mg/kg	<0.3	<0.3	<0.3
Methyl Isobutyl Ketone, mg/kg	<0.3	<0.3	<0.3
Methyl Ethyl Ketone, mg/kg	<0.3	<0.3	<0.3
Methylene Chloride, mg/kg	<3	<3	<3
Tetrachloroethylene, mg/kg	<0.3	<0.3	<0.3
Styrene, mg/kg	1.5	5.3	<0.3
Trichloroethylene, mg/kg	<0.3	<0.3	<0.3
Trichlorofluoromethane, mg/kg	<0.3	<0.3	<0.3
Toluene, mg/kg	<0.3	<0.3	<0.3
Vinyl Acetate, mg/kg	<0.3	<0.3	<0.3
Vinyl Chloride, mg/kg	<3	<3	<3
Total Xylene Isomers, mg/kg	<0.3	<0.3	<0.3
trans-1,2-Dichloroethylene, mg/kg	<3	<3	<3
trans-1,3-Dichloropropene, mg/kg	<0.3	<0.3	<0.3

Jeffrey A. Erion, Laboratory Manager

APPENDIX A.4

LABORATORY REPORTS FOR THE RFI SHALLOW SOIL SAMPLING PROGRAM (PHASE IIa)

Key

Test Pit	Sample Designation	Date Sampled
TP-1	T-1	08/08/90
TP-2	T-2	07/25/90
TP-3	T-3	08/08/90
TP-4	T-4	08/08/90
TP-5	T-5	08/09/90
TP-6	T-6	08/09/90
TP-7	T-7	08/09/90
TP-8	T-8	08/08/90
TP-9	T-9	08/08/90
TP-10	T-10	08/07/90
TP-11	T-3	07/24/90
TP-12	T-2	07/24/90
TP-13	T-4	07/24/90
TP-14	T-1	07/24/90

Analytical Report

WESTERN REGION
RECEIVED
AUG 28 1990
C.W.M.I.

LOG NO: A90-07-118

Received: 24 JUL 90
Reported: 02 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 90702

Project: 751-OK-002

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-118-1	T-1-1 14	24 JUL 90
07-118-2	T-2-1 12	24 JUL 90
07-118-3	T-3-1 11	24 JUL 90
07-118-4	T-4-1 13	24 JUL 90

PARAMETER	07-118-1	07-118-2	07-118-3	07-118-4
Beryllium, mg/kg	<0.02	<0.02	<0.02	<0.02
Cadmium, mg/kg	<0.06	0.07	<0.06	<0.06
Chromium, mg/kg	9.7	20	11	6.9
Copper, mg/kg	13	24	17	15
Lead, mg/kg	1.7	17	1.7	3.5
Nickel, mg/kg	8.8	14	8.2	7.9
Silver, mg/kg	<0.2	<0.2	<0.2	<0.2
Thallium, mg/kg	<0.8	9.1	<0.8	6.0
Zinc, mg/kg	24	62	29	29
Antimony, mg/kg	<0.2	<0.2	<0.2	<0.2
Arsenic, mg/kg	3.0	5.1	3.1	3.0
Selenium, mg/kg	1.1	1.2	0.8	1.2
Mercury, mg/kg	<0.2	<0.2	3.2	<0.2
Nitric Acid Digestion with HCl, Date	07/25/90	07/25/90	07/25/90	07/25/90
Nitric Acid Digestion, Date	07/25/90	07/25/90	07/25/90	07/25/90

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

WESTERN REGION
RECEIVED

AUG 28 1990

C.W.M.I.

LOG NO: A90-07-119

Received: 25 JUL 90
Reported: 06 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 90702

Project: RFI-Trenching

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-119-1	T-2, 1-A	25 JUL 90

PARAMETER	07-119-1
Beryllium, mg/kg	<0.02
Cadmium, mg/kg	<0.06
Chromium, mg/kg	11
Copper, mg/kg	14
Lead, mg/kg	2.4
Nickel, mg/kg	6.6
Silver, mg/kg	<0.02
Thallium, mg/kg	<0.8
Zinc, mg/kg	29
Antimony, mg/kg	<0.2
Arsenic, mg/kg	3.2
Selenium, mg/kg	1.0
Mercury, mg/kg	<0.2
Nitric Acid Digestion with HCl	07/30/90
Nitric Acid Digestion, Date	07/30/90

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

STERN REGION
RECEIVED
SEP 06 1990
C.W.M.I.

DUPLICATE

LOG NO: A90-08-055

Received: 08 AUG 90
Reported: 23 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa RFI

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-055-4	T-10,9D	07 AUG 90
08-055-3	T-10,1	07 AUG 90

PARAMETER	08-055-4	08-055-3
Beryllium, mg/kg	<0.02	<0.02
Cadmium, mg/kg	0.07	0.21
Chromium, mg/kg	28	29
Copper, mg/kg	41	30
Lead, mg/kg	9.8	26
Nickel, mg/kg	21	15
Silver, mg/kg	<0.2	<0.2
Thallium, mg/kg	<0.8	<0.8
Zinc, mg/kg	63	56
Antimony, mg/kg	<0.2	<0.2
Arsenic, mg/kg	15	7.7
Selenium, mg/kg	<0.5	0.6
Mercury, mg/kg	<0.2	<0.2
Nitric Acid Digestion with HCl, Date	08/08/90	08/08/90
Nitric Acid Digestion, Date	08/08/90	08/08/90

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

WESTERN REGION
RECEIVED
SEP 06 1990
C.W.M.I.

LOG NO: A90-08-065

Received: 08 AUG 90
Reported: 27 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa RFI

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-065-1	T-9,1	08 AUG 90
08-065-2	T-1,1	08 AUG 90
08-065-3	T-3,1	08 AUG 90
08-065-4	T-8,1	08 AUG 90
08-065-5	T-4,1	08 AUG 90

PARAMETER	08-065-1	08-065-2	08-065-3	08-065-4	08-065-5
Beryllium, mg/kg	<0.02	<0.02	<0.02	<0.02	<0.02
Cadmium, mg/kg	0.07	<0.06	<0.06	<0.06	<0.06
Chromium, mg/kg	15	18	9.3	24	26
Copper, mg/kg	18	20	11	24	29
Lead, mg/kg	10	5.5	<0.8	<0.8	<0.8
Nickel, mg/kg	9	12	9	14	19
Silver, mg/kg	<0.02	<0.02	<0.02	<0.02	<0.02
Thallium, mg/kg	<0.8	<0.8	<0.8	<0.8	<0.8
Zinc, mg/kg	40	56	26	48	42
Antimony, mg/kg	<0.2	<0.2	0.5	<0.2	<0.2
Arsenic, mg/kg	2.8	2.2	1.9	2.9	3.2
Selenium, mg/kg	0.7	0.6	0.5	<0.4	0.8
Mercury, mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Nitric Acid Digestion with HCl, Date	08/16/90	08/16/90	08/16/90	08/16/90	08/16/90
Nitric Acid Digestion, Date	08/16/90	08/16/90	08/16/90	08/16/90	08/16/90

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-065

Received: 08 AUG 90
Reported: 27 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa RFI

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-065-6	T-5,1	08 AUG 90
08-065-7	T-5,9D	08 AUG 90

PARAMETER	08-065-6	08-065-7
Beryllium, mg/kg	<0.02	<0.02
Cadmium, mg/kg	<0.06	<0.06
Chromium, mg/kg	17	18
Copper, mg/kg	220	270
Lead, mg/kg	<0.8	<0.8
Nickel, mg/kg	13	11
Silver, mg/kg	<0.02	<0.02
Thallium, mg/kg	<0.8	<0.8
Zinc, mg/kg	22	16
Antimony, mg/kg	<0.2	<0.2
Arsenic, mg/kg	2.4	2.2
Selenium, mg/kg	0.6	0.7
Mercury, mg/kg	<0.2	<0.2
Nitric Acid Digestion with HCl, Date	08/16/90	08/16/90
Nitric Acid Digestion, Date	08/16/90	08/16/90

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

WESTERN REGION
RECEIVED
SEP 06 1990
C.W.M.I.

LOG NO: A90-08-077

Received: 10 AUG 90
Reported: 24 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-077-1	T-6,1A	09 AUG 90
08-077-2	T-7,1A	09 AUG 90
08-077-3	T-6,9,DA	09 AUG 90

PARAMETER	08-077-1	08-077-2	08-077-3
Beryllium, mg/kg	<0.02	<0.02	<0.02
Cadmium, mg/kg	<0.06	<0.06	2.8
Chromium, mg/kg	11	17	42
Copper, mg/kg	12	20	65
Lead, mg/kg	4.1	10	100
Nickel, mg/kg	4	10	15
Silver, mg/kg	<0.02	<0.02	<0.02
Thallium, mg/kg	<0.8	<0.8	<0.8
Zinc, mg/kg	34	54	140
Antimony, mg/kg	<0.2	<0.2	<0.2
Arsenic, mg/kg	1.4	1.4	4.6
Selenium, mg/kg	<0.4	<0.4	1.0
Mercury, mg/kg	<0.2	<0.2	<0.2
Nitric Acid Digestion with HCl, Date	08/16/90	08/16/90	08/16/90
Nitric Acid Digestion, Date	08/16/90	08/16/90	08/16/90

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-07-118

Received: 24 JUL 90
Reported: 02 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 90702

Project: 751-OK-002

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-118-1	T-1-1	24 JUL 90
07-118-2	T-2-1	24 JUL 90
07-118-3	T-3-1	24 JUL 90
07-118-4	T-4-1	24 JUL 90

PARAMETER	07-118-1	07-118-2	07-118-3	07-118-4
B/N,A Ext.Pri.Poll. (EPA-8270)				
Date Analyzed	08/01/90	08/01/90	08/01/90	08/01/90
Date Extracted	07/31/90	07/31/90	07/31/90	07/31/90
Dilution Factor, Times	1	1	1	1
1,2,4-Trichlorobenzene, mg/kg	<0.3	<0.3	<0.3	<0.3
1,2-Dichlorobenzene, mg/kg	<0.3	<0.3	<0.3	<0.3
1,2-Diphenylhydrazine, mg/kg	<0.3	<0.3	<0.3	<0.3
1,3-Dichlorobenzene, mg/kg	<0.3	<0.3	<0.3	<0.3
1,4-Dichlorobenzene, mg/kg	<0.3	<0.3	<0.3	<0.3
2,4,5-Trichlorophenol, mg/kg	<0.3	<0.3	<0.3	<0.3
2,4,6-Trichlorophenol, mg/kg	<0.3	<0.3	<0.3	<0.3
2,4-Dichlorophenol, mg/kg	<0.3	<0.3	<0.3	<0.3
2,4-Dimethylphenol, mg/kg	<0.3	<0.3	<0.3	<0.3
2,4-Dinitrophenol, mg/kg	<0.8	<0.8	<0.8	<0.8
2,4-Dinitrotoluene, mg/kg	<0.3	<0.3	<0.3	<0.3
2,6-Dinitrotoluene, mg/kg	<0.3	<0.3	<0.3	<0.3
2-Chloronaphthalene, mg/kg	<0.3	<0.3	<0.3	<0.3
2-Chlorophenol, mg/kg	<0.3	<0.3	<0.3	<0.3
2-Methyl-4,6-dinitrophenol, mg/kg	<2	<2	<2	<2
2-Methylnaphthalene, mg/kg	<0.3	<0.3	<0.3	<0.3
2-Methylphenol, mg/kg	<0.3	<0.3	<0.3	<0.3
2-Nitroaniline, mg/kg	<2	<2	<2	<2
2-Nitrophenol, mg/kg	<0.3	<0.3	<0.3	<0.3
3,3'-Dichlorobenzidine, mg/kg	<0.3	<0.3	<0.3	<0.3

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-07-118

Received: 24 JUL 90
Reported: 02 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 90702

Project: 751-OK-002

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-118-1	T-1-1	24 JUL 90
07-118-2	T-2-1	24 JUL 90
07-118-3	T-3-1	24 JUL 90
07-118-4	T-4-1	24 JUL 90

PARAMETER	07-118-1	07-118-2	07-118-3	07-118-4
3-Nitroaniline, mg/kg	<2	<2	<2	<2
4-Bromophenylphenylether, mg/kg	<0.3	<0.3	<0.3	<0.3
4-Chloro-3-methylphenol, mg/kg	<0.3	<0.3	<0.3	<0.3
4-Chloroaniline, mg/kg	<0.6	<0.6	<0.6	<0.6
4-Chlorophenylphenylether, mg/kg	<0.3	<0.3	<0.3	<0.3
4-Methylphenol, mg/kg	<0.3	<0.3	<0.3	<0.3
4-Nitroaniline, mg/kg	<2	<2	<2	<2
4-Nitrophenol, mg/kg	<0.8	<0.8	<0.8	<0.8
Acenaphthene, mg/kg	<0.3	<0.3	<0.3	<0.3
Acenaphthylene, mg/kg	<0.3	<0.3	<0.3	<0.3
Aniline, mg/kg	<0.6	<0.6	<0.6	<0.6
Anthracene, mg/kg	<0.3	<0.3	<0.3	<0.3
Benzidine, mg/kg	<1	<1	<1	<1
Benzo(a)anthracene, mg/kg	<0.3	<0.3	<0.3	<0.3
Benzo(a)pyrene, mg/kg	<0.3	<0.3	<0.3	<0.3
Benzo(b)fluoranthene, mg/kg	<0.3	<0.3	<0.3	<0.3
Benzo(g,h,i)perylene, mg/kg	<0.3	<0.3	<0.3	<0.3
Benzo(k)fluoranthene, mg/kg	<0.3	<0.3	<0.3	<0.3
Benzyl Alcohol, mg/kg	<0.6	<0.6	<0.6	<0.6
Benzoic acid, mg/kg	<2	<2	<2	<2
Butylbenzylphthalate, mg/kg	<0.3	<0.3	<0.3	<0.3
Chrysene, mg/kg	<0.3	<0.3	<0.3	<0.3
Di-n-octylphthalate, mg/kg	<0.3	<0.3	<0.3	<0.3
Dibenzo(a,h)anthracene, mg/kg	<0.3	<0.3	<0.3	<0.3

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-07-118

Received: 24 JUL 90
Reported: 02 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 90702

Project: 751-OK-002

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-118-1	T-1-1	24 JUL 90
07-118-2	T-2-1	24 JUL 90
07-118-3	T-3-1	24 JUL 90
07-118-4	T-4-1	24 JUL 90

PARAMETER	07-118-1	07-118-2	07-118-3	07-118-4
Dibenzofuran, mg/kg	<0.3	<0.3	<0.3	<0.3
Dibutylphthalate, mg/kg	<2	<2	<2	<2
Diethylphthalate, mg/kg	<0.3	<0.3	<0.3	<0.3
Dimethylphthalate, mg/kg	<0.8	<0.8	<0.8	<0.8
Fluoranthene, mg/kg	<0.3	<0.3	<0.3	<0.3
Fluorene, mg/kg	<0.3	<0.3	<0.3	<0.3
Hexachlorobenzene, mg/kg	<0.3	<0.3	<0.3	<0.3
Hexachlorobutadiene, mg/kg	<0.3	<0.3	<0.3	<0.3
Hexachlorocyclopentadiene, mg/kg	<0.3	<0.3	<0.3	<0.3
Hexachloroethane, mg/kg	<0.3	<0.3	<0.3	<0.3
Indeno(1,2,3-c,d)pyrene, mg/kg	<0.3	<0.3	<0.3	<0.3
Isophorone, mg/kg	<0.3	<0.3	<0.3	<0.3
N-Nitrosodimethylamine, mg/kg	<2	<2	<2	<2
N-Nitrosodiphenylamine, mg/kg	<0.3	<0.3	<0.3	<0.3
N-Nitrosodi-n-propylamine, mg/kg	<1	<1	<1	<1
Nitrobenzene, mg/kg	<0.3	<0.3	<0.3	<0.3
Naphthalene, mg/kg	<0.3	<0.3	<0.3	<0.3
Phenanthrene, mg/kg	<0.3	<0.3	<0.3	<0.3
Phenol, mg/kg	<0.3	<0.3	<0.3	<0.3
Pentachlorophenol, mg/kg	<0.3	<0.3	<0.3	<0.3
Pyrene, mg/kg	<0.3	<0.3	<0.3	<0.3
Bis(2-chloroethoxy)methane, mg/kg	<0.3	<0.3	<0.3	<0.3
Bis(2-chloroethyl)ether, mg/kg	<0.3	<0.3	<0.3	<0.3
Bis(2-chloroisopropyl)ether, mg/kg	<0.3	<0.3	<0.3	<0.3

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-07-118

Received: 24 JUL 90
Reported: 02 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 90702

Project: 751-OK-002

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-118-1	T-1-1	24 JUL 90
07-118-2	T-2-1	24 JUL 90
07-118-3	T-3-1	24 JUL 90
07-118-4	T-4-1	24 JUL 90

PARAMETER	07-118-1	07-118-2	07-118-3	07-118-4
Bis(2-ethylhexyl)phthalate, mg/kg	1	1	<0.3	<0.3
Semi-Quantified Results **				
A C15 To C35 Hydrocarbon Matrix, mg/kg	---	100	---	---

** Quantification based upon comparison of total ion count of the compound with that of the nearest internal standard.

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-07-119

Received: 25 JUL 90
Reported: 06 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 90702

Project: RFI-Trenching

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-119-1	T-2, 1-A	25 JUL 90

PARAMETER	07-119-1
B/N,A Ext.Pri.Poll. (EPA-8270)	
Date Analyzed	08/01/90
Date Extracted	07/31/90
Dilution Factor, Times	1
1,2,4-Trichlorobenzene, mg/kg	<0.3
1,2-Dichlorobenzene, mg/kg	<0.3
1,2-Diphenylhydrazine, mg/kg	<0.3
1,3-Dichlorobenzene, mg/kg	<0.3
1,4-Dichlorobenzene, mg/kg	<0.3
2,4,5-Trichlorophenol, mg/kg	<0.3
2,4,6-Trichlorophenol, mg/kg	<0.3
2,4-Dichlorophenol, mg/kg	<0.3
2,4-Dimethylphenol, mg/kg	<0.3
2,4-Dinitrophenol, mg/kg	<0.8
2,4-Dinitrotoluene, mg/kg	<0.3
2,6-Dinitrotoluene, mg/kg	<0.3
2-Chloronaphthalene, mg/kg	<0.3
2-Chlorophenol, mg/kg	<0.3
2-Methyl-4,6-dinitrophenol, mg/kg	<2
2-Methylnaphthalene, mg/kg	<0.3
2-Methylphenol, mg/kg	<0.3
2-Nitroaniline, mg/kg	<2
2-Nitrophenol, mg/kg	<0.3
3,3'-Dichlorobenzidine, mg/kg	<0.3
3-Nitroaniline, mg/kg	<2
4-Bromophenylphenylether, mg/kg	<0.3
4-Chloro-3-methylphenol, mg/kg	<0.3

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-07-119

Received: 25 JUL 90
Reported: 06 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 90702

Project: RFI-Trenching

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-119-1	T-2, 1-A	25 JUL 90

PARAMETER	07-119-1
4-Chloroaniline, mg/kg	<0.6
4-Chlorophenylphenylether, mg/kg	<0.3
4-Methylphenol, mg/kg	<0.3
4-Nitroaniline, mg/kg	<2
4-Nitrophenol, mg/kg	<0.8
Acenaphthene, mg/kg	<0.3
Acenaphthylene, mg/kg	<0.3
Aniline, mg/kg	<0.6
Anthracene, mg/kg	<0.3
Benzidine, mg/kg	<1
Benzo(a)anthracene, mg/kg	<0.3
Benzo(a)pyrene, mg/kg	<0.3
Benzo(b)fluoranthene, mg/kg	<0.3
Benzo(g,h,i)perylene, mg/kg	<0.3
Benzo(k)fluoranthene, mg/kg	<0.3
Benzyl Alcohol, mg/kg	<0.6
Benzoic acid, mg/kg	<2
Butylbenzylphthalate, mg/kg	<0.3
Chrysene, mg/kg	<0.3
Di-n-octylphthalate, mg/kg	<0.3
Dibenzo(a,h)anthracene, mg/kg	<0.3
Dibenzofuran, mg/kg	<0.3
Dibutylphthalate, mg/kg	<2
Diethylphthalate, mg/kg	<0.3
Dimethylphthalate, mg/kg	<0.8
Fluoranthene, mg/kg	<0.3
Fluorene, mg/kg	<0.3

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-07-119

Received: 25 JUL 90
Reported: 06 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 90702

Project: RFI-Trenching

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-119-1	T-2, 1-A	25 JUL 90

PARAMETER	07-119-1
Hexachlorobenzene, mg/kg	<0.3
Hexachlorobutadiene, mg/kg	<0.3
Hexachlorocyclopentadiene, mg/kg	<0.3
Hexachloroethane, mg/kg	<0.3
Indeno(1,2,3-c,d)pyrene, mg/kg	<0.3
Isophorone, mg/kg	<0.3
N-Nitrosodimethylamine, mg/kg	<2
N-Nitrosodiphenylamine, mg/kg	<0.3
N-Nitrosodi-n-propylamine, mg/kg	<1
Nitrobenzene, mg/kg	<0.3
Naphthalene, mg/kg	<0.3
Phenanthrene, mg/kg	<0.3
Phenol, mg/kg	<0.3
Pentachlorophenol, mg/kg	<0.3
Pyrene, mg/kg	<0.3
Bis(2-chloroethoxy)methane, mg/kg	<0.3
Bis(2-chloroethyl)ether, mg/kg	<0.3
Bis(2-chloroisopropyl)ether, mg/kg	<0.3
Bis(2-ethylhexyl)phthalate, mg/kg	<0.3

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-055

Received: 08 AUG 90
Reported: 23 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa RFI

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-055-4	T-10,9D	07 AUG 90
08-055-3	T-10,1	07 AUG 90

PARAMETER	08-055-4	08-055-3
B/N,A Ext.Pri.Poll. (EPA-8270)		
Date Analyzed	08/21/90	08/21/90
Date Extracted	08/14/90	08/14/90
Dilution Factor, Times	1	1
1,2,4-Trichlorobenzene, mg/kg	<0.3	<0.3
1,2-Dichlorobenzene, mg/kg	<0.3	<0.3
1,2-Diphenylhydrazine, mg/kg	<0.3	<0.3
1,3-Dichlorobenzene, mg/kg	<0.3	<0.3
1,4-Dichlorobenzene, mg/kg	<0.3	<0.3
2,4,5-Trichlorophenol, mg/kg	<0.3	<0.3
2,4,6-Trichlorophenol, mg/kg	<0.3	<0.3
2,4-Dichlorophenol, mg/kg	<0.3	<0.3
2,4-Dimethylphenol, mg/kg	<0.3	<0.3
2,4-Dinitrophenol, mg/kg	<0.8	<0.8
2,4-Dinitrotoluene, mg/kg	<0.3	<0.3
2,6-Dinitrotoluene, mg/kg	<0.3	<0.3
2-Chloronaphthalene, mg/kg	<0.3	<0.3
2-Chlorophenol, mg/kg	<0.3	<0.3
2-Methyl-4,6-dinitrophenol, mg/kg	<2	<2
2-Methylnaphthalene, mg/kg	<0.3	<0.3
2-Methylphenol, mg/kg	<0.3	<0.3
2-Nitroaniline, mg/kg	<2	<2
2-Nitrophenol, mg/kg	<0.3	<0.3
3,3'-Dichlorobenzidine, mg/kg	<0.3	<0.3
3-Nitroaniline, mg/kg	<2	<2
4-Bromophenylphenylether, mg/kg	<0.3	<0.3

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-055

Received: 08 AUG 90
Reported: 23 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa RFI

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-055-4	T-10,9D	07 AUG 90
08-055-3	T-10,1	07 AUG 90

PARAMETER	08-055-4	08-055-3
4-Chloro-3-methylphenol, mg/kg	<0.3	<0.3
4-Chloroaniline, mg/kg	<0.6	<0.6
4-Chlorophenylphenylether, mg/kg	<0.3	<0.3
4-Methylphenol, mg/kg	<0.3	<0.3
4-Nitroaniline, mg/kg	<2	<2
4-Nitrophenol, mg/kg	<0.8	<0.8
Acenaphthene, mg/kg	<0.3	<0.3
Acenaphthylene, mg/kg	<0.3	<0.3
Aniline, mg/kg	<0.6	<0.6
Anthracene, mg/kg	<0.3	<0.3
Benzidine, mg/kg	<1	<1
Benzo(a)anthracene, mg/kg	<0.3	<0.3
Benzo(a)pyrene, mg/kg	<0.3	<0.3
Benzo(b)fluoranthene, mg/kg	<0.3	<0.3
Benzo(g,h,i)perylene, mg/kg	<0.3	<0.3
Benzo(k)fluoranthene, mg/kg	<0.3	<0.3
Benzyl Alcohol, mg/kg	<0.6	<0.6
Benzoic acid, mg/kg	<2	<2
Butylbenzylphthalate, mg/kg	<0.3	<0.3
Chrysene, mg/kg	<0.3	<0.3
Di-n-octylphthalate, mg/kg	<0.3	<0.3
Dibenzo(a,h)anthracene, mg/kg	<0.3	<0.3
Dibenzofuran, mg/kg	<0.3	<0.3
Dibutylphthalate, mg/kg	<2	<2
Diethylphthalate, mg/kg	<0.3	<0.3
Dimethylphthalate, mg/kg	<0.8	<0.8

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-055

Received: 08 AUG 90
Reported: 23 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa RFI

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-055-4	T-10,9D	07 AUG 90
08-055-3	T-10,1	07 AUG 90

PARAMETER	08-055-4	08-055-3
Fluoranthene, mg/kg	<0.3	<0.3
Fluorene, mg/kg	<0.3	<0.3
Hexachlorobenzene, mg/kg	<0.3	<0.3
Hexachlorobutadiene, mg/kg	<0.3	<0.3
Hexachlorocyclopentadiene, mg/kg	<0.3	<0.3
Hexachloroethane, mg/kg	<0.3	<0.3
Indeno(1,2,3-c,d)pyrene, mg/kg	<0.3	<0.3
Isophorone, mg/kg	<0.3	<0.3
N-Nitrosodimethylamine, mg/kg	<2	<2
N-Nitrosodiphenylamine, mg/kg	<0.3	<0.3
N-Nitrosodi-n-propylamine, mg/kg	<1	<1
Nitrobenzene, mg/kg	<0.3	<0.3
Naphthalene, mg/kg	<0.3	<0.3
Phenanthrene, mg/kg	<0.3	<0.3
Phenol, mg/kg	<0.3	<0.3
Pentachlorophenol, mg/kg	<0.3	<0.3
Pyrene, mg/kg	<0.3	<0.3
Bis(2-chloroethoxy)methane, mg/kg	<0.3	<0.3
Bis(2-chloroethyl)ether, mg/kg	<0.3	<0.3
Bis(2-chloroisopropyl)ether, mg/kg	<0.3	<0.3
Bis(2-ethylhexyl)phthalate, mg/kg	<0.3	<0.3

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-065

Received: 08 AUG 90
Reported: 27 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa RFI

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-065-1	T-9,1	08 AUG 90
08-065-2	T-1,1	08 AUG 90
08-065-3	T-3,1	08 AUG 90
08-065-4	T-8,1	08 AUG 90
08-065-5	T-4,1	08 AUG 90

PARAMETER	08-065-1	08-065-2	08-065-3	08-065-4	08-065-5
B/N,A Ext.Pri.Poll. (EPA-8270)					
Date Analyzed	08/23/90	08/23/90	08/23/90	08/23/90	08/23/90
Date Extracted	08/14/90	08/14/90	08/14/90	08/14/90	08/14/90
Dilution Factor, Times	1	1	1	1	1
1,2,4-Trichlorobenzene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
1,2-Dichlorobenzene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
1,2-Diphenylhydrazine, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
1,3-Dichlorobenzene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
1,4-Dichlorobenzene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
2,4,5-Trichlorophenol, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
2,4,6-Trichlorophenol, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
2,4-Dichlorophenol, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
2,4-Dimethylphenol, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
2,4-Dinitrophenol, mg/kg	<0.8	<0.8	<0.8	<0.8	<0.8
2,4-Dinitrotoluene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
2,6-Dinitrotoluene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
2-Chloronaphthalene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
2-Chlorophenol, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
2-Methyl-4,6-dinitrophenol, mg/kg	<2	<2	<2	<2	<2
2-Methylnaphthalene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
2-Methylphenol, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
2-Nitroaniline, mg/kg	<2	<2	<2	<2	<2
2-Nitrophenol, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-065

Received: 08 AUG 90
Reported: 27 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa RFI

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-065-1	T-9,1	08 AUG 90
08-065-2	T-1,1	08 AUG 90
08-065-3	T-3,1	08 AUG 90
08-065-4	T-8,1	08 AUG 90
08-065-5	T-4,1	08 AUG 90

PARAMETER	08-065-1	08-065-2	08-065-3	08-065-4	08-065-5
3,3'-Dichlorobenzidine, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
3-Nitroaniline, mg/kg	<2	<2	<2	<2	<2
4-Bromophenylphenylether, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
4-Chloro-3-methylphenol, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
4-Chloroaniline, mg/kg	<0.6	<0.6	<0.6	<0.6	<0.6
4-Chlorophenylphenylether, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
4-Methylphenol, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
4-Nitroaniline, mg/kg	<2	<2	<2	<2	<2
4-Nitrophenol, mg/kg	<0.8	<0.8	<0.8	<0.8	<0.8
Acenaphthene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Acenaphthylene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Aniline, mg/kg	<0.6	<0.6	<0.6	<0.6	<0.6
Anthracene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Benzidine, mg/kg	<1	<1	<1	<1	<1
Benzo(a)anthracene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo(a)pyrene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo(b)fluoranthene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo(g,h,i)perylene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo(k)fluoranthene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Benzyl Alcohol, mg/kg	<0.6	<0.6	<0.6	<0.6	<0.6
Benzoic acid, mg/kg	<2	<2	<2	<2	<2
Butylbenzylphthalate, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Chrysene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-065

Received: 08 AUG 90
Reported: 27 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa RFI

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-065-1	T-9,1	08 AUG 90
08-065-2	T-1,1	08 AUG 90
08-065-3	T-3,1	08 AUG 90
08-065-4	T-8,1	08 AUG 90
08-065-5	T-4,1	08 AUG 90

PARAMETER	08-065-1	08-065-2	08-065-3	08-065-4	08-065-5
Di-n-octylphthalate, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Dibenzo(a,h)anthracene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Dibenzofuran, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Dibutylphthalate, mg/kg	<2	<2	<2	<2	<2
Diethylphthalate, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Dimethylphthalate, mg/kg	<0.8	<0.8	<0.8	<0.8	<0.8
Fluoranthene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Fluorene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Hexachlorobenzene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Hexachlorobutadiene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Hexachlorocyclopentadiene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Hexachloroethane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Indeno(1,2,3-c,d)pyrene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Isophorone, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
N-Nitrosodimethylamine, mg/kg	<2	<2	<2	<2	<2
N-Nitrosodiphenylamine, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
N-Nitrosodi-n-propylamine, mg/kg	<1	<1	<1	<1	<1
Nitrobenzene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Naphthalene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Phenanthrene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Phenol, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Pentachlorophenol, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Pyrene, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-065

Received: 08 AUG 90
Reported: 27 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa RFI

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-065-1	T-9,1	08 AUG 90
08-065-2	T-1,1	08 AUG 90
08-065-3	T-3,1	08 AUG 90
08-065-4	T-8,1	08 AUG 90
08-065-5	T-4,1	08 AUG 90

PARAMETER	08-065-1	08-065-2	08-065-3	08-065-4	08-065-5
Bis(2-chloroethoxy)methane, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Bis(2-chloroethyl)ether, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Bis(2-chloroisopropyl)ether, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Bis(2-ethylhexyl)phthalate, mg/kg	<0.3	<0.3	<0.3	<0.3	<0.3
Semi-Quantified Results **					
An Unidentified Nitrogenated Compound, mg/kg	---	---	---	---	2

** Quantification based upon comparison of total ion count of the compound with that of the nearest internal standard.

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-065

Received: 08 AUG 90
Reported: 27 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa RFI

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-065-6	T-5,1	08 AUG 90
08-065-7	T-5,9D	08 AUG 90

PARAMETER	08-065-6	08-065-7
B/N,A Ext.Pri.Poll. (EPA-8270)		
Date Analyzed	08/23/90	08/23/90
Date Extracted	08/14/90	08/14/90
Dilution Factor, Times	1	1
1,2,4-Trichlorobenzene, mg/kg	<0.3	<0.3
1,2-Dichlorobenzene, mg/kg	<0.3	<0.3
1,2-Diphenylhydrazine, mg/kg	<0.3	<0.3
1,3-Dichlorobenzene, mg/kg	<0.3	<0.3
1,4-Dichlorobenzene, mg/kg	<0.3	<0.3
2,4,5-Trichlorophenol, mg/kg	<0.3	<0.3
2,4,6-Trichlorophenol, mg/kg	<0.3	<0.3
2,4-Dichlorophenol, mg/kg	<0.3	<0.3
2,4-Dimethylphenol, mg/kg	<0.3	<0.3
2,4-Dinitrophenol, mg/kg	<0.8	<0.8
2,4-Dinitrotoluene, mg/kg	<0.3	<0.3
2,6-Dinitrotoluene, mg/kg	<0.3	<0.3
2-Chloronaphthalene, mg/kg	<0.3	<0.3
2-Chlorophenol, mg/kg	<0.3	<0.3
2-Methyl-4,6-dinitrophenol, mg/kg	<2	<2
2-Methylnaphthalene, mg/kg	<0.3	<0.3
2-Methylphenol, mg/kg	<0.3	<0.3
2-Nitroaniline, mg/kg	<2	<2
2-Nitrophenol, mg/kg	<0.3	<0.3
3,3'-Dichlorobenzidine, mg/kg	<0.3	<0.3
3-Nitroaniline, mg/kg	<2	<2
4-Bromophenylphenylether, mg/kg	<0.3	<0.3

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-065

Received: 08 AUG 90
Reported: 27 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa RFI

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-065-6	T-5,1	08 AUG 90
08-065-7	T-5,9D	08 AUG 90

PARAMETER	08-065-6	08-065-7
4-Chloro-3-methylphenol, mg/kg	<0.3	<0.3
4-Chloroaniline, mg/kg	<0.6	<0.6
4-Chlorophenylphenylether, mg/kg	<0.3	<0.3
4-Methylphenol, mg/kg	<0.3	<0.3
4-Nitroaniline, mg/kg	<2	<2
4-Nitrophenol, mg/kg	<0.8	<0.8
Acenaphthene, mg/kg	<0.3	<0.3
Acenaphthylene, mg/kg	<0.3	<0.3
Aniline, mg/kg	<0.6	<0.6
Anthracene, mg/kg	<0.3	<0.3
Benzidine, mg/kg	<1	<1
Benzo(a)anthracene, mg/kg	<0.3	<0.3
Benzo(a)pyrene, mg/kg	<0.3	<0.3
Benzo(b)fluoranthene, mg/kg	<0.3	<0.3
Benzo(g,h,i)perylene, mg/kg	<0.3	<0.3
Benzo(k)fluoranthene, mg/kg	<0.3	<0.3
Benzyl Alcohol, mg/kg	<0.6	<0.6
Benzoic acid, mg/kg	<2	<2
Butylbenzylphthalate, mg/kg	<0.3	<0.3
Chrysene, mg/kg	<0.3	<0.3
Di-n-octylphthalate, mg/kg	<0.3	<0.3
Dibenzo(a,h)anthracene, mg/kg	<0.3	<0.3
Dibenzofuran, mg/kg	<0.3	<0.3
Dibutylphthalate, mg/kg	<2	<2
Diethylphthalate, mg/kg	<0.3	<0.3
Dimethylphthalate, mg/kg	<0.8	<0.8

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-065

Received: 08 AUG 90
Reported: 27 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa RFI

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-065-6	T-5,1	08 AUG 90
08-065-7	T-5,9D	08 AUG 90

PARAMETER	08-065-6	08-065-7
Fluoranthene, mg/kg	<0.3	<0.3
Fluorene, mg/kg	<0.3	<0.3
Hexachlorobenzene, mg/kg	<0.3	<0.3
Hexachlorobutadiene, mg/kg	<0.3	<0.3
Hexachlorocyclopentadiene, mg/kg	<0.3	<0.3
Hexachloroethane, mg/kg	<0.3	<0.3
Indeno(1,2,3-c,d)pyrene, mg/kg	<0.3	<0.3
Isophorone, mg/kg	<0.3	<0.3
N-Nitrosodimethylamine, mg/kg	<2	<2
N-Nitrosodiphenylamine, mg/kg	<0.3	<0.3
N-Nitrosodi-n-propylamine, mg/kg	<1	<1
Nitrobenzene, mg/kg	<0.3	<0.3
Naphthalene, mg/kg	<0.3	<0.3
Phenanthrene, mg/kg	<0.3	<0.3
Phenol, mg/kg	<0.3	<0.3
Pentachlorophenol, mg/kg	<0.3	<0.3
Pyrene, mg/kg	<0.3	<0.3
Bis(2-chloroethoxy)methane, mg/kg	<0.3	<0.3
Bis(2-chloroethyl)ether, mg/kg	<0.3	<0.3
Bis(2-chloroisopropyl)ether, mg/kg	<0.3	<0.3
Bis(2-ethylhexyl)phthalate, mg/kg	<0.3	<0.3

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-077

Received: 10 AUG 90
Reported: 24 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-077-1	T-6,1A	09 AUG 90
08-077-2	T-7,1A	09 AUG 90
08-077-3	T-6,9,DA	09 AUG 90

PARAMETER	08-077-1	08-077-2	08-077-3
B/N,A Ext.Pri.Poll. (EPA-8270)			
Date Analyzed	08/21/90	08/21/90	08/21/90
Date Extracted	08/14/90	08/14/90	08/14/90
Dilution Factor, Times	1	1	1
1,2,4-Trichlorobenzene, mg/kg	<0.3	<0.3	<0.3
1,2-Dichlorobenzene, mg/kg	<0.3	<0.3	<0.3
1,2-Diphenylhydrazine, mg/kg	<0.3	<0.3	<0.3
1,3-Dichlorobenzene, mg/kg	<0.3	<0.3	<0.3
1,4-Dichlorobenzene, mg/kg	<0.3	<0.3	<0.3
2,4,5-Trichlorophenol, mg/kg	<0.3	<0.3	<0.3
2,4,6-Trichlorophenol, mg/kg	<0.3	<0.3	<0.3
2,4-Dichlorophenol, mg/kg	<0.3	<0.3	<0.3
2,4-Dimethylphenol, mg/kg	<0.3	<0.3	<0.3
2,4-Dinitrophenol, mg/kg	<0.8	<0.8	<0.8
2,4-Dinitrotoluene, mg/kg	<0.3	<0.3	<0.3
2,6-Dinitrotoluene, mg/kg	<0.3	<0.3	<0.3
2-Chloronaphthalene, mg/kg	<0.3	<0.3	<0.3
2-Chlorophenol, mg/kg	<0.3	<0.3	<0.3
2-Methyl-4,6-dinitrophenol, mg/kg	<2	<2	<2
2-Methylnaphthalene, mg/kg	<0.3	<0.3	<0.3
2-Methylphenol, mg/kg	<0.3	<0.3	<0.3
2-Nitroaniline, mg/kg	<2	<2	<2
2-Nitrophenol, mg/kg	<0.3	<0.3	<0.3
3,3'-Dichlorobenzidine, mg/kg	<0.3	<0.3	<0.3
3-Nitroaniline, mg/kg	<2	<2	<2

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-077

Received: 10 AUG 90
Reported: 24 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-077-1	T-6,1A	09 AUG 90
08-077-2	T-7,1A	09 AUG 90
08-077-3	T-6,9,DA	09 AUG 90

PARAMETER	08-077-1	08-077-2	08-077-3
4-Bromophenylphenylether, mg/kg	<0.3	<0.3	<0.3
4-Chloro-3-methylphenol, mg/kg	<0.3	<0.3	<0.3
4-Chloroaniline, mg/kg	<0.6	<0.6	<0.6
4-Chlorophenylphenylether, mg/kg	<0.3	<0.3	<0.3
4-Methylphenol, mg/kg	<0.3	<0.3	<0.3
4-Nitroaniline, mg/kg	<2	<2	<2
4-Nitrophenol, mg/kg	<0.8	<0.8	<0.8
Acenaphthene, mg/kg	<0.3	<0.3	<0.3
Acenaphthylene, mg/kg	<0.3	<0.3	<0.3
Aniline, mg/kg	<0.6	<0.6	<0.6
Anthracene, mg/kg	<0.3	<0.3	<0.3
Benzidine, mg/kg	<1	<1	<1
Benzo(a)anthracene, mg/kg	<0.3	<0.3	<0.3
Benzo(a)pyrene, mg/kg	<0.3	<0.3	<0.3
Benzo(b)fluoranthene, mg/kg	<0.3	<0.3	<0.3
Benzo(g,h,i)perylene, mg/kg	<0.3	<0.3	<0.3
Benzo(k)fluoranthene, mg/kg	<0.3	<0.3	<0.3
Benzyl Alcohol, mg/kg	<0.6	<0.6	<0.6
Benzoic acid, mg/kg	<2	<2	<2
Butylbenzylphthalate, mg/kg	<0.3	<0.3	<0.3
Chrysene, mg/kg	<0.3	<0.3	<0.3
Di-n-octylphthalate, mg/kg	<0.3	<0.3	<0.3
Dibenzo(a,h)anthracene, mg/kg	<0.3	<0.3	<0.3
Dibenzofuran, mg/kg	<0.3	<0.3	<0.3
Dibutylphthalate, mg/kg	<2	<2	<2

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-077

Received: 10 AUG 90
Reported: 24 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-077-1	T-6,1A	09 AUG 90
08-077-2	T-7,1A	09 AUG 90
08-077-3	T-6,9,DA	09 AUG 90

PARAMETER	08-077-1	08-077-2	08-077-3
Diethylphthalate, mg/kg	<0.3	<0.3	<0.3
Dimethylphthalate, mg/kg	<0.8	<0.8	<0.8
Fluoranthene, mg/kg	<0.3	<0.3	<0.3
Fluorene, mg/kg	<0.3	<0.3	<0.3
Hexachlorobenzene, mg/kg	<0.3	<0.3	<0.3
Hexachlorobutadiene, mg/kg	<0.3	<0.3	<0.3
Hexachlorocyclopentadiene, mg/kg	<0.3	<0.3	<0.3
Hexachloroethane, mg/kg	<0.3	<0.3	<0.3
Indeno(1,2,3-c,d)pyrene, mg/kg	<0.3	<0.3	<0.3
Isophorone, mg/kg	<0.3	<0.3	<0.3
N-Nitrosodimethylamine, mg/kg	<2	<2	<2
N-Nitrosodiphenylamine, mg/kg	<0.3	<0.3	<0.3
N-Nitrosodi-n-propylamine, mg/kg	<1	<1	<1
Nitrobenzene, mg/kg	<0.3	<0.3	<0.3
Naphthalene, mg/kg	<0.3	<0.3	<0.3
Phenanthrene, mg/kg	<0.3	<0.3	<0.3
Phenol, mg/kg	<0.3	<0.3	<0.3
Pentachlorophenol, mg/kg	<0.3	<0.3	<0.3
Pyrene, mg/kg	<0.3	<0.3	<0.3
Bis(2-chloroethoxy)methane, mg/kg	<0.3	<0.3	<0.3
Bis(2-chloroethyl)ether, mg/kg	<0.3	<0.3	<0.3
Bis(2-chloroisopropyl)ether, mg/kg	<0.3	<0.3	<0.3
Bis(2-ethylhexyl)phthalate, mg/kg	<0.3	<0.3	<0.3

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-07-118

Received: 24 JUL 90
Reported: 02 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 90702

Project: 751-OK-002

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-118-1	T-1-1	24 JUL 90
07-118-2	T-2-1	24 JUL 90
07-118-3	T-3-1	24 JUL 90
07-118-4	T-4-1	24 JUL 90

PARAMETER	07-118-1	07-118-2	07-118-3	07-118-4
Vol.Pri.Poll. (EPA-8240)				
Date Analyzed	07/28/90	07/28/90	07/28/90	07/28/90
Date Extracted	07/28/90	07/28/90	07/28/90	07/28/90
Dilution Factor, Times	1	1	1	1
1,1,1-Trichloroethane, ug/kg	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane, ug/kg	<5	<5	<5	<5
1,1,2-Trichloroethane, ug/kg	<5	<5	<5	<5
1,1-Dichloroethane, ug/kg	<5	<5	<5	<5
1,1-Dichloroethene, ug/kg	<5	<5	<5	<5
1,2-Dichloroethane, ug/kg	<5	<5	<5	<5
1,2-Dichlorobenzene, ug/kg	<5	<5	5	<5
1,2-Dichloropropane, ug/kg	<5	<5	<5	<5
1,3-Dichlorobenzene, ug/kg	<5	<5	<5	<5
1,4-Dichlorobenzene, ug/kg	<5	<5	<5	<5
2-Chloroethylvinylether, ug/kg	<5	<5	<5	<5
2-Hexanone, ug/kg	<50	<50	<50	<50
Acetone, ug/kg	<50	<50	<50	<50
Acrolein, ug/kg	<100	<100	<100	<100
Acrylonitrile, ug/kg	<100	<100	<100	<100
Bromodichloromethane, ug/kg	<5	<5	<5	<5
Bromomethane, ug/kg	<5	<5	<5	<5
Benzene, ug/kg	<5	<5	<5	<5
Bromoform, ug/kg	<5	<5	<5	<5
Chlorobenzene, ug/kg	<5	<5	<5	<5

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-07-118

Received: 24 JUL 90
Reported: 02 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 90702

Project: 751-OK-002

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-118-1	T-1-1	24 JUL 90
07-118-2	T-2-1	24 JUL 90
07-118-3	T-3-1	24 JUL 90
07-118-4	T-4-1	24 JUL 90

PARAMETER	07-118-1	07-118-2	07-118-3	07-118-4
Carbon Tetrachloride, ug/kg	<5	<5	<5	<5
Chloroethane, ug/kg	<5	<5	<5	<5
Chloroform, ug/kg	<5	<5	<5	<5
Chloromethane, ug/kg	<10	<10	<10	<10
Carbon Disulfide, ug/kg	<10	<10	<10	<10
Dibromochloromethane, ug/kg	<5	<5	<5	<5
Ethylbenzene, ug/kg	<5	<5	<5	<5
Freon 113, ug/kg	<5	<5	<5	<5
Methyl ethyl ketone, ug/kg	<50	<50	<50	<50
Methyl isobutyl ketone, ug/kg	<25	<25	<25	<25
Methylene chloride, ug/kg	<5	<5	<5	<5
Styrene, ug/kg	<5	<5	<5	<5
Trichloroethene, ug/kg	<5	<5	<5	<5
Trichlorofluoromethane, ug/kg	<5	<5	<5	<5
Toluene, ug/kg	<5	<5	<5	<5
Tetrachloroethene, ug/kg	<5	19	75	<5
Vinyl acetate, ug/kg	<25	<25	<25	<25
Vinyl chloride, ug/kg	<5	<5	<5	<5
Total Xylene Isomers, ug/kg	<25	<25	<25	<25
cis-1,2-Dichloroethene, ug/kg	<5	<5	<5	<5
cis-1,3-Dichloropropene, ug/kg	<5	<5	<5	<5
trans-1,2-Dichloroethene, ug/kg	<5	<5	<5	<5
trans-1,3-Dichloropropene, ug/kg	<5	<5	<5	<5

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-07-118

Received: 24 JUL 90
Reported: 02 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 90702

Project: 751-OK-002

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-118-5	T-1-3	24 JUL 90
07-118-6	T-2-3	24 JUL 90
07-118-7	T-2-5	24 JUL 90
07-118-8	T-3-3	24 JUL 90
07-118-9	T-3-5	24 JUL 90

PARAMETER	07-118-5	07-118-6	07-118-7	07-118-8	07-118-9
Vol.Pri.Poll. (EPA-8240)					
Date Analyzed	07/28/90	07/28/90	07/28/90	07/28/90	07/30/90
Date Extracted	07/28/90	07/28/90	07/28/90	07/28/90	07/30/90
Dilution Factor, Times	1	1	1	1	1
1,1,1-Trichloroethane, ug/kg	<5	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane, ug/kg	<5	<5	<5	<5	<5
1,1,2-Trichloroethane, ug/kg	<5	<5	<5	<5	<5
1,1-Dichloroethane, ug/kg	<5	<5	<5	<5	<5
1,1-Dichloroethene, ug/kg	<5	<5	<5	<5	<5
1,2-Dichloroethane, ug/kg	<5	<5	<5	<5	<5
1,2-Dichlorobenzene, ug/kg	<5	<5	<5	<5	<5
1,2-Dichloropropane, ug/kg	<5	<5	<5	<5	<5
1,3-Dichlorobenzene, ug/kg	<5	<5	<5	<5	<5
1,4-Dichlorobenzene, ug/kg	<5	<5	<5	<5	<5
2-Chloroethylvinylether, ug/kg	<5	<5	<5	<5	<5
2-Hexanone, ug/kg	<50	<50	<50	<50	<50
Acetone, ug/kg	<50	<50	<50	<50	<50
Acrolein, ug/kg	<100	<100	<100	<100	<100
Acrylonitrile, ug/kg	<100	<100	<100	<100	<100
Bromodichloromethane, ug/kg	<5	<5	<5	<5	<5
Bromomethane, ug/kg	<5	<5	<5	<5	<5
Benzene, ug/kg	<5	<5	<5	<5	<5
Bromoform, ug/kg	<5	<5	<5	<5	<5

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-07-118

Received: 24 JUL 90
Reported: 02 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 90702

Project: 751-OK-002

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-118-5	T-1-3	24 JUL 90
07-118-6	T-2-3	24 JUL 90
07-118-7	T-2-5	24 JUL 90
07-118-8	T-3-3	24 JUL 90
07-118-9	T-3-5	24 JUL 90

PARAMETER	07-118-5	07-118-6	07-118-7	07-118-8	07-118-9
Chlorobenzene, ug/kg	<5	<5	<5	<5	<5
Carbon Tetrachloride, ug/kg	<5	<5	<5	<5	<5
Chloroethane, ug/kg	<5	<5	<5	<5	<5
Chloroform, ug/kg	<5	<5	<5	<5	<5
Chloromethane, ug/kg	<10	<10	<10	<10	<10
Carbon Disulfide, ug/kg	<10	<10	<10	<10	<10
Dibromochloromethane, ug/kg	<5	<5	<5	<5	<5
Ethylbenzene, ug/kg	<5	<5	<5	<5	<5
Freon 113, ug/kg	<5	<5	<5	<5	<5
Methyl ethyl ketone, ug/kg	<50	<50	<50	<50	<50
Methyl isobutyl ketone, ug/kg	<25	<25	<25	<25	<25
Methylene chloride, ug/kg	<5	<5	<5	<5	<5
Styrene, ug/kg	<5	<5	<5	<5	<5
Trichloroethene, ug/kg	<5	<5	<5	<5	<5
Trichlorofluoromethane, ug/kg	<5	<5	<5	<5	<5
Toluene, ug/kg	<5	<5	<5	<5	<5
Tetrachloroethene, ug/kg	<5	28	11	48	17
Vinyl acetate, ug/kg	<25	<25	<25	<25	<25
Vinyl chloride, ug/kg	<5	<5	<5	<5	<5
Total Xylene Isomers, ug/kg	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene, ug/kg	<5	<5	<5	<5	<5
cis-1,3-Dichloropropene, ug/kg	<5	<5	<5	<5	<5
trans-1,2-Dichloroethene, ug/kg	<5	<5	<5	<5	<5

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-07-118

Received: 24 JUL 90
Reported: 02 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 90702

Project: 751-OK-002

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-118-5	T-1-3	24 JUL 90
07-118-6	T-2-3	24 JUL 90
07-118-7	T-2-5	24 JUL 90
07-118-8	T-3-3	24 JUL 90
07-118-9	T-3-5	24 JUL 90

PARAMETER	07-118-5	07-118-6	07-118-7	07-118-8	07-118-9
trans-1,3-Dichloropropene, ug/kg	<5	<5	<5	<5	<5

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-07-118

Received: 24 JUL 90
Reported: 02 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 90702

Project: 751-OK-002

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-118-10	T-4-3	24 JUL 90
07-118-11	T-4-5	24 JUL 90
07-118-12	T-1-5	24 JUL 90

PARAMETER	07-118-10	07-118-11	07-118-12
Vol.Pri.Poll. (EPA-8240)			
Date Analyzed	07/30/90	07/30/90	07/30/90
Date Extracted	07/30/90	07/30/90	07/30/90
Dilution Factor, Times	1	1	1
1,1,1-Trichloroethane, ug/kg	<5	<5	<5
1,1,2,2-Tetrachloroethane, ug/kg	<5	<5	<5
1,1,2-Trichloroethane, ug/kg	<5	<5	<5
1,1-Dichloroethane, ug/kg	<5	<5	<5
1,1-Dichloroethene, ug/kg	<5	<5	<5
1,2-Dichloroethane, ug/kg	<5	<5	<5
1,2-Dichlorobenzene, ug/kg	<5	<5	<5
1,2-Dichloropropane, ug/kg	<5	<5	<5
1,3-Dichlorobenzene, ug/kg	<5	<5	<5
1,4-Dichlorobenzene, ug/kg	<5	<5	<5
2-Chloroethylvinylether, ug/kg	<5	<5	<5
2-Hexanone, ug/kg	<50	<50	<50
Acetone, ug/kg	<50	<50	<50
Acrolein, ug/kg	<100	<100	<100
Acrylonitrile, ug/kg	<100	<100	<100
Bromodichloromethane, ug/kg	<5	<5	<5
Bromomethane, ug/kg	<5	<5	<5
Benzene, ug/kg	<5	<5	<5
Bromoform, ug/kg	<5	<5	<5
Chlorobenzene, ug/kg	<5	<5	<5
Carbon Tetrachloride, ug/kg	<5	<5	<5

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-07-118

Received: 24 JUL 90
Reported: 02 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 90702

Project: 751-OK-002

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-118-10	T-4-3	24 JUL 90
07-118-11	T-4-5	24 JUL 90
07-118-12	T-1-5	24 JUL 90

PARAMETER	07-118-10	07-118-11	07-118-12
Chloroethane, ug/kg	<5	<5	<5
Chloroform, ug/kg	<5	<5	<5
Chloromethane, ug/kg	<10	<10	<10
Carbon Disulfide, ug/kg	<10	<10	<10
Dibromochloromethane, ug/kg	<5	<5	<5
Ethylbenzene, ug/kg	<5	<5	<5
Freon 113, ug/kg	<5	<5	<5
Methyl ethyl ketone, ug/kg	<50	<50	<50
Methyl isobutyl ketone, ug/kg	<25	<25	<25
Methylene chloride, ug/kg	<5	<5	<5
Styrene, ug/kg	<5	<5	<5
Trichloroethene, ug/kg	<5	<5	<5
Trichlorofluoromethane, ug/kg	<5	<5	<5
Toluene, ug/kg	<5	<5	<5
Tetrachloroethene, ug/kg	<5	<5	<5
Vinyl acetate, ug/kg	<25	<25	<25
Vinyl chloride, ug/kg	<5	<5	<5
Total Xylene Isomers, ug/kg	<25	<25	<25
cis-1,2-Dichloroethene, ug/kg	<5	<5	<5
cis-1,3-Dichloropropene, ug/kg	<5	<5	<5
trans-1,2-Dichloroethene, ug/kg	<5	<5	<5
trans-1,3-Dichloropropene, ug/kg	<5	<5	<5

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-07-118

Received: 24 JUL 90
Reported: 02 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 90702

Project: 751-OK-002

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-118-13	T-1-3	24 JUL 90
07-118-14	T-2-3	24 JUL 90
07-118-15	T-2-5	24 JUL 90
07-118-16	T-3-3	24 JUL 90
07-118-17	T-3-5	24 JUL 90

PARAMETER	07-118-13	07-118-14	07-118-15	07-118-16	07-118-17
Sample Held, Not Analyzed	HOLD	HOLD	HOLD	HOLD	HOLD

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-07-118

Received: 24 JUL 90
Reported: 02 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 90702

Project: 751-OK-002

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-118-18	T-4-3	24 JUL 90
07-118-19	T-4-5	24 JUL 90
07-118-20	T-1-5	24 JUL 90

PARAMETER	07-118-18	07-118-19	07-118-20
Sample Held, Not Analyzed	HOLD	HOLD	HOLD

Based on historical data,the bis(2-ethylhexyl)phthalate found in the samples for EPA-8270 could have been introduced as a random laboratory contamination. Bis(2-ethylhexyl)phthalate was not found in the batch method blank.
-- G. Havalias 08/02/90

Charles Jacks

Charles Jacks, Ph.D., Laboratory Manager

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-07-119

Received: 25 JUL 90
Reported: 06 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: RFI-Trenching

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-119-1	T-2, 1-A	25 JUL 90
07-119-2	T-2, 3-A	25 JUL 90
07-119-3	T-2, 5-A	25 JUL 90
07-119-4	T-2, 9-D	25 JUL 90
07-119-5	T-2, 3-A	25 JUL 90

PARAMETER	07-119-1	07-119-2	07-119-3	07-119-4	07-119-5
Vol.Pri.Poll. (EPA-8240)					
Date Analyzed	07/30/90	07/30/90	07/30/90	07/30/90	---
Date Extracted	07/30/90	07/30/90	07/30/90	07/30/90	---
Dilution Factor, Times	1	1	1	1	---
1,1,1-Trichloroethane, ug/kg	<5	<5	<5	<5	---
1,1,2,2-Tetrachloroethane, ug/kg	<5	<5	<5	<5	---
1,1,2-Trichloroethane, ug/kg	<5	<5	<5	<5	---
1,1-Dichloroethane, ug/kg	<5	<5	<5	<5	---
1,1-Dichloroethene, ug/kg	<5	<5	<5	<5	---
1,2-Dichloroethane, ug/kg	<5	<5	<5	<5	---
1,2-Dichlorobenzene, ug/kg	<5	<5	<5	<5	---
1,2-Dichloropropane, ug/kg	<5	<5	<5	<5	---
1,3-Dichlorobenzene, ug/kg	<5	<5	<5	<5	---
1,4-Dichlorobenzene, ug/kg	<5	<5	<5	<5	---
2-Chloroethylvinylether, ug/kg	<5	<5	<5	<5	---
2-Hexanone, ug/kg	<50	<50	<50	<50	---
Acetone, ug/kg	<50	<50	<50	<50	---
Acrolein, ug/kg	<100	<100	<100	<100	---
Acrylonitrile, ug/kg	<100	<100	<100	<100	---
Bromodichloromethane, ug/kg	<5	<5	<5	<5	---
Bromomethane, ug/kg	<5	<5	<5	<5	---
Benzene, ug/kg	<5	<5	<5	<5	---
Bromoform, ug/kg	<5	<5	<5	<5	---

Analytical Report

LOG NO: A90-07-119

Received: 25 JUL 90
Reported: 06 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: RFI-Trenching

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-119-1	T-2, 1-A	25 JUL 90
07-119-2	T-2, 3-A	25 JUL 90
07-119-3	T-2, 5-A	25 JUL 90
07-119-4	T-2, 9-D	25 JUL 90
07-119-5	T-2, 3-A	25 JUL 90

PARAMETER	07-119-1	07-119-2	07-119-3	07-119-4	07-119-5
Chlorobenzene, ug/kg	<5	<5	<5	<5	---
Carbon Tetrachloride, ug/kg	<5	<5	<5	<5	---
Chloroethane, ug/kg	<5	<5	<5	<5	---
Chloroform, ug/kg	<5	<5	<5	<5	---
Chloromethane, ug/kg	<10	<10	<10	<10	---
Carbon Disulfide, ug/kg	<10	<10	<10	<10	---
Dibromochloromethane, ug/kg	<5	<5	<5	<5	---
Ethylbenzene, ug/kg	<5	<5	<5	<5	---
Freon 113, ug/kg	<5	<5	<5	<5	---
Methyl ethyl ketone, ug/kg	<50	<50	<50	<50	---
Methyl isobutyl ketone, ug/kg	<25	<25	<25	<25	---
Methylene chloride, ug/kg	<5	<5	<5	<5	---
Styrene, ug/kg	<5	<5	<5	<5	---
Trichloroethene, ug/kg	<5	<5	<5	<5	---
Trichlorofluoromethane, ug/kg	<5	<5	<5	<5	---
Toluene, ug/kg	<5	<5	<5	<5	---
Tetrachloroethene, ug/kg	<5	<5	<5	<5	---
Vinyl acetate, ug/kg	<25	<25	<25	<25	---
Vinyl chloride, ug/kg	<5	<5	<5	<5	---
Total Xylene Isomers, ug/kg	<25	<25	<25	<25	---
cis-1,2-Dichloroethene, ug/kg	<5	<5	<5	<5	---
cis-1,3-Dichloropropene, ug/kg	<5	<5	<5	<5	---
trans-1,2-Dichloroethene, ug/kg	<5	<5	<5	<5	---

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-07-119

Received: 25 JUL 90
Reported: 06 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: RFI-Trenching

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-119-1	T-2, 1-A	25 JUL 90
07-119-2	T-2, 3-A	25 JUL 90
07-119-3	T-2, 5-A	25 JUL 90
07-119-4	T-2, 9-D	25 JUL 90
07-119-5	T-2, 3-A	25 JUL 90

PARAMETER	07-119-1	07-119-2	07-119-3	07-119-4	07-119-5
trans-1,3-Dichloropropene, ug/kg	<5	<5	<5	<5	---

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-055

Received: 08 AUG 90
Reported: 23 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa RFI

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-055-4	T-10,9D	07 AUG 90
08-055-3	T-10,1	07 AUG 90

PARAMETER	08-055-4	08-055-3
Vol.Pri.Poll. (EPA-8240)		
Date Analyzed	08/10/90	08/10/90
Date Extracted	08/10/90	08/10/90
Dilution Factor, Times	1	1
1,1,1-Trichloroethane, ug/kg	<5	<5
1,1,2,2-Tetrachloroethane, ug/kg	<5	<5
1,1,2-Trichloroethane, ug/kg	<5	<5
1,1-Dichloroethane, ug/kg	<5	<5
1,1-Dichloroethene, ug/kg	<5	<5
1,2-Dichloroethane, ug/kg	<5	<5
1,2-Dichlorobenzene, ug/kg	<5	<5
1,2-Dichloropropane, ug/kg	<5	<5
1,3-Dichlorobenzene, ug/kg	<5	<5
1,4-Dichlorobenzene, ug/kg	<5	<5
2-Chloroethylvinylether, ug/kg	<5	<5
2-Hexanone, ug/kg	<50	<50
Acetone, ug/kg	<50	<50
Acrolein, ug/kg	<100	<100
Acrylonitrile, ug/kg	<100	<100
Bromodichloromethane, ug/kg	<5	<5
Bromomethane, ug/kg	<5	<5
Benzene, ug/kg	<5	<5
Bromoform, ug/kg	<5	<5
Chlorobenzene, ug/kg	<5	<5
Carbon Tetrachloride, ug/kg	<5	<5
Chloroethane, ug/kg	<5	<5

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-055

Received: 08 AUG 90
Reported: 23 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa RFI

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-055-4	T-10,9D	07 AUG 90
08-055-3	T-10,1	07 AUG 90

PARAMETER	08-055-4	08-055-3
Chloroform, ug/kg	<5	<5
Chloromethane, ug/kg	<10	<10
Carbon Disulfide, ug/kg	<10	<10
Dibromochloromethane, ug/kg	<5	<5
Ethylbenzene, ug/kg	<5	<5
Freon 113, ug/kg	<5	<5
Methyl ethyl ketone, ug/kg	<50	<50
Methyl isobutyl ketone, ug/kg	<25	<25
Methylene chloride, ug/kg	<5	<5
Styrene, ug/kg	<5	<5
Trichloroethene, ug/kg	6	<5
Trichlorofluoromethane, ug/kg	<5	<5
Toluene, ug/kg	<5	<5
Tetrachloroethene, ug/kg	150	11
Vinyl acetate, ug/kg	<25	<25
Vinyl chloride, ug/kg	<5	<5
Total Xylene Isomers, ug/kg	<25	<25
cis-1,2-Dichloroethene, ug/kg	<5	<5
cis-1,3-Dichloropropene, ug/kg	<5	<5
trans-1,2-Dichloroethene, ug/kg	<5	<5
trans-1,3-Dichloropropene, ug/kg	<5	<5

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-055

Received: 08 AUG 90
Reported: 23 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa RFI

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-055-9	T-10,3	07 AUG 90
08-055-10	T-10,5	07 AUG 90

PARAMETER	08-055-9	08-055-10
Vol.Pri.Poll. (EPA-8240)		
Date Analyzed	08/10/90	08/10/90
Date Extracted	08/10/90	08/10/90
Dilution Factor, Times	1	1
1,1,1-Trichloroethane, ug/kg	<5	<5
1,1,2,2-Tetrachloroethane, ug/kg	<5	<5
1,1,2-Trichloroethane, ug/kg	<5	<5
1,1-Dichloroethane, ug/kg	<5	<5
1,1-Dichloroethene, ug/kg	<5	<5
1,2-Dichloroethane, ug/kg	<5	<5
1,2-Dichlorobenzene, ug/kg	<5	<5
1,2-Dichloropropane, ug/kg	<5	<5
1,3-Dichlorobenzene, ug/kg	<5	<5
1,4-Dichlorobenzene, ug/kg	<5	<5
2-Chloroethylvinylether, ug/kg	<5	<5
2-Hexanone, ug/kg	<50	<50
Acetone, ug/kg	<50	<50
Acrolein, ug/kg	<100	<100
Acrylonitrile, ug/kg	<100	<100
Bromodichloromethane, ug/kg	<5	<5
Bromomethane, ug/kg	<5	<5
Benzene, ug/kg	<5	<5
Bromoform, ug/kg	<5	<5
Chlorobenzene, ug/kg	<5	<5
Carbon Tetrachloride, ug/kg	<5	<5
Chloroethane, ug/kg	<5	<5

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-055

Received: 08 AUG 90
Reported: 23 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa RFI

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-055-9	T-10,3	07 AUG 90
08-055-10	T-10,5	07 AUG 90

PARAMETER	08-055-9	08-055-10
Chloroform, ug/kg	<5	<5
Chloromethane, ug/kg	<10	<10
Carbon Disulfide, ug/kg	<10	<10
Dibromochloromethane, ug/kg	<5	<5
Ethylbenzene, ug/kg	<5	<5
Freon 113, ug/kg	<5	<5
Methyl ethyl ketone, ug/kg	<50	<50
Methyl isobutyl ketone, ug/kg	<25	<25
Methylene chloride, ug/kg	<5	<5
Styrene, ug/kg	<5	<5
Trichloroethene, ug/kg	<5	<5
Trichlorofluoromethane, ug/kg	<5	<5
Toluene, ug/kg	<5	<5
Tetrachloroethene, ug/kg	110	<5
Vinyl acetate, ug/kg	<25	<25
Vinyl chloride, ug/kg	<5	<5
Total Xylene Isomers, ug/kg	<25	<25
cis-1,2-Dichloroethene, ug/kg	<5	<5
cis-1,3-Dichloropropene, ug/kg	<5	<5
trans-1,2-Dichloroethene, ug/kg	<5	<5
trans-1,3-Dichloropropene, ug/kg	<5	<5

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-065

Received: 08 AUG 90
Reported: 27 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa RFI

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-065-1	T-9,1	08 AUG 90
08-065-2	T-1,1	08 AUG 90
08-065-3	T-3,1	08 AUG 90
08-065-4	T-8,1	08 AUG 90
08-065-5	T-4,1	08 AUG 90

PARAMETER	08-065-1	08-065-2	08-065-3	08-065-4	08-065-5
Vol.Pri.Poll. (EPA-8240)					
Date Analyzed	08/15/90	08/15/90	08/15/90	08/15/90	08/15/90
Date Extracted	08/15/90	08/15/90	08/15/90	08/15/90	08/15/90
Dilution Factor, Times	1	1	1	1	1
1,1,1-Trichloroethane, ug/kg	<5	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane, ug/kg	<5	<5	<5	<5	<5
1,1,2-Trichloroethane, ug/kg	<5	<5	<5	<5	<5
1,1-Dichloroethane, ug/kg	<5	<5	<5	<5	<5
1,1-Dichloroethene, ug/kg	<5	<5	<5	<5	<5
1,2-Dichloroethane, ug/kg	<5	<5	<5	<5	<5
1,2-Dichlorobenzene, ug/kg	<5	<5	<5	<5	27
1,2-Dichloropropane, ug/kg	<5	<5	<5	<5	<5
1,3-Dichlorobenzene, ug/kg	<5	<5	<5	<5	<5
1,4-Dichlorobenzene, ug/kg	<5	<5	<5	<5	<5
2-Chloroethylvinylether, ug/kg	<5	<5	<5	<5	<5
2-Hexanone, ug/kg	<50	<50	<50	<50	<50
Acetone, ug/kg	<50	<50	<50	<50	70
Acrolein, ug/kg	<100	<100	<100	<100	<100
Acrylonitrile, ug/kg	<100	<100	<100	<100	<100
Bromodichloromethane, ug/kg	<5	<5	<5	<5	<5
Bromomethane, ug/kg	<5	<5	<5	<5	<5
Benzene, ug/kg	<5	<5	<5	<5	<5
Bromoform, ug/kg	<5	<5	<5	<5	<5

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-065

Received: 08 AUG 90
Reported: 27 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa RFI

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-065-1	T-9,1	08 AUG 90
08-065-2	T-1,1	08 AUG 90
08-065-3	T-3,1	08 AUG 90
08-065-4	T-8,1	08 AUG 90
08-065-5	T-4,1	08 AUG 90

PARAMETER	08-065-1	08-065-2	08-065-3	08-065-4	08-065-5
Chlorobenzene, ug/kg	<5	<5	<5	<5	<5
Carbon Tetrachloride, ug/kg	<5	<5	<5	<5	<5
Chloroethane, ug/kg	<5	<5	<5	<5	<5
Chloroform, ug/kg	<5	<5	<5	<5	<5
Chloromethane, ug/kg	<10	<10	<10	<10	<10
Carbon Disulfide, ug/kg	<10	<10	<10	<10	<10
Dibromochloromethane, ug/kg	<5	<5	<5	<5	<5
Ethylbenzene, ug/kg	<5	<5	<5	<5	<5
Freon 113, ug/kg	<5	<5	<5	<5	<5
Methyl ethyl ketone, ug/kg	<50	<50	<50	<50	<50
Methyl isobutyl ketone, ug/kg	<25	<25	<25	<25	<25
Methylene chloride, ug/kg	<5	<5	<5	<5	<5
Styrene, ug/kg	<5	<5	<5	<5	<5
Trichloroethene, ug/kg	<5	<5	<5	<5	<5
Trichlorofluoromethane, ug/kg	<5	<5	<5	<5	<5
Toluene, ug/kg	<5	<5	<5	<5	<5
Tetrachloroethene, ug/kg	<5	11	<5	96	<5
Vinyl acetate, ug/kg	<25	<25	<25	<25	<25
Vinyl chloride, ug/kg	<5	<5	<5	<5	<5
Total Xylene Isomers, ug/kg	<25	<25	<25	<25	35
cis-1,2-Dichloroethene, ug/kg	<5	<5	<5	<5	<5
cis-1,3-Dichloropropene, ug/kg	<5	<5	<5	<5	<5
trans-1,2-Dichloroethene, ug/kg	<5	<5	<5	<5	<5

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-065

Received: 08 AUG 90
Reported: 27 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa RFI

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-065-1	T-9,1	08 AUG 90
08-065-2	T-1,1	08 AUG 90
08-065-3	T-3,1	08 AUG 90
08-065-4	T-8,1	08 AUG 90
08-065-5	T-4,1	08 AUG 90

PARAMETER	08-065-1	08-065-2	08-065-3	08-065-4	08-065-5
trans-1,3-Dichloropropene, ug/kg	<5	<5	<5	<5	<5
Semi-Quantified Results **					
1,3 Dioxolane (C3H602), ug/kg	---	---	---	10	---
1,4 Dioxane (C4H802), ug/kg	---	---	---	30	---
A C10H14 Aromatic Hydrocarbon, ug/kg	---	---	---	---	70
A C8-C11 Hydrocarbon Matrix, ug/kg	---	---	---	---	4000
A C9H12 Aromatic Hydrocarbon, ug/kg	---	---	---	---	60
A Second C10 H14 Cyclic Hydrocarbon, ug/kg	---	---	---	---	50
A Second C9H12 Aromatic Hydrocarbon, ug/kg	---	---	---	---	40
A Third C10H14 Aromatic Hydrocarbon, ug/kg	---	---	---	---	70

** Quantification based upon comparison of total ion count of the compound with that of the nearest internal standard.

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-065

Received: 08 AUG 90
Reported: 27 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa RFI

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-065-6	T-5,1	08 AUG 90
08-065-7	T-5,9D	08 AUG 90

PARAMETER	08-065-6	08-065-7
Vol.Pri.Poll. (EPA-8240)		
Date Analyzed	08/15/90	08/15/90
Date Extracted	08/15/90	08/15/90
Dilution Factor, Times	1	1
1,1,1-Trichloroethane, ug/kg	<5	<5
1,1,2,2-Tetrachloroethane, ug/kg	<5	<5
1,1,2-Trichloroethane, ug/kg	<5	<5
1,1-Dichloroethane, ug/kg	<5	<5
1,1-Dichloroethene, ug/kg	<5	<5
1,2-Dichloroethane, ug/kg	<5	<5
1,2-Dichlorobenzene, ug/kg	<5	<5
1,2-Dichloropropane, ug/kg	<5	<5
1,3-Dichlorobenzene, ug/kg	<5	<5
1,4-Dichlorobenzene, ug/kg	<5	<5
2-Chloroethylvinylether, ug/kg	<5	<5
2-Hexanone, ug/kg	<50	<50
Acetone, ug/kg	<50	<50
Acrolein, ug/kg	<100	<100
Acrylonitrile, ug/kg	<100	<100
Bromodichloromethane, ug/kg	<5	<5
Bromomethane, ug/kg	<5	<5
Benzene, ug/kg	<5	<5
Bromoform, ug/kg	<5	<5
Chlorobenzene, ug/kg	<5	<5
Carbon Tetrachloride, ug/kg	<5	<5
Chloroethane, ug/kg	<5	<5

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-065

Received: 08 AUG 90
Reported: 27 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa RFI

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-065-6	T-5,1	08 AUG 90
08-065-7	T-5,9D	08 AUG 90

PARAMETER	08-065-6	08-065-7
Chloroform, ug/kg	<5	<5
Chloromethane, ug/kg	<10	<10
Carbon Disulfide, ug/kg	<10	<10
Dibromochloromethane, ug/kg	<5	<5
Ethylbenzene, ug/kg	<5	<5
Freon 113, ug/kg	<5	<5
Methyl ethyl ketone, ug/kg	<50	<50
Methyl isobutyl ketone, ug/kg	<25	<25
Methylene chloride, ug/kg	<5	<5
Styrene, ug/kg	<5	<5
Trichloroethene, ug/kg	<5	<5
Trichlorofluoromethane, ug/kg	<5	<5
Toluene, ug/kg	<5	<5
Tetrachloroethene, ug/kg	<5	<5
Vinyl acetate, ug/kg	<25	<25
Vinyl chloride, ug/kg	<5	<5
Total Xylene Isomers, ug/kg	<25	<25
cis-1,2-Dichloroethene, ug/kg	<5	<5
cis-1,3-Dichloropropene, ug/kg	<5	<5
trans-1,2-Dichloroethene, ug/kg	<5	<5
trans-1,3-Dichloropropene, ug/kg	<5	<5

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-065

Received: 08 AUG 90
Reported: 27 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa RFI

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-065-8	T-9,5	08 AUG 90
08-065-9	T-9,3	08 AUG 90
08-065-10	T-1,5	08 AUG 90
08-065-11	T-1,3	08 AUG 90
08-065-12	T-3,5	08 AUG 90

PARAMETER	08-065-8	08-065-9	08-065-10	08-065-11	08-065-12
Vol.Pri.Poll. (EPA-8240)					
Date Analyzed	08/15/90	08/15/90	08/15/90	08/16/90	08/16/90
Date Extracted	08/15/90	08/15/90	08/15/90	08/16/90	08/16/90
Dilution Factor, Times	1	1	1	1	1
1,1,1-Trichloroethane, ug/kg	<5	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane, ug/kg	<5	<5	<5	<5	<5
1,1,2-Trichloroethane, ug/kg	<5	<5	<5	<5	<5
1,1-Dichloroethane, ug/kg	<5	<5	<5	<5	<5
1,1-Dichloroethene, ug/kg	<5	<5	<5	<5	<5
1,2-Dichloroethane, ug/kg	<5	<5	<5	<5	<5
1,2-Dichlorobenzene, ug/kg	<5	<5	<5	<5	<5
1,2-Dichloropropane, ug/kg	<5	<5	<5	<5	<5
1,3-Dichlorobenzene, ug/kg	<5	<5	<5	<5	<5
1,4-Dichlorobenzene, ug/kg	<5	<5	<5	<5	<5
2-Chloroethylvinylether, ug/kg	<5	<5	<5	<5	<5
2-Hexanone, ug/kg	<50	<50	<50	<50	<50
Acetone, ug/kg	<50	<50	<50	<50	<50
Acrolein, ug/kg	<100	<100	<100	<100	<100
Acrylonitrile, ug/kg	<100	<100	<100	<100	<100
Bromodichloromethane, ug/kg	<5	<5	<5	<5	<5
Bromomethane, ug/kg	<5	<5	<5	<5	<5
Benzene, ug/kg	<5	<5	<5	<5	<5
Bromoform, ug/kg	<5	<5	<5	<5	<5

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-065

Received: 08 AUG 90
Reported: 27 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa RFI

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-065-8	T-9,5	08 AUG 90
08-065-9	T-9,3	08 AUG 90
08-065-10	T-1,5	08 AUG 90
08-065-11	T-1,3	08 AUG 90
08-065-12	T-3,5	08 AUG 90

PARAMETER	08-065-8	08-065-9	08-065-10	08-065-11	08-065-12
Chlorobenzene, ug/kg	<5	<5	<5	<5	<5
Carbon Tetrachloride, ug/kg	<5	<5	<5	<5	<5
Chloroethane, ug/kg	<5	<5	<5	<5	<5
Chloroform, ug/kg	<5	<5	<5	<5	<5
Chloromethane, ug/kg	<10	<10	<10	<10	<10
Carbon Disulfide, ug/kg	<10	<10	<10	<10	<10
Dibromochloromethane, ug/kg	<5	<5	<5	<5	<5
Ethylbenzene, ug/kg	<5	<5	<5	<5	<5
Freon 113, ug/kg	<5	<5	<5	<5	<5
Methyl ethyl ketone, ug/kg	<50	<50	<50	<50	<50
Methyl isobutyl ketone, ug/kg	<25	<25	<25	<25	<25
Methylene chloride, ug/kg	<5	<5	<5	<5	<5
Styrene, ug/kg	<5	<5	<5	<5	<5
Trichloroethene, ug/kg	<5	<5	<5	<5	<5
Trichlorofluoromethane, ug/kg	<5	<5	<5	<5	<5
Toluene, ug/kg	<5	<5	<5	<5	<5
Tetrachloroethene, ug/kg	31	<5	<5	<5	5
Vinyl acetate, ug/kg	<25	<25	<25	<25	<25
Vinyl chloride, ug/kg	<5	<5	<5	<5	<5
Total Xylene Isomers, ug/kg	<25	<25	<25	<25	<25
cis-1,2-Dichloroethene, ug/kg	<5	<5	<5	<5	<5
cis-1,3-Dichloropropene, ug/kg	<5	<5	<5	<5	<5
trans-1,2-Dichloroethene, ug/kg	<5	<5	<5	<5	<5

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-065

Received: 08 AUG 90
Reported: 27 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa RFI

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-065-8	T-9,5	08 AUG 90
08-065-9	T-9,3	08 AUG 90
08-065-10	T-1,5	08 AUG 90
08-065-11	T-1,3	08 AUG 90
08-065-12	T-3,5	08 AUG 90

PARAMETER	08-065-8	08-065-9	08-065-10	08-065-11	08-065-12
trans-1,3-Dichloropropene, ug/kg	<5	<5	<5	<5	<5

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-065

Received: 08 AUG 90
Reported: 27 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa RFI

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-065-13	T-3,3	08 AUG 90
08-065-14	T-8,5	08 AUG 90
08-065-15	T-8,3	08 AUG 90
08-065-17	T-4,3	08 AUG 90
08-065-18	T-5,3	08 AUG 90

PARAMETER	08-065-13	08-065-14	08-065-15	08-065-17	08-065-18
Vol.Pri.Poll. (EPA-8240)					
Date Analyzed	08/16/90	08/16/90	08/16/90	08/16/90	08/17/90
Date Extracted	08/16/90	08/16/90	08/16/90	08/16/90	08/17/90
Dilution Factor, Times	1	5	1	1	1
1,1,1-Trichloroethane, ug/kg	<5	<25	<5	<5	<5
1,1,2,2-Tetrachloroethane, ug/kg	<5	<25	<5	<5	<5
1,1,2-Trichloroethane, ug/kg	<5	<25	<5	<5	<5
1,1-Dichloroethane, ug/kg	<5	<25	<5	<5	<5
1,1-Dichloroethene, ug/kg	<5	<25	<5	<5	<5
1,2-Dichloroethane, ug/kg	<5	<25	<5	<5	<5
1,2-Dichlorobenzene, ug/kg	<5	<25	<5	<5	<5
1,2-Dichloropropane, ug/kg	<5	<25	<5	<5	<5
1,3-Dichlorobenzene, ug/kg	<5	<25	<5	<5	<5
1,4-Dichlorobenzene, ug/kg	<5	<25	<5	<5	<5
2-Chloroethylvinylether, ug/kg	<5	<25	<5	<5	<5
2-Hexanone, ug/kg	<50	<250	<50	<50	<50
Acetone, ug/kg	<50	<250	<50	<50	<50
Acrolein, ug/kg	<100	<500	<100	<100	<100
Acrylonitrile, ug/kg	<100	<500	<100	<100	<100
Bromodichloromethane, ug/kg	<5	<25	<5	<5	<5
Bromomethane, ug/kg	<5	<25	<5	<5	<5
Benzene, ug/kg	<5	<25	<5	<5	<5
Bromoform, ug/kg	<5	<25	<5	<5	<5

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-065

Received: 08 AUG 90
Reported: 27 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa RFI

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-065-13	T-3,3	08 AUG 90
08-065-14	T-8,5	08 AUG 90
08-065-15	T-8,3	08 AUG 90
08-065-17	T-4,3	08 AUG 90
08-065-18	T-5,3	08 AUG 90

PARAMETER	08-065-13	08-065-14	08-065-15	08-065-17	08-065-18
Chlorobenzene, ug/kg	<5	<25	<5	<5	<5
Carbon Tetrachloride, ug/kg	<5	<25	<5	<5	<5
Chloroethane, ug/kg	<5	<25	<5	<5	<5
Chloroform, ug/kg	<5	<25	<5	<5	<5
Chloromethane, ug/kg	<10	<50	<10	<10	<10
Carbon Disulfide, ug/kg	<10	<50	<10	<10	<10
Dibromochloromethane, ug/kg	<5	<25	<5	<5	<5
Ethylbenzene, ug/kg	<5	<25	<5	<5	<5
Freon 113, ug/kg	<5	<25	<5	<5	<5
Methyl ethyl ketone, ug/kg	<50	<250	<50	<50	<50
Methyl isobutyl ketone, ug/kg	<25	<130	<25	<25	<25
Methylene chloride, ug/kg	<5	<25	<5	<5	<5
Styrene, ug/kg	<5	<25	<5	<5	<5
Trichloroethene, ug/kg	<5	<25	<5	<5	<5
Trichlorofluoromethane, ug/kg	<5	<25	<5	<5	<5
Toluene, ug/kg	<5	<25	<5	<5	<5
Tetrachloroethene, ug/kg	<5	830	6	<5	<5
Vinyl acetate, ug/kg	<25	<130	<25	<25	<25
Vinyl chloride, ug/kg	<5	<25	<5	<5	<5
Total Xylene Isomers, ug/kg	<25	<130	<25	<25	<25
cis-1,2-Dichloroethene, ug/kg	<5	<25	<5	<5	<5
cis-1,3-Dichloropropene, ug/kg	<5	<25	<5	<5	<5
trans-1,2-Dichloroethene, ug/kg	<5	<25	<5	<5	<5

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-065

Received: 08 AUG 90
Reported: 27 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa RFI

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-065-13	T-3,3	08 AUG 90
08-065-14	T-8,5	08 AUG 90
08-065-15	T-8,3	08 AUG 90
08-065-17	T-4,3	08 AUG 90
08-065-18	T-5,3	08 AUG 90

PARAMETER	08-065-13	08-065-14	08-065-15	08-065-17	08-065-18
trans-1,3-Dichloropropene, ug/kg	<5	<25	<5	<5	<5
Semi-Quantified Results **					
1,4-Dioxane, ug/kg	---	---	10	---	---
A C10-C11 Hydrocarbon Matrix, ug/kg	---	---	---	700	---
A C10H14 Aromatic Hydrocarbon, ug/kg	---	---	---	10	---
A Second C10 H14 Cyclic Hydrocarbon, ug/kg	---	---	---	20	---
A Third C10H14 Aromatic Hydrocarbon, ug/kg	---	---	---	20	---

** Quantification based upon comparison of total ion count of the compound with that of the nearest internal standard.

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-065

Received: 08 AUG 90
Reported: 27 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa RFI

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-065-19	T-5,5	08 AUG 90

PARAMETER	08-065-19
Vol.Pri.Poll. (EPA-8240)	
Date Analyzed	08/17/90
Date Extracted	08/17/90
Dilution Factor, Times	1
1,1,1-Trichloroethane, ug/kg	<5
1,1,2,2-Tetrachloroethane, ug/kg	<5
1,1,2-Trichloroethane, ug/kg	<5
1,1-Dichloroethane, ug/kg	<5
1,1-Dichloroethene, ug/kg	<5
1,2-Dichloroethane, ug/kg	<5
1,2-Dichlorobenzene, ug/kg	<5
1,2-Dichloropropane, ug/kg	<5
1,3-Dichlorobenzene, ug/kg	<5
1,4-Dichlorobenzene, ug/kg	<5
2-Chloroethylvinylether, ug/kg	<5
2-Hexanone, ug/kg	<50
Acetone, ug/kg	<50
Acrolein, ug/kg	<100
Acrylonitrile, ug/kg	<100
Bromodichloromethane, ug/kg	<5
Bromomethane, ug/kg	<5
Benzene, ug/kg	<5
Bromoform, ug/kg	<5
Chlorobenzene, ug/kg	<5
Carbon Tetrachloride, ug/kg	<5
Chloroethane, ug/kg	<5
Chloroform, ug/kg	<5

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-065

Received: 08 AUG 90
Reported: 27 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa RFI

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-065-19	T-5,5	08 AUG 90

PARAMETER	08-065-19
Chloromethane, ug/kg	<10
Carbon Disulfide, ug/kg	<10
Dibromochloromethane, ug/kg	<5
Ethylbenzene, ug/kg	<5
Freon 113, ug/kg	<5
Methyl ethyl ketone, ug/kg	<50
Methyl isobutyl ketone, ug/kg	<25
Methylene chloride, ug/kg	<5
Styrene, ug/kg	<5
Trichloroethene, ug/kg	<5
Trichlorofluoromethane, ug/kg	<5
Toluene, ug/kg	<5
Tetrachloroethene, ug/kg	<5
Vinyl acetate, ug/kg	<25
Vinyl chloride, ug/kg	<5
Total Xylene Isomers, ug/kg	<25
cis-1,2-Dichloroethene, ug/kg	<5
cis-1,3-Dichloropropene, ug/kg	<5
trans-1,2-Dichloroethene, ug/kg	<5
trans-1,3-Dichloropropene, ug/kg	<5

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-065

Received: 08 AUG 90
Reported: 27 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa RFI

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-065-16	T-4,5	08 AUG 90

PARAMETER	08-065-16
Vol.Pri.Poll. (EPA-8240)	
Date Analyzed	08/21/90
Date Extracted	08/16/90
Dilution Factor, Times	1
Tetrachloroethylene, mg/kg	0.4
1,1,1-Trichloroethane, mg/kg	<0.1
1,1,2,2-Tetrachloroethane, mg/kg	<0.1
1,1,2-Trichloroethane, mg/kg	<0.1
1,1-Dichloroethane, mg/kg	<0.1
1,1-Dichloroethene, mg/kg	<0.1
1,2-Dichloroethane, mg/kg	<0.1
1,2-Dichlorobenzene, mg/kg	0.9
1,2-Dichloropropane, mg/kg	<0.1
1,3-Dichlorobenzene, mg/kg	<0.1
1,4-Dichlorobenzene, mg/kg	<0.1
2-Chloroethylvinylether, mg/kg	<0.1
2-Hexanone, mg/kg	<1
Acetone, mg/kg	<1
Acrolein, mg/kg	<5
Acrylonitrile, mg/kg	<5
Bromodichloromethane, mg/kg	<0.1
Benzene, mg/kg	<0.1
Bromomethane, mg/kg	<0.1
Bromoform, mg/kg	<0.1
Chlorobenzene, mg/kg	<0.1
Carbon Tetrachloride, mg/kg	<0.1
Chloroethane, mg/kg	<0.1

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-065

Received: 08 AUG 90
Reported: 27 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa RFI

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-065-16	T-4,5	08 AUG 90

PARAMETER	08-065-16
Chloroform, mg/kg	<0.1
Chloromethane, mg/kg	<0.2
Carbon Disulfide, mg/kg	<0.5
Dibromochloromethane, mg/kg	<0.1
Ethylbenzene, mg/kg	7.0
Freon 113, mg/kg	<0.1
Methyl ethyl ketone, mg/kg	<1
Methyl isobutyl ketone, mg/kg	<0.5
Methylene chloride, mg/kg	<0.1
Styrene, mg/kg	<0.1
Trichloroethene, mg/kg	<0.1
Trichlorofluoromethane, mg/kg	<0.1
Toluene, mg/kg	0.2
Vinyl acetate, mg/kg	<0.5
Vinyl chloride, mg/kg	<0.1
Total Xylene Isomers, mg/kg	12
cis-1,2-Dichloroethene, mg/kg	<0.1
cis-1,3-Dichloropropene, mg/kg	<0.1
trans-1,2-Dichloroethene, mg/kg	<0.1
trans-1,3-Dichloropropene, mg/kg	<0.1
Semi-Quantified Results **	
A C10H14 Aromatic Hydrocarbon, mg/kg	10
A C10 H20 Hydrocarbon, mg/kg	7
A C8-C11 Hydrocarbon Matrix, mg/kg	700
A C9H12 Aromatic Hydrocarbon, mg/kg	6
A Second C10 H14 Cyclic Hydrocarbon, mg/kg	9

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-065

Received: 08 AUG 90
Reported: 27 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa RFI

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-065-16	T-4,5	08 AUG 90

PARAMETER	08-065-16
A Second C9H12 Aromatic Hydrocarbon, mg/kg	6
A Saturated C10H22 Hydrocarbon, mg/kg	7
A Saturated C11H24 Hydrocarbon, mg/kg	6
A Third C10H14 Aromatic Hydrocarbon, mg/kg	9
A Third C9H12 Aromatic Hydrocarbon, mg/kg	10

** Quantification based upon comparison of total ion count of the compound with that of the nearest internal standard.

Charles Jacks, Ph.D., Laboratory Manager

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-077

Received: 10 AUG 90
Reported: 24 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-077-1	T-6,1A	09 AUG 90
08-077-2	T-7,1A	09 AUG 90
08-077-3	T-6,9,DA	09 AUG 90

PARAMETER	08-077-1	08-077-2	08-077-3
Vol.Pri.Poll. (EPA-8240)			
Date Analyzed	08/20/90	08/20/90	08/20/90
Date Extracted	08/20/90	08/20/90	08/20/90
Dilution Factor, Times	1	1	1
1,1,1-Trichloroethane, ug/kg	<5	<5	<5
1,1,2,2-Tetrachloroethane, ug/kg	<5	<5	<5
1,1,2-Trichloroethane, ug/kg	<5	<5	<5
1,1-Dichloroethane, ug/kg	<5	<5	<5
1,1-Dichloroethene, ug/kg	<5	<5	<5
1,2-Dichloroethane, ug/kg	<5	<5	<5
1,2-Dichlorobenzene, ug/kg	<5	<5	<5
1,2-Dichloropropane, ug/kg	<5	<5	<5
1,3-Dichlorobenzene, ug/kg	<5	<5	<5
1,4-Dichlorobenzene, ug/kg	<5	<5	<5
2-Chloroethylvinylether, ug/kg	<5	<5	<5
2-Hexanone, ug/kg	<50	<50	<50
Acetone, ug/kg	<50	<50	<50
Acrolein, ug/kg	<100	<100	<100
Acrylonitrile, ug/kg	<100	<100	<100
Bromodichloromethane, ug/kg	<5	<5	<5
Bromomethane, ug/kg	<5	<5	<5
Benzene, ug/kg	<5	<5	<5
Bromoform, ug/kg	<5	<5	<5
Chlorobenzene, ug/kg	<5	<5	<5
Carbon Tetrachloride, ug/kg	<5	<5	<5

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-077

Received: 10 AUG 90
Reported: 24 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-077-1	T-6,1A	09 AUG 90
08-077-2	T-7,1A	09 AUG 90
08-077-3	T-6,9,DA	09 AUG 90

PARAMETER	08-077-1	08-077-2	08-077-3
Chloroethane, ug/kg	<5	<5	<5
Chloroform, ug/kg	<5	<5	<5
Chloromethane, ug/kg	<10	<10	<10
Carbon Disulfide, ug/kg	<10	<10	<10
Dibromochloromethane, ug/kg	<5	<5	<5
Ethylbenzene, ug/kg	<5	<5	<5
Freon 113, ug/kg	<5	<5	<5
Methyl ethyl ketone, ug/kg	<50	<50	<50
Methyl isobutyl ketone, ug/kg	<25	<25	<25
Methylene chloride, ug/kg	<5	<5	<5
Styrene, ug/kg	<5	<5	<5
Trichloroethene, ug/kg	<5	<5	<5
Trichlorofluoromethane, ug/kg	<5	<5	<5
Toluene, ug/kg	<5	<5	<5
Tetrachloroethene, ug/kg	43	8	40
Vinyl acetate, ug/kg	<25	<25	<25
Vinyl chloride, ug/kg	<5	<5	<5
Total Xylene Isomers, ug/kg	<25	<25	<25
cis-1,2-Dichloroethene, ug/kg	<5	<5	<5
cis-1,3-Dichloropropene, ug/kg	<5	<5	<5
trans-1,2-Dichloroethene, ug/kg	<5	<5	<5
trans-1,3-Dichloropropene, ug/kg	<5	<5	<5

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-077

Received: 10 AUG 90
Reported: 24 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-077-4	T-6,3A	09 AUG 90
08-077-5	T-6,5A	09 AUG 90
08-077-6	T-7,3A	09 AUG 90
08-077-7	T-7,5A	09 AUG 90

PARAMETER	08-077-4	08-077-5	08-077-6	08-077-7
Vol.Pri.Poll. (EPA-8240)				
Date Analyzed	08/20/90	08/20/90	08/20/90	08/20/90
Date Extracted	08/20/90	08/20/90	08/20/90	08/20/90
Dilution Factor, Times	1	1	1	1
1,1,1-Trichloroethane, ug/kg	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane, ug/kg	<5	<5	<5	<5
1,1,2-Trichloroethane, ug/kg	<5	<5	<5	<5
1,1-Dichloroethane, ug/kg	<5	<5	<5	<5
1,1-Dichloroethene, ug/kg	<5	<5	<5	<5
1,2-Dichloroethane, ug/kg	<5	<5	<5	<5
1,2-Dichlorobenzene, ug/kg	<5	<5	<5	<5
1,2-Dichloropropane, ug/kg	<5	<5	<5	<5
1,3-Dichlorobenzene, ug/kg	<5	<5	<5	<5
1,4-Dichlorobenzene, ug/kg	<5	<5	<5	<5
2-Chloroethylvinylether, ug/kg	<5	<5	<5	<5
2-Hexanone, ug/kg	<50	<50	<50	<50
Acetone, ug/kg	<50	<50	<50	<50
Acrolein, ug/kg	<100	<100	<100	<100
Acrylonitrile, ug/kg	<100	<100	<100	<100
Bromodichloromethane, ug/kg	<5	<5	<5	<5
Bromomethane, ug/kg	<5	<5	<5	<5
Benzene, ug/kg	<5	<5	<5	<5
Bromoform, ug/kg	<5	<5	<5	<5
Chlorobenzene, ug/kg	<5	<5	<5	<5

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

Analytical Report

LOG NO: A90-08-077

Received: 10 AUG 90
Reported: 24 AUG 90

Mr. Peter Coutts
Chemical Waste Management
107 South Motor
Azusa, CA 91702

Project: Osco/Azusa

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
08-077-4	T-6,3A	09 AUG 90
08-077-5	T-6,5A	09 AUG 90
08-077-6	T-7,3A	09 AUG 90
08-077-7	T-7,5A	09 AUG 90

PARAMETER	08-077-4	08-077-5	08-077-6	08-077-7
Carbon Tetrachloride, ug/kg	<5	<5	<5	<5
Chloroethane, ug/kg	<5	<5	<5	<5
Chloroform, ug/kg	<5	<5	<5	<5
Chloromethane, ug/kg	<10	<10	<10	<10
Carbon Disulfide, ug/kg	<10	<10	<10	<10
Dibromochloromethane, ug/kg	<5	<5	<5	<5
Ethylbenzene, ug/kg	<5	<5	<5	<5
Freon 113, ug/kg	<5	<5	<5	<5
Methyl ethyl ketone, ug/kg	<50	<50	<50	<50
Methyl isobutyl ketone, ug/kg	<25	<25	<25	<25
Methylene chloride, ug/kg	<5	<5	<5	<5
Styrene, ug/kg	<5	<5	<5	<5
Trichloroethene, ug/kg	<5	<5	<5	<5
Trichlorofluoromethane, ug/kg	<5	<5	<5	<5
Toluene, ug/kg	<5	<5	<5	<5
Tetrachloroethene, ug/kg	<5	<5	7	7
Vinyl acetate, ug/kg	<25	<25	<25	<25
Vinyl chloride, ug/kg	<5	<5	<5	<5
Total Xylene Isomers, ug/kg	<25	<25	<25	<25
cis-1,2-Dichloroethene, ug/kg	<5	<5	<5	<5
cis-1,3-Dichloropropene, ug/kg	<5	<5	<5	<5
trans-1,2-Dichloroethene, ug/kg	<5	<5	<5	<5
trans-1,3-Dichloropropene, ug/kg	<5	<5	<5	<5

1200 Pacifico Avenue
Anaheim, CA 92805

714/978-0113
Fax: 714/978-9284

BCA B C Analytical

APPENDIX B

SAMPLING AND DECONTAMINATION PROCEDURES

APPENDIX B

OSCO FACILITY RFI PHASE IIb
SAMPLING AND DECONTAMINATION PROTOCOLS

Decontamination Protocol 1

- Distilled water purchased daily from local grocery store in either 1- or 2.5-gallon plastic containers, as available.

- All distilled water stored on-site near decontamination area.

- Each decontamination station container (5-gallon white plastic bucket) cleaned with a wash of tri-sodium phosphate soap (approximately 2 tablespoons) and two rinses of distilled water. Buckets were brushed with a medium stiffness brush during wash. Water disposed of in truck decontamination area.

- After washing all buckets as described, first bucket filled with 2.5 gallons of distilled water and approximately one cup of tri-sodium phosphate. Second bucket filled with approximately 1 gallon of distilled water. Third bucket remained empty for rinsing.

- Prior to the first sampling of the day and after each sampling, the sampler parts were collectively placed in the wash bucket. The sampler was disassembled on a driller-provided work stand. After placing the sampler parts in the wash bucket, the work stand was brushed clean and rinsed with distilled water. Each piece of the sampler was individually washed and brushed. It then was placed in the first rinse bucket, where soap was rinsed by hand from the sampler piece. This was augmented by a direct pour of distilled water on the sampler part as it was removed from the bucket. The part then was moved to the final rinse bucket, where it was not allowed to come in contact with water in the bucket. Distilled water was poured over the sampler part and allowed to drain into the bucket. Sampler parts then were placed on the work stand, reassembled, and allowed to air dry. During cleaning activities, latex gloves were worn. In all cases, clean latex gloves were put on prior to final rinse or a second individual with clean latex gloves performed the final rinse and reassembly.

- Decontamination water disposed of on truck wash and decontamination pad each day. Excess distilled water disposed of daily.

Decontamination Protocol 1a

- Distilled water purchased daily from local grocery store in either 1- or 2.5-gallon plastic containers, as available.

- Only distilled water being used in buckets was on-site during drilling activities. Excess water stored in vehicles parked off-site. Additional water taken from vehicles as needed during day.

- Each decontamination station container (5-gallon white plastic bucket) cleaned with a wash of tri-sodium phosphate soap (approximately 2 tablespoons) and two rinses of distilled water. Buckets were brushed with a medium stiffness brush during wash. Water disposed of in truck decontamination area.

- After washing all buckets as described, first bucket filled with 2.5 gallons of distilled water and approximately one cup of tri-sodium phosphate. Second bucket filled with approximately 1 gallon of distilled water. Third bucket remained empty for rinsing.

- Prior to the first sampling of the day and after each sampling, the sampler parts were collectively placed in the wash bucket. The sampler was disassembled on a driller-provided work stand. After placing the sampler parts in the wash bucket, the work stand was brushed clean and rinsed with distilled water. Each piece of the sampler was individually washed and brushed. It then was placed in the first rinse bucket, where soap was rinsed by hand from the sampler piece. This was augmented by a direct pour of distilled water on the sampler part. The part then was moved to the final rinse bucket, where it was not allowed to come in contact with water in the bucket. Distilled water was poured over the sampler part and allowed to drain into the bucket. Sampler parts then were placed on the pipe stand, reassembled, and allowed to air dry. During cleaning activities, latex gloves were worn. In all cases, clean latex gloves were put on prior to final rinse or a second individual with clean latex gloves performed the final rinse and reassembly.

- Decontamination water disposed of on truck wash and decontamination pad each day. Excess distilled water disposed of daily.

Decontamination Protocol 2

- Distilled water purchased daily from local grocery store in either 1- or 2.5-gallon plastic containers, as available.

- Only distilled water being used in buckets on-site during drilling activities. Excess water stored in vehicles parked off-site. Additional water taken from vehicles as needed during day.

- Each decontamination station container (5-gallon white plastic bucket) cleaned with a wash of tri-sodium phosphate soap (approximately 2 tablespoons) and two rinses of distilled water. Buckets were brushed with a medium stiffness brush during wash. Water disposed of in truck decontamination area.

- After washing all buckets as described, first bucket filled with 2.5 gallons of distilled water and approximately one cup of tri-sodium phosphate. Second bucket filled with approximately 1 gallon of distilled water. The third container also was filled with approximately 1 to 1.5 gallons of distilled water. A fourth and fifth bucket or basin remained empty for final rinse.

- Prior to the first sampling of each day and after each sampling, the sampler parts were collectively placed in the wash bucket. The sampler was disassembled on a driller-provided work stand. After placing the sampler parts in the wash bucket, the work stand was brushed clean and rinsed with distilled water. Each piece of the sampler was washed and brushed individually. Two brushes were used in the wash/rinse process. In the first wash bucket, the sampler parts were scrubbed with one brush. In the second and third buckets, the parts were rinsed with clean distilled water poured onto each part as they were scrubbed with the second brush. Each part then was rinsed with distilled water again over the fourth rinse bucket, where they were not allowed to come in contact with the water collecting in the bucket. This process was repeated over a fifth rinse bucket, where parts were allowed to drain into the bucket and air dry. Sampler parts then were placed on the pipe stand and reassembled, allowing further

time for air drying if needed. During cleaning activities, latex gloves were worn. In all cases, clean latex gloves were put on prior to final rinse or a second individual with clean latex gloves performed the final rinse and reassembly.

- Decontamination water disposed of on truck wash and decontamination pad each day. Excess distilled water disposed of daily.

Decontamination Protocol 2a

- Distilled water purchased daily from local grocery store in either 1- or 2.5-gallon plastic containers, as available.

- Only distilled water used in buckets left on-site during drilling activities. Excess water stored in vehicles parked off-site. Additional water taken from vehicles as needed during day. Tri-sodium phosphate now stored in vehicles off-site at all times.

- Each decontamination station container (5-gallon white plastic bucket) cleaned with a wash of tri-sodium phosphate soap (approximately 2 tablespoon) and two rinses of distilled water. Buckets were brushed with a medium stiffness brush during wash. Water disposed of in truck decontamination area.

- After washing all buckets as described, first bucket filled with 2.5 gallons of distilled water and approximately one cup of tri-sodium phosphate. Second bucket filled with approximately 1 gallon of distilled water. The third container also was filled with approximately 1 to 1.5 gallons of distilled water. A fourth and fifth bucket or basin remained empty for final rinse.

- Prior to the first sampling of each day and after each sampling, the sampler parts were collectively placed in the wash bucket. The sampler was disassembled on a driller-provided work stand. After placing the sampler parts in the wash bucket, the work stand was brushed clean and rinsed with distilled water. Each piece of the sampler was washed and brushed individually. Two brushes were used in the wash/rinse process. In the first wash bucket, the sampler parts were scrubbed with one brush. In the second and third buckets, the parts were rinsed with clean distilled water poured onto each part as they were scrubbed with the second brush. Each part then was rinsed with distilled water again over the fourth rinse bucket, where they were not allowed to come in contact with the water collecting in the bucket. This process was repeated over a fifth rinse bucket, where parts were allowed to come in contact with the water collecting in the bucket. This process was repeated over a fifth rinse bucket, where parts were allowed to drain into the bucket and air dry. Sampler parts then were placed on the pipe stand and reassembled, allowing further time for air drying if needed. During cleaning activities, latex gloves were worn. In all cases, clean latex gloves were put on prior to final rinse or a second individual with clean latex gloves performed the final rinse and reassembly.

- Decontamination water disposed of on truck wash and decontamination pad each day. Excess distilled water disposed of daily.

Sampling Protocol 1

- During activities in which the sampling device was being handled, latex gloves were worn to protect the sampler from possible contamination. Tools used to assemble and disassemble the sampling device were rinsed with distilled water along with the sampling work stand.

- A 1.5-inch diameter, 24-inch long split spoon sampler with four 6-inch brass sleeves inserted in the sampler was attached to a pneumatic percussion sampling apparatus with rigid rod. The sampler then was lowered to the bottom of the borehole and was advanced by hammering it into the borehole bottom. When the apparatus would not penetrate further (refusal), it was removed from the borehole.

- The split spoon sampler was removed from the rod and taken to the sampling station. The ends were removed with an appropriate sized pipe wrench and the spoons were split apart using the ends of the wrench and/or a screw driver blade. The brass tubes containing sample were capped with a teflon cover and an end cap, which was taped in place with duct tape. Samples then were placed under chain-of-custody and stored in an ice chest.

- The sampler then was decontaminated according to one of the protocols described previously.

Sampling Protocol 1a

- During activities in which the sampling device was being handled, latex gloves were worn to protect the sampler from possible contamination. Tools used to assemble and disassemble the sampling device were rinsed with distilled water along with the sampling work stand.

- A 1.5-inch diameter, 24-inch long split spoon sampler with four 6-inch brass sleeves inserted in the sampler was used. A sand catcher was installed in the end of the sampler and the entire assembly was attached to a pneumatic percussion sampling apparatus with rigid rod. The sampler then was lowered to the bottom of the borehole and was advanced by hammering it into the borehole bottom. When the apparatus would not penetrate further (refusal), it was removed from the borehole.

- The split spoon sampler was removed from the rod and taken to the sampling station. The ends were removed with an appropriate sized pipe wrench and the spoons were split apart using the ends of the wrench and/or a screw driver blade. The brass tubes containing sample were capped with a teflon cover and an end cap, which was taped in place with duct tape. Samples then were placed under chain-of-custody and stored in an ice chest.

- The sampler then was decontaminated according to one of the protocols described previously.

Sampling Protocol 1b

- During activities in which the sampling device was being handled, latex gloves were worn to protect the sampler from possible contamination. Tools used to assemble and disassemble the sampling device were rinsed with distilled water along with the sampling work stand.

- A 1.5-inch diameter, 24-inch long split spoon sampler without brass liners was attached to a pneumatic percussion sampling apparatus with rigid rod. The sampler then was lowered to the

bottom of the borehole and was advanced by hammering it into the borehole bottom. When the apparatus would not penetrate further (refusal), it was removed from the borehole.

- The split spoon sampler was removed from the rod and taken to the sampling station. The ends were removed with an appropriate sized pipe wrench and the spoons were split apart using the ends of the wrench and/or a screw drive blade. The sample was collected by isolating the finer fraction of material by hand and placing that material into 40 ml vials. Samples then were placed under chain-of-custody and stored in an ice chest.

- The sampler then was decontaminated according to one of the protocols described previously.

Sampling Protocol 2

- During activities in which the sampling device was being handled, latex gloves were worn to protect the sampler from possible contamination. Tools used to assemble and disassemble the sampling device were rinsed with distilled water along with the sampling work stand.

- A 1.5-inch diameter, 24-inch long split spoon sampler without brass liners was attached to a 140-pound drop hammer connected to a sand line and winch system. The hammer had an approximate 24-inch drop. In order to gauge the drop distance, once the hammer was on the bottom of the borehole, the driller's helper would measure 26 inches up the sand line cable from the top of the drill steel and mark both locations with either a piece of colored tape or a chalk mark. The sampler then was advanced by alternately winding line on to the winch and releasing the winch brake causing the drop hammer to advanced the sampler into the borehole bottom. When the apparatus would not penetrate further (refusal), it was removed from the borehole.

- The split spoon sampler was removed from the cable assembly rod and taken to the sampling station. The ends were removed with an appropriate sized pipe wrench and the spoons were split apart using the ends of the wrench and/or a screw driver blade. The sample was collected by isolating the finer fraction of material by hand and placing that material into 40 ml vials. Samples then were placed under chain-of-custody and stored in an ice chest.

- The sampler then was decontaminated according to one of the protocols described previously.

Sampling Protocol 2a

- During activities in which the sampling device was being handled, latex gloves were worn to protect the sampler for possible contamination. Tools used to assemble and disassemble the sampling device were rinsed with distilled water along with the sampling work stand.

- When a sampling zone was noted either by observation or extrapolation of location from other borehole information, the drilling air would be shut down and the drill steel would be advanced from 12 to 24 inches prior to sampling.

- A 1.5-inch diameter, 24-inch long split spoon sampler without brass liners was attached to a 140-pound drop hammer connected to a sand line and winch system. A sand catcher was installed in the bottom of the split spoon sampler. The hammer had an approximate 24-inch drop. In order to gauge the drop distance, once the hammer was on the bottom of the

borehole, the driller's helper would measure 26 inches up the sand line cable from the top of the drill steel and mark both locations with either a piece of colored tape or a chalk mark. The sampler then was advanced by alternately winding line onto the winch and releasing the winch brake causing the drop hammer to advance the sampler into the borehole bottom. When the apparatus would not penetrate further (refusal), it was removed from the borehole.

- The split spoon sampler was removed from the rod and taken to the sampling station. The ends were removed with an appropriate sized pipe wrench and the spoons were split apart using the ends of the wrench and/or a screw driver blade. The sample was collected by isolating the finer fraction of material and placing that material into 40 ml vials using a new, clean plastic spoon. Samples then were placed under chain-of-custody and stored in an ice chest.

- The sampler then was decontaminated according to one of the protocols described previously.

SUMMARY OF SAMPLING AND DECONTAMINATION PROTOCOLS

Date	Borehole	Sample No.	Sample Depth	Decontamination Protocol	Sampling Protocol	Driller	Drill Rig
11-Feb-91	B-2	B2-1	5	1	1	Datum/Layne	CME-95
11-Feb-91	B-2	B2-2	9.5	1	1	Datum/Layne	CME-95
11-Feb-91	B-2	B2-3	15	1	1	Datum/Layne	CME-95
11-Feb-91	B-2	B2-5	25	1	1	Datum/Layne	CME-95
11-Feb-91	B-2	B2-7	30	1	1	Datum/Layne	CME-95
11-Feb-91	B-2	B2-9	40	1	1	Datum/Layne	CME-95
11-Feb-91	B-8	B8-1	4	1	1	Datum/Layne	CME-95
11-Feb-91	B-8	B8-2	9	1	1	Datum/Layne	CME-95
11-Feb-91	B-8	B8-3	14	1	1	Datum/Layne	CME-95
11-Feb-91	B-8	B8-4	19	1	1	Datum/Layne	CME-95
11-Feb-91	B-8	B8-5	30	1	1	Datum/Layne	CME-95
11-Feb-91	B-8	B8-6	40	1	1	Datum/Layne	CME-95
11-Feb-91	B-8	B8-7	50	1	1	Datum/Layne	CME-95
11-Feb-91	B-8	B8-8	55	1	1	Datum/Layne	CME-95
12-Feb-91	B-8R	B8R-1	4	1	1	Layne	Diesel Hammer
12-Feb-91	B-8R	B8R-2	9	1	1	Layne	Diesel Hammer
12-Feb-91	B-8R	B8R-15	15	1	1	Layne	Diesel Hammer
12-Feb-91	B-8R	B8R-19	19	1	1	Layne	Diesel Hammer
12-Feb-91	B-8R	B8R-4	19	1	1	Layne	Diesel Hammer
12-Feb-91	B-8R	B8R-21	21	1	1	Layne	Diesel Hammer
12-Feb-91	B-8R	B8R-7	35	1	1a	Layne	Diesel Hammer
12-Feb-91	B-8R	B8R-8	37	1	1a	Layne	Diesel Hammer
12-Feb-91	B-8R	B8R-9	45	1	1a	Layne	Diesel Hammer
12-Feb-91	B-8R	B8R-10	51	1	1a	Layne	Diesel Hammer
12-Feb-91	B-8R	B8R-12	53	1	1b	Layne	Diesel Hammer
12-Feb-91	B-8R	B8R-13	64	1	1b	Layne	Diesel Hammer
21-Feb-91	B-8R	B8R-14	70	1	1b	Layne	Diesel Hammer
21-Feb-91	B-8R	B8R-15	70	1	1b	Layne	Diesel Hammer
21-Feb-91	B-8R	B8R-16	75.5	1	1b	Layne	Diesel Hammer

SUMMARY OF SAMPLING AND DECONTAMINATION PROTOCOLS
(continued)

Date	Borehole	Sample No.	Sample Depth	Decontamination Protocol	Sampling Protocol	Driller	Drill Rig
21-Feb-91	B-8R	B8R-17	80	1	1b	Layne	Diesel Hammer
21-Feb-91	B-8R	B8R-18	85	1	1b	Layne	Diesel Hammer
21-Feb-91	B-8R	B8R-19	90	1	1b	Layne	Diesel Hammer
21-Feb-91	B-8R	B8R-20	96	1	1b	Layne	Diesel Hammer
21-Feb-91	B-8R	B8R-21	102	1	1b	Layne	Diesel Hammer
21-Feb-91	B-8R	B8R-22	106	1	1b	Layne	Diesel Hammer
21-Feb-91	B-8R	B8R-23	118	1	1b	Layne	Diesel Hammer
22-Feb-91	B-8R	B8R-24	122.5	1	1b	Layne	Diesel Hammer
14-Feb-91	B-2R	B2R-1	4	1	1b	Layne	Diesel Hammer
14-Feb-91	B-2R	B2R-11	11	1	1b	Layne	Diesel Hammer
14-Feb-91	B-2R	B2R-3	14	1	1b	Layne	Diesel Hammer
14-Feb-91	B-2R	B2R-4	19	1	1b	Layne	Diesel Hammer
14-Feb-91	B-2R	B2R-5	27	1	1b	Layne	Diesel Hammer
14-Feb-91	B-2R	B2R-8	45.5	1	1b	Layne	Diesel Hammer
14-Feb-91	B-2R	B2R-9	56	1	1b	Layne	Diesel Hammer
15-Feb-91	B-2R	B2R-10	66	1	1b	Layne	Diesel Hammer
15-Feb-91	B-2R	B2R-11	77.5	1	1b	Layne	Diesel Hammer
15-Feb-91	B-2R	B2R-12	89	1	1b	Layne	Diesel Hammer
15-Feb-91	B-2R	B2R-13	99	1	1b	Layne	Diesel Hammer
20-Feb-91	B-2R	B2R-14	116.5	1a	1b	Layne	Diesel Hammer
20-Feb-91	B-2R	B2R-15	128	1a	1b	Layne	Diesel Hammer
20-Feb-91	B-2R	B2R-17	139	1a	1b	Layne	Diesel Hammer
05-Mar-91	B-2R	B2R-18	154	1a	2	Beylik	Hydraulic Percussion
05-Mar-91	B-2R	B2R-19	166	1a	2	Beylik	Hydraulic Percussion
05-Mar-91	B-2R	B2R-20	170	1a	2	Beylik	Hydraulic Percussion
07-Mar-91	B-1	B1-20	20	1a	2	Beylik	Hydraulic Percussion
11-Mar-91	B-1	B1-47	47	1a	2a	Beylik	Hydraulic Percussion
11-Mar-91	B-1	B1-49	49	1a	2a	Beylik	Hydraulic Percussion

SUMMARY OF SAMPLING AND DECONTAMINATION PROTOCOLS
(continued)

Date	Borehole	Sample No.	Sample Depth	Decontamination Protocol	Sampling Protocol	Driller	Drill Rig
11-Mar-91	B-1	B1-55	55	1a	2a	Beylik	Hydraulic Percussion
11-Mar-91	B-1	B1-61	61	1a	2a	Beylik	Hydraulic Percussion
11-Mar-91	B-1	B1-65	65	1a	2a	Beylik	Hydraulic Percussion
11-Mar-91	B-1	B1-66.5	66.5	1a	2a	Beylik	Hydraulic Percussion
11-Mar-91	B-1	B1-70	70	1a	2a	Beylik	Hydraulic Percussion
12-Mar-91	B-1	B1-77	77	1a	2a	Beylik	Hydraulic Percussion
12-Mar-91	B-1	B1-79	79	1a	2a	Beylik	Hydraulic Percussion
12-Mar-91	B-1	B1-93	93	1a	2a	Beylik	Hydraulic Percussion
12-Mar-91	B-1	B1-101.5	101.5	1a	2a	Beylik	Hydraulic Percussion
12-Mar-91	B-1	B1-108	108	1a	2a	Beylik	Hydraulic Percussion
14-Mar-91	B-1	B1-110	110	1a	2a	Beylik	Hydraulic Percussion
14-Mar-91	B-1	B1-123	123	1a	2a	Beylik	Hydraulic Percussion
15-Mar-91	B-1	B1-132	132	1a	2a	Beylik	Hydraulic Percussion
15-Mar-91	B-1	B1-134	134	1a	2a	Beylik	Hydraulic Percussion
15-Mar-91	B-1	B1-137	137	1a	2a	Beylik	Hydraulic Percussion
19-Mar-91	B-4	B4-10	10	1a	2a	Beylik	Hydraulic Percussion
19-Mar-91	B-4	B4-13	13	1a	2a	Beylik	Hydraulic Percussion
21-Mar-91	B-4	B4-18	18	1a	2a	Beylik	Hydraulic Percussion
21-Mar-91	B-4	B4-31	31	1a	2a	Beylik	Hydraulic Percussion
22-Mar-91	B-4	B4-51	51	1a	2a	Beylik	Hydraulic Percussion
22-Mar-91	B-4	B4-53	53	1a	2a	Beylik	Hydraulic Percussion
22-Mar-91	B-4	B4-54	54	1a	2a	Beylik	Hydraulic Percussion
22-Mar-91	B-4	B4-56	56	1a	2a	Beylik	Hydraulic Percussion
22-Mar-91	B-4	B4-60	60	1a	2a	Beylik	Hydraulic Percussion
22-Mar-91	B-4	B4-62	62	1a	2a	Beylik	Hydraulic Percussion
22-Mar-91	B-4	B4-68	68	1a	2a	Beylik	Hydraulic Percussion
22-Mar-91	B-4	B4-72	72	1a	2a	Beylik	Hydraulic Percussion
25-Mar-91	B-4	B4-74	74	1a	2a	Beylik	Hydraulic Percussion

SUMMARY OF SAMPLING AND DECONTAMINATION PROTOCOLS
(continued)

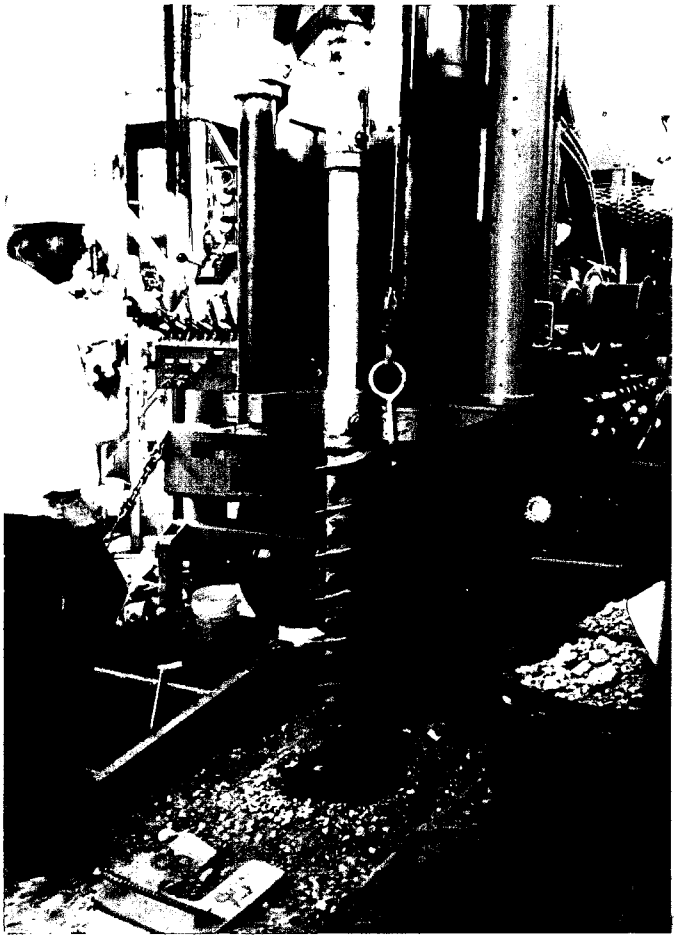
Date	Borehole	Sample No.	Sample Depth	Decontamination Protocol	Sampling Protocol	Driller	Drill Rig
25-Mar-91	B-4	B4-79	79	1a	2a	Beylik	Hydraulic Percussion
01-Apr-91	B-4	B4-89	89	1a	2a	Beylik	Hydraulic Percussion
01-Apr-91	B-4	B4-98	98	1a	2a	Beylik	Hydraulic Percussion
02-Apr-91	B-4	B4-99	99	1a	2a	Beylik	Hydraulic Percussion
02-Apr-91	B-4	B4-106	106	1a	2a	Beylik	Hydraulic Percussion
02-Apr-91	B-4	B4-108	108	1a	2a	Beylik	Hydraulic Percussion
02-Apr-91	B-4	B4-128	128	1a	2a	Beylik	Hydraulic Percussion
03-Apr-91	B-4	B4-138	138	1a	2a	Beylik	Hydraulic Percussion
03-Apr-91	B-4	B4-146	146	1a	2a	Beylik	Hydraulic Percussion
03-Apr-91	B-4	B4-155	155	1a	2a	Beylik	Hydraulic Percussion
05-Apr-91	B-4	B4-175	175	2	2a	Beylik	Hydraulic Percussion
05-Apr-91	B-4	B4-179	179	2	2a	Beylik	Hydraulic Percussion
05-Apr-91	B-4	B4-184	184	2	2a	Beylik	Hydraulic Percussion
15-Apr-91	B-6	B6-19	19	2a	2a	Beylik	Hydraulic Percussion
15-Apr-91	B-6	B6-29	29	2a	2a	Beylik	Hydraulic Percussion
15-Apr-91	B-6	B6-42	42	2a	2a	Beylik	Hydraulic Percussion
15-Apr-91	B-6	B6-51	51	2a	2a	Beylik	Hydraulic Percussion
15-Apr-91	B-6	B6-67	67	2a	2a	Beylik	Hydraulic Percussion
16-Apr-91	B-6	B6-86	86	2a	2a	Beylik	Hydraulic Percussion
17-Apr-91	B-6	B6-97	97	2a	2a	Beylik	Hydraulic Percussion
17-Apr-91	B-6	B6-107	107	2a	2a	Beylik	Hydraulic Percussion
17-Apr-91	B-6	B6-127	127	2a	2a	Beylik	Hydraulic Percussion
18-Apr-91	B-6	B6-133	133	2a	2a	Beylik	Hydraulic Percussion
18-Apr-91	B-6	B6-145	145	2a	2a	Beylik	Hydraulic Percussion
18-Apr-91	B-6	B6-150	150	2a	2a	Beylik	Hydraulic Percussion
22-Apr-91	B-6	B6-156	156	2a	2a	Beylik	Hydraulic Percussion
23-Apr-91	B-6	B6-168	168	2a	2a	Beylik	Hydraulic Percussion
23-Apr-91	B-6	B6-175	175	2a	2a	Beylik	Hydraulic Percussion

SUMMARY OF SAMPLING AND DECONTAMINATION PROTOCOLS
(concluded)

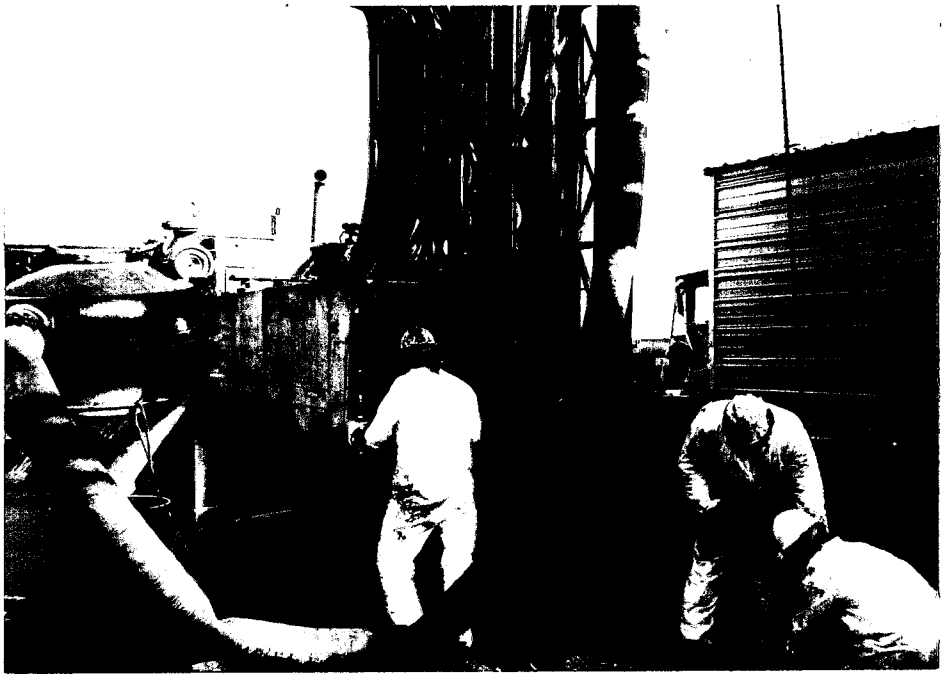
Date	Borehole	Sample No.	Sample Depth	Decontamination Protocol	Sampling Protocol	Driller	Drill Rig
24-Apr-91	B-6	B6-180	180	2a	2a	Beylik	Hydraulic Percussion
24-Apr-91	B-6	B6-183	183	2a	2a	Beylik	Hydraulic Percussion
24-Apr-91	B-6	B6-191	191	2a	2a	Beylik	Hydraulic Percussion
14-May-91	B-3	B3-19	19	2a	2a	Beylik	Hydraulic Percussion
14-May-91	B-3	B3-30	30	2a	2a	Beylik	Hydraulic Percussion
14-May-91	B-3	B3-33	33	2a	2a	Beylik	Hydraulic Percussion
14-May-91	B-3	B3-48	48	2a	2a	Beylik	Hydraulic Percussion
14-May-91	B-3	B3-62.5	62.5	2a	2a	Beylik	Hydraulic Percussion
15-May-91	B-3	B3-71	71	2a	2a	Beylik	Hydraulic Percussion
15-May-91	B-3	B3-78	78	2a	2a	Beylik	Hydraulic Percussion
15-May-91	B-3	B3-90	90	2a	2a	Beylik	Hydraulic Percussion
21-May-91	B-5	B5-17	17	2a	2a	Beylik	Hydraulic Percussion
21-May-91	B-5	B5-21	21	2a	2a	Beylik	Hydraulic Percussion
21-May-91	B-5	B5-24	24	2a	2a	Beylik	Hydraulic Percussion
21-May-91	B-5	B5-28	28	2a	2a	Beylik	Hydraulic Percussion
21-May-91	B-5	B5-32	32	2a	2a	Beylik	Hydraulic Percussion
22-May-91	B-5	B5-54	54	2a	2a	Beylik	Hydraulic Percussion
22-May-91	B-5	B5-77	77	2a	2a	Beylik	Hydraulic Percussion
22-May-91	B-5	B5-82	82	2a	2a	Beylik	Hydraulic Percussion
22-May-91	B-5	B5-90	90	2a	2a	Beylik	Hydraulic Percussion
23-May-91	B-5	B5-103	103	2a	2a	Beylik	Hydraulic Percussion
23-May-91	B-5	B5-110	110	2a	2a	Beylik	Hydraulic Percussion
23-May-91	B-5	B5-115	115	2a	2a	Beylik	Hydraulic Percussion
23-May-91	B-5	B5-129	129	2a	2a	Beylik	Hydraulic Percussion
23-May-91	B-5	B5-144	144	2a	2a	Beylik	Hydraulic Percussion
23-May-91	B-5	B5-159	159	2a	2a	Beylik	Hydraulic Percussion
23-May-91	B-5	B5-162	162	2a	2a	Beylik	Hydraulic Percussion

APPENDIX C

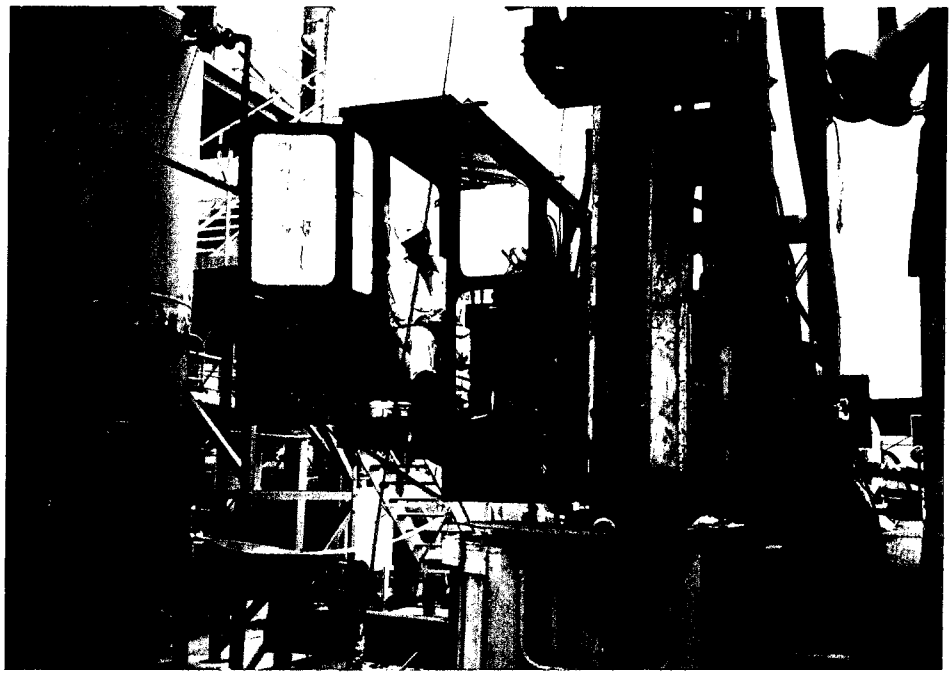
PHOTOGRAPHIC ESSAY



1. *CME-95 Rig Drilling at Boring B-2 [8 February 1991].*

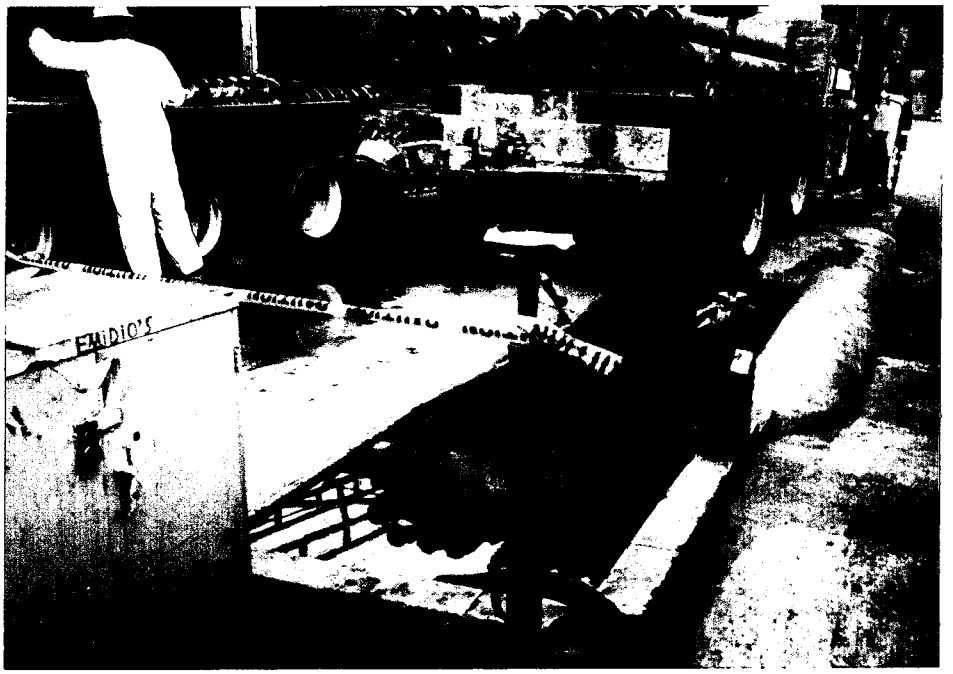


2. *Layne Environmental Services, Inc. Reverse Air Circulation Diesel Hammer Rig with Cyclone Collector Drilling at Boring B-2R [14 February 1991].*

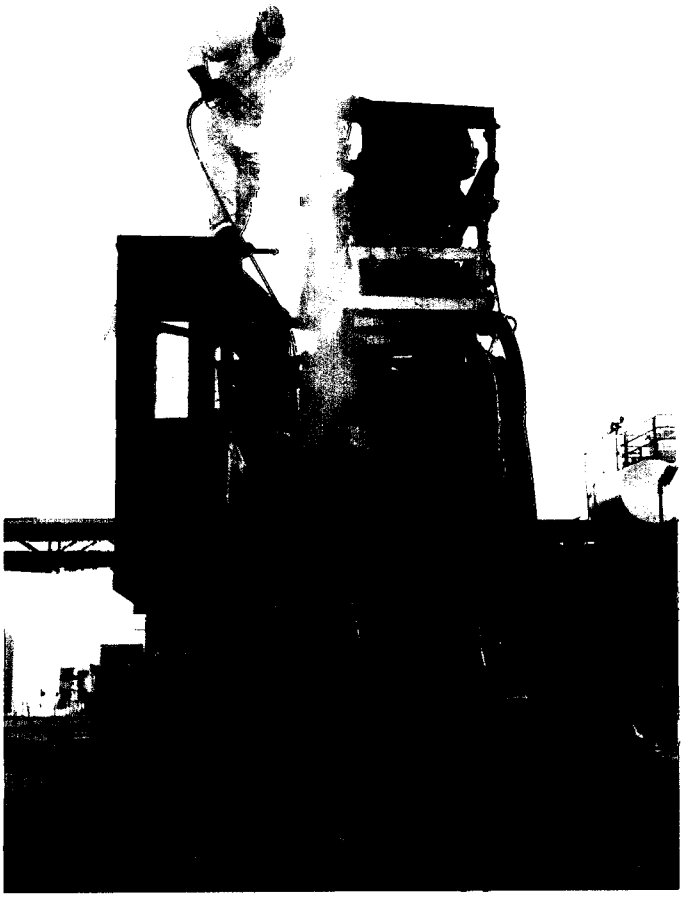


3. *Beylik Drilling, Inc. Reverse Air Circulation Percussion Hammer Rig Drilling at Boring B-2R [4 March 1991].*

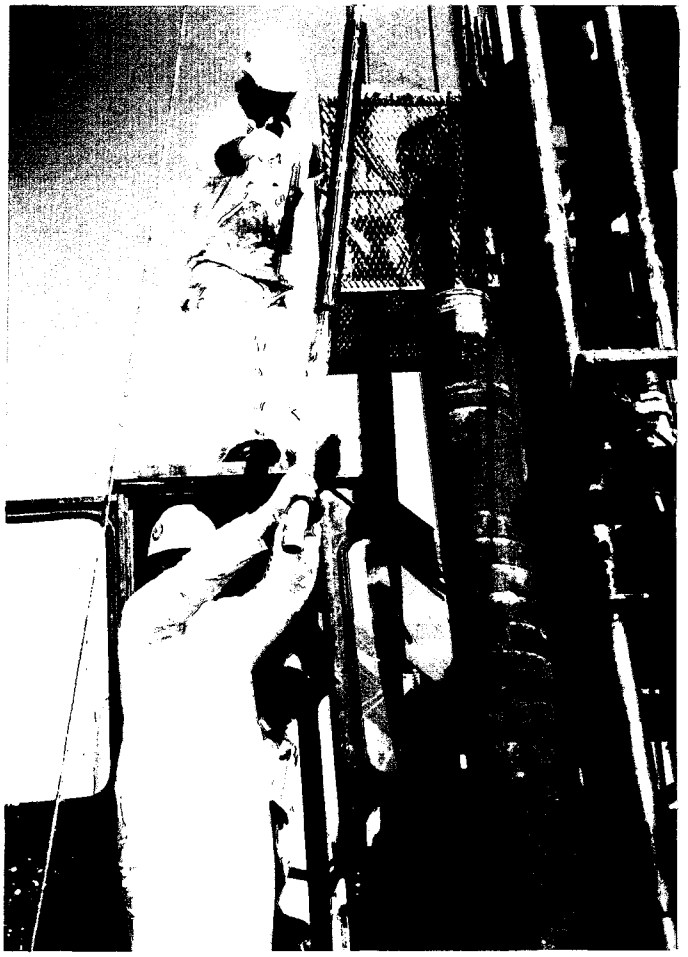
4. *Cyclone Material Collected from 123 feet at Boring B-1 -- Mixture of Cobbles and Dark Brown Sand [14 March 1991].*



5. *Temporary Decontamination Pad for Drilling Equipment [11 February 1991].*

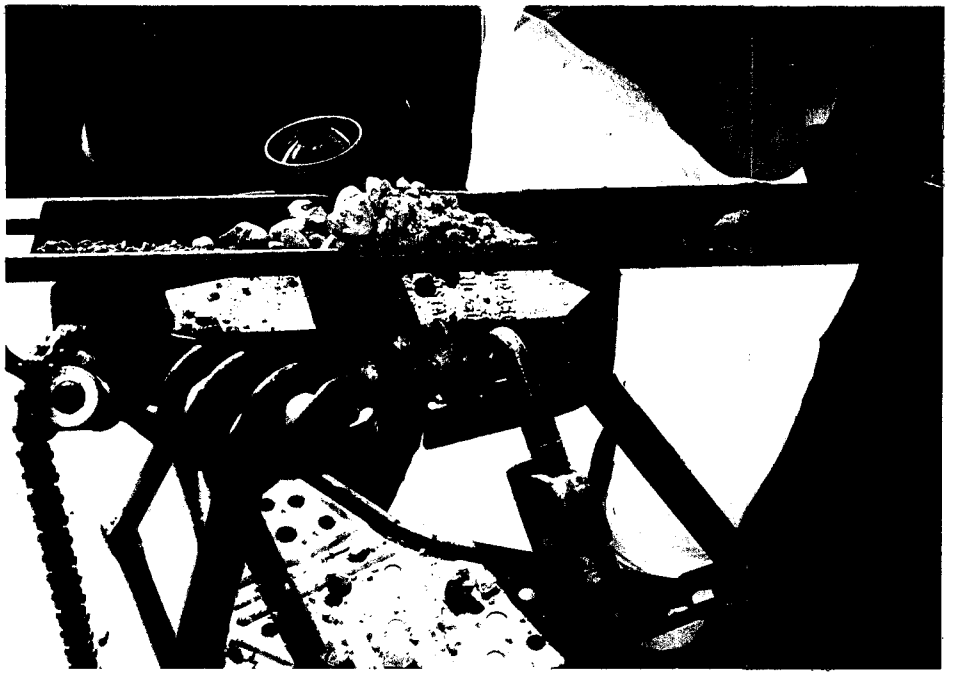


6. *Decontaminating the Beylik Rig with High-Pressure Wash [28 March 1991].*



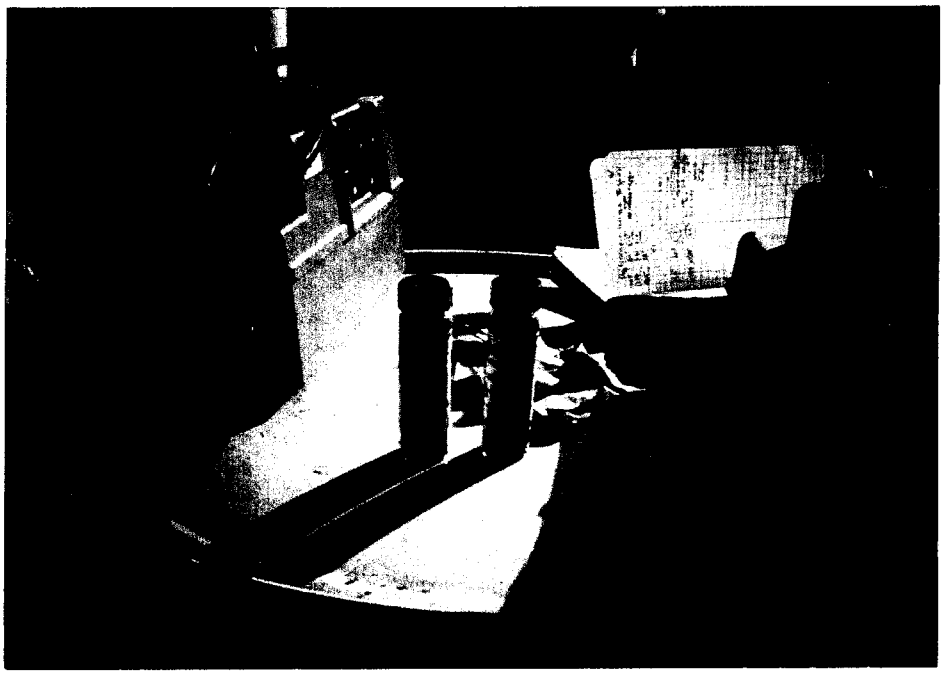
7. *Preparing to Insert Drive Sampler into Boring B-1 [12 March 1991].*

8. *Brass Tube Sample Collected from 30 feet at Boring B-2 [8 February 1991].*



9. *Drive Sample Collected from 116 feet at Boring B-2R -- Finer Grained Materials Being Placed in a 40-ml Vial [20 February 1991].*

10. *Drive Sample Collected from 106 feet at Boring B-8R -- Competent Sandy Sample Retrieved at this Location [21 February 1991].*



11. 40-ml Vials Used to Collect Discrete Soil Samples [13 February 1991].

12. Sampling Equipment Decontamination Area [13 February 1991].

13. Placement of 1-inch PVC Vapor Monitoring Riser at Boring B-8 [18 February 1991].

14. Adding Volclay Pellets to Boring B-8R [22 February 1991].

15. Boring B-6 Immediately Prior to Installation of Locking Well Box [30 April 1991].

16. Completed Soil Vapor Probe Installation at Boring B-4 [18 April 1991].

APPENDIX D

BORING/PROBE AS-BUILT DRAWINGS AND SPECIFICATIONS

OIL & SOLVENT PROCESS COMPANY
DEEP BORING COMPLETION SPECIFICATIONS

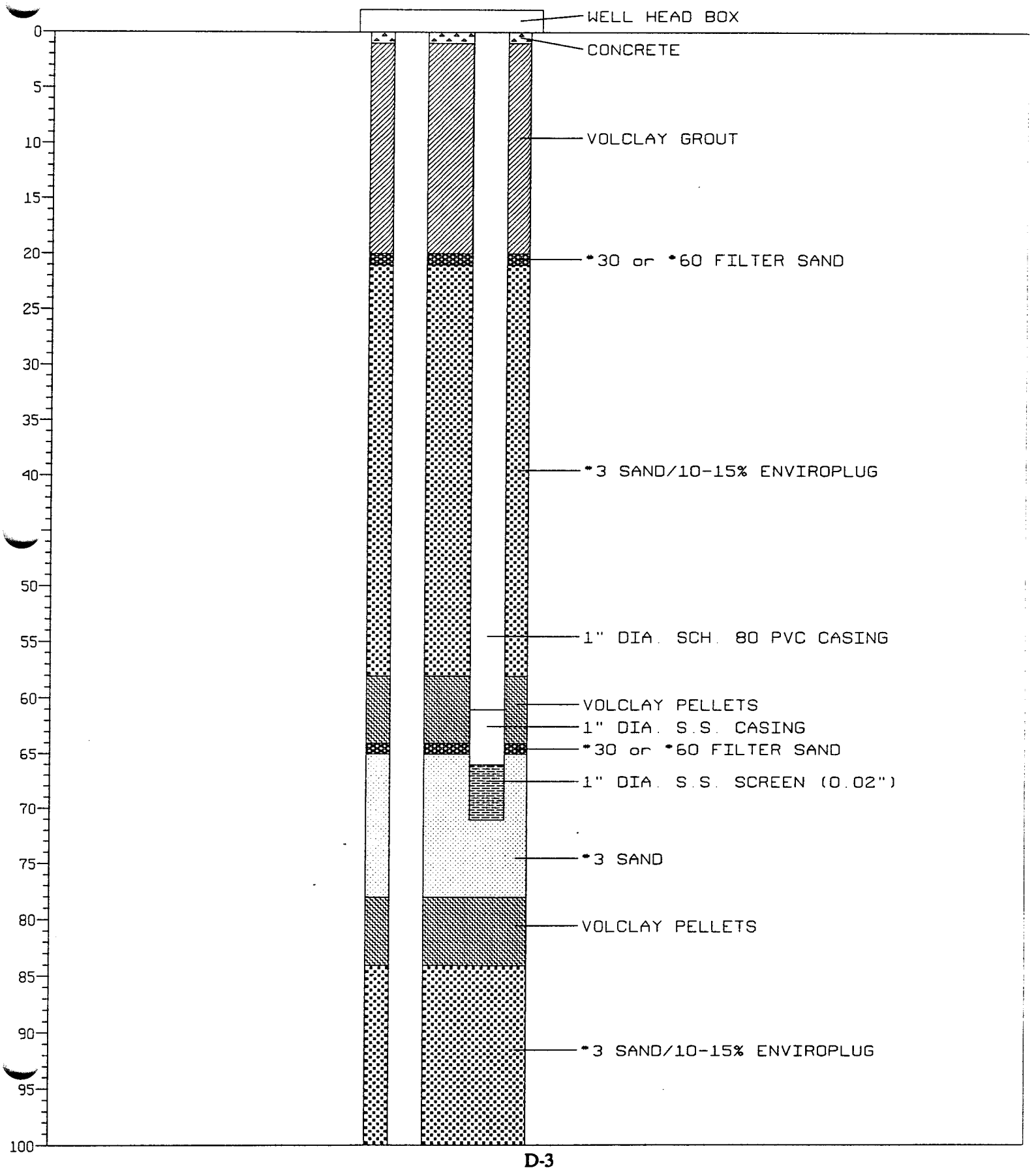
Boring Feature	Depth Interval (feet bgs)								
	B-1	B-2	B-2R	B-3	B-4	B-5	B-6	B-8	B-8R
Cement seal	0-1	0-1	0-2	0-1	0-1	0-1	0-1	0-1	0-1
Volclay grout seal	1-20	1-13	2-20	1-20	1-20	1-20	1-20	1-32	1-5
Filter sand	20-21	--	20-21	--	--	--	--	--	--
Sand/Enviroplug backfill	21-58	--	21-57	20-53	20-59	20-53	20-52	--	5-31
Vapor Probe No. 3									
Upper volclay seal	--	--	--	--	--	--	--	--	31-37
Filter sand (#30 or #60)	--	--	--	--	--	--	--	--	37-38
Sandpack (#3)	--	--	--	--	--	--	--	--	38-58
Lower volclay seal	--	--	--	--	--	--	--	--	--
Steel riser	--	--	--	--	--	--	--	--	35-40
Steel screen (0.01-inch)	--	--	--	--	--	--	--	--	40-45
Vapor Probe No. 2									
Upper volclay seal	58-64	--	57-63	53-59	59-65	53-59	52-60	--	58-64
Filter sand (#30 or #60)	64-65	--	63-64	59-61	65-67	59-61	60-62	--	64-66
Sandpack (#3)	65-78	--	64-79	61-72	67-80	61-73	62-75	--	66-79
Lower filter sand	--	--	--	72-74	80-82	73-74	75-77	--	--
Lower volclay seal	78-84	--	79-85	74-80	82-88	74-82	77-83	--	79-85
Steel riser	61-66	--	61-66	58-63	65-70	57-62	60-65	--	62-67
Steel screen (0.01-inch)	66-71	--	66-71	63-68	70-75	62-67	65-70	--	67-72
Steel riser	--	--	--	--	75-80	--	70-75	--	--
Sand/Enviroplug backfill	84-122	--	85-148	80-90	88-159	82-147	83-172	--	85-97

OIL & SOLVENT PROCESS COMPANY
DEEP BORING COMPLETION SPECIFICATIONS
(concluded)

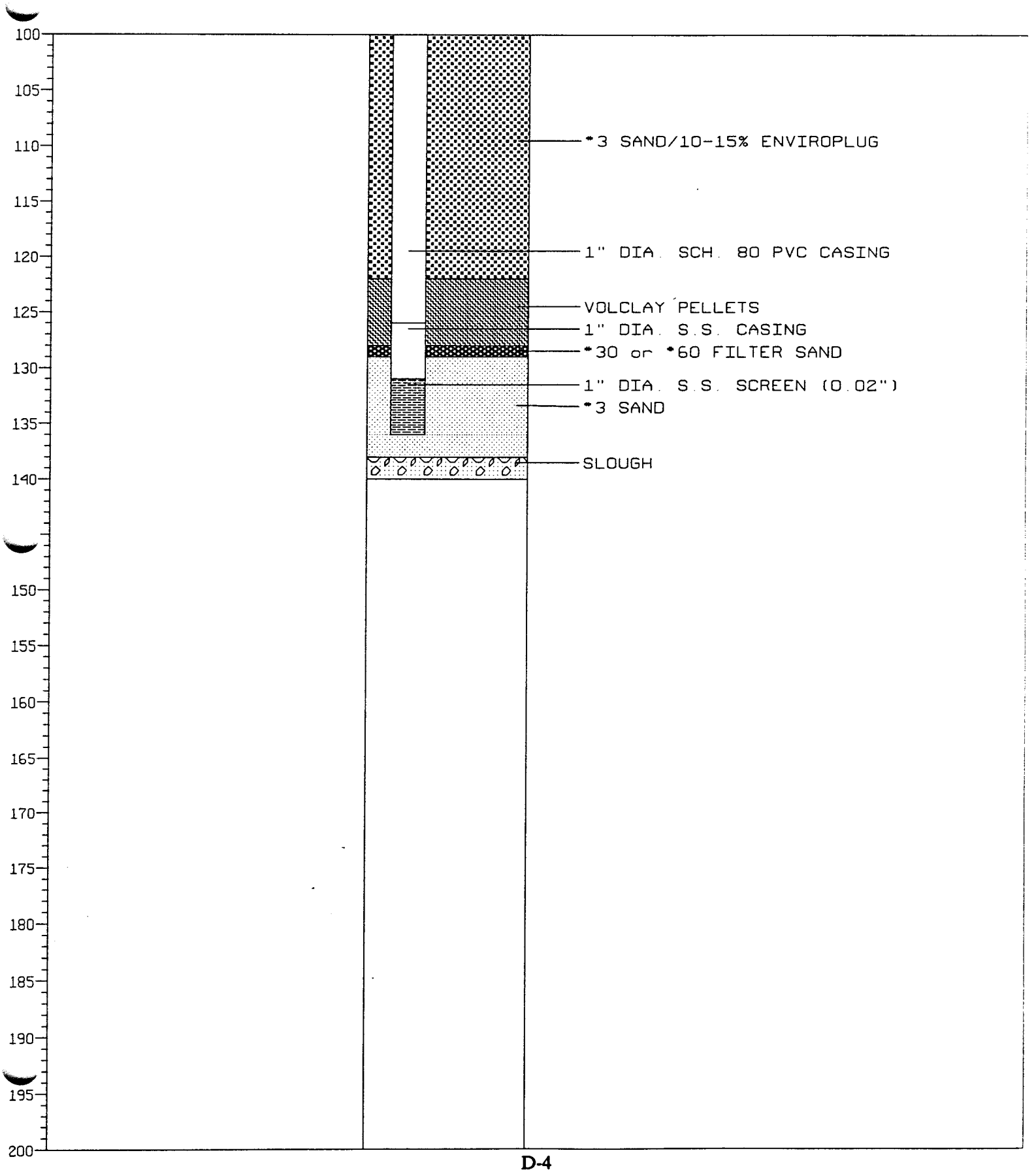
Boring Feature	Depth Interval (feet bgs)								
	B-1	B-2	B-2R	B-3	B-4	B-5	B-6	B-8	B-8R
Vapor Probe No. 1									
Upper volclay seal	122-128	13-14	148-154	90-96	159-165	147-153	172-178	32-34	97-103
Filter sand (#30 or #60)	128-129	14-15	154-155	96-98	165-167	153-154	178-180	34-35	103-105
Sandpack (#3)	129-138	15-22	155-169.5	98-106.5	167-181.5	154-166.5	180-197	35-41	105-120
Steel riser	126-131	12-17	152-157	94-99	165-170	150-155	180-185	31-36	101-106
Steel screen (0.01-inch)	131-136	17-22	157-162	99-104	170-175	155-160	185-190	36-41	106-111
Steel riser	--	--	--	--	175-180	--	190-195	--	--
Slough	138-140	22-43	169.5-174	--	181.5-186.5	--	--	41-57.5	120-122.5
Total boring depth	140	43	174	106.5	186.5	166.5	197	57.5	122.5

[Note: 1-inch diameter PVC casing extends from upper stainless steel riser to ground surface.]

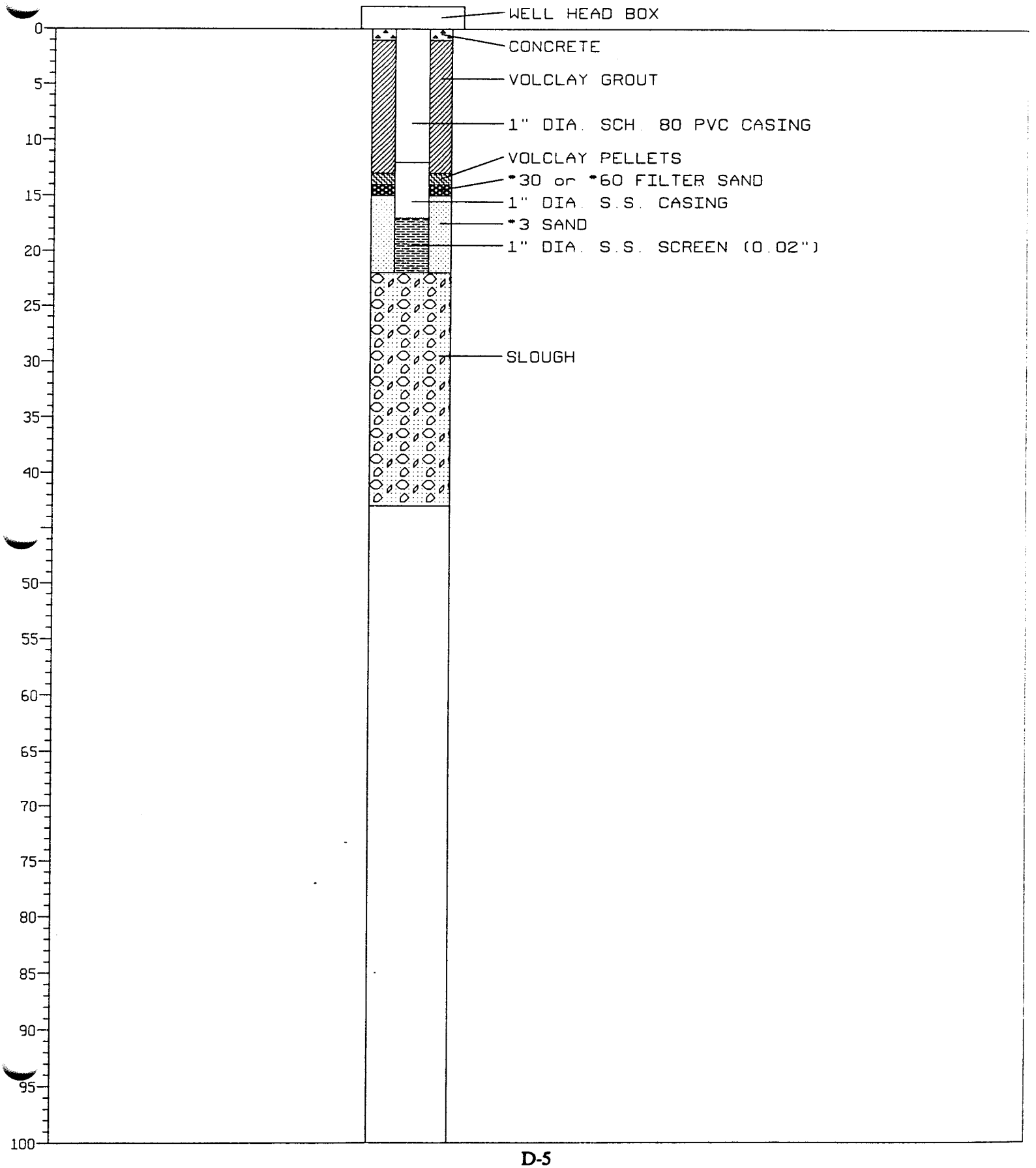
MEREDITH/BOLI & ASSOCIATES, INC		BORING LOG No:	B-1
PROJECT:	OSCO Azusa RFI (Phase IIb)	PROJECT No:	90-211
PROJECT LOCATION:	Azusa, California	DATE(S):	3/7/91 - 3/15/91
DRILLING METHOD:	Hydraulic Percussion	DRILLING CO:	Beylik TOTAL DEPTH: 140 feet
FIELD GEOLOGIST:	Hagar/Gilmer (Knight Piesold & Co.)	GROUND ELEVATION:	522.8 feet MSL



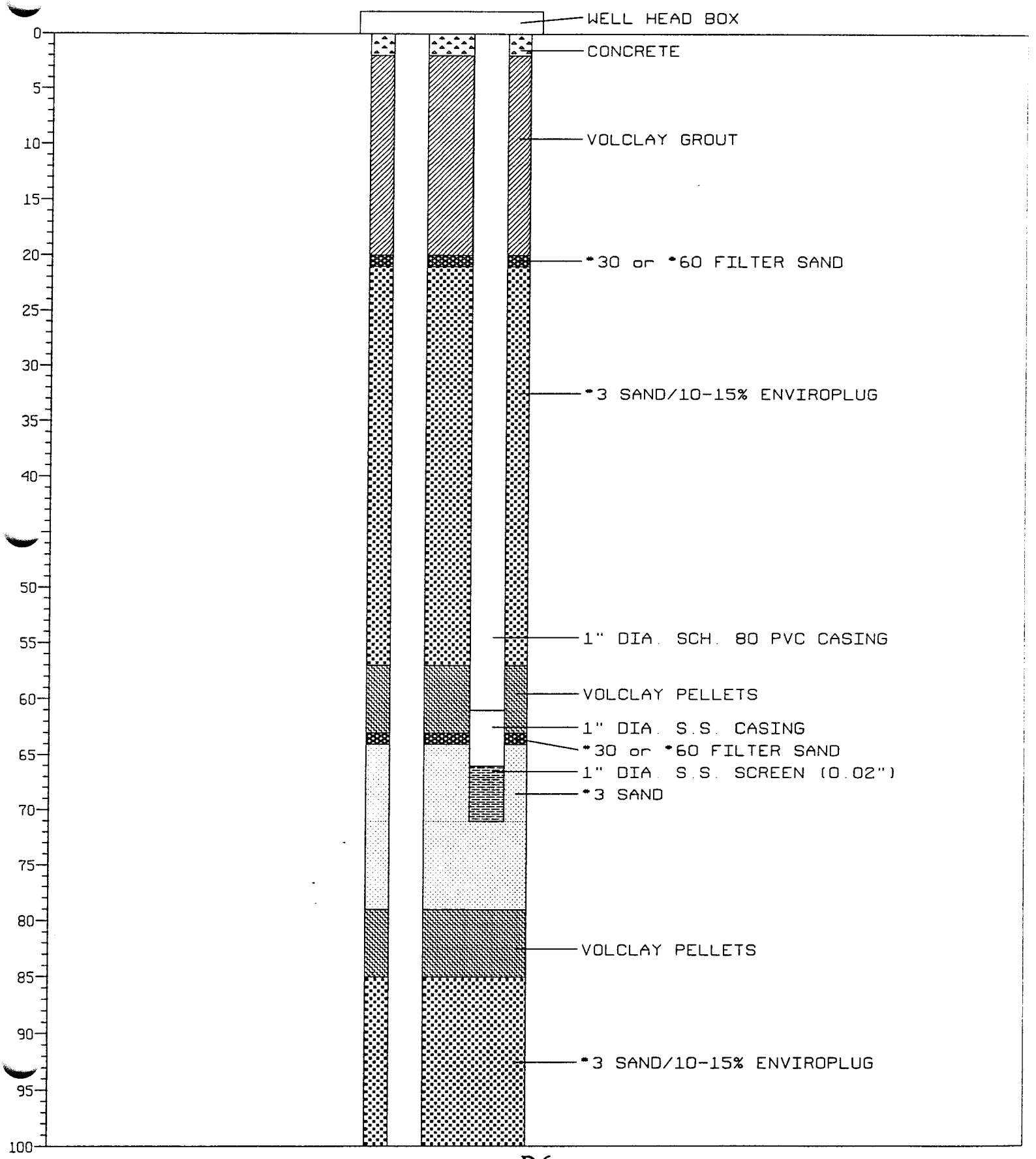
MEREDITH/BOLI & ASSOCIATES, INC.		BORING LOG No:	B-1
PROJECT:	OSCO Azusa RFI (Phase IIb)	PROJECT No:	90-211
PROJECT LOCATION:	Azusa, California	DATE(S):	3/7/91 - 3/15/91
DRILLING METHOD:	Hydraulic Percussion	DRILLING CO:	Beylik TOTAL DEPTH: 140 feet
FIELD GEOLOGIST:	Hagar/Gilmer (Knight Piesold & Co.)	GROUND ELEVATION	522.8 feet MSL



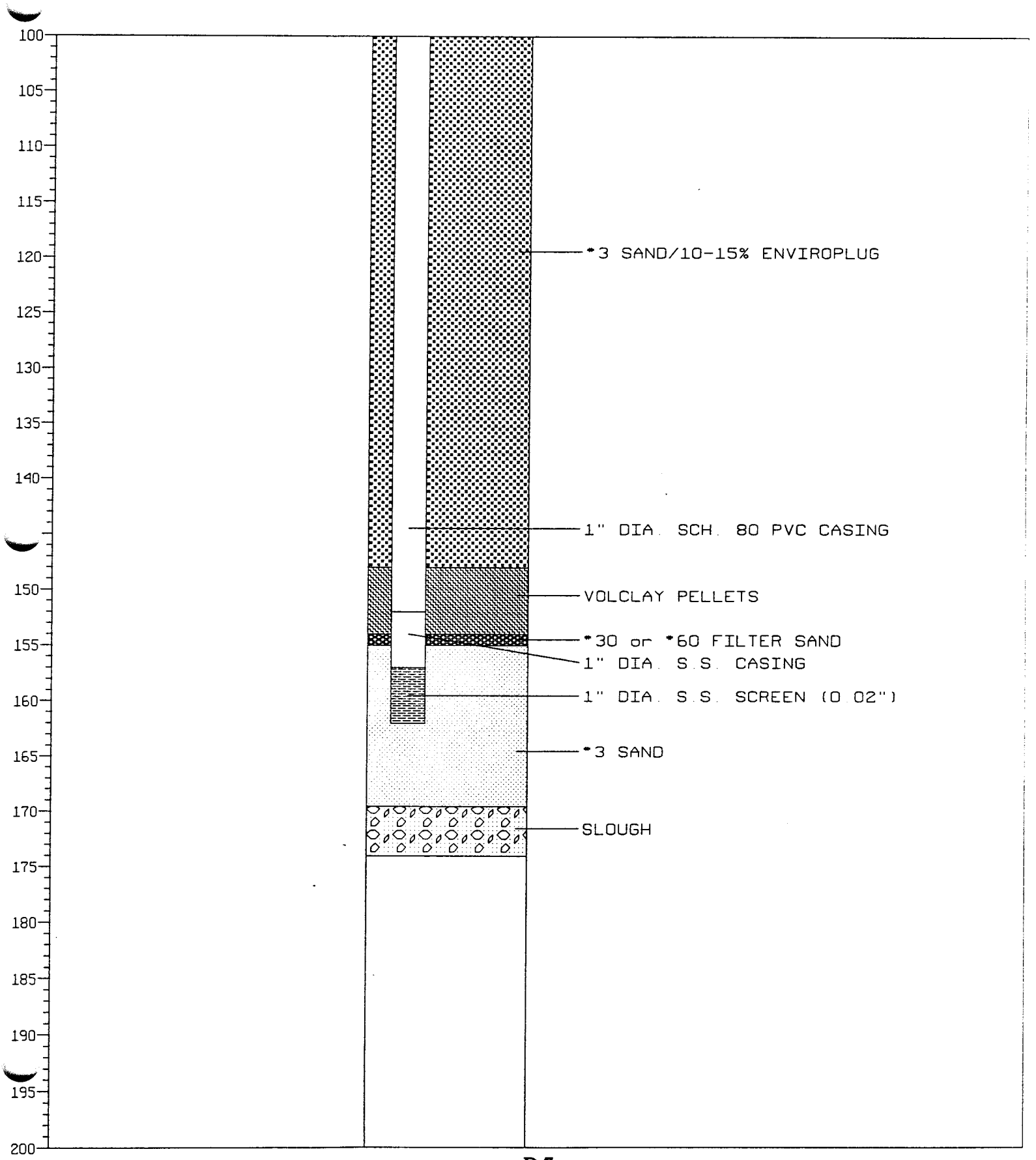
MEREDITH/BOLI & ASSOCIATES, INC.		BORING LOG No:	B-2
PROJECT:	OSCO Azusa RFI (Phase IIb)	PROJECT No:	90-211
PROJECT LOCATION:	Azusa, California	DATE(S):	2/7/91 - 2/8/91
DRILLING METHOD:	CME-95 Auger	DRILLING CO:	Datum/Layne TOTAL DEPTH: 43 feet
FIELD GEOLOGIST:	Hagar/Gilmer (Knight Piesold & Co.)	GROUND ELEVATION:	524.18 feet MSL



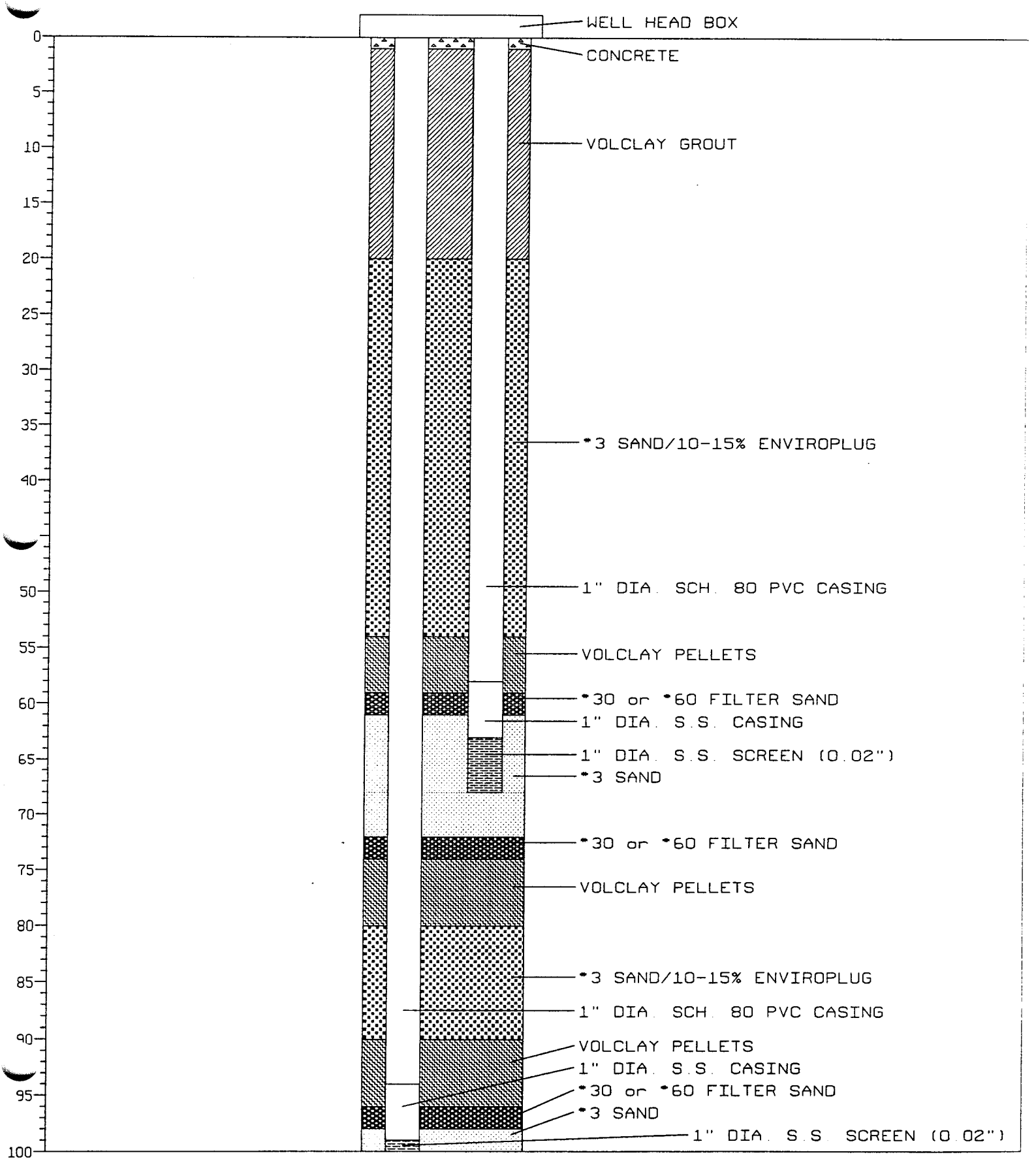
MEREDITH/BOLI & ASSOCIATES, INC		BORING LOG No:	B-2R
PROJECT:	OSCO Azusa RFI (Phase IIb)	PROJECT No:	90-211
PROJECT LOCATION:	Azusa, California	DATE(S):	2/14/91 - 5/3/91
DRILLING METHOD:	Diesel Hammer/Hydraulic Percussion	DRILLING CO:	Layne/Beylik TOTAL DEPTH: 174 feet
FIELD GEOLOGIST:	Hagar/Gilmer (Knight Piesold & Co.)	GROUND ELEVATION:	524.18 feet MSL



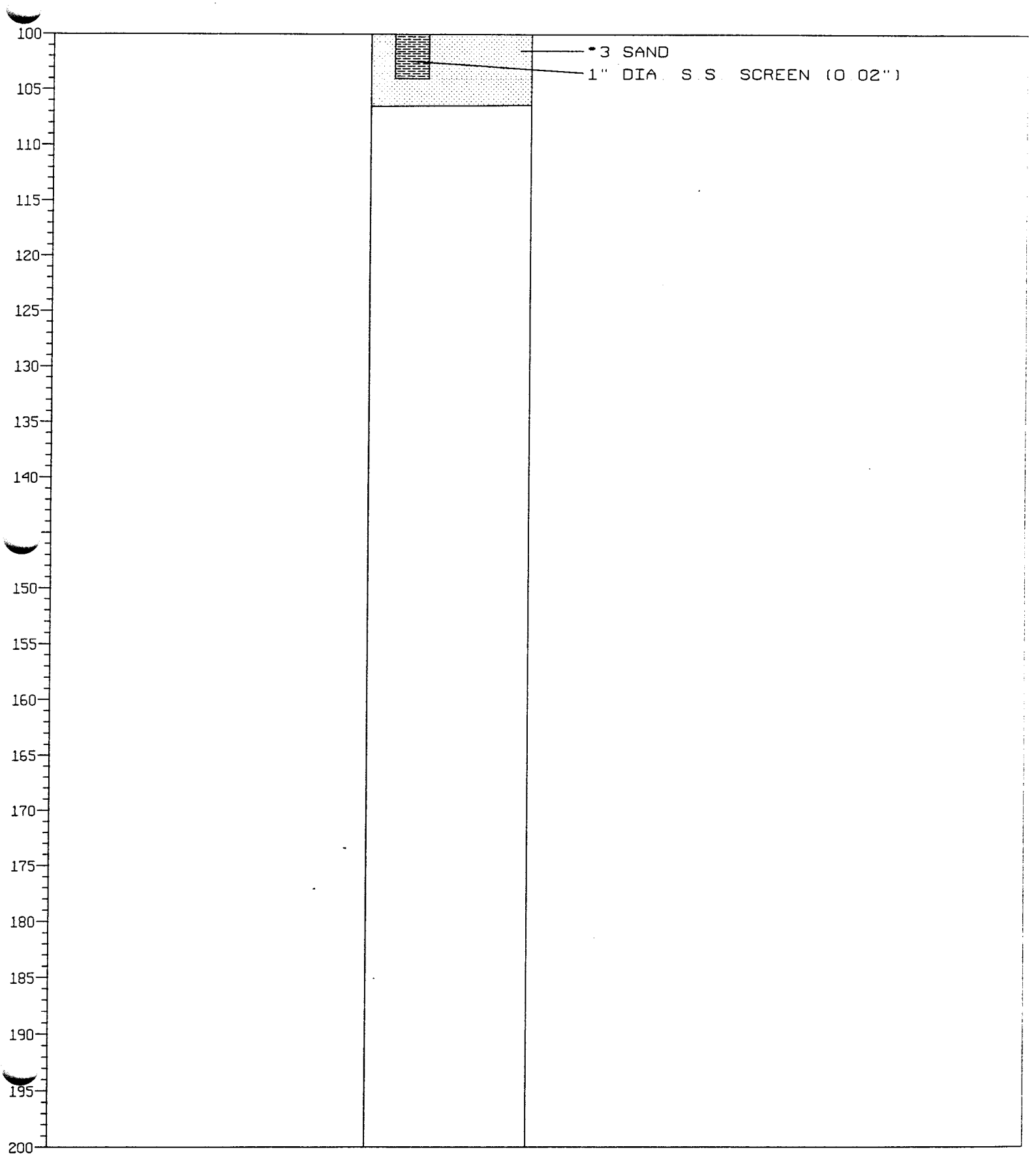
MEREDITH/BOLI & ASSOCIATES, INC		BORING LOG No:	B-2R
PROJECT:	OSCO Azusa RFI (Phase IIb)	PROJECT No:	90-211
PROJECT LOCATION:	Azusa, California	DATE(S):	2/14 - 5/3/91
DRILLING METHOD:	Diesel Hammer/Hydraulic Percussion	DRILLING CO:	Layne/Beylik TOTAL DEPTH: 174 feet
FIELD GEOLOGIST:	Hagar/Gilmer (Knight Piesold & Co.)	GROUND ELEVATION:	524.18 feet MSL



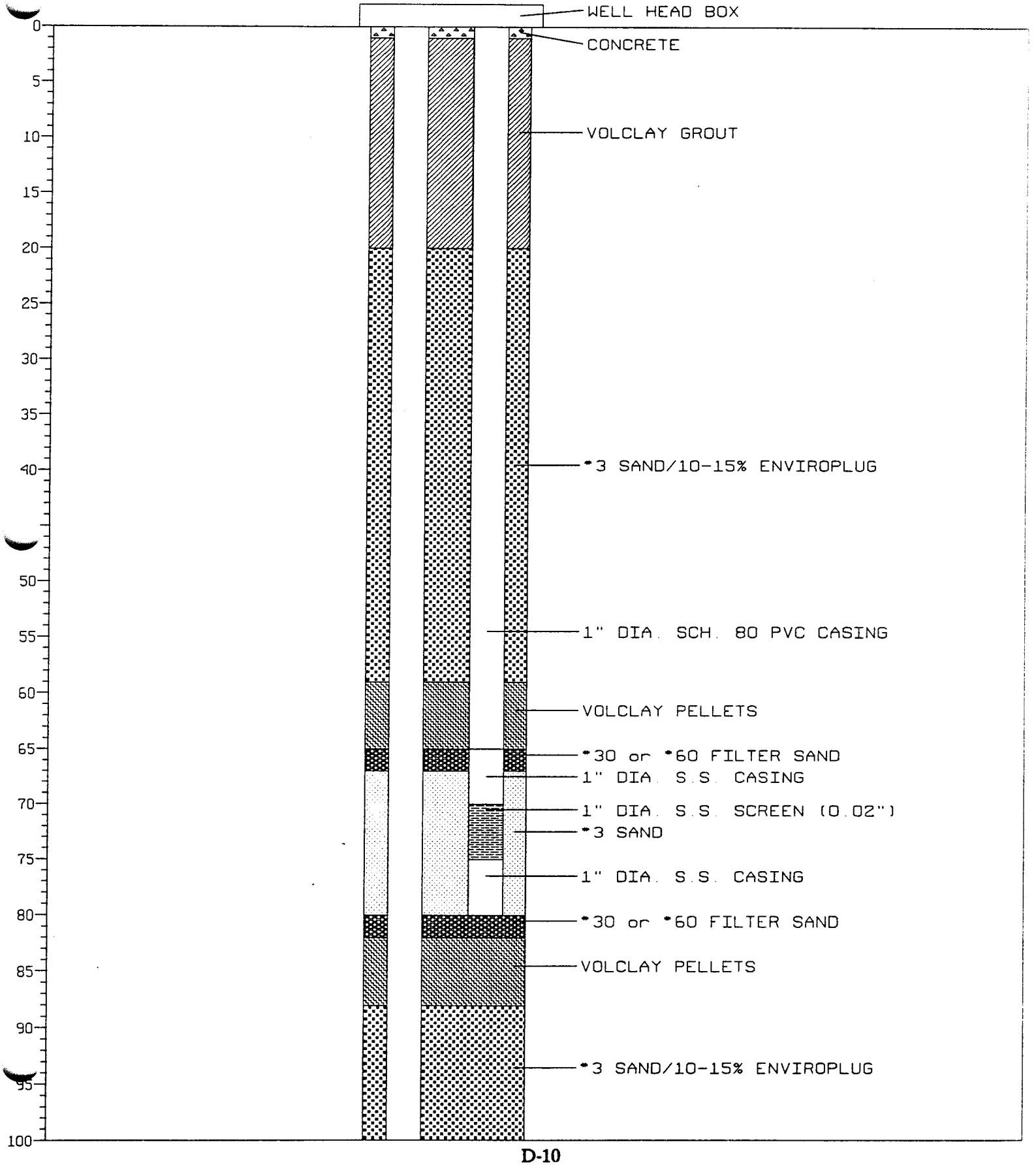
MEREDITH/BOLI & ASSOCIATES, INC		BORING LOG No	B-3
PROJECT	OSCO Azusa RFI (Phase IIb)	PROJECT No	90-211
PROJECT LOCATION	Azusa, California	DATE(S)	5/13/91 - 5/16/91
DRILLING METHOD	Hydraulic Percussion	DRILLING CO	Beylik TOTAL DEPTH 106.5 feet
FIELD GEOLOGIST	Hagar (Knight Piesold & Co.)	GROUND ELEVATION	522.55 feet MSL



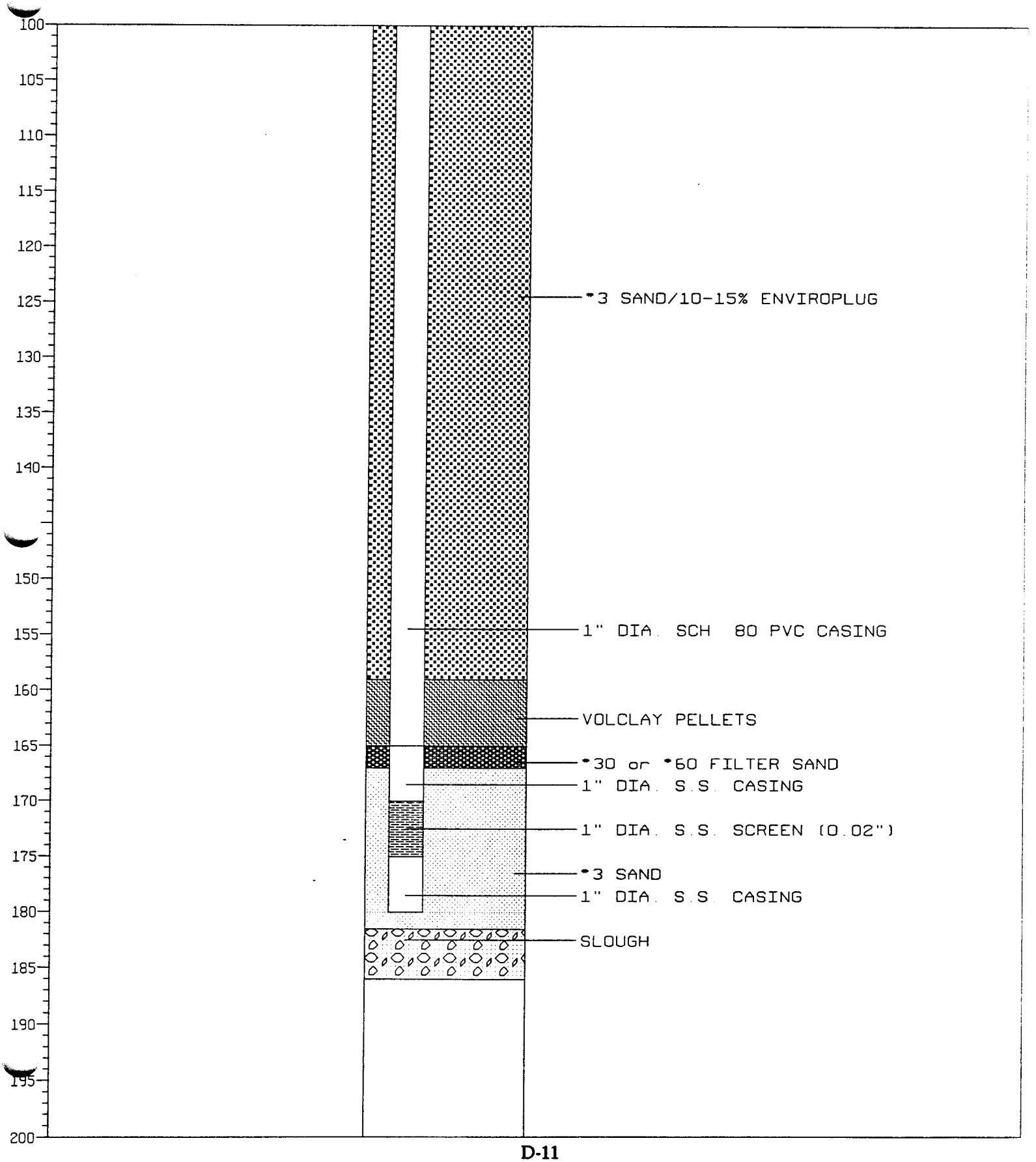
MEREDITH/BOLI & ASSOCIATES, INC		BORING LOG No	B-3
PROJECT	OSCO Azusa RFI (Phase IIb)	PROJECT No	90-211
PROJECT LOCATION	Azusa, California	DATE(S)	5/13/91 - 5/16/91
DRILLING METHOD	Hydraulic Percussion	DRILLING CO	Beylik TOTAL DEPTH 106 5 feet
FIELD GEOLOGIST	Hagar (Knight Piesold & Co)	GROUND ELEVATION	522.55 feet MSL



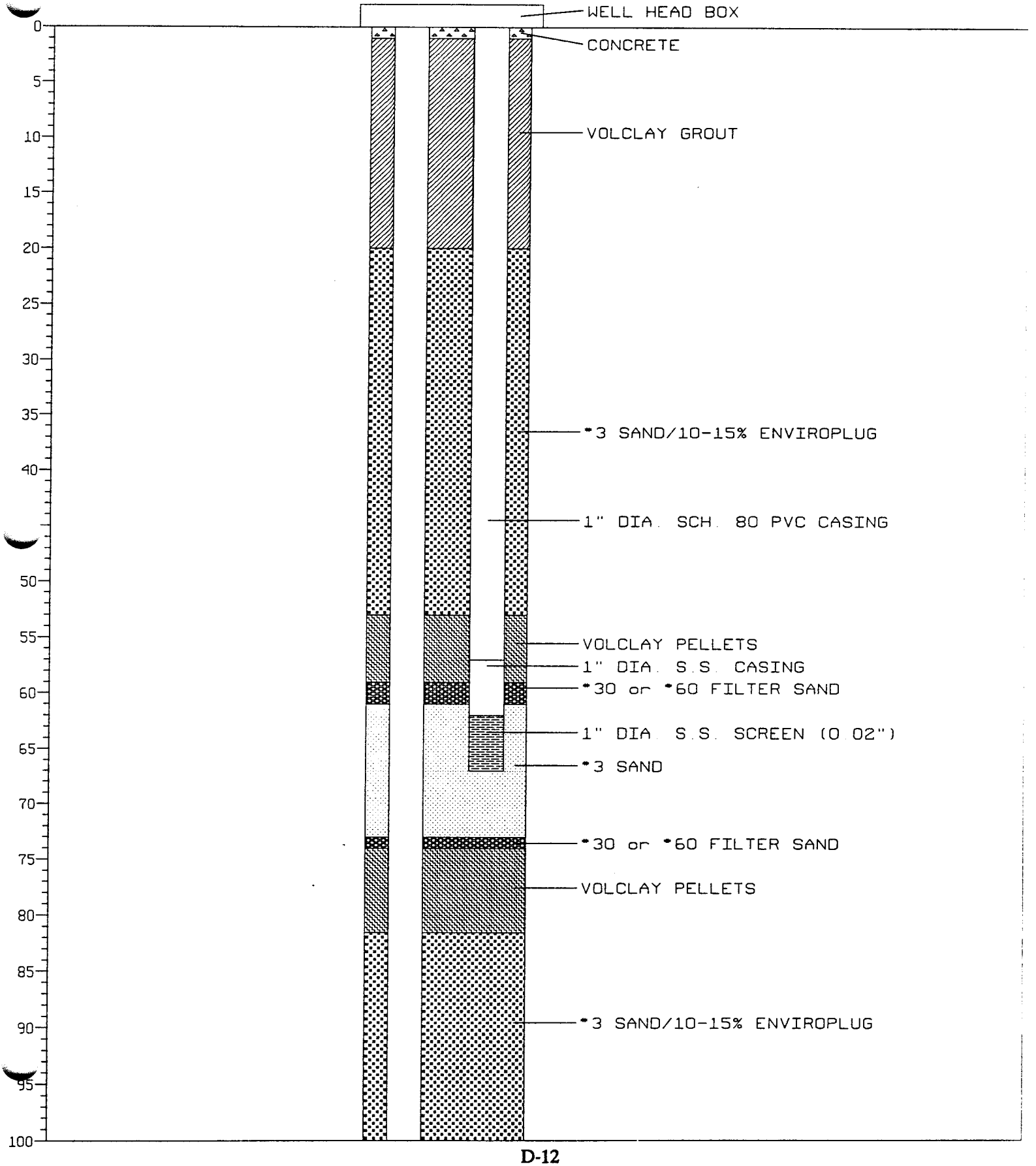
MEREDITH/BOLI & ASSOCIATES, INC		BORING LOG No:	B-4
PROJECT:	OSCO Azusa RFI (Phase IIb)	PROJECT No:	90-211
PROJECT LOCATION:	Azusa, California	DATE(S)	3/19/91 - 4/5/91
DRILLING METHOD:	Hydraulic Percussion	DRILLING CO:	Beylik TOTAL DEPTH: 186 feet
FIELD GEOLOGIST:	Hagar/Gilmer (Knight Piesold & Co.)	GROUND ELEVATION:	521.87 feet MSL



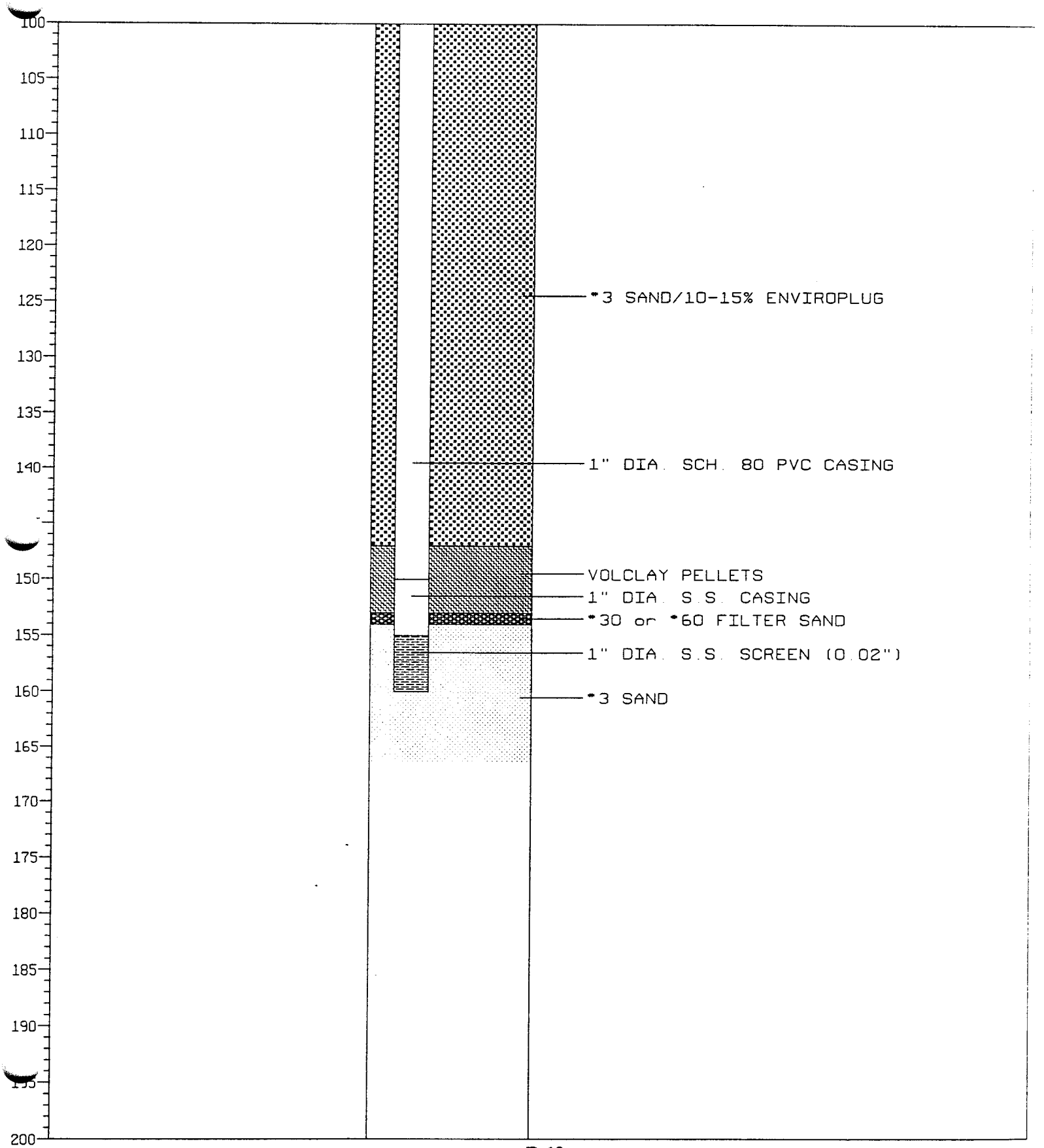
MEREDITH/BOLI & ASSOCIATES, INC		BORING LOG No:	B-4
PROJECT:	OSCO Azusa RFI (Phase IIb)	PROJECT No:	90-211
PROJECT LOCATION:	Azusa, California	DATE(S):	3/19/91 - 4/5/91
DRILLING METHOD:	Hydraulic Percussion	DRILLING CO:	Beylik TOTAL DEPTH: 186 feet
FIELD GEOLOGIST:	Hagar (Knight Piesold & Co.)	GROUND ELEVATION:	521.87 feet MSL



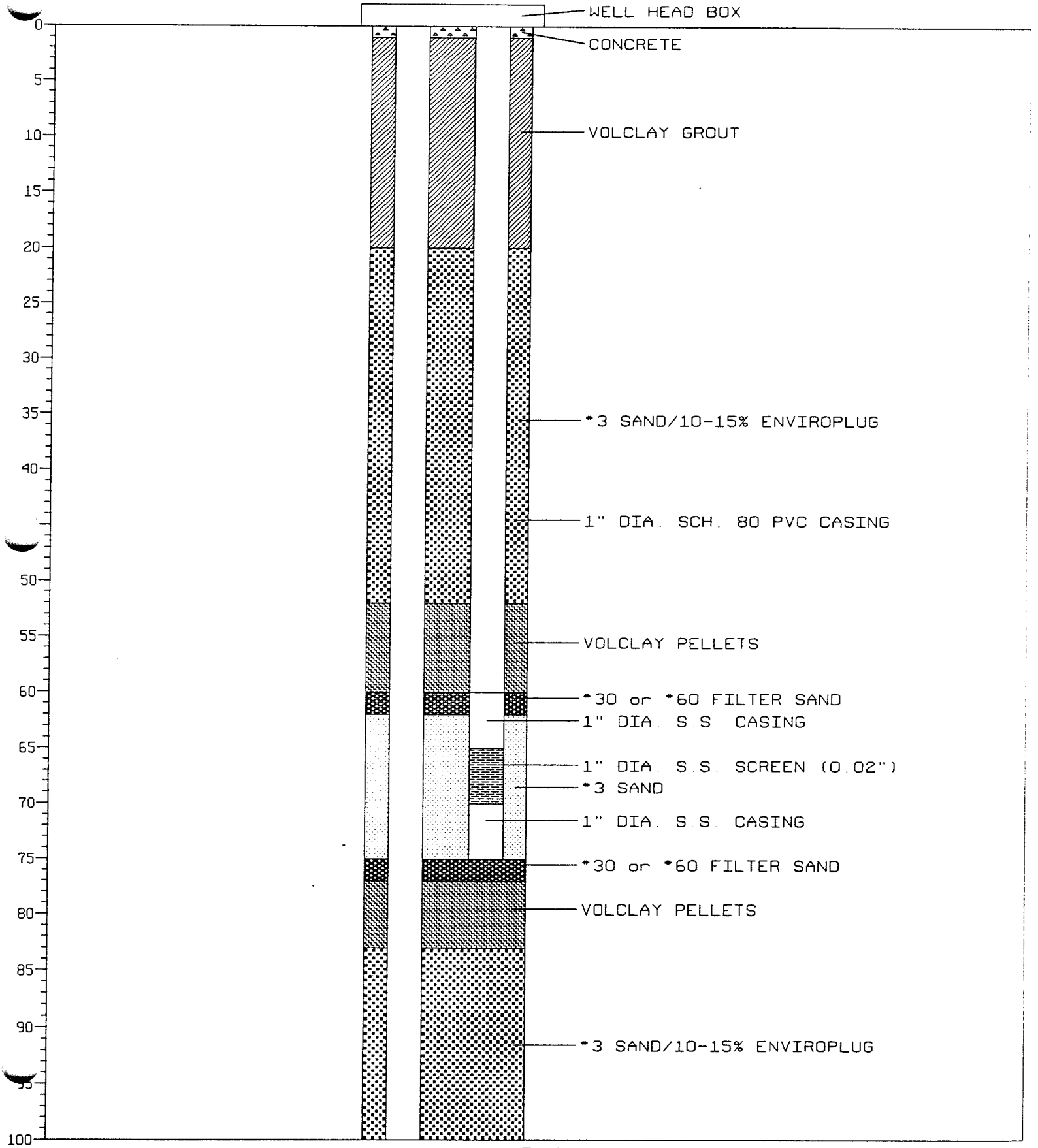
MEREDITH/BOLI & ASSOCIATES, INC		BORING LOG No	B-5
PROJECT	OSCO Azusa RFI (Phase IIb)	PROJECT No	90-211
PROJECT LOCATION	Azusa, California	DATE(S)	5/20/91 - 5/27/91
DRILLING METHOD	Hydraulic Percussion	DRILLING CO	Beylik TOTAL DEPTH 166 5 feet
FIELD GEOLOGIST	Gilmer (Knight Piesold & Co)	GROUND ELEVATION	519 58 feet MSL



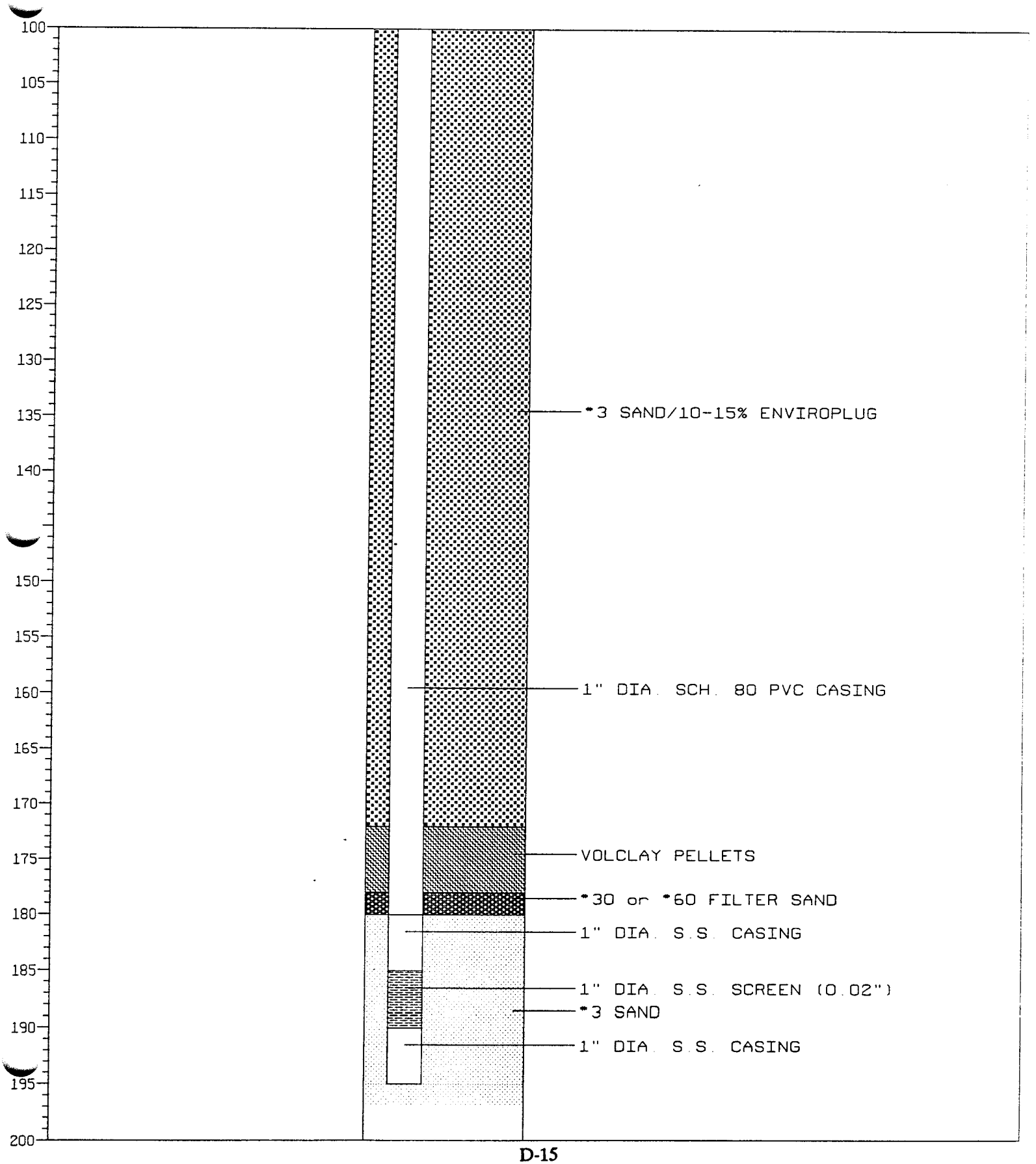
MEREDITH/BOLI & ASSOCIATES, INC		BORING LOG No:	B-5
PROJECT	OSCO Azusa RFI (Phase IIb)	PROJECT No:	90-211
PROJECT LOCATION	Azusa, California	DATE(S)	5/20/91 - 5/27/91
DRILLING METHOD:	Hydraulic Percussion	DRILLING CO:	Beylik TOTAL DEPTH: 166 5 feet
FIELD GEOLOGIST:	Gilmer (Knight Piesold & Co)	GROUND ELEVATION:	519 58 feet MSL



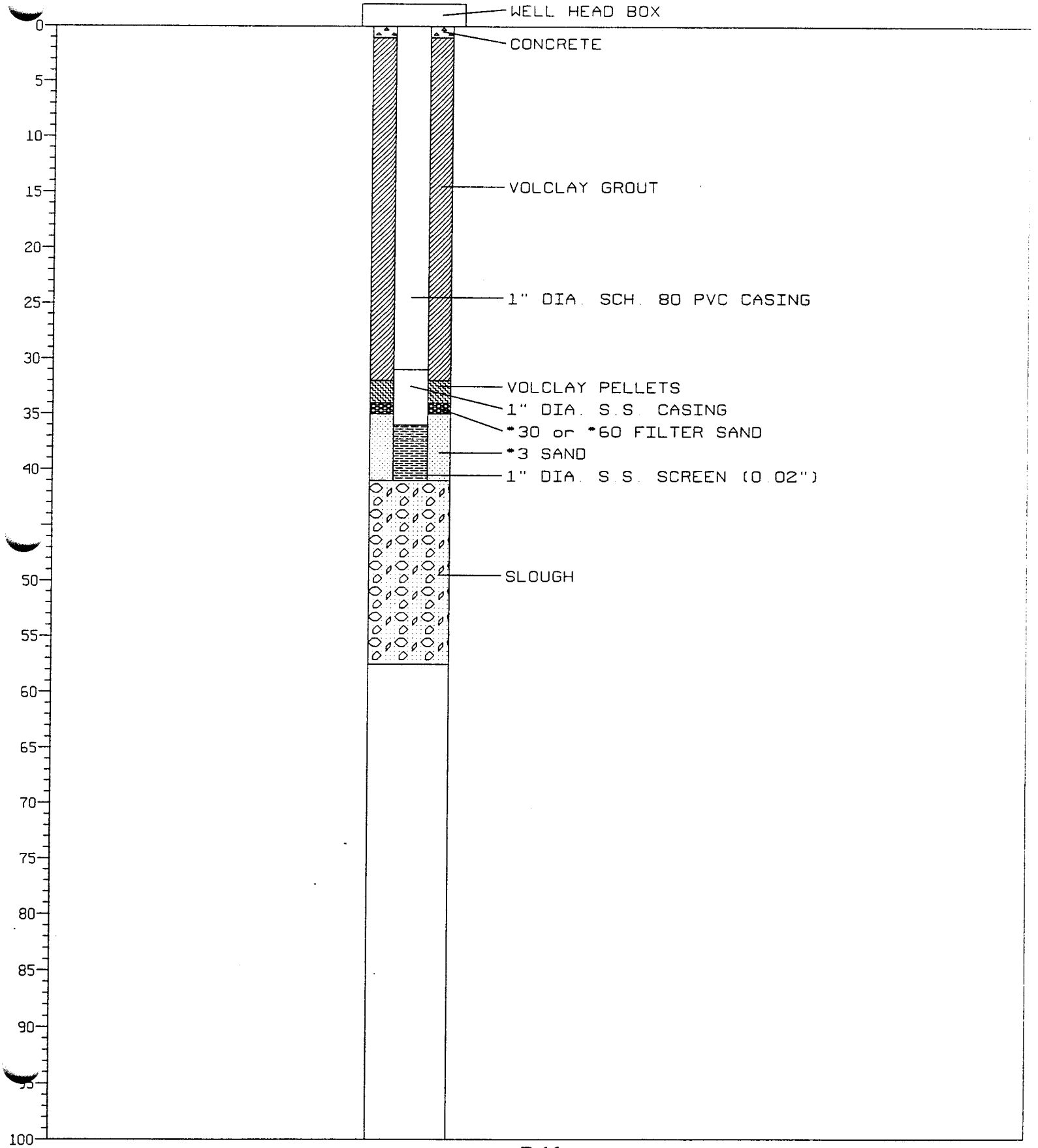
MEREDITH/BOLI & ASSOCIATES, INC		BORING LOG No:	B-6
PROJECT:	OSCO Azusa RFI (Phase IIb)	PROJECT No	90-211
PROJECT LOCATION:	Azusa, California	DATE(S):	4/12/91 - 4/29/91
DRILLING METHOD:	Hydraulic Percussion	DRILLING CO:	Beylik TOTAL DEPTH 197 feet
FIELD GEOLOGIST:	Hagar/Gilmer (Knight Piesold & Co.)	GROUND ELEVATION:	521.66 feet MSL



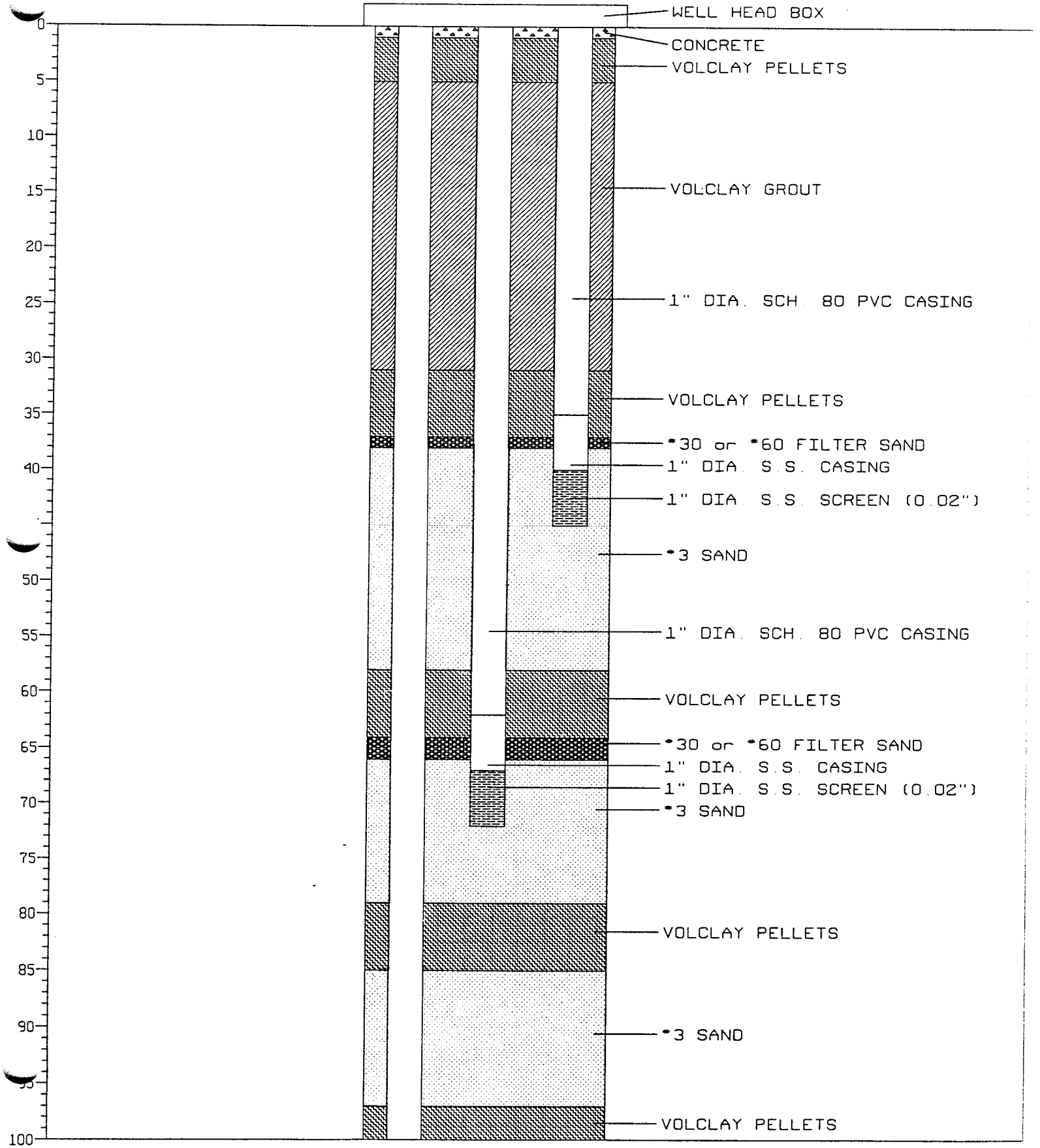
MEREDITH/BOLI & ASSOCIATES, INC		BORING LOG No:	B-6
PROJECT:	OSCO Azusa RFI (Phase IIb)	PROJECT No:	90-211
PROJECT LOCATION:	Azusa, California	DATE(S):	4/12/91 - 4/29/91
DRILLING METHOD:	Hydraulic Percussion	DRILLING CO:	Beylik TOTAL DEPTH 197 feet
FIELD GEOLOGIST:	Hagar/Gilmer (Knight Piesold & Co.)	GROUND ELEVATION:	521.66 feet MSL



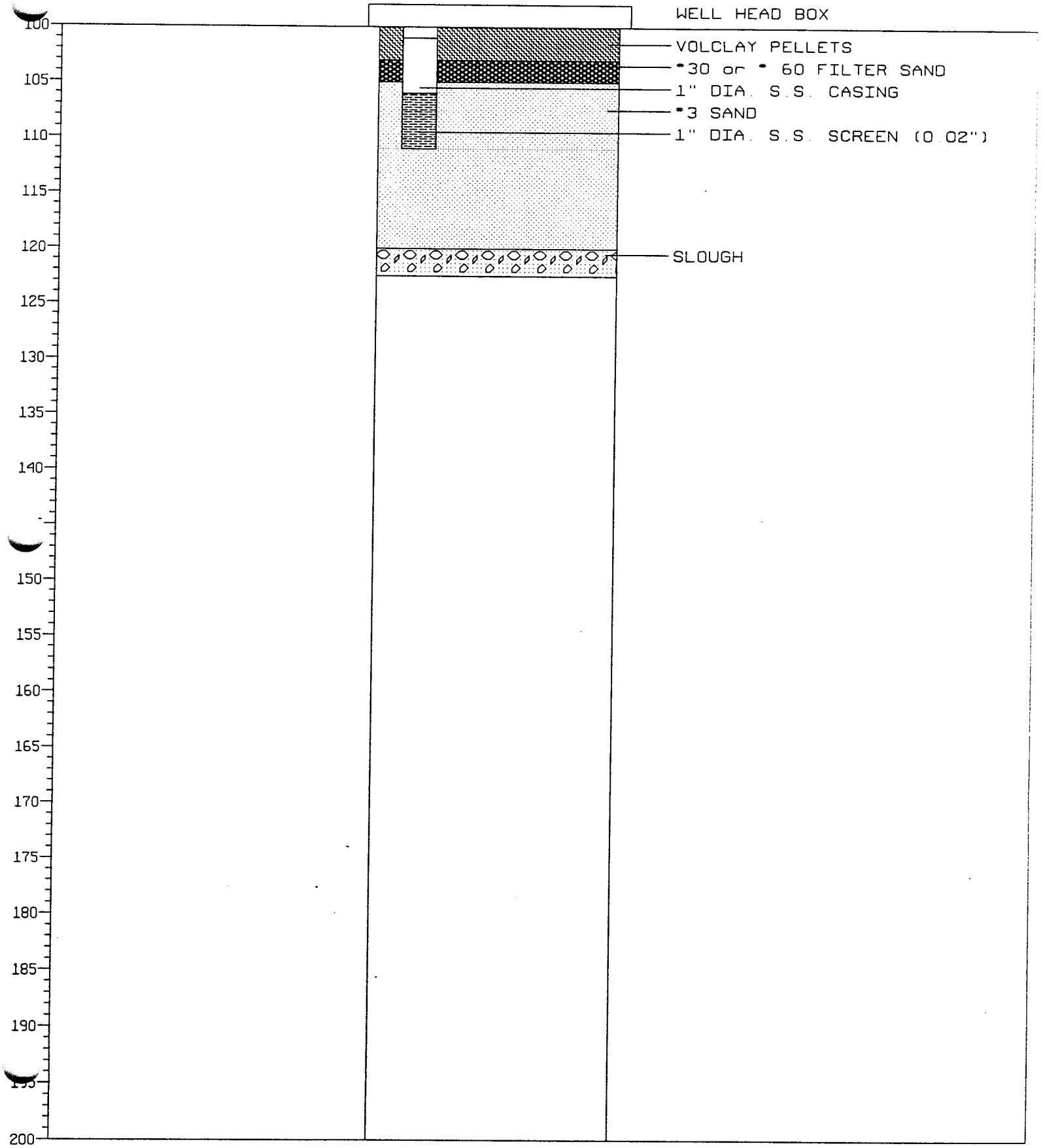
MEREDITH/BOLI & ASSOCIATES, INC		BORING LOG No	B-8
PROJECT	OSCO Azusa RFI (Phase IIb)	PROJECT No	90-211
PROJECT LOCATION	Azusa, California	DATE(S)	2/11/91 - 2/18/91
DRILLING METHOD	CME-95 Auger	DRILLING CO	Datum/Layne TOTAL DEPTH 57.5 feet
FIELD GEOLOGIST	Gilmer (Knight Piesold & Co.)	GROUND ELEVATION	522.76 feet MSL



MEREDITH/BOLI & ASSOCIATES, INC		BORING LOG No	B-8R
PROJECT	OSCO Azusa RFI (Phase IIb)	PROJECT No	90-211
PROJECT LOCATION	Azusa, California	DATE(S)	2/12/91 - 2/23/91
DRILLING METHOD	Diesel Hammer	DRILLING CO	Layne TOTAL DEPTH 122 5 Feet
FIELD GEOLOGIST	Gilmer (Knight Piesold & Co.)	GROUND ELEVATION	522.79 Feet MSL



MEREDITH/BOLI & ASSOCIATES, INC.		BORING LOG No:	B-8R
PROJECT:	OSCO Azusa RFI (Phase IIb)	PROJECT No:	90-211
PROJECT LOCATION:	Azusa, California	DATE(S):	2/12/91 - 2/23/91
DRILLING METHOD:	Diesel Hammer	DRILLING CO:	Layne TOTAL DEPTH: 122.5 feet
FIELD GEOLOGIST:	Gilmer (Knight Piesold & Co.)	GROUND ELEVATION:	522.79 feet MSL

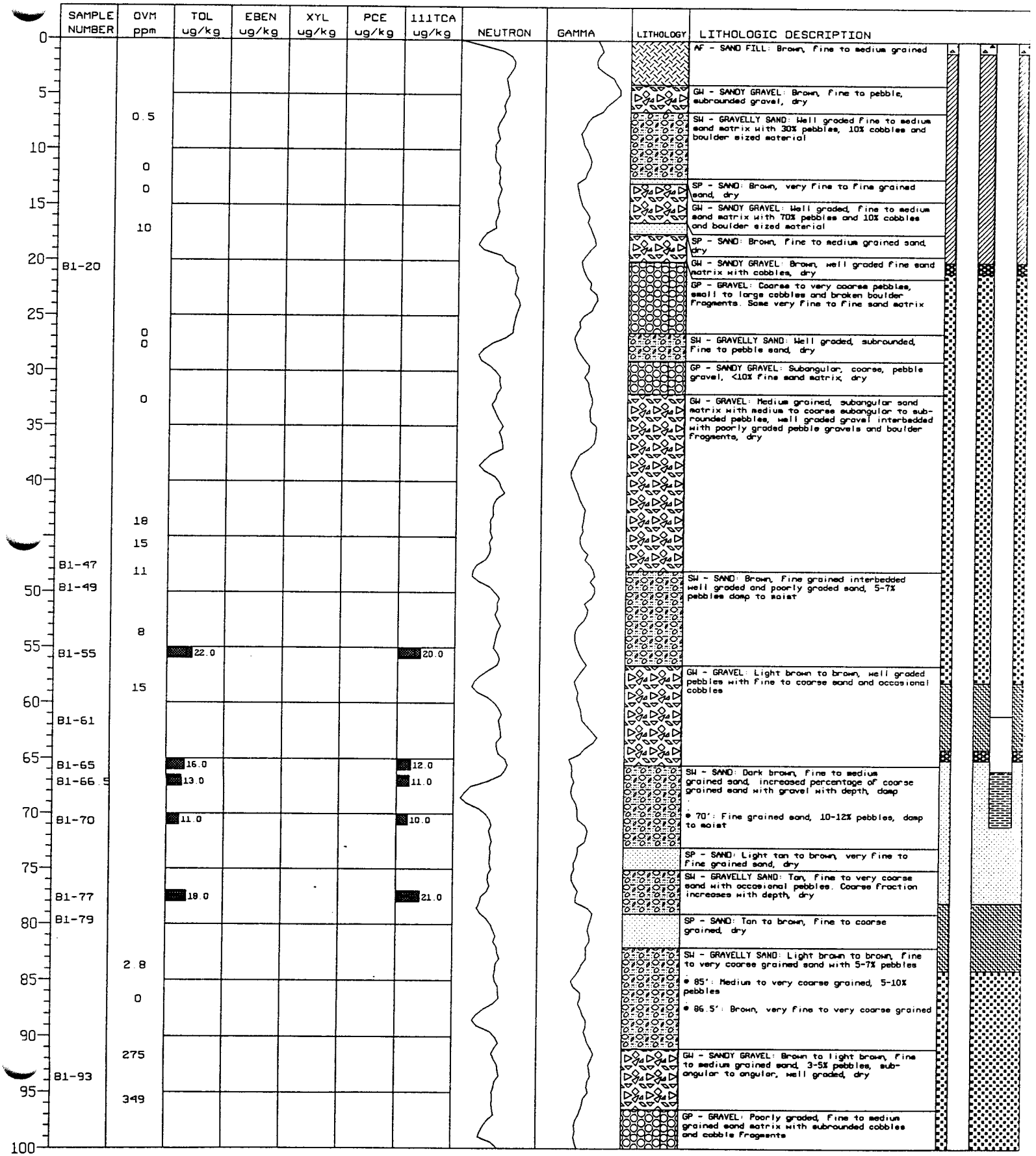


APPENDIX E

DEEP SOIL BORING LOGS

MEREDITH/BOLI & ASSOCIATES, INC.		BORING LOG No.	B-1
PROJECT	OSCO Azusa RFI (Phase IIb)	PROJECT No	90-211
PROJECT LOCATION:	Azusa, California	DATE(S):	3/7/91 - 3/15/91
DRILLING METHOD:	Hydraulic Percussion	DRILLING CO:	Beylik TOTAL DEPTH: 140 feet
FIELD GEOLOGIST:	Hagar/Gilmer (Knight Piesold & Co.)	GROUND ELEVATION	522.8 feet MSL

SAMPLE NUMBER	OVM ppm	TOL ug/kg	EBEN ug/kg	XYL ug/kg	PCE ug/kg	111TCA ug/kg
	0.5					
	0					
	0					
	10					
B1-20						
	0					
	0					
	0					
	18					
	15					
B1-47	11					
B1-49						
	8					
B1-55		22.0				20.0
	15					
B1-61						
B1-65		16.0				12.0
B1-66.5		13.0				11.0
B1-70		11.0				10.0
B1-77		18.0				21.0
B1-79						
	2.8					
	0					
	275					
B1-93						
	349					



LITHOLOGIC DESCRIPTION

AF - SAND FILL: Brown, fine to medium grained

GW - SANDY GRAVEL: Brown, fine to pebble, subrounded gravel, dry

SW - GRAVELLY SAND: Well graded fine to medium sand matrix with 30% pebbles, 10% cobbles and boulder sized material

SP - SAND: Brown, very fine to fine grained sand, dry

GW - SANDY GRAVEL: Well graded, fine to medium sand matrix with 70% pebbles and 10% cobbles and boulder sized material

SP - SAND: Brown, fine to medium grained sand, dry

GW - SANDY GRAVEL: Brown, well graded fine sand matrix with cobbles, dry

GP - GRAVEL: Coarse to very coarse pebbles, small to large cobbles and broken boulder fragments. Some very fine to fine sand matrix

SW - GRAVELLY SAND: Well graded, subrounded, fine to pebble sand, dry

GP - SANDY GRAVEL: Subangular, coarse, pebble gravel, <10% fine sand matrix, dry

GW - GRAVEL: Medium grained, subangular sand matrix with medium to coarse subangular to subrounded pebbles, well graded gravel interbedded with poorly graded pebble gravels and boulder fragments, dry

SW - SAND: Brown, fine grained interbedded well graded and poorly graded sand, 5-7% pebbles damp to moist

GW - GRAVEL: Light brown to brown, well graded pebbles with fine to coarse sand and occasional cobbles

SW - SAND: Dark brown, fine to medium grained sand, increased percentage of coarse grained sand with gravel with depth, damp

- 70': Fine grained sand, 10-12% pebbles, damp to moist

SP - SAND: Light tan to brown, very fine to fine grained sand, dry

SW - GRAVELLY SAND: Tan, fine to very coarse sand with occasional pebbles. Coarse fraction increases with depth, dry

SP - SAND: Tan to brown, fine to coarse grained, dry

SW - GRAVELLY SAND: Light brown to brown, fine to very coarse grained sand with 5-7% pebbles

- 85': Medium to very coarse grained, 5-10% pebbles

- 86.5': Brown, very fine to very coarse grained

GW - SANDY GRAVEL: Brown to light brown, fine to medium grained sand, 3-5% pebbles, subangular to angular, well graded, dry

GP - GRAVEL: Poorly graded, fine to medium grained sand matrix with subrounded cobbles and cobble fragments

MEREDITH/BOLI & ASSOCIATES, INC		BORING LOG No:	B-1
PROJECT:	OSCO Azusa RFI (Phase IIb)	PROJECT No:	90-211
PROJECT LOCATION:	Azusa, California	DATE(S):	3/7/91 - 3/15/91
DRILLING METHOD:	Hydraulic Percussion	DRILLING CO:	Beylik TOTAL DEPTH: 140 feet
FIELD GEOLOGIST:	Hagar/Gilmer (Knight Piesold & Co.)	GROUND ELEVATION:	522.8 feet MSL

SAMPLE NUMBER	OVM ppm	TOL ug/kg	EBEN ug/kg	XYL ug/kg	PCE ug/kg	111TCA ug/kg
B1-101	5					
B1-108						
B1-110	223					
	298					
B1-123	278	5.0				
	298					
B1-132						
B1-134						
B1-137						

NEUTRON | GAMMA | LITHOLOGY

LITHOLOGIC DESCRIPTION

SP - SAND: Tan brown, very fine to fine grained sand, dry

GW - SANDY GRAVEL: Brown to tan, fine to coarse grained sand with angular pebbles and broken pebble fragments, dry

@ 108': Brown to dark brown, rounded to sub-rounded gravel, damp

SP - SAND: Very fine to fine grained sand

GP - GRAVEL: Pebbly

SP - SAND: Tan brown, fine grained sand, dry

SW - SAND: Well graded, fine to very coarse subangular sand with pebbles, dry

GW - GRAVEL: Fine to gravelly sand, well graded pebbles, rock chips and fragments of boulders and cobbles, dry

@ 132': Tan to brown, fine to medium, sand with pebbles and cobbles, predominantly subrounded with some subangular and rounded clasts, dry

Bottom of Boring @ 140'

MEREDITH/BOLI & ASSOCIATES, INC		BORING LOG No	B-2
PROJECT	OSCO Azusa RFI (Phase IIb)	PROJECT No	90-211
PROJECT LOCATION	Azusa, California	DATE(S)	2/7/91 - 2/8/91
DRILLING METHOD	CME-95 Auger	DRILLING CO	Datum/Layne TOTAL DEPTH: 43 feet
FIELD GEOLOGIST	Hagar/Gilmer (Knight Piesold & Co.)	GROUND ELEVATION	524.18 feet MSL

SAMPLE NUMBER	OVM ppm	TOL ug/kg	EBEN ug/kg	XYL ug/kg	PCE ug/kg	111TCA ug/kg	NEUTRON	GAMMA
B2-1					40.0			
B2-2								
B2-3			4000.0	62000.0				
B2-5								
B2-7								
B2-9								

LITHOLOGY

LITHOLOGIC DESCRIPTION

AF - FILL: Tan to light gray, fine medium grained sand, 25% pebbles and cobbles

SW - SAND & COBBLES: Tan to light gray, fine to medium grained sand, 35% pebbles and cobbles

GP - GRAVEL: Tan to light gray, 35% pebbles and cobbles

GW - SANDY GRAVEL: Brown, coarse grained sand, and 30% cobbles

GP - COBBLES: gray, sand matrix, 70% cobbles

SW - SAND & GRAVELLY SAND: Gray, medium to coarse grained sand and 35% cobbles

GW - SANDY GRAVEL: Gray, medium to coarse grained sand with 30% cobbles, and occasional pebbles

SP - SAND: Light tan, fine to medium grained, occasional pebbles

SW - GRAVELLY SAND: Tan to gray, fine to medium grained, 20% cobbles, occasional pebbles

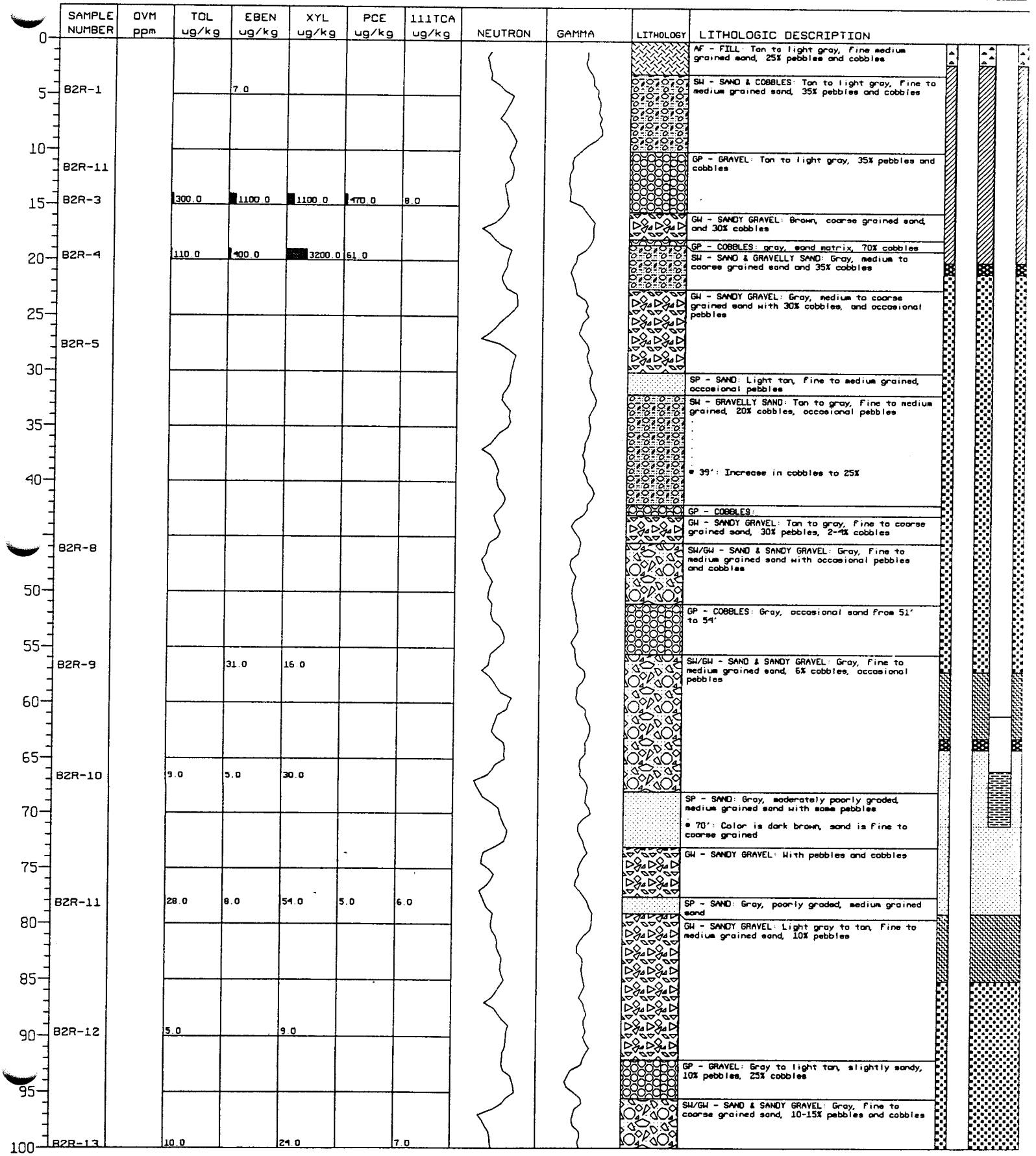
@ 39': Increase in cobbles to 25%

GP - COBBLES:

Bottom of Boring @ 43'

MEREDITH/BOLI & ASSOCIATES, INC		BORING LOG No	B-2R
PROJECT	OSCO Azusa RFI (Phase IIb)	PROJECT No	90-211
PROJECT LOCATION	Azusa, California	DATE(S)	2/14/91 - 5/3/91
DRILLING METHOD	Diesel Hammer/Hydraulic Percussion	DRILLING CO	Layne/Beylik TOTAL DEPTH 174 Feet
FIELD GEOLOGIST	Hagar/Gilmer (Knight Piesold & Co)	GROUND ELEVATION	524.18 feet MSL

SAMPLE NUMBER	OVM ppm	TOL ug/kg	EBEN ug/kg	XYL ug/kg	PCE ug/kg	111TCA ug/kg
B2R-1			7.0			
B2R-11						
B2R-3		300.0	1100.0	1100.0	470.0	8.0
B2R-4		110.0	400.0	3200.0	61.0	
B2R-5						
B2R-8						
B2R-9			31.0	16.0		
B2R-10		9.0	5.0	30.0		
B2R-11		28.0	8.0	54.0	5.0	6.0
B2R-12		5.0		9.0		
B2R-13		10.0		24.0		7.0



LITHOLOGIC DESCRIPTION

AF - FILL: Tan to light gray, fine medium grained sand, 25% pebbles and cobbles

SW - SAND & COBBLES: Tan to light gray, fine to medium grained sand, 35% pebbles and cobbles

GP - GRAVEL: Tan to light gray, 35% pebbles and cobbles

GW - SANDY GRAVEL: Brown, coarse grained sand, and 30% cobbles

GP - COBBLES: gray, sand matrix, 70% cobbles

SW - SAND & GRAVELLY SAND: Gray, medium to coarse grained sand and 35% cobbles

GW - SANDY GRAVEL: Gray, medium to coarse grained sand with 30% cobbles, and occasional pebbles

SP - SAND: Light tan, fine to medium grained, occasional pebbles

SW - GRAVELLY SAND: Tan to gray, fine to medium grained, 20% cobbles, occasional pebbles

@ 39': Increase in cobbles to 25%

GP - COBBLES:

GW - SANDY GRAVEL: Tan to gray, fine to coarse grained sand, 30% pebbles, 2-4% cobbles

SW/GW - SAND & SANDY GRAVEL: Gray, fine to medium grained sand with occasional pebbles and cobbles

GP - COBBLES: Gray, occasional sand from 51' to 54'

SW/GW - SAND & SANDY GRAVEL: Gray, fine to medium grained sand, 6% cobbles, occasional pebbles

SP - SAND: Gray, moderately poorly graded, medium grained sand with some pebbles

@ 70': Color is dark brown, sand is fine to coarse grained

GW - SANDY GRAVEL: With pebbles and cobbles

SP - SAND: Gray, poorly graded, medium grained sand

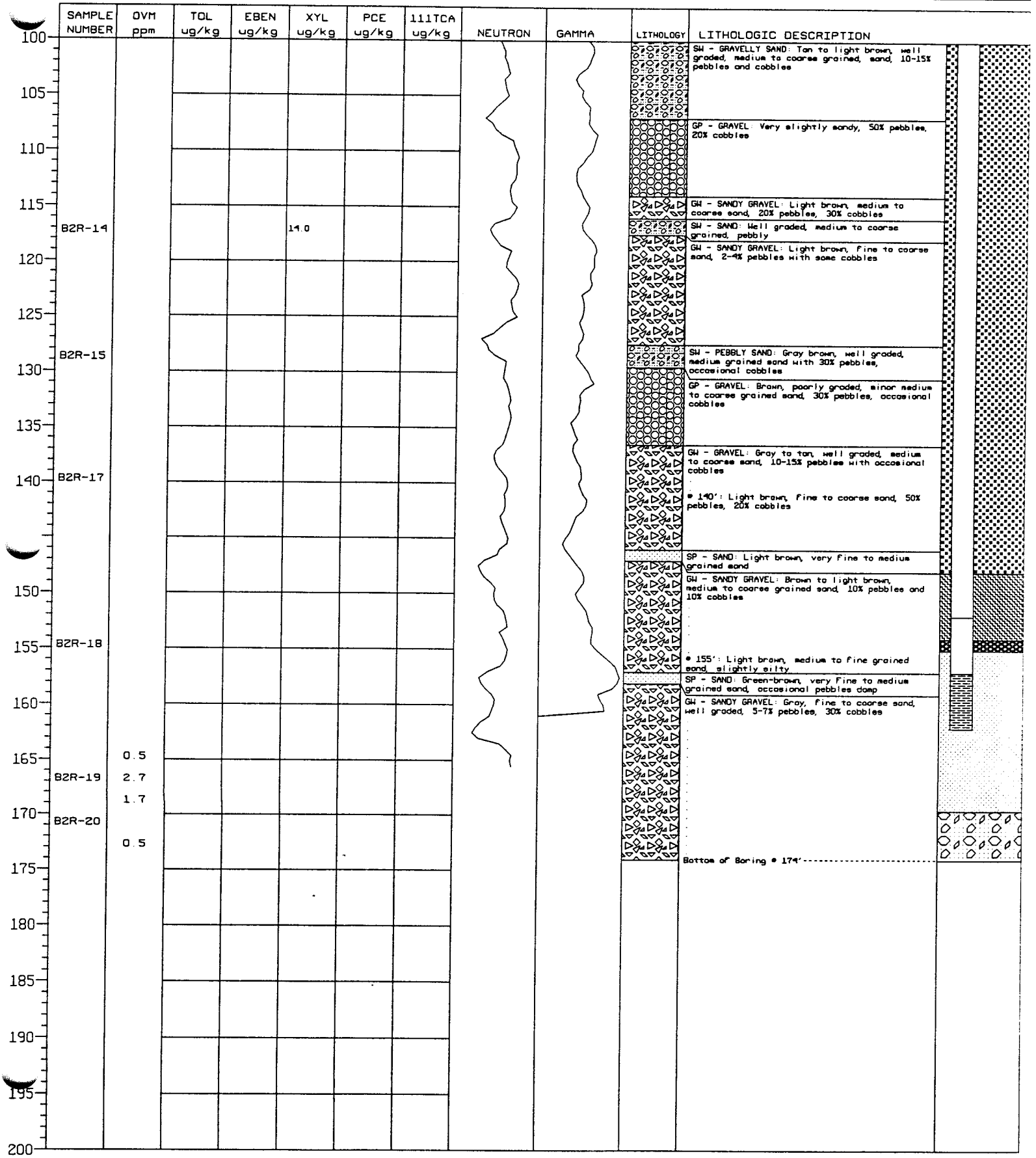
GW - SANDY GRAVEL: Light gray to tan, fine to medium grained sand, 10% pebbles

GP - GRAVEL: Gray to light tan, slightly sandy, 10% pebbles, 25% cobbles

SW/GW - SAND & SANDY GRAVEL: Gray, fine to coarse grained sand, 10-15% pebbles and cobbles

MEREDITH/BOLI & ASSOCIATES, INC		BORING LOG No	B-2R
PROJECT	OSCO Azusa RFI (Phase IIb)	PROJECT No	90-211
PROJECT LOCATION:	Azusa, California	DATE(S)	2/14/91 - 5/3/91
DRILLING METHOD:	Diesel Hammer/Hydraulic Percussion	DRILLING CO	Layne/Beylik TOTAL DEPTH: 174 feet
FIELD GEOLOGIST:	Hagar/Gilmer (Knight Piesold & Co.)	GROUND ELEVATION:	524.18 feet MSL

SAMPLE NUMBER	OVM ppm	TOL ug/kg	EBEN ug/kg	XYL ug/kg	PCE ug/kg	111TCA ug/kg
B2R-14				14.0		
B2R-15						
B2R-17						
B2R-18						
	0.5					
B2R-19	2.7					
	1.7					
B2R-20						
	0.5					



LITHOLOGIC DESCRIPTION

SW - GRAVELLY SAND: Tan to light brown, well graded, medium to coarse grained, sand, 10-15% pebbles and cobbles

GP - GRAVEL: Very slightly sandy, 50% pebbles, 20% cobbles

GW - SANDY GRAVEL: Light brown, medium to coarse sand, 20% pebbles, 30% cobbles

SW - SAND: Well graded, medium to coarse grained, pebbly

GW - SANDY GRAVEL: Light brown, fine to coarse sand, 2-4% pebbles with some cobbles

SW - PEBBLY SAND: Gray brown, well graded, medium grained sand with 30% pebbles, occasional cobbles

GP - GRAVEL: Brown, poorly graded, minor medium to coarse grained sand, 30% pebbles, occasional cobbles

GW - GRAVEL: Gray to tan, well graded, medium to coarse sand, 10-15% pebbles with occasional cobbles

• 140': Light brown, fine to coarse sand, 50% pebbles, 20% cobbles

SP - SAND: Light brown, very fine to medium grained sand

GW - SANDY GRAVEL: Brown to light brown, medium to coarse grained sand, 10% pebbles and 10% cobbles

• 155': Light brown, medium to fine grained sand, slightly silty

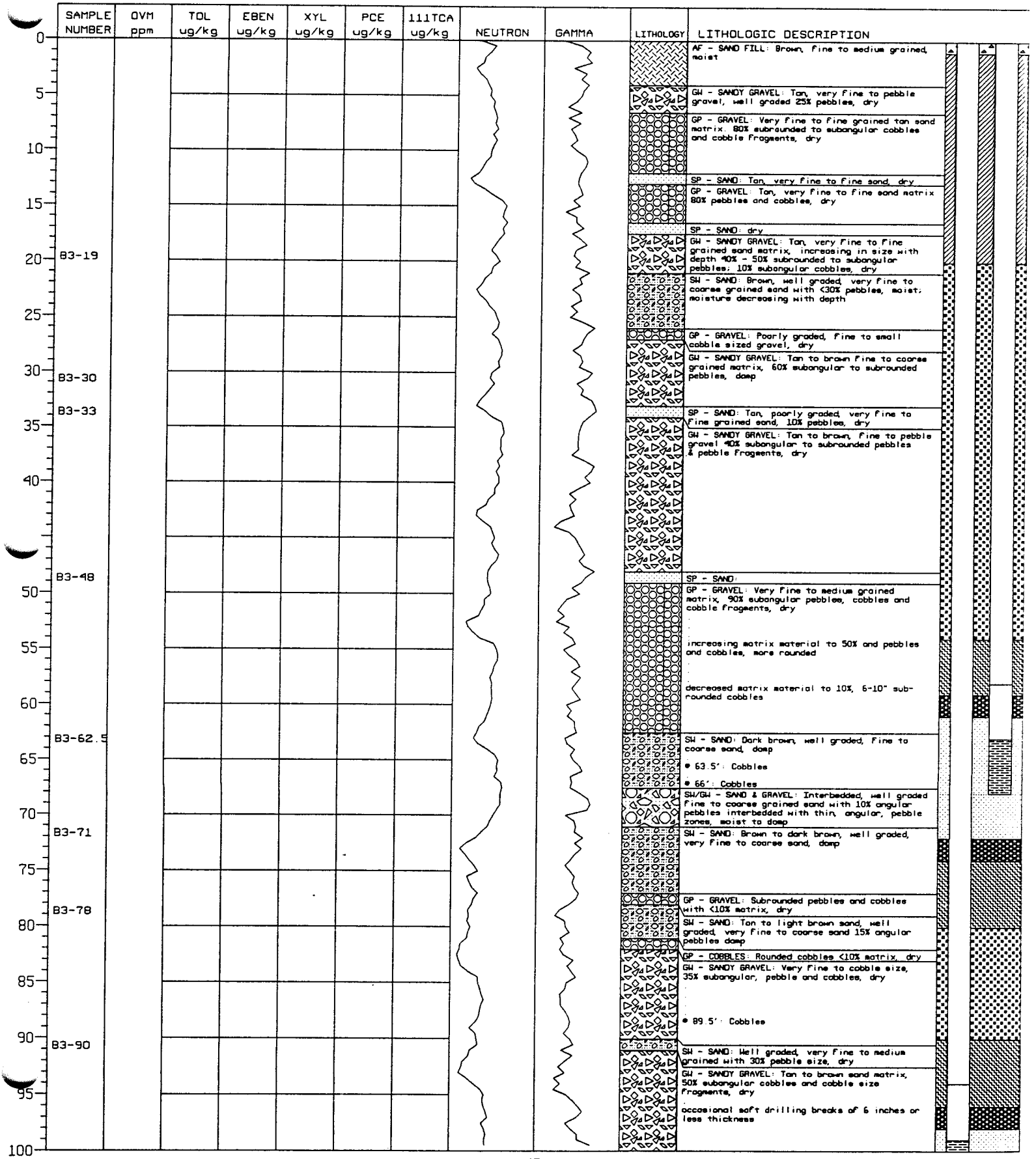
SP - SAND: Green-brown, very fine to medium grained sand, occasional pebbles damp

GW - SANDY GRAVEL: Gray, fine to coarse sand, well graded, 5-7% pebbles, 30% cobbles

Bottom of Boring • 174'

MEREDITH/BOLI & ASSOCIATES, INC		BORING LOG No	B-3
PROJECT	OSCO Azusa RFI (Phase IIb)	PROJECT No	90-211
PROJECT LOCATION	Azusa, California	DATE(S)	5/13/91 - 5/16/91
DRILLING METHOD	Hydraulic Percussion	DRILLING CO	Beylik TOTAL DEPTH: 106.5 feet
FIELD GEOLOGIST	Hagar (Knight Piesold & Co.)	GROUND ELEVATION	522.55 feet MSL

SAMPLE NUMBER	OVM ppm	TOL ug/kg	EBEN ug/kg	XYL ug/kg	PCE ug/kg	111TCA ug/kg
B3-19						
B3-30						
B3-33						
B3-48						
B3-62.5						
B3-71						
B3-78						
B3-90						



LITHOLOGIC DESCRIPTION

AF - SAND FILL: Brown, fine to medium grained, moist

GW - SANDY GRAVEL: Tan, very fine to pebble gravel, well graded 25% pebbles, dry

GP - GRAVEL: Very fine to fine grained tan sand matrix. 80% subrounded to subangular cobbles and cobble fragments, dry

SP - SAND: Tan, very fine to fine sand, dry

GP - GRAVEL: Tan, very fine to fine sand matrix 80% pebbles and cobbles, dry

SP - SAND: dry

GW - SANDY GRAVEL: Tan, very fine to fine grained sand matrix, increasing in size with depth 40% - 50% subrounded to subangular pebbles; 10% subangular cobbles, dry

SW - SAND: Brown, well graded, very fine to coarse grained sand with <30% pebbles, moist; moisture decreasing with depth

GP - GRAVEL: Poorly graded, fine to small cobble sized gravel, dry

GW - SANDY GRAVEL: Tan to brown fine to coarse grained matrix, 60% subangular to subrounded pebbles, damp

SP - SAND: Tan, poorly graded, very fine to fine grained sand, 10% pebbles, dry

GW - SANDY GRAVEL: Tan to brown, fine to pebble gravel 40% subangular to subrounded pebbles & pebble fragments, dry

SP - SAND:

GP - GRAVEL: Very fine to medium grained matrix, 90% subangular pebbles, cobbles and cobble fragments, dry

increasing matrix material to 50% and pebbles and cobbles, more rounded

decreased matrix material to 10%, 6-10" sub-rounded cobbles

SW - SAND: Dark brown, well graded, fine to coarse sand, damp

@ 63.5': Cobbles

@ 66': Cobbles

SW/GW - SAND & GRAVEL: Interbedded, well graded fine to coarse grained sand with 10% angular pebbles interbedded with thin, angular, pebble zones, moist to damp

SW - SAND: Brown to dark brown, well graded, very fine to coarse sand, damp

GP - GRAVEL: Subrounded pebbles and cobbles with <10% matrix, dry

SW - SAND: Tan to light brown sand, well graded, very fine to coarse sand 15% angular pebbles damp

GP - COBBLES: Rounded cobbles <10% matrix, dry

GW - SANDY GRAVEL: Very fine to cobble size, 35% subangular, pebble and cobbles, dry

@ 89.5': Cobbles

SW - SAND: Well graded, very fine to medium grained with 30% pebble size, dry

GW - SANDY GRAVEL: Tan to brown sand matrix, 50% subangular cobbles and cobble size fragments, dry

occasional soft drilling breaks of 6 inches or less thickness

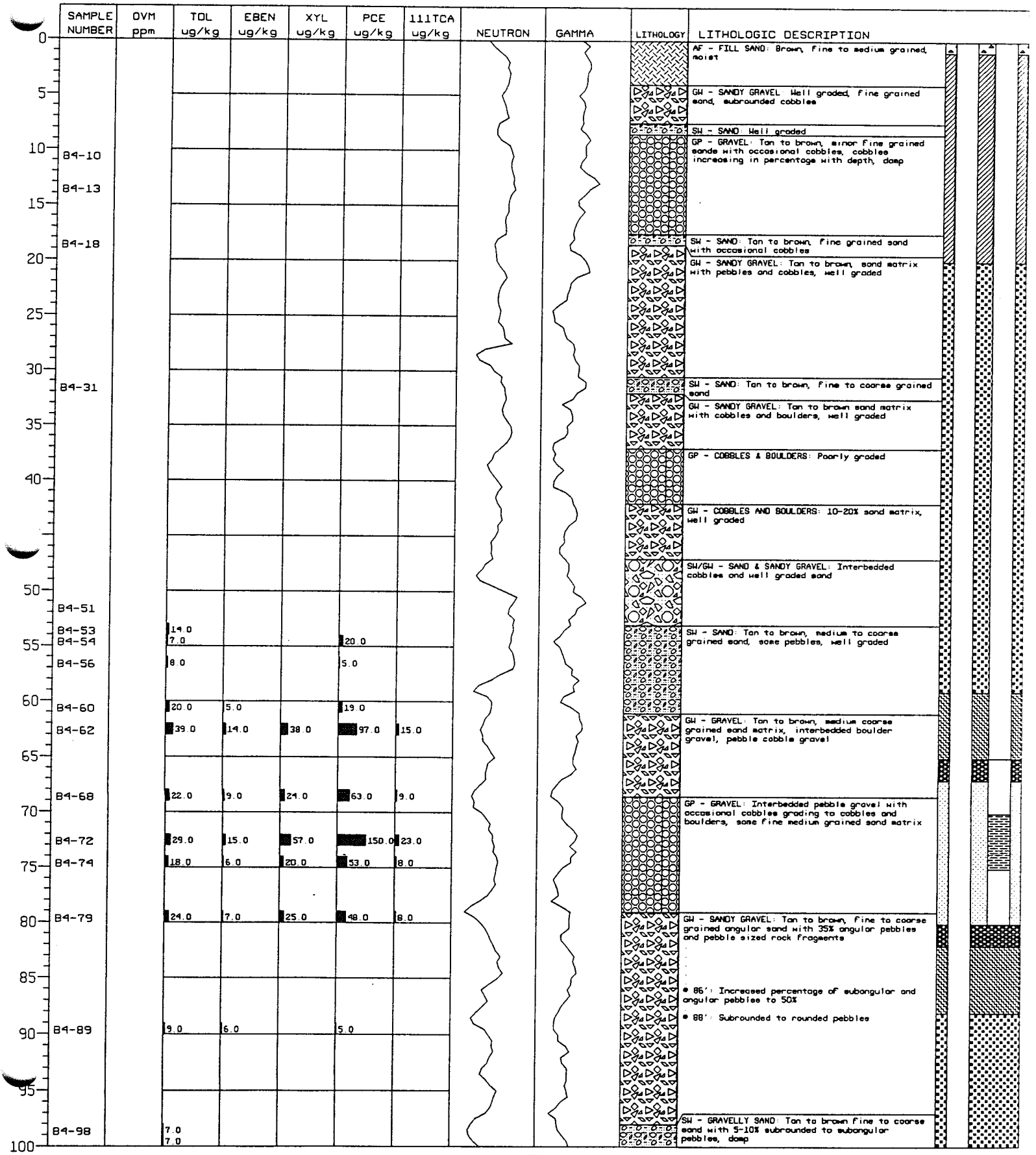
MEREDITH/BOLI & ASSOCIATES, INC		BORING LOG No	B-3
PROJECT	OSCO Azusa RFI (Phase IIb)	PROJECT No	90-211
PROJECT LOCATION	Azusa, California	DATE(S)	5/13 - 5/16/91
DRILLING METHOD	Hydraulic Percussion	DRILLING CO	Baylik TOTAL DEPTH 106.5 feet
FIELD GEOLOGIST	Hagar (Knight Piesold & Co.)	GROUND ELEVATION	522.55 feet MSL

SAMPLE NUMBER	OVM ppm	TOL ug/kg	EBEN ug/kg	XYL ug/kg	PCE ug/kg	111TCA ug/kg	NEUTRON	GAMMA	LITHOLOGY	LITHOLOGIC DESCRIPTION
										GW - SANDY GRAVEL: See description on previous page
										GP - GRAVEL: Subrounded to rounded pebbles, cobbles and cobble fragments, cobbles increasing with depth, <10% matrix, dry
										Bottom of Boring @ 106.5'

100 105 110 115 120 125 130 135 140 150 155 160 165 170 175 180 185 190 195 200

MEREDITH/BOLI & ASSOCIATES, INC		BORING LOG No	B-4
PROJECT	OSCO Azusa RFI (Phase IIb)	PROJECT No	90-211
PROJECT LOCATION	Azusa, California	DATE(S)	3/19/91 - 4/5/91
DRILLING METHOD	Hydraulic Percussion	DRILLING CO	Beylik TOTAL DEPTH 186 feet
FIELD GEOLOGIST	Hagar/Gilmer (Knight Piesold & Co.)	GROUND ELEVATION	521 87 Feet MSL

SAMPLE NUMBER	OVM ppm	TOL ug/kg	EBEN ug/kg	XYL ug/kg	PCE ug/kg	111TCA ug/kg
B4-10						
B4-13						
B4-18						
B4-31						
B4-51						
B4-53		14.0				
B4-54		7.0			20.0	
B4-56		8.0			5.0	
B4-60		20.0	5.0		19.0	
B4-62		39.0	14.0	38.0	97.0	15.0
B4-68		22.0	9.0	24.0	63.0	9.0
B4-72		29.0	15.0	57.0	150.0	23.0
B4-74		18.0	6.0	20.0	53.0	8.0
B4-79		24.0	7.0	25.0	48.0	8.0
B4-89		9.0	6.0		5.0	
B4-98		7.0 7.0				



LITHOLOGIC DESCRIPTION

AF - FILL SAND: Brown, fine to medium grained, moist

GW - SANDY GRAVEL: Well graded, fine grained sand, subrounded cobbles

SW - SAND: Well graded

GP - GRAVEL: Tan to brown, minor fine grained sands with occasional cobbles, cobbles increasing in percentage with depth, damp

SW - SAND: Tan to brown, fine grained sand with occasional cobbles

GW - SANDY GRAVEL: Tan to brown, sand matrix with pebbles and cobbles, well graded

SW - SAND: Tan to brown, fine to coarse grained sand

GW - SANDY GRAVEL: Tan to brown sand matrix with cobbles and boulders, well graded

GP - COBBLES & BOULDERS: Poorly graded

GW - COBBLES AND BOULDERS: 10-20% sand matrix, well graded

SW/GW - SAND & SANDY GRAVEL: Interbedded cobbles and well graded sand

SW - SAND: Tan to brown, medium to coarse grained sand, some pebbles, well graded

GW - GRAVEL: Tan to brown, medium coarse grained sand matrix, interbedded boulder gravel, pebble cobble gravel

GP - GRAVEL: Interbedded pebble gravel with occasional cobbles grading to cobbles and boulders, some fine medium grained sand matrix

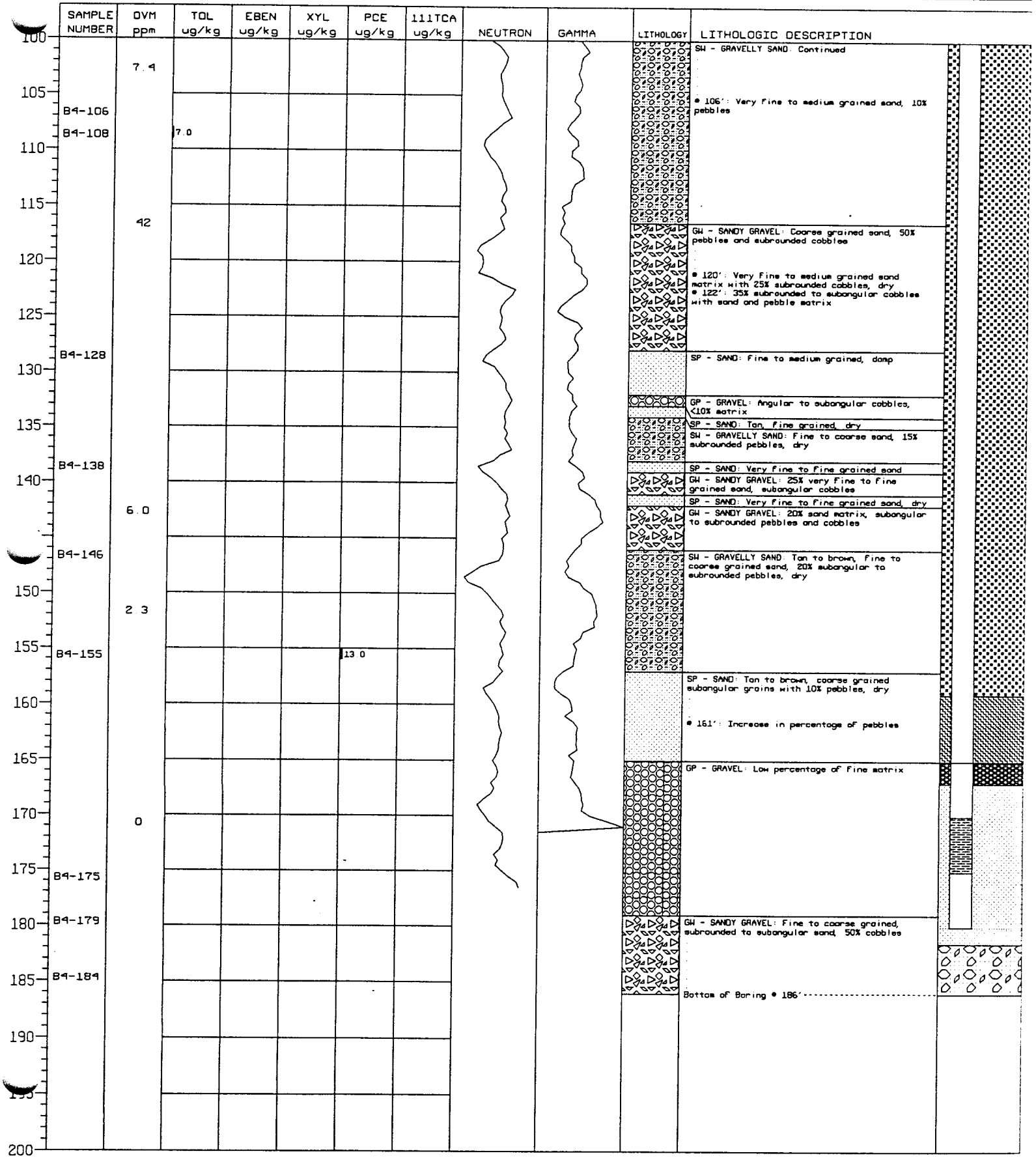
GW - SANDY GRAVEL: Tan to brown, fine to coarse grained angular sand with 35% angular pebbles and pebble sized rock fragments

- 86': Increased percentage of subangular and angular pebbles to 50%
- 88': Subrounded to rounded pebbles

SW - GRAVELLY SAND: Tan to brown fine to coarse sand with 5-10% subrounded to subangular pebbles, damp

MEREDITH/BOLI & ASSOCIATES, INC		BORING LOG No	B-4
PROJECT	OSCO Azusa RFI (Phase IIb)	PROJECT No	90-211
PROJECT LOCATION	Azusa, California	DATE(S)	3/19/91 - 4/5/91
DRILLING METHOD	Hydraulic Percussion	DRILLING CO	Beylik TOTAL DEPTH 186 feet
FIELD GEOLOGIST	Hagar (Knight Piesold & Co.)	GROUND ELEVATION	521.87 feet MSL

SAMPLE NUMBER	OVM ppm	TOL ug/kg	EBEN ug/kg	XYL ug/kg	PCE ug/kg	111TCA ug/kg
	7.4					
B4-106						
B4-108		7.0				
	42					
B4-128						
B4-138						
	6.0					
B4-146						
	2.3					
B4-155					13.0	
	0					
B4-175						
B4-179						
B4-184						



LITHOLOGIC DESCRIPTION

SW - GRAVELLY SAND: Continued

• 106': Very fine to medium grained sand, 10% pebbles

GW - SANDY GRAVEL: Coarse grained sand, 50% pebbles and subrounded cobbles

• 120': Very fine to medium grained sand matrix with 25% subrounded cobbles, dry
• 122': 35% subrounded to subangular cobbles with sand and pebble matrix

SP - SAND: Fine to medium grained, damp

GP - GRAVEL: Angular to subangular cobbles, <10% matrix

SP - SAND: Tan, fine grained, dry

SW - GRAVELLY SAND: Fine to coarse sand, 15% subrounded pebbles, dry

SP - SAND: Very fine to fine grained sand

GW - SANDY GRAVEL: 25% very fine to fine grained sand, subangular cobbles

SP - SAND: Very fine to fine grained sand, dry

GW - SANDY GRAVEL: 20% sand matrix, subangular to subrounded pebbles and cobbles

SW - GRAVELLY SAND: Tan to brown, fine to coarse grained sand, 20% subangular to subrounded pebbles, dry

SP - SAND: Tan to brown, coarse grained subangular grains with 10% pebbles, dry

• 161': Increase in percentage of pebbles

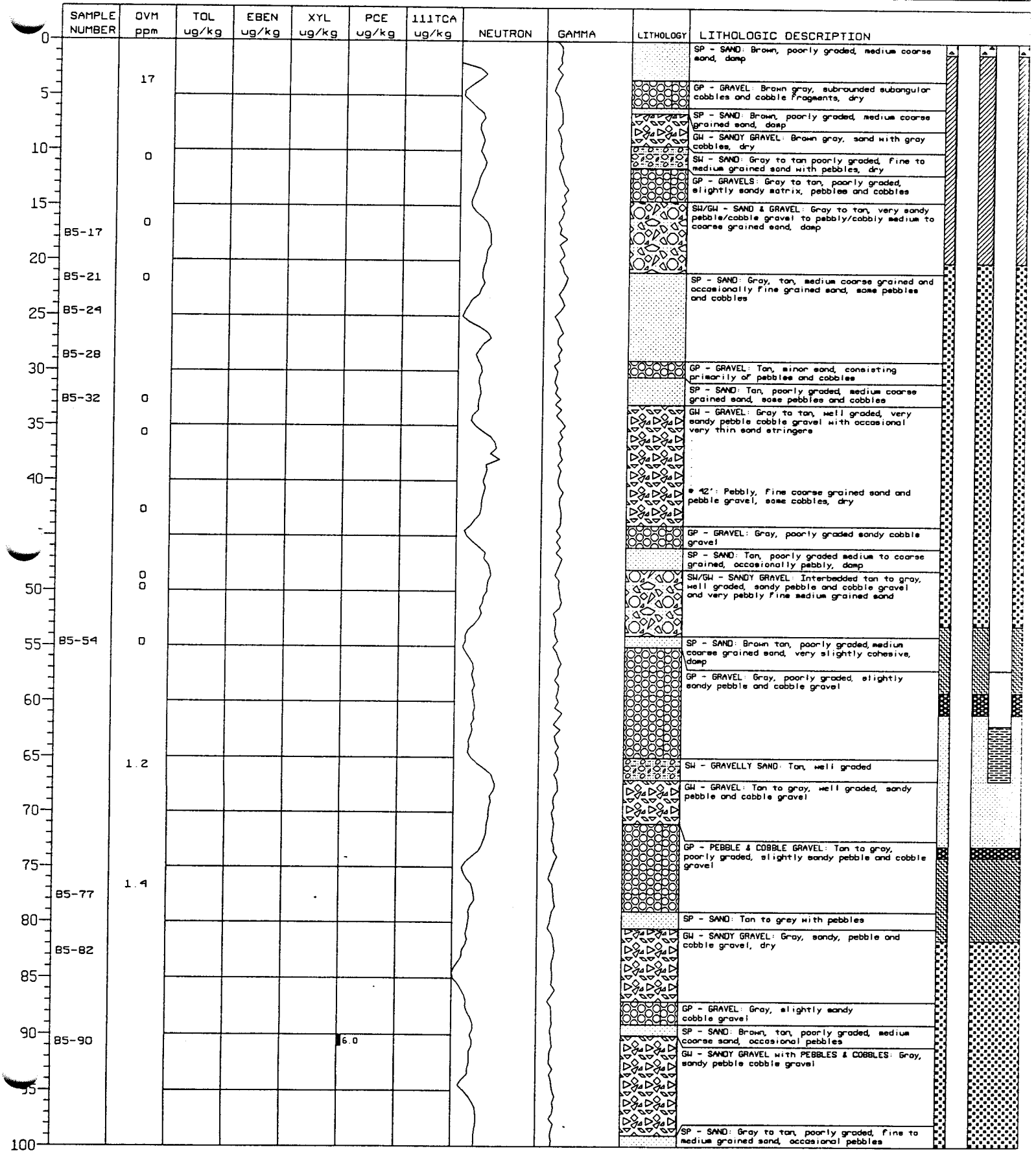
GP - GRAVEL: Low percentage of fine matrix

GW - SANDY GRAVEL: Fine to coarse grained, subrounded to subangular sand, 50% cobbles

Bottom of Boring • 186'

MEREDITH/BOLI & ASSOCIATES, INC		BORING LOG No	B-5
PROJECT	OSCO Azusa RFI (Phase IIb)	PROJECT No	90-211
PROJECT LOCATION	Azusa, California	DATE(S)	5/20/91 - 5/27/91
DRILLING METHOD	Hydraulic Percussion	DRILLING CO	Beylik TOTAL DEPTH 166.5 feet
FIELD GEOLOGIST	Gilmer (Knight Piesold & Co.)	GROUND ELEVATION	519.58 feet MSL

SAMPLE NUMBER	OVM ppm	TOL ug/kg	EBEN ug/kg	XYL ug/kg	PCE ug/kg	111TCA ug/kg
	17					
	0					
B5-17	0					
B5-21	0					
B5-24						
B5-28						
B5-32	0					
	0					
	0					
	0					
	0					
B5-54	0					
	1.2					
B5-77	1.4					
B5-82						
B5-90					6.0	

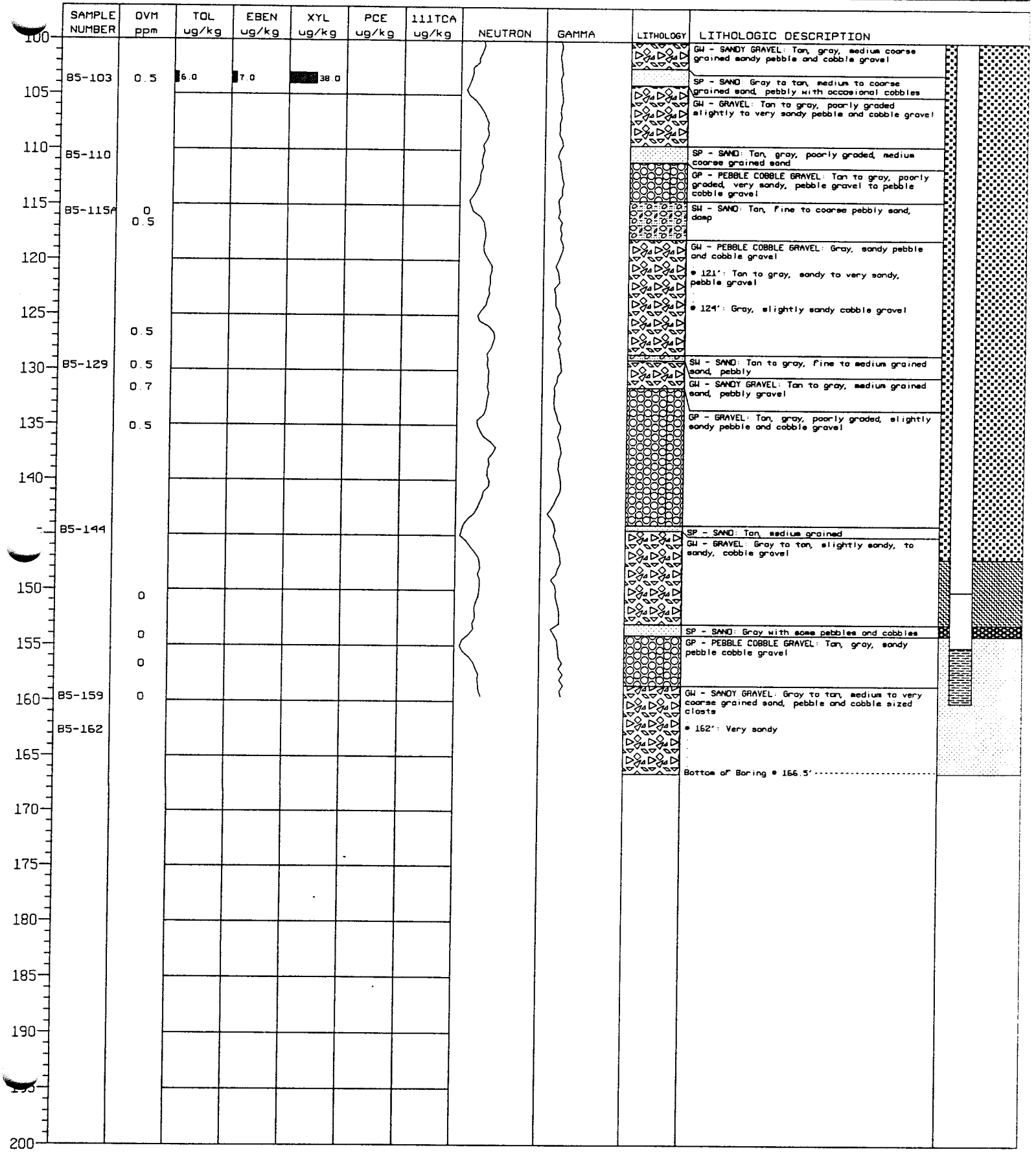


LITHOLOGIC DESCRIPTION

- SP - SAND: Brown, poorly graded, medium coarse sand, damp
- GP - GRAVEL: Brown gray, subrounded subangular cobbles and cobble fragments, dry
- SP - SAND: Brown, poorly graded, medium coarse grained sand, damp
- GW - SANDY GRAVEL: Brown gray, sand with gray cobbles, dry
- SW - SAND: Gray to tan poorly graded, fine to medium grained sand with pebbles, dry
- GP - GRAVELS: Gray to tan, poorly graded, slightly sandy matrix, pebbles and cobbles
- SW/GW - SAND & GRAVEL: Gray to tan, very sandy pebble/cobble gravel to pebbly/cobbly medium to coarse grained sand, damp
- SP - SAND: Gray, tan, medium coarse grained and occasionally fine grained sand, some pebbles and cobbles
- GP - GRAVEL: Tan, minor sand, consisting primarily of pebbles and cobbles
- SP - SAND: Tan, poorly graded, medium coarse grained sand, some pebbles and cobbles
- GW - GRAVEL: Gray to tan, well graded, very sandy pebble cobble gravel with occasional very thin sand stringers
- @ 42': Pebbly, fine coarse grained sand and pebble gravel, some cobbles, dry
- GP - GRAVEL: Gray, poorly graded sandy cobble gravel
- SP - SAND: Tan, poorly graded medium to coarse grained, occasionally pebbly, damp
- SW/GW - SANDY GRAVEL: Interbedded tan to gray, well graded, sandy pebble and cobble gravel and very pebbly fine medium grained sand
- SP - SAND: Brown tan, poorly graded, medium coarse grained sand, very slightly cohesive, damp
- GP - GRAVEL: Gray, poorly graded, slightly sandy pebble and cobble gravel
- SW - GRAVELLY SAND: Tan, well graded
- GW - GRAVEL: Tan to gray, well graded, sandy pebble and cobble gravel
- GP - PEBBLE & COBBLE GRAVEL: Tan to gray, poorly graded, slightly sandy pebble and cobble gravel
- SP - SAND: Tan to grey with pebbles
- GW - SANDY GRAVEL: Gray, sandy, pebble and cobble gravel, dry
- GP - GRAVEL: Gray, slightly sandy cobble gravel
- SP - SAND: Brown, tan, poorly graded, medium coarse sand, occasional pebbles
- GW - SANDY GRAVEL with PEBBLES & COBBLES: Gray, sandy pebble cobble gravel
- SP - SAND: Gray to tan, poorly graded, fine to medium grained sand, occasional pebbles

MEREDITH/BOLI & ASSOCIATES, INC		BORING LOG No	B-5
PROJECT	OSCO Azusa RFI (Phase IIb)	PROJECT No	90-211
PROJECT LOCATION	Azusa, California	DATE(S)	5/20/91 - 5/27/91
DRILLING METHOD	Hydraulic Percussion	DRILLING CO	Beylik TOTAL DEPTH 166 5 feet
FIELD GEOLOGIST	Gilmer (Knight Piesold & Co)	GROUND ELEVATION	519 58 feet MSL

SAMPLE NUMBER	OVM ppm	TOL ug/kg	EBEN ug/kg	XYL ug/kg	PCE ug/kg	111TCA ug/kg
B5-103	0.5	6.0	7.0	38.0		
B5-110						
B5-115A	0 0.5					
	0.5					
B5-129	0.5					
	0.7					
	0.5					
B5-144						
	0					
	0					
	0					
B5-159	0					
B5-162						



LITHOLOGIC DESCRIPTION

GW - SANDY GRAVEL: Tan, gray, medium coarse grained sandy pebble and cobble gravel

SP - SAND: Gray to tan, medium to coarse grained sand, pebbly with occasional cobbles

GW - GRAVEL: Tan to gray, poorly graded slightly to very sandy pebble and cobble gravel

SP - SAND: Tan, gray, poorly graded, medium coarse grained sand

GP - PEBBLE COBBLE GRAVEL: Tan to gray, poorly graded, very sandy, pebble gravel to pebble cobble gravel

SW - SAND: Tan, fine to coarse pebbly sand, damp

GW - PEBBLE COBBLE GRAVEL: Gray, sandy pebble and cobble gravel

- 121': Tan to gray, sandy to very sandy, pebble gravel
- 124': Gray, slightly sandy cobble gravel

SW - SAND: Tan to gray, fine to medium grained sand, pebbly

GW - SANDY GRAVEL: Tan to gray, medium grained sand, pebbly gravel

GP - GRAVEL: Tan, gray, poorly graded, slightly sandy pebble and cobble gravel

SP - SAND: Tan, medium grained

GW - GRAVEL: Gray to tan, slightly sandy, to sandy, cobble gravel

SP - SAND: Gray with some pebbles and cobbles

GP - PEBBLE COBBLE GRAVEL: Tan, gray, sandy pebble cobble gravel

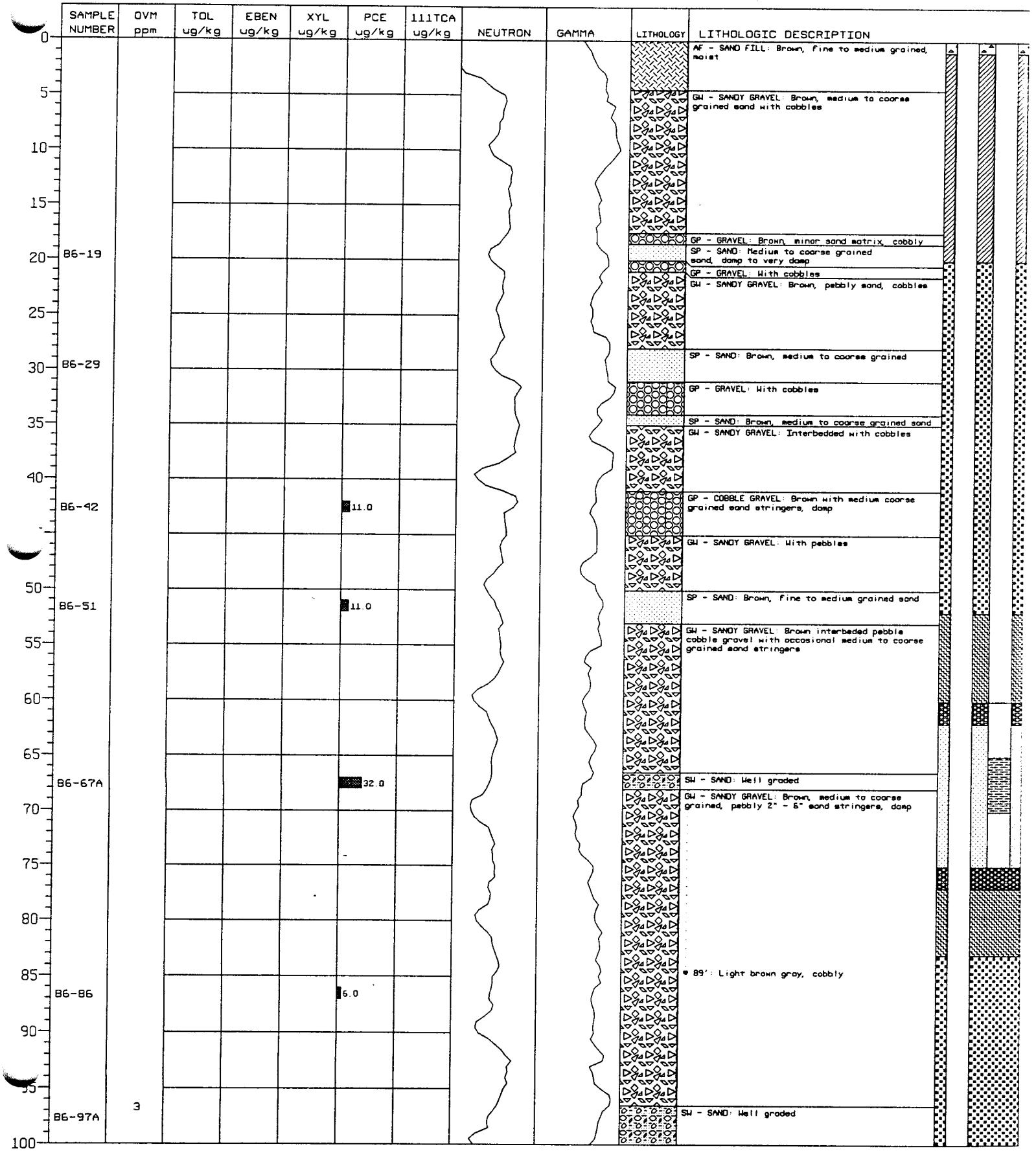
GW - SANDY GRAVEL: Gray to tan, medium to very coarse grained sand, pebble and cobble sized clasts

- 162': Very sandy

Bottom of Boring @ 166.5'

MEREDITH/BOLI & ASSOCIATES, INC		BORING LOG No	B-6
PROJECT	OSCO Azusa RFI (Phase IIb)	PROJECT No	90-211
PROJECT LOCATION	Azusa, California	DATE(S)	4/12/91 - 4/29/91
DRILLING METHOD	Hydraulic Percussion	DRILLING CO	Beylik TOTAL DEPTH 197 feet
FIELD GEOLOGIST	Hagar/Gilmer (Knight Piesold & Co.)	GROUND ELEVATION	521.66 feet MSL

SAMPLE NUMBER	OVM ppm	TOL ug/kg	EBEN ug/kg	XYL ug/kg	PCE ug/kg	111TCA ug/kg
B6-19						
B6-29						
B6-42					11.0	
B6-51					11.0	
B6-67A					32.0	
B6-86					6.0	
B6-97A	3					

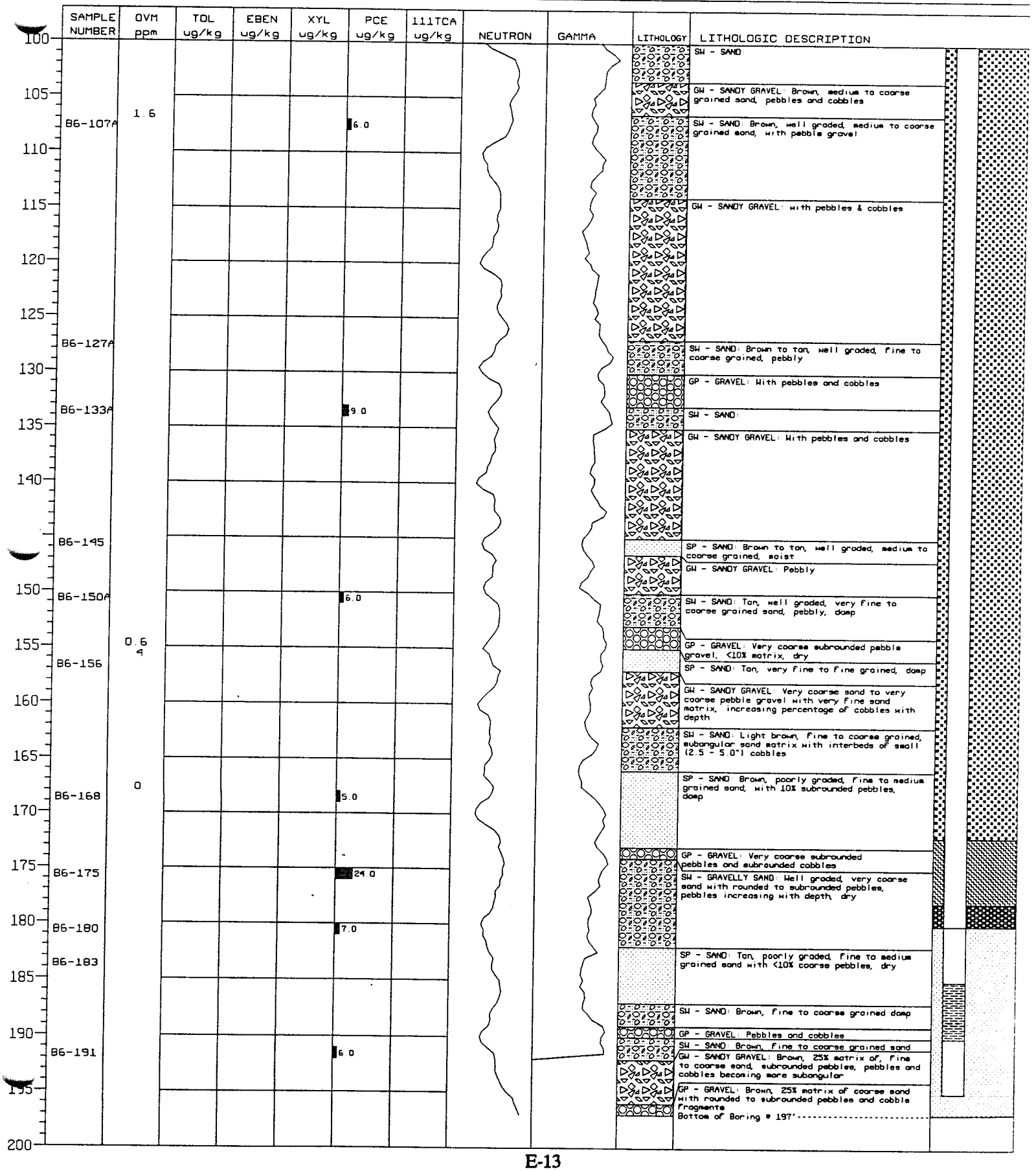


LITHOLOGIC DESCRIPTION

- AF - SAND FILL: Brown, fine to medium grained, moist
- GW - SANDY GRAVEL: Brown, medium to coarse grained sand with cobbles
- GP - GRAVEL: Brown, minor sand matrix, cobbly
- SP - SAND: Medium to coarse grained sand, damp to very damp
- GP - GRAVEL: With cobbles
- GW - SANDY GRAVEL: Brown, pebbly sand, cobbles
- SP - SAND: Brown, medium to coarse grained
- GP - GRAVEL: With cobbles
- SP - SAND: Brown, medium to coarse grained sand
- GW - SANDY GRAVEL: Interbedded with cobbles
- GP - COBBLE GRAVEL: Brown with medium coarse grained sand stringers, damp
- GW - SANDY GRAVEL: With pebbles
- SP - SAND: Brown, fine to medium grained sand
- GW - SANDY GRAVEL: Brown interbeded pebble cobble gravel with occasional medium to coarse grained sand stringers
- SW - SAND: Well graded
- GW - SANDY GRAVEL: Brown, medium to coarse grained, pebbly 2" - 6" sand stringers, damp
- @ 89': Light brown gray, cobbly
- SW - SAND: Well graded

MEREDITH/BOLI & ASSOCIATES, INC		BORING LOG No	B-6
PROJECT	OSCO Azusa RFI (Phase IIb)	PROJECT No	90-211
PROJECT LOCATION:	Azusa, California	DATE(S)	4/12/91 - 4/29/91
DRILLING METHOD:	Hydraulic Percussion	DRILLING CO	Beylik TOTAL DEPTH: 197 Feet
FIELD GEOLOGIST:	Hagar/Gilmer (Knight Piesold & Co.)	GROUND ELEVATION	521.66 Feet MSL

SAMPLE NUMBER	OVM ppm	TOL ug/kg	EBEN ug/kg	XYL ug/kg	PCE ug/kg	111TCA ug/kg
B6-107A	1.6				6.0	
B6-127A						
B6-133A					9.0	
B6-145						
B6-150A					6.0	
B6-156	0.6 4					
B6-168	0				5.0	
B6-175					24.0	
B6-180					7.0	
B6-183						
B6-191					6.0	



LITHOLOGIC DESCRIPTION

- SW - SAND:
- GW - SANDY GRAVEL: Brown, medium to coarse grained sand, pebbles and cobbles
- SW - SAND: Brown, well graded, medium to coarse grained sand, with pebble gravel
- GW - SANDY GRAVEL: with pebbles & cobbles
- SW - SAND: Brown to tan, well graded, fine to coarse grained, pebbly
- GP - GRAVEL: With pebbles and cobbles
- SW - SAND:
- GW - SANDY GRAVEL: With pebbles and cobbles
- SP - SAND: Brown to tan, well graded, medium to coarse grained, moist
- GW - SANDY GRAVEL: Pebbly
- SW - SAND: Tan, well graded, very fine to coarse grained sand, pebbly, damp
- GP - GRAVEL: Very coarse subrounded pebble gravel, <10% matrix, dry
- SP - SAND: Tan, very fine to fine grained, damp
- GW - SANDY GRAVEL: Very coarse sand to very coarse pebble gravel with very fine sand matrix, increasing percentage of cobbles with depth
- SW - SAND: Light brown, fine to coarse grained, subangular sand matrix with interbeds of small (2.5 - 5.0") cobbles
- SP - SAND: Brown, poorly graded, fine to medium grained sand, with 10% subrounded pebbles, damp
- GP - GRAVEL: Very coarse subrounded pebbles and subrounded cobbles
- SW - GRAVELLY SAND: Well graded, very coarse sand with rounded to subrounded pebbles, pebbles increasing with depth, dry
- SP - SAND: Tan, poorly graded, fine to medium grained sand with <10% coarse pebbles, dry
- SW - SAND: Brown, fine to coarse grained damp
- GP - GRAVEL: Pebbles and cobbles
- SW - SAND: Brown, fine to coarse grained sand
- GW - SANDY GRAVEL: Brown, 25% matrix of, fine to coarse sand, subrounded pebbles, pebbles and cobbles becoming more subangular
- GP - GRAVEL: Brown, 25% matrix of coarse sand with rounded to subrounded pebbles and cobble fragments

Bottom of Boring @ 197'

MEREDITH/BOLI & ASSOCIATES, INC		BORING LOG No	B-8
PROJECT	OSCO Azusa RFI (Phase IIb)	PROJECT No	90-211
PROJECT LOCATION:	Azusa, California	DATE(S):	2/11/91 - 2/18/91
DRILLING METHOD:	CME-95 Auger	DRILLING CO:	Datum/Layne TOTAL DEPTH: 57.5 feet
FIELD GEOLOGIST:	Gilmer (Knight Piesold & Co.)	GROUND ELEVATION:	522.76 feet MSL

SAMPLE NUMBER	OVM ppm	TOL ug/kg	EBEN ug/kg	XYL ug/kg	PCE ug/kg	111TCA ug/kg	NEUTRON	GAMMA
B8-1								
B8-2	0							
B8-3	5							
B8-4	5							
B8-5	30							
B8-6	5 25							
B8-7	60 140							
B8-8								

LITHOLOGY

LITHOLOGIC DESCRIPTION

GP - GRAVEL: Dark gray to brown, pebble to cobble size, sandy matrix, dry

GW - GRAVEL: Gray to brown, well graded, very coarse sandy gravel

GP - GRAVEL: Gray to brown, very coarse gravel with cobbles and pebbles

GW - SANDY GRAVEL: Gray to brown, very coarse gravel

SP - SAND: Poorly graded

GW - SANDY GRAVEL: Gray to brown, sandy very coarse gravel, 10-12% pebbles, 10-12% cobbles

SW - GRAVELLY SAND: Dark brown, well graded, coarse sand with pebbles

GW - GRAVEL: Gray to brown, 60% pebbles and 20% cobbles with medium to coarse sand matrix

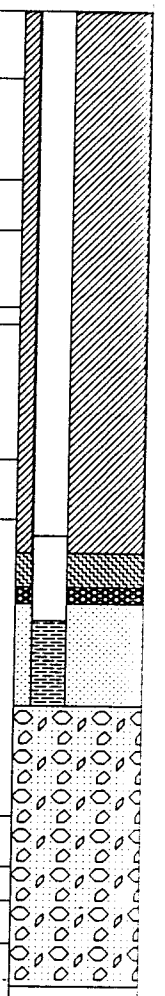
GP - GRAVEL: Dark brown, poorly graded, medium to coarse grained sand matrix 10-15% pebbles and 10-12% cobbles and cobble fragments

SW - GRAVELLY SAND: Gray to tan, medium grained, 10-12% pebbles, occasional cobbles

SP - SAND: Gray to tan, very fine to medium grained

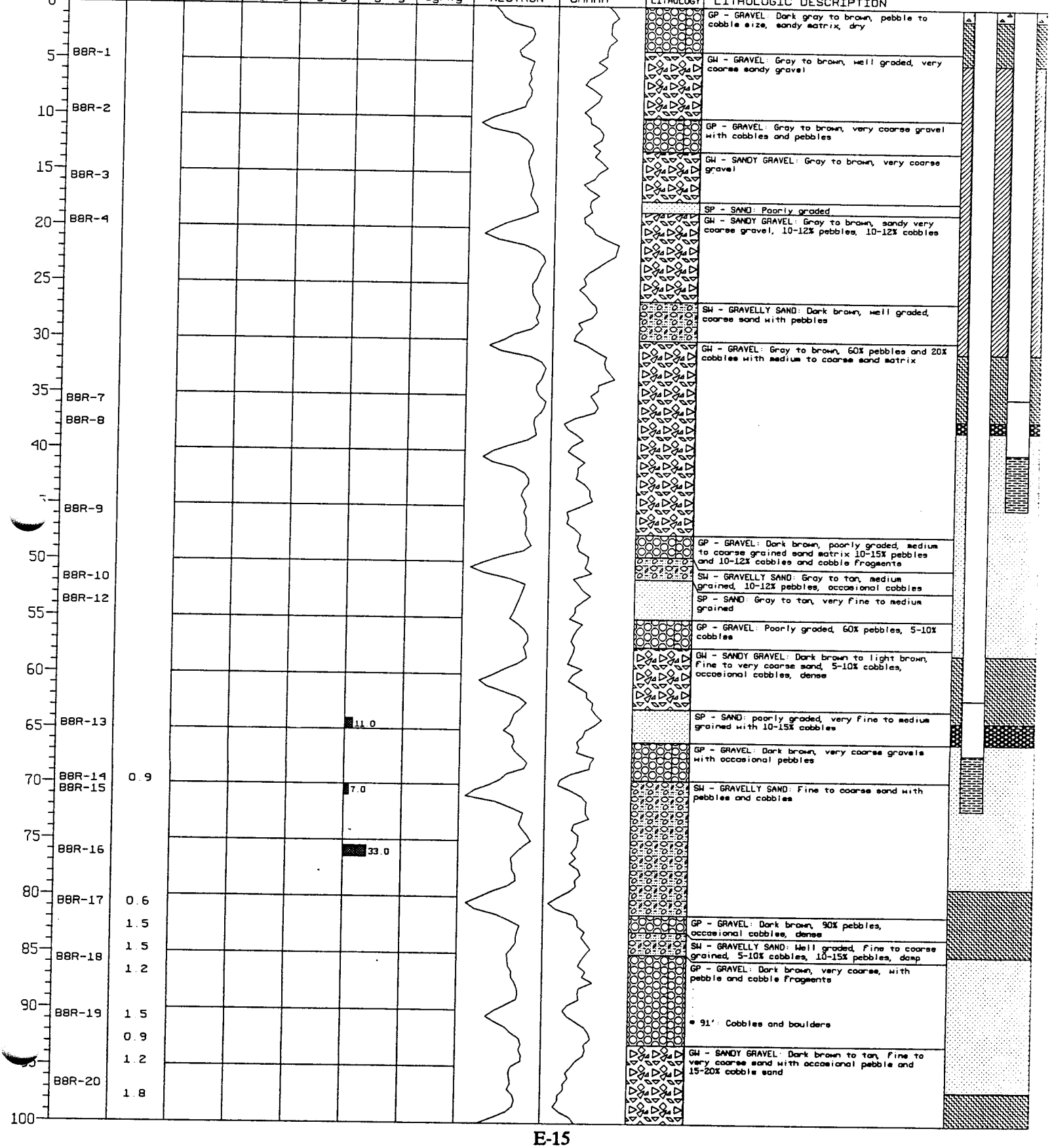
GP - GRAVEL: Poorly graded, 60% pebbles, 5-10% cobbles

Bottom of Boring @ 57.5'



MEREDITH/BOLI & ASSOCIATES, INC		BORING LOG No:	B-8R
PROJECT:	OSCO Azusa RFI (Phase IIb)	PROJECT No	90-211
PROJECT LOCATION:	Azusa, California	DATE(S):	2/12/91 - 2/23/91
DRILLING METHOD:	Diesel Hammer	DRILLING CO	Layne TOTAL DEPTH: 122.5 feet
FIELD GEOLOGIST:	Gilmer (Knight Piesold & Co.)	GROUND ELEVATION:	522.79 feet MSL

SAMPLE NUMBER	OVM ppm	TOL ug/kg	EBEN ug/kg	XYL ug/kg	PCE ug/kg	111TCA ug/kg
B8R-1						
B8R-2						
B8R-3						
B8R-4						
B8R-7						
B8R-8						
B8R-9						
B8R-10						
B8R-12						
B8R-13					11.0	
B8R-14	0.9					
B8R-15					7.0	
B8R-16					33.0	
B8R-17	0.6					
	1.5					
B8R-18	1.5					
	1.2					
B8R-19	1.5					
	0.9					
B8R-20	1.2					
	1.8					

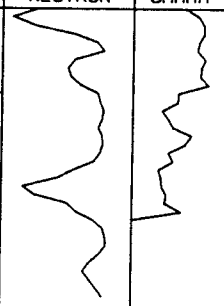


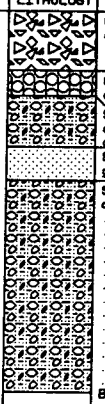
LITHOLOGIC DESCRIPTION

- GP - GRAVEL: Dark gray to brown, pebble to cobble size, sandy matrix, dry
- GW - GRAVEL: Gray to brown, well graded, very coarse sandy gravel
- GP - GRAVEL: Gray to brown, very coarse gravel with cobbles and pebbles
- GW - SANDY GRAVEL: Gray to brown, very coarse gravel
- SP - SAND: Poorly graded
- GW - SANDY GRAVEL: Gray to brown, sandy very coarse gravel, 10-12% pebbles, 10-12% cobbles
- SW - GRAVELLY SAND: Dark brown, well graded, coarse sand with pebbles
- GW - GRAVEL: Gray to brown, 60% pebbles and 20% cobbles with medium to coarse sand matrix
- GP - GRAVEL: Dark brown, poorly graded, medium to coarse grained sand matrix 10-15% pebbles and 10-12% cobbles and cobble fragments
- SW - GRAVELLY SAND: Gray to tan, medium grained, 10-12% pebbles, occasional cobbles
- SP - SAND: Gray to tan, very fine to medium grained
- GP - GRAVEL: Poorly graded, 60% pebbles, 5-10% cobbles
- GW - SANDY GRAVEL: Dark brown to light brown, fine to very coarse sand, 5-10% cobbles, occasional cobbles, dense
- SP - SAND: poorly graded, very fine to medium grained with 10-15% cobbles
- GP - GRAVEL: Dark brown, very coarse gravels with occasional pebbles
- SW - GRAVELLY SAND: Fine to coarse sand with pebbles and cobbles
- GP - GRAVEL: Dark brown, 90% pebbles, occasional cobbles, dense
- SW - GRAVELLY SAND: Well graded, fine to coarse grained, 5-10% cobbles, 10-15% pebbles, damp
- GP - GRAVEL: Dark brown, very coarse, with pebble and cobble fragments
- @ 91': Cobbles and boulders
- GW - SANDY GRAVEL: Dark brown to tan, fine to very coarse sand with occasional pebble and 15-20% cobble sand

MEREDITH/BOLI & ASSOCIATES, INC.		BORING LOG No:	B-8R
PROJECT:	OSCO Azusa RFI (Phase IIb)	PROJECT No:	90-211
PROJECT LOCATION:	Azusa, California	DATE(S):	2/12/91 - 2/23/91
DRILLING METHOD:	Diesel Hammer	DRILLING CO:	Layne TOTAL DEPTH: 122 5 feet
FIELD GEOLOGIST:	Gilmer (Knight Piesold & Co.)	GROUND ELEVATION:	522.79 feet MSL

SAMPLE NUMBER	OVM ppm	TOL ug/kg	EBEN ug/kg	XYL ug/kg	PCE ug/kg	111TCA ug/kg
	0.6					
B8R-21					16.0	
B8R-22						
B8R-23						
B8R-24						





LITHOLOGIC DESCRIPTION

GW - SANDY GRAVELS: See previous page for description

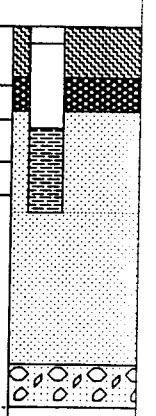
GP - GRAVELS: 70-80% pebbles, occasional cobbles

SW - GRAVELLY SAND: Tan to brown, medium to coarse grained with 10-12% pebbles and 5-10% cobbles

SP - SAND: Tan to brown, fine to medium grained, occasional pebbles

SW - GRAVELLY SAND: Tan to brown, medium to coarse sand with pebbles and cobbles

Bottom of Boring @ 122.5'



APPENDIX F

DATA SUMMARY TABLES AND GRAPHS

BORING 1

ANALYTICAL CHEMISTRY DATA
SUMMARY OF DETECTED ORGANIC COMPOUNDS
(ug/kg)

Sample Depth (feet bgs)	Lab[1]	Field ID	Sample Type[2]	Benzene	Toluene	Ethyl-Benzene	Xylene	PCE	TCE	111TCA	112TCA	t12DCE	c12DCE	$MECl_2$	12DCB	14DCB	Acetone	MEK	MIBK	Analytical Method
20	1	B1-20		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
47	1	B1-47		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
49	1	B1-49		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
49	1	B1-49D	D	<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
49	2	B1-49D	FD	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5			25	<10	<10	8240
49	3	B1-49		<5	<5	<5	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5				8010/20
49	2	B1-49		<5	<5	<5	<5	<5	<5	<5	<5	<5		<5			52	18	<10	8240
55	2	B1-55		<5	<5	<5	<5	<5	<5	<5	<5	<5		<5			23	<10	<10	8240
55	1	B1-55		<5	22	<5	<15	<5	<5	20	<5	<5		6	<5	<5				8010/20
61	2	B1-61		<5	<5	<5	<5	<5	<5	<5	<5	<5		<5			28	<10	<10	8240
61	1	B1-61		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
65	1	B1-65		<5	16	<5	<15	<5	<5	12	<5	<5		6	<5	<5				8010/20
66.5	1	B1-66.5		<5	13	<5	<15	<5	<5	11	<5	<5		7	<5	<5				8010/20
66.5	2	B1-66.5		<5	<5	<5	<5	<5	<5	<5	<5	<5		<5			77	29	<10	8240
66.5	3	B1-66.5		<5	<5	<5	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5				8010/20
70	1	B1-70		<5	11	<5	<15	<5	<5	10	<5	<5		7	<5	<5				8010/20
70	2	B1-70		<5	<5	<5	<5	<5	<5	<5	<5	<5		<5			50	17	<10	8240
77	3	B1-77		<5	<5	<5	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5				8010/20
77	2	B1-77		<5	<5	<5	<5	<5	<5	<5	<5	<5		<5			31	<10	<10	8240
77	1	B1-77		<5	18	<5	<15	<5	<5	21	<5	<5		6	<5	<5				8010/20

BORING 1
(continued)

ANALYTICAL CHEMISTRY DATA
SUMMARY OF DETECTED ORGANIC COMPOUNDS
(ug/kg)

Sample Depth (feet bgs)	Lab[1]	Field ID	Sample Type[2]	Benzene	Toluene	Ethyl-Benzene	Xylene	PCE	TCE	111TCA	112TCA	t12DCE	c12DCE	$MECl_2$	12DCB	14DCB	Acetone	MEK	MIBK	Analytical Method
79	2	B1-79		<5	<5	<5	<5	<5	<5	<5	<5	<5		<5			210	250	16	8240
79	1	B1-79		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
93	2	B1-93		<25	<25	<25	<25	<25	<25	<25	<25	<25		<25			200	290	<50	8240
93	2	B1-93D	FD	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5			170	250	34	8240
93	1	B1-93D	D	<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
93	1	B1-93		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
101.5	2	B1-101.5		<5	<5	<5	<5	<5	<5	<5	<5	<5		<5			230	260	36	8240
101.5	1	B1-101.5		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
108	1	B1-108		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
108	3	B1-108C	C	<5	<5	<5	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5				8010/20
108	3	B1-108		<5	<5	<5	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5				8010/20
108	2	B1-108		<5	<5	<5	<5	<5	<5	<5	<5	<5		<5			130	150	27	8240
110	2	B1-110		<25	<25	<25	<25	<25	<25	<25	<25	<25		<25			630	330	<50	8240
110	3	B1-110		<5	<5	<5	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5				8010/20
110	1	B1-110		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
123	3	B1-123		<5	<5	<5	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5				8010/20
123	3	B1-123C	C	<5	5	<5	<20	<5	<5	<5	<5	<5	9	<5	<5	<5				8010/20
123	2	B1-123		<25	<25	<25	<25	<25	<25	<25	<25	<25		<25			2000	720	<50	8240
123	1	B1-123		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
132	1	B1-132		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20

BORING 1
(concluded)

ANALYTICAL CHEMISTRY DATA
SUMMARY OF DETECTED ORGANIC COMPOUNDS
(ug/kg)

Sample Depth (feet bgs)	Lab[1]	Field ID	Sample Type[2]	Benzene	Toluene	Ethyl-Benzene	Xylene	PCE	TCE	111TCA	112TCA	t12DCE	c12DCE	$MECl_2$	12DCB	14DCB	Acetone	MEK	MIBK	Analytical Method
132	2	B1-132D	FD	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5			39	18	<10	8240
132	1	B1-132D	D	<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
132	2	B1-132		<5	<5	<5	<5	<5	<5	<5	<5	<5		<5			50	25	10	8240
134	2	B1-134		<25	<25	<25	<25	<25	<25	<25	<25	<25		<25			500	170	<50	8240
134	1	B1-134		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
137	2	B1-137		<5	<5	<5	<5	<5	<5	<5	<5	<5		<5			280	170	29	8240
137	1	B1-137		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
137	3	B1-137		<5	<5	<5	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5				8010/20

[1] LAB: 1 = ENSECO (On-Site), 2 = ENSECO (Main Lab), 3 = BCA
[2] D = Laboratory Duplicate, FD = Field Duplicate, C = Cutting Sample

[Note: Results preceeded with a "<" are below the detection limit. The number following the "<" is the analytical detection limit for the analysis.]

BORING 2

ANALYTICAL CHEMISTRY DATA
SUMMARY OF DETECTED ORGANIC COMPOUNDS
(ug/kg)

Sample Depth	Lab[1]	Field ID	Sample Type[2]	Benzene	Toluene	Ethyl-Benzene	Xylene	PCE	TCE	111TCA	112TCA	t12DCE	c12DCE	$MECl_2$	12DCB	14DCB	Acetone	MEK	MIBK	Analytical Method
5	3	B2-1		<5	<5	<5	<20	40	<5	<5	<5	<5	<5	<5	<5	<5				8010/20
9.5	3	B2-2		<5	<5	<5	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5				8010/20
15	3	B2-3		<500	<500	4000	62000	<500	<500	<500	<500	<500	<500	<500	700	<500				8010/20
25	3	B2-5		<5	<5	<5	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5				8010/20
30	3	B2-7		<5	<5	<5	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5				8010/20
40	3	B2-9		<5	<5	<5	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5				8010/20

[1] LAB: 1 = ENSECO (On-Site), 2 = ENSECO (Main Lab), 3 = BCA

[2] D = Laboratory Duplicate, FD = Field Duplicate, C = Cutting Sample

[Note: Results preceeded with a "<" are below the detection limit. The number following the "<" is the analytical detection limit for the analysis.]

BORING 2R

ANALYTICAL CHEMISTRY DATA
SUMMARY OF DETECTED ORGANIC COMPOUNDS
(ug/kg)

Sample Depth	Lab[1]	Field ID	Sample Type[2]	Benzene	Toluene	Ethyl-Benzene	Xylene	PCE	TCE	111TCA	112TCA	t12DCE	c12DCE	$MECl_2$	12DCB	14DCB	Acetone	MEK	MIBK	Analytical Method
4	1	B2R-1		<5	<5	7	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
11	3	B2R-11		<5	<5	<5	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5				8010/20
14	1	B2R-3		<5	300	1100	1100	470	8	8	<5	<5		<5	<5	180				8010/20
19	1	B2R-4		<5	110	400	3200	61	6	<5	<5	<5		<5	<5	64				8010/20
27	1	B2R-5		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
45.5	1	B2R-8		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
56	1	B2R-9		<5	<5	31	16	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
66	1	B2R-10		<5	9	5	30	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
77.5	1	B2R-11		<5	7	<5	8	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
77.5	1	B2R-11D	D	<5	28	8	54	5	<5	6	<5	<5		<5	<5	<5				8010/20
89	1	B2R-12		<5	5	<5	9	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
99	1	B2R-13		<5	10	<5	24	<5	<5	7	<5	<5		<5	<5	<5				8010/20
116.5	1	B2R-14		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
128	1	B2R-15		<5	<5	<5	14	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
139	1	B2R-17		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
154	1	B2R-18		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
166	1	B2R-19		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
167	3	B2R-167C	C	<5	<5	<5	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5				8010/20
170	1	B2R-20		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
174	3	B2R-174C	C	<5	<5	<5	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5				8010/20

[1] LAB: 1 = ENSECO (On-Site), 2 = ENSECO (Main Lab), 3 = BCA
[2] D = Laboratory Duplicate, FD = Field Duplicate, C = Cutting Sample

[Note: Results preceeded with a "<" are below the detection limit. The number following the "<" is the analytical detection limit for the analysis.]

BORING 3

ANALYTICAL CHEMISTRY DATA
SUMMARY OF DETECTED ORGANIC COMPOUNDS
(ug/kg)

Sample Depth (feet bgs)	Lab[1]	Field ID	Sample Type[2]	Benzene	Toluene	Ethyl-Benzene	Xylene	PCE	TCE	111TCA	112TCA	t12DCE	c12DCE	$MECl_2$	12DCB	14DCB	Acetone	MEK	MIBK	Analytical Method
19	1	B3-19		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
30	1	B3-30		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
33	1	B3-33		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
48	1	B3-48		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
62.5	1	B3-62.5		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
71	1	B3-71		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
78	1	B3-78		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
90	1	B3-90		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20

[1] LAB: 1 = ENSECO (On-Site), 2= ENSECO (Main Lab), 3 = BCA.
[2] D = Laboratory Duplicate, FD = Field Duplicate, C = Cutting.

[Note: Results preceeded with a "<" are below the detection limit. The number following the "<" is the analytical detection limit for the analysis.]

BORING 4

ANALYTICAL CHEMISTRY DATA
SUMMARY OF DETECTED ORGANIC COMPOUNDS
(ug/kg)

Sample Depth	Lab[1]	Field ID	Sample Type[2]	Benzene	Toluene	Ethyl-Benzene	Xylene	PCE	TCE	111TCA	112TCA	t12DCE	c12DCE	$MECl_2$	12DCB	14DCB	Acetone	MEK	MIBK	Analytical Method
10	1	B4-10		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
13	1	B4-13		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
18	1	B4-18		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
31	1	B4-31		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
31	3	B4-31D	FD	<5	<5	<5	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5				8010/20
51	1	B4-51		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
53	1	B4-53		<5	14	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
53	2	B4-53		<5	<5	<5	<5	<5	<5	<5	<5	<5		<5			370	70	<10	8240
54	1	B4-54		<5	7	<5	<15	20	<5	<5	<5	<5		<5	<5	<5				8010/20
56	1	B4-56		<5	8	<5	<15	5	<5	<5	<5	<5		<5	<5	<5				8010/20
56	3	B4-56D	FD	<5	<5	<5	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5				8010/20
60	3	B4-60D	FD	<5	<5	<5	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5				8010/20
60	1	B4-60		<5	20	5	<15	19	<5	<5	<5	<5		<5	<5	<5				8010/20
62	3	B4-62D	FD	<5	<5	<5	<20	20	<5	<5	<5	<5	<5	<5	<5	<5				8010/20
62	1	B4-62		<5	39	14	38	97	<5	15	<5	<5		<5	<5	<5				8010/20
68	1	B4-68		<5	22	9	24	63	<5	9	<5	<5		<5	<5	<5				8010/20
72	1	B4-72		<5	29	15	57	150	<5	23	6	<5		<5	<5	<5				8010/20
72	2	B4-72		<25	<25	<25	<25	<25	<25	<25	<25	<25		<25			600	350	<50	8240
74	1	B4-74		6	18	6	20	53	<5	8	<5	<5		<5	<5	<5				8010/20
79	1	B4-79		<5	24	7	25	48	<5	8	<5	6		<5	<5	<5				8010/20
89	2	B4-89		<25	<25	<25	<25	<25	<25	<25	<25			<25			300	390	150	8240
89	1	B4-89		<5	9	6	<15	5	<5	<5	<5	<5		<5	<5	<5				8010/20
98	2	B4-98		<25	<25	<25	<25	<25	<25	<25	<25			<25			1600	1700	200	8240
98	1	B4-98D	D	<5	8	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20

BORING 4
(concluded)

ANALYTICAL CHEMISTRY DATA
SUMMARY OF DETECTED ORGANIC COMPOUNDS
(ug/kg)

Sample Depth	Lab[1]	Field ID	Sample Type[2]	Benzene	Toluene	Ethyl-Benzene	Xylene	PCE	TCE	111TCA	112TCA	t12DCE	c12DCE	$MECl_2$	12DCB	14DCB	Acetone	MEK	MIBK	Analytical Method
98	1	B4-98		<5	7	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
99	1	B4-99		<5	7	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
99	2	B4-99		<250	<250	<250	<250	<250	<250	<250	<250			<250			8600	5100	<500	8240
106	2	B4-106		<25	<25	<25	<25	<25	<25	<25	<25			<25			1600	880	80	8240
106	1	B4-106		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
108	1	B4-108		<5	7	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
108	2	B4-108		<250	<250	<250	<250	<250	<250	<250	<250			<250			4600	2900	<500	8240
128	2	B4-128		<25	<25	<25	<25	<25	<25	<25	<25			<25			1400	1200	78	8240
128	1	B4-128		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
138	1	B4-138		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
138	2	B4-138		<5	<5	<5	<5	<5	<5	<5	<5			<5			13	18	41	8240
146	1	B4-146		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
146	2	B4-146		<5	<5	<5	<5	<5	<5	<5	<5			<5			<10	<10	<10	8240
155	2	B4-155		<5	<5	<5	<5	<5	<5	<5	<5			<5			<10	<10	<10	8240
155	1	B4-155		<5	<5	<5	<15	13	<5	<5	<5	<5		<5	<5	<5				8010/20
175	2	B4-175		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
179	2	B4-179		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
184	2	B4-184		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20

[1] LAB: 1 = ENSECO (On-Site), 2 = ENSECO (Main Lab), 3 = BCA
[2] D = Laboratory Duplicate, FD = Field Duplicate, C = Cutting Sample

[Note: Results preceeded with a "<" are below the detection limit. The number following the "<" is the analytical detection limit for the analysis.]

BORING 5

ANALYTICAL CHEMISTRY DATA
SUMMARY OF DETECTED ORGANIC COMPOUNDS
(ug/kg)

Sample Depth (feet bgs)	Lab[1]	Field ID	Sample Type[2]	Benzene	Toluene	Ethyl-Benzene	Xylene	PCE	TCE	111TCA	112TCA	112DCE	c12DCE	$MECl_2$	12DCB	14DCB	Acetone	MEK	MIBK	Analytical Method
17	1	B5-17		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
21	1	B5-21		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
24	1	B5-24		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
28	1	B5-28		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
32	1	B5-32		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
54	1	B5-54		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
54	2	B5-54		<5	<5	<5	<5	<5	<5	<5	<5	<5		6.7			<10	<10	<10	8240
77	1	B5-77		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
82	1	B5-82		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
90	1	B5-90		<5	<5	<5	<15	8	<5	<5	<5	<5		<5	<5	<5				8010/20
103	1	B5-103		<5	6	7	38	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
103	2	B5-103		<5	<5	<5	<5	<5	<5	<5	<5			5.3			<10	<10	<10	8240
110	1	B5-110		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
115	1	B5-115A		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
115	3	B5-115B	FD					<5	<5	<5	<5	<5	<5	<5	<5	<5				8010
129	1	B5-129		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
144	1	B5-144		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
159	1	B5-159		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
159	2	B5-159		<5	<5	<5	<5	<5	<5	<5	<5			<5			<10	<10	<10	8240

BORING 5
(concluded)

ANALYTICAL CHEMISTRY DATA
SUMMARY OF DETECTED ORGANIC COMPOUNDS
(ug/kg)

Sample Depth (feet bgs)	Lab[1]	Field ID	Sample Type[2]	Benzene	Toluene	Ethyl-Benzene	Xylene	PCE	TCE	111TCA	112TCA	t12DCE	c12DCE	$MECl_2$	12DCB	14DCB	Acetone	MEK	MIBK	Analytical Method
159	3	B5-159B	FD					<5	<5	<5	<5	<5	<5	<5	<5	<5				8010
162	1	B5-162		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20

[1] LAB: 1 = ENSECO (On-Site), 2 = ENSECO (Main Lab), 3 = BCA
[2] D = Laboratory Duplicate, FD = Field Duplicate, C = Cutting

[Note: Results preceeded with a "<" are below the detection limit. The number following the "<" is the analytical detection limit for the analysis.]

BORING 6

ANALYTICAL CHEMISTRY DATA
SUMMARY OF DETECTED ORGANIC COMPOUNDS
(ug/kg)

Sample Depth	Lab[1]	Field ID	Sample Type[2]	Benzene	Toluene	Ethyl-Benzene	Xylene	PCE	TCE	111TCA	112TCA	t12DCE	c12DCE	$MECl_2$	12DCB	14DCB	Acetone	MEK	MIBK	Analytical Method
19	1	B6-19		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
29	1	B6-29		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
42	1	B6-42		<5	<5	<5	<15	11	<5	<5	<5	<5		<5	<5	<5				8010/20
51	1	B6-51		<5	<5	<5	<15	11	<5	<5	<5	<5		<5	<5	<5				8010/20
51	3	B6-51D	D	<5	<5	<5	<20	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
67	1	B6-67A		<5	<5	<5	<15	32	<5	<5	<5	<5		<5	<5	<5				8010/20
67	2	B6-67A	D	<5	<5	<5	<5	<5	<5	<5	<5			<5			<10	<10	<10	8240
67	2	B6-67B	FD	<5	<5	<5	<5	<5	<5	<5	<5			<5			<10	<10	<10	8240
86	1	B6-86		<5	<5	<5	<15	6	<5	<5	<5	<5		<5	<5	<5				8010/20
97	1	B6-97A		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
107	1	B6-107A		<5	<5	<5	<15	6	<5	<5	<5	<5		<5	<5	<5				8010/20
107	2	B6-107A	D	<5	<5	<5	<5	<5	<5	<5	<5			<5			<10	<10	<10	8240
127	1	B6-127A		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
133	1	B6-133A		<5	<5	<5	<15	9	<5	<5	<5	<5		<5	<5	<5				8010/20
145	1	B6-145		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
150	1	B6-150A		<5	<5	<5	<15	6	<5	<5	<5	<5		<5	<5	<5				8010/20
156	1	B6-156		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
168	1	B6-168		<5	<5	<5	<15	5	<5	<5	<5	<5		<5	<5	<5				8010/20
168	3	B6-168		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<50	<30	<30	8240
175	1	B6-175A		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
175	1	B6-175		<5	<5	<5	<15	24	<5	<5	<5	<5		<5	<5	<5				8010/20

BORING 6
(concluded)

ANALYTICAL CHEMISTRY DATA
SUMMARY OF DETECTED ORGANIC COMPOUNDS
(ug/kg)

Sample Depth	Lab[1]	Field ID	Sample Type[2]	Benzene	Toluene	Ethyl-Benzene	Xylene	PCE	TCE	111TCA	112TCA	t12DCE	c12DCE	$MECl_2$	12DCB	14DCB	Acetone	MEK	MIBK	Analytical Method
180	1	B6-180		<5	<5	<5	<15	7	<5	<5	<5	<5		<5	<5	<5				8010/20
183	1	B6-183		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
191	1	B6-191		<5	<5	<5	<15	6	<5	<5	<5	<5		<5	<5	<5				8010/20
191	3	B6-191		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<50	<30	<30	8240
191	3	B6-191		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<50	<30	<30	8240

[1] LAB: 1 = ENSECO (On-Site), 2 = ENSECO (Main Lab), 3 = BCA
[2] D = Laboratory Duplicate, FD = Field Duplicate, C = Cutting Sample

[Note: Results preceeded with a "<" are below the detection limit. The number following the "<" is the analytical detection limit for the analysis.]

BORING 8

ANALYTICAL CHEMISTRY DATA
SUMMARY OF DETECTED ORGANIC COMPOUNDS
(ug/kg)

	Lab[1]	Field ID	Sample Type[2]	Benzene	Toluene	Ethyl-Benzene	Xylene	PCE	TCE	111TCA	112TCA	t12DCE	c12DCE	$MECl_2$	12DCB	14DCB	Acetone	MEK	MIBK	Analytical Method
4	1	B8-1		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
9	1	B8-2		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
14	1	B8-3		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
19	1	B8-4		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
30	1	B8-5		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
40[3]	1	B8-6		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
50	1	B8-7		<5	<5	<5	<15	<5	6	<5	<5	<5		<5	<5	<5				8010/20
55	1	B8-8		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20

1 LAB: 1 = ENSECO (On-Site), 2 = ENSECO (Main Lab), 3 = BCA
2 D = Laboratory Duplicate, FD = Field Duplicate, C = Cutting Sample
3 11DCE also was detected at a concentration of 24 ug/kg at this depth.

[Note: Results preceeded with a "<" are below the detection limit. The number following the "<" is the analytical detection limit for the analysis.]

BORING 8R

ANALYTICAL CHEMISTRY DATA
SUMMARY OF DETECTED ORGANIC COMPOUNDS
(ug/kg)

Sample Depth	Lab[1]	Field ID	Sample Type[2]	Benzene	Toluene	Ethyl-Benzene	Xylene	PCE	TCE	111TCA	112TCA	t12DCE	c12DCE	$MECl_2$	12DCB	14DCB	Acetone	MEK	MIBK	Analytical Method
4	1	B8R-1		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
9	1	B8R-2		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
15	3	B8R-15		<5	<5	<5	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5				8010/20
19	3	B8R-19		<5	<5	<5	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5				8010/20
19	1	B8R-4		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
21	3	B8R-21		<5	<5	<5	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5				8010/20
35	1	B8R-7		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
37	1	B8R-8		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
45	1	B8R-9		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
51	1	B8R-10		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
53	1	B8R-12		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
64	1	B8R-13		<5	<5	<5	<15	11	<5	<5	<5	<5		<5	<5	<5				8010/20
70	1	BR8-15		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
70	1	B8R-14		<5	<5	<5	<15	7	<5	<5	<5	<5		<5	<5	<5				8010/20
75.5	1	BR8-16		<5	<5	<5	<15	33	<5	<5	<5	8		<5	<5	<5				8010/20
80	1	B8R-17D	FD	<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
80	1	B8R-17		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
85	1	B8R-18		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
90	1	B8R-19		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
96	1	B8R-20		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
102	1	B8R-21		<5	<5	<5	<15	16	<5	<5	<5	<5		<5	<5	<5				8010/20
106	1	B8R-22		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20
118	1	B8R-23		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20

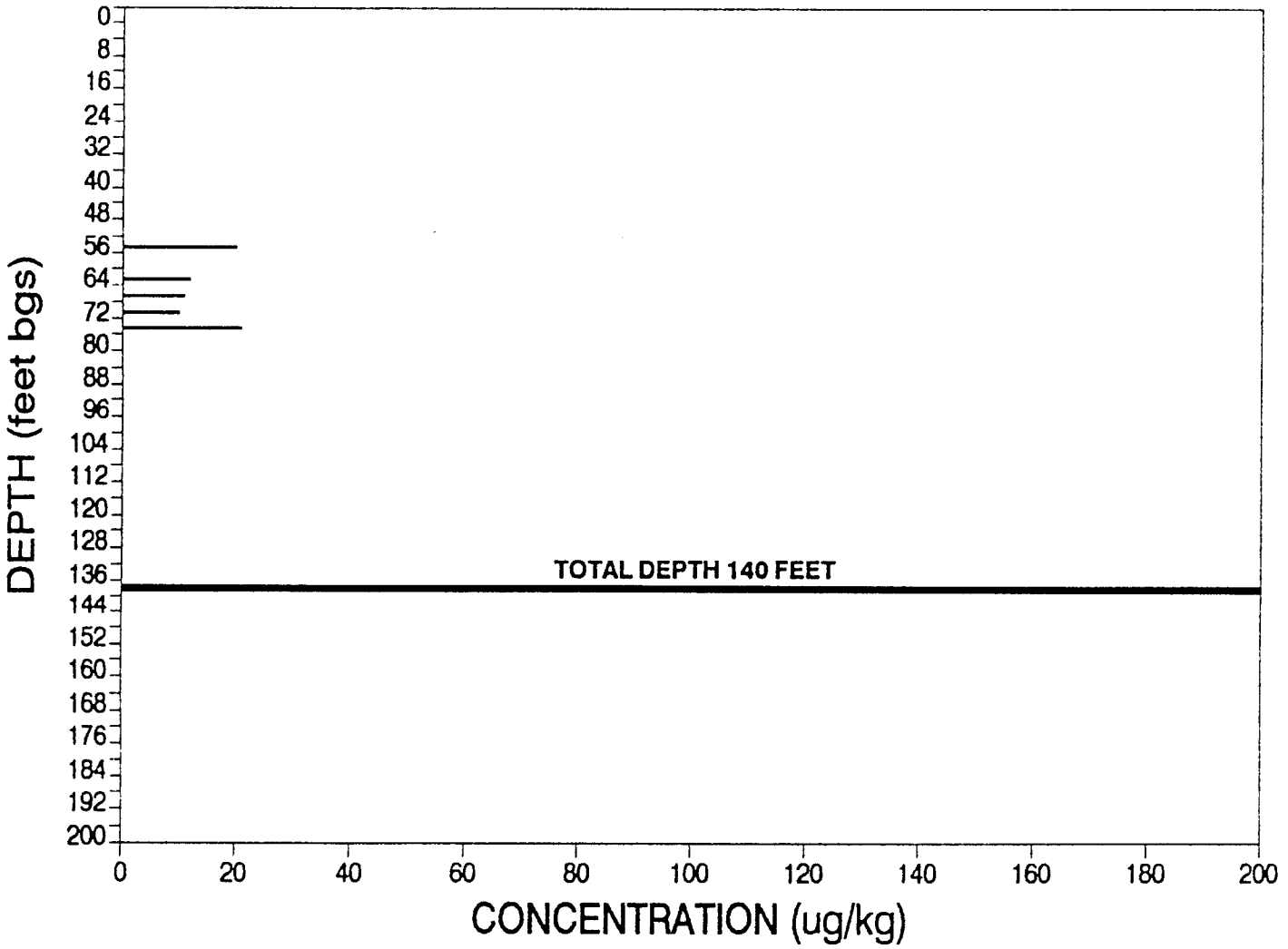
BORING 8R
(concluded)

ANALYTICAL CHEMISTRY DATA
SUMMARY OF DETECTED ORGANIC COMPOUNDS
(ug/kg)

Sample Depth	Lab[1]	Field ID	Sample Type[2]	Benzene	Toluene	Ethyl-Benzene	Xylene	PCE	TCE	111TCA	112TCA	t12DCE	c12DCE	$MECl_2$	12DCB	14DCB	Acetone	MEK	MIBK	Analytical Method
122.5	1	B8R-24		<5	<5	<5	<15	<5	<5	<5	<5	<5		<5	<5	<5				8010/20

[1] LAB: 1 = ENSECO (On-Site), 2 = ENSECO (Main Lab), 3 = BCA
[2] D = Laboratory Duplicate, FD = Field Duplicate, C = Cutting Sample

[Note: Results preceeded with a "<" are below the detection limit. The number following the "<" is the analytical detection limit for the analysis.]



MEREDITH/BOLI & ASSOCIATES, INC.

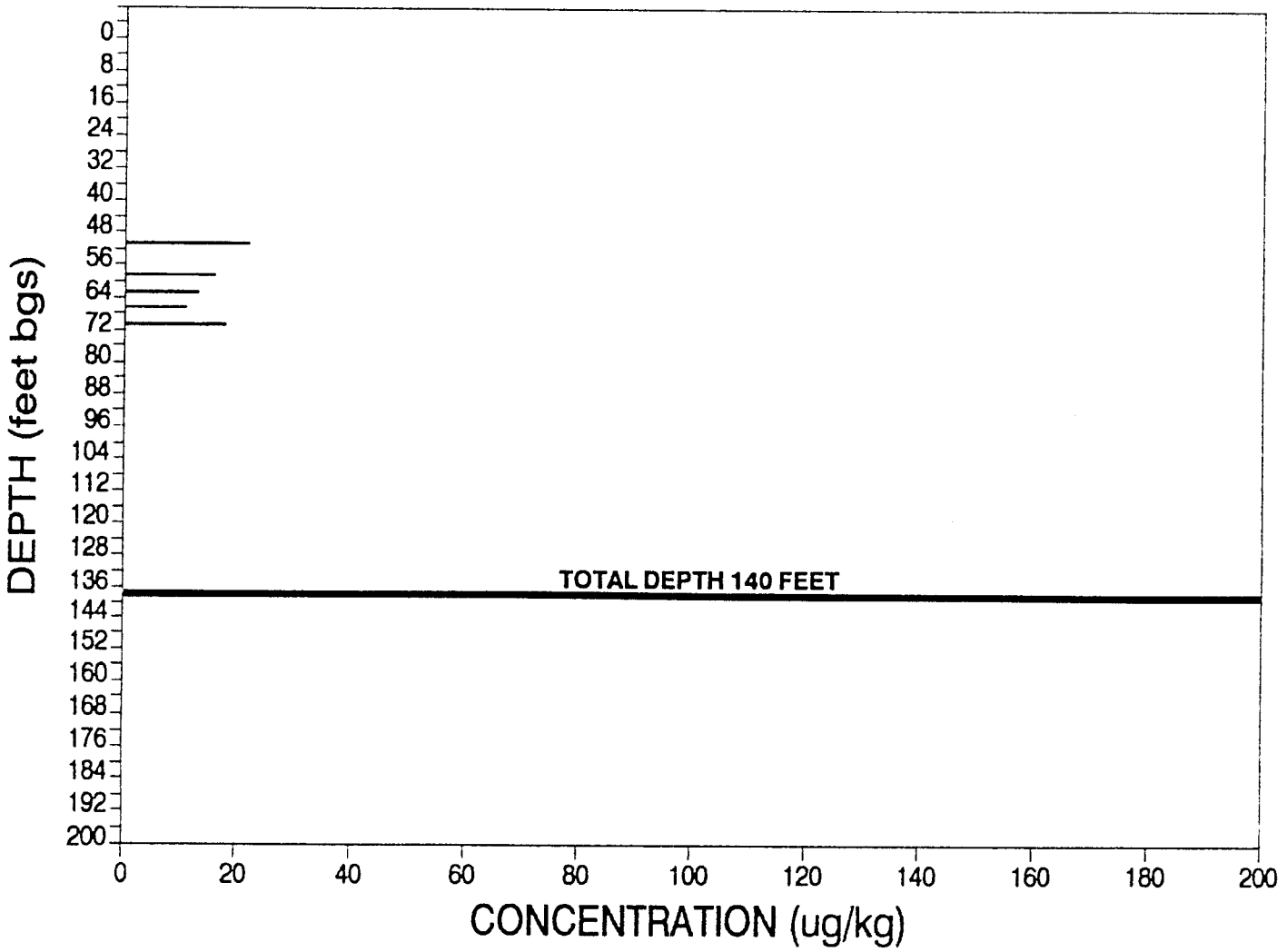
OIL & SOLVENT PROCESS COMPANY

OSCO - BORING 1
1,1,1-TCA

FIGURE
F-1

1990-211

11/15/91



MEREDITH/BOLI & ASSOCIATES, INC.

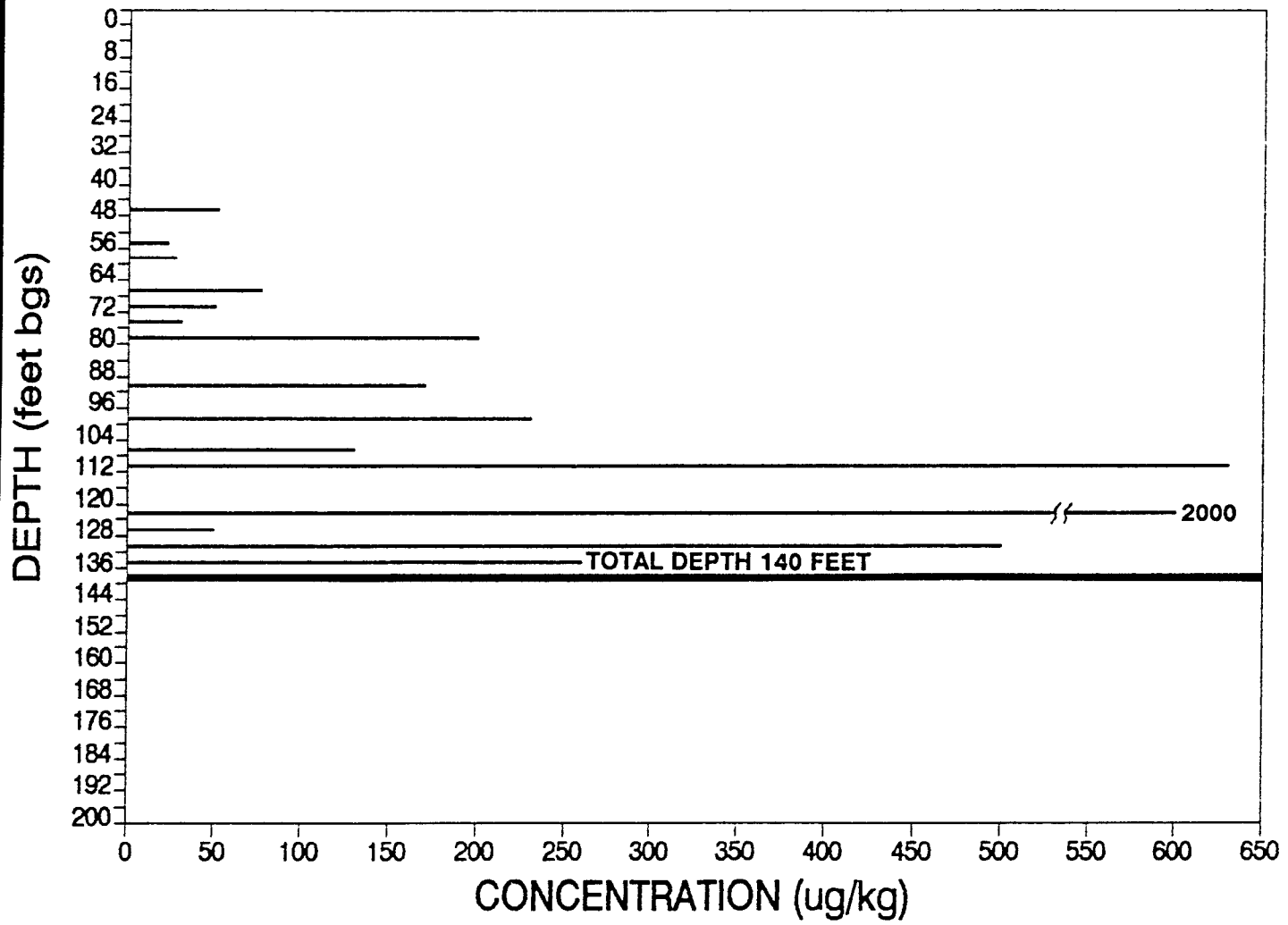
OIL & SOLVENT PROCESS COMPANY

OSCO - BORING 1
TOLUENE

FIGURE
F-2

1990-211

11/15/91



MEREDITH/BOLI & ASSOCIATES, INC.

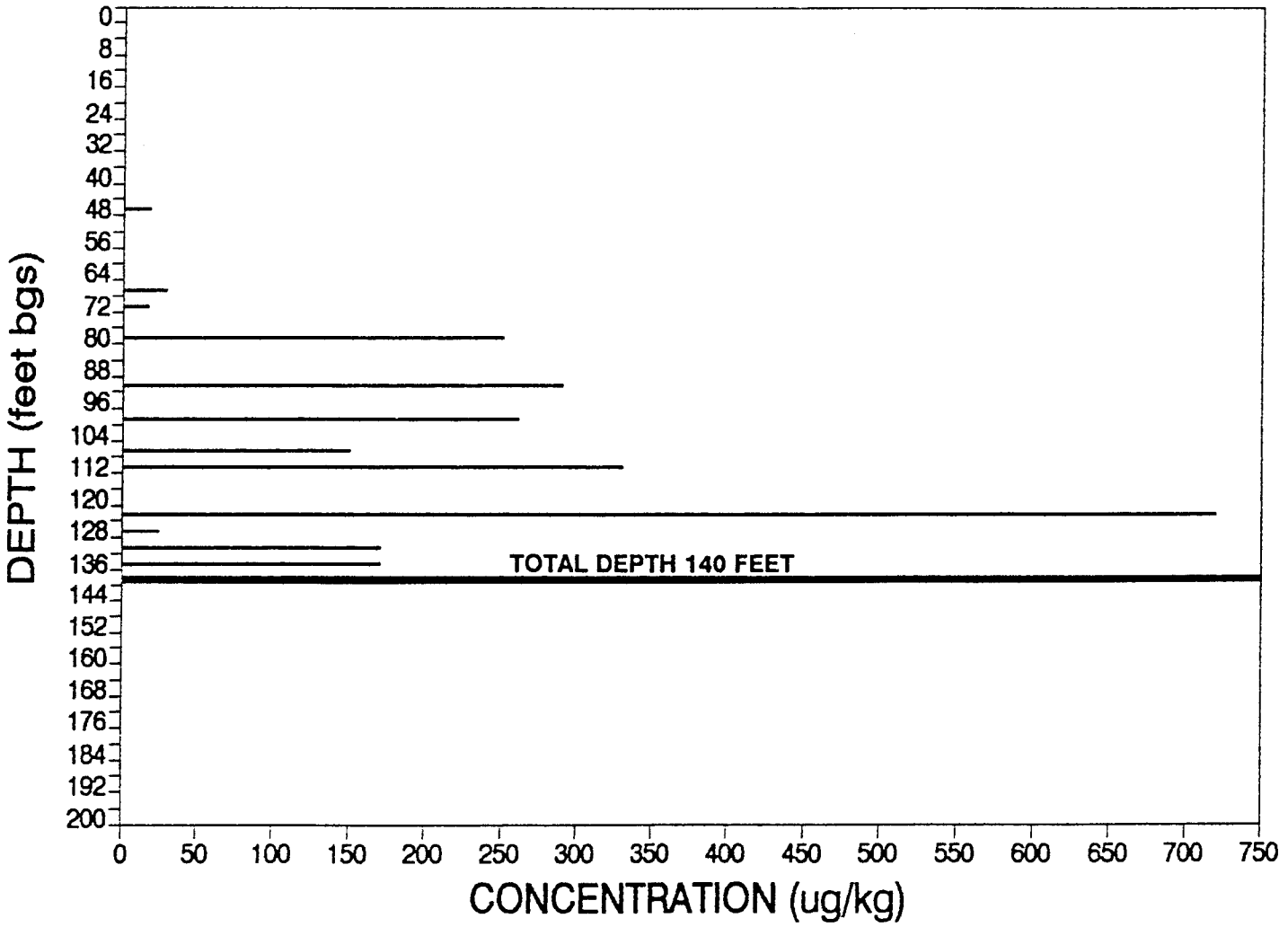
OIL & SOLVENT PROCESS COMPANY

OSCO - BORING 1
ACETONE

FIGURE
F-3

1990-211

11/15/91



MEREDITH/BOLI & ASSOCIATES, INC.

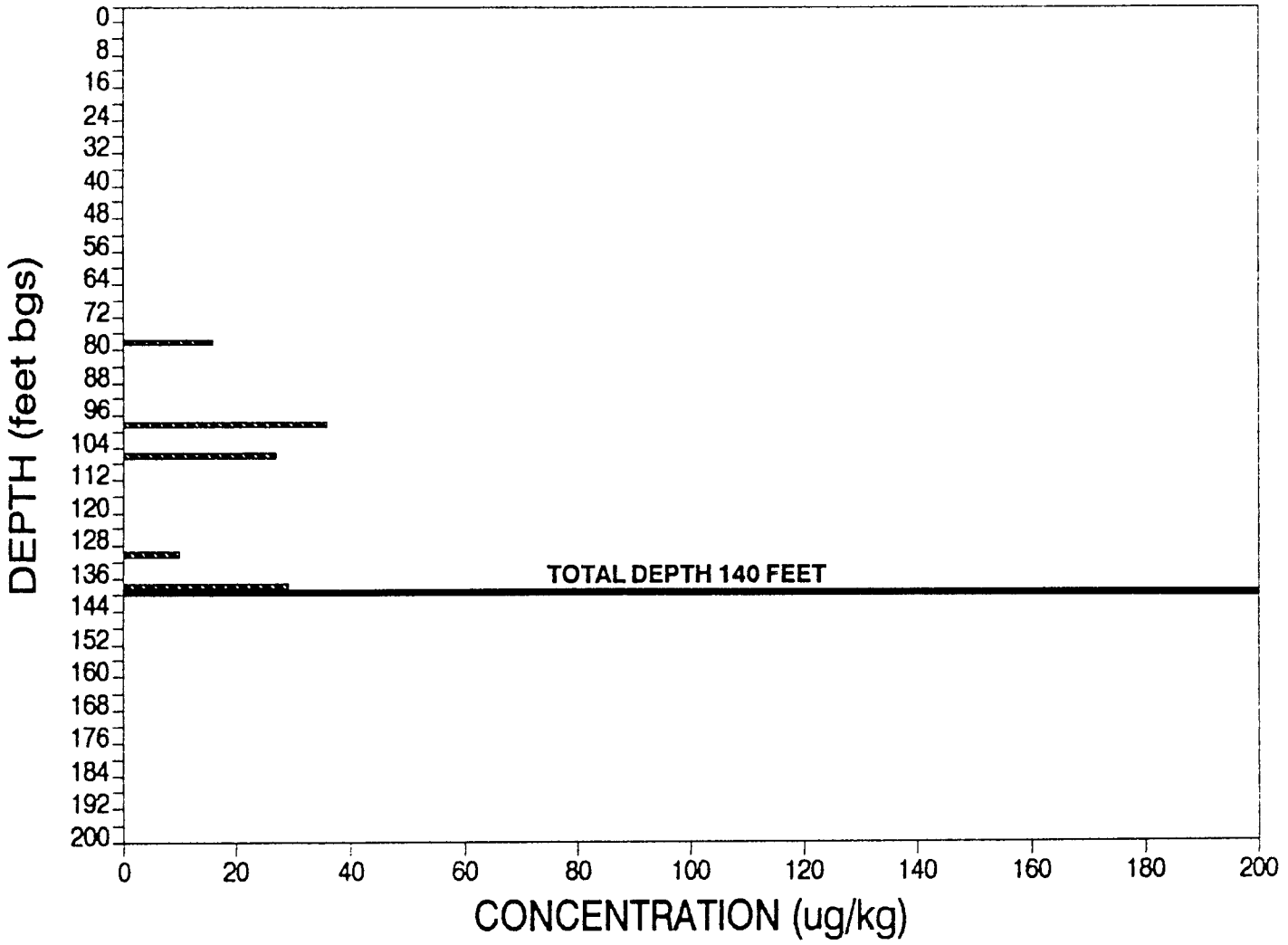
OIL & SOLVENT PROCESS COMPANY

OSCO - BORING 1
MEK

FIGURE
F-4

1990-211

11/15/91



MEREDITH/BOLI & ASSOCIATES, INC.

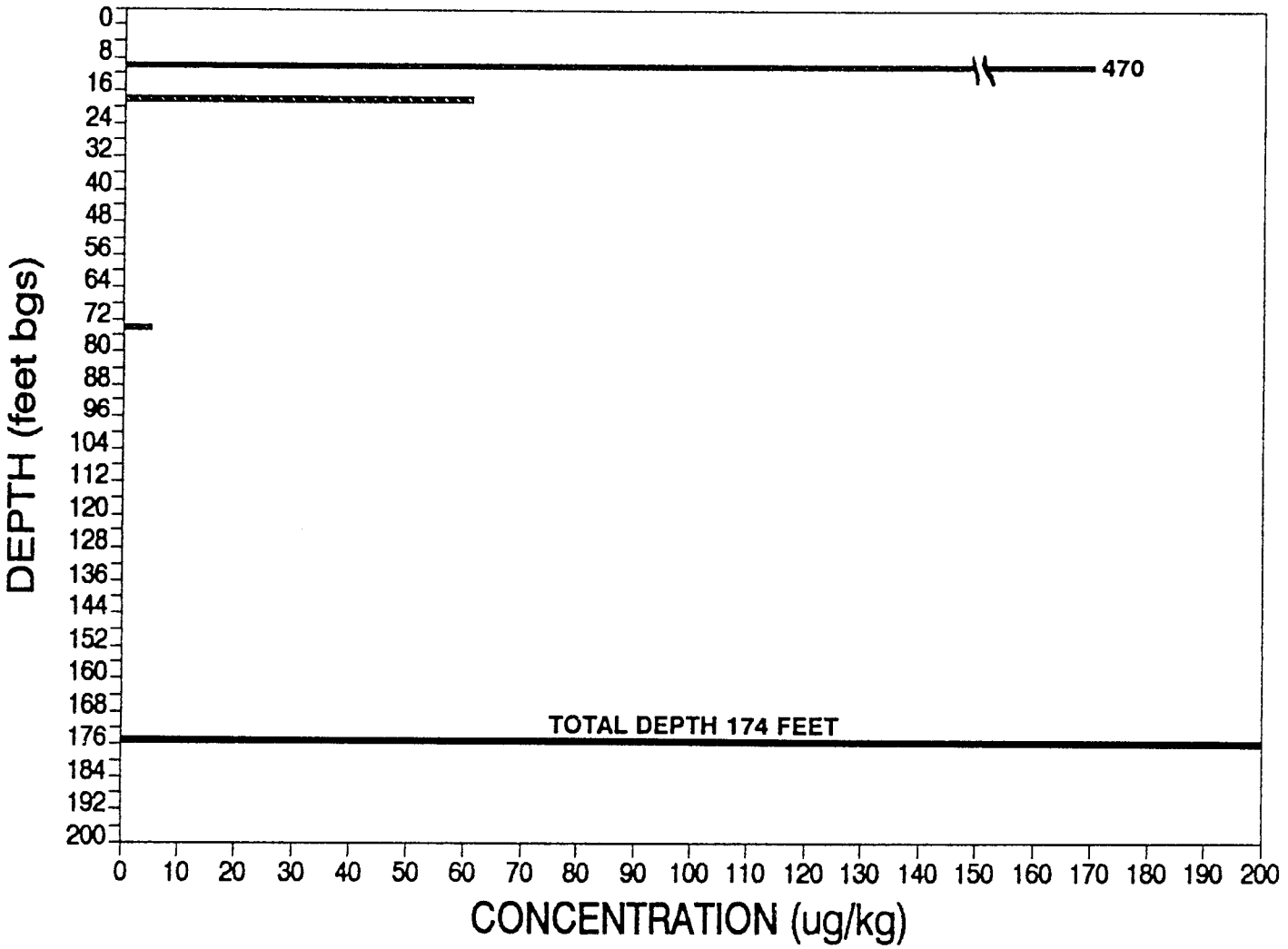
OIL & SOLVENT PROCESS COMPANY

OSCO - BORING 1
MIBK

FIGURE
F-5

1990-211

11/15/91



MEREDITH/BOLI & ASSOCIATES, INC.

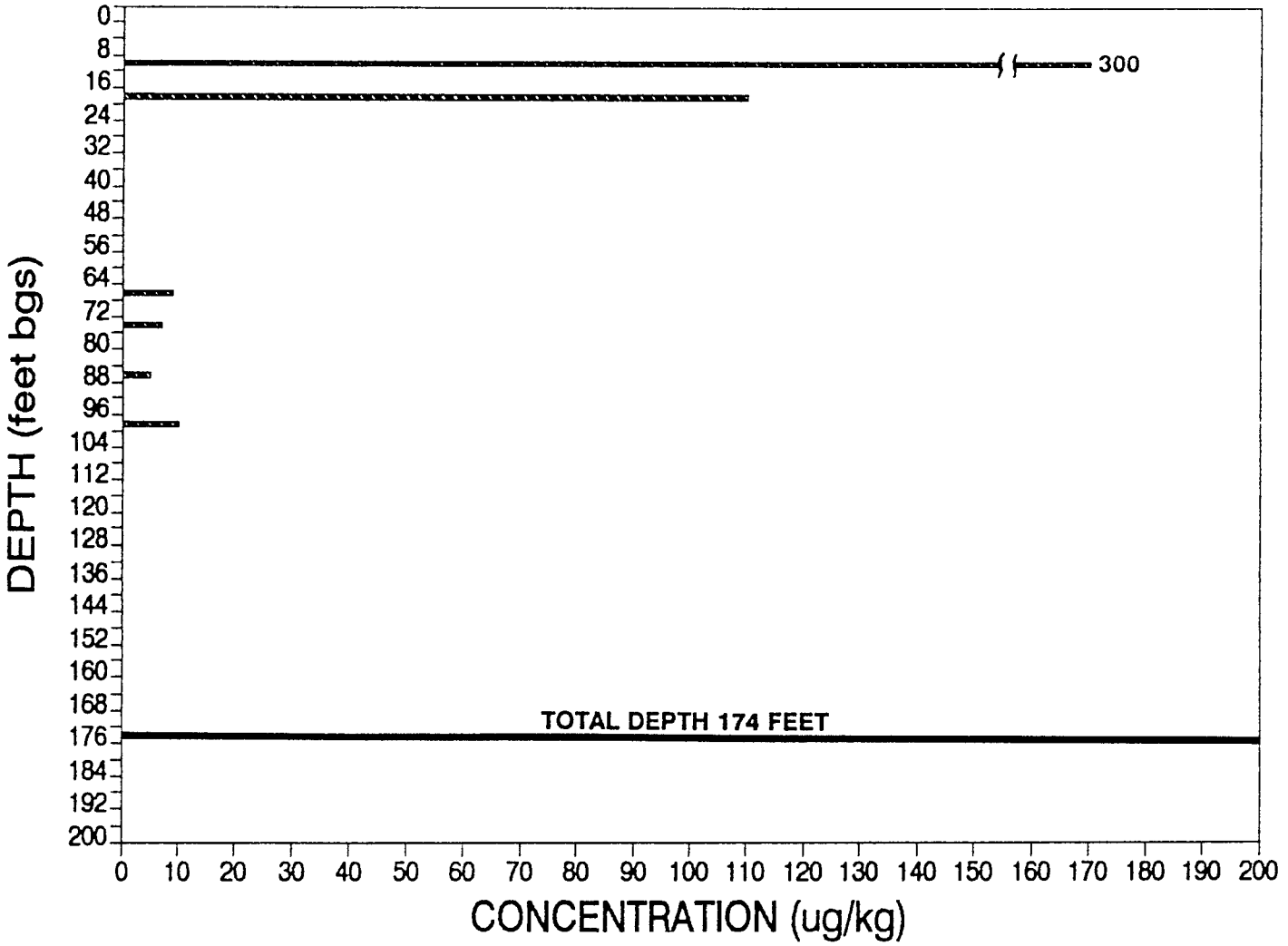
OIL & SOLVENT PROCESS COMPANY

OSCO - BORING 2R
PCE

FIGURE
F-6

1990-211

11/15/91



MEREDITH/BOLI & ASSOCIATES, INC.

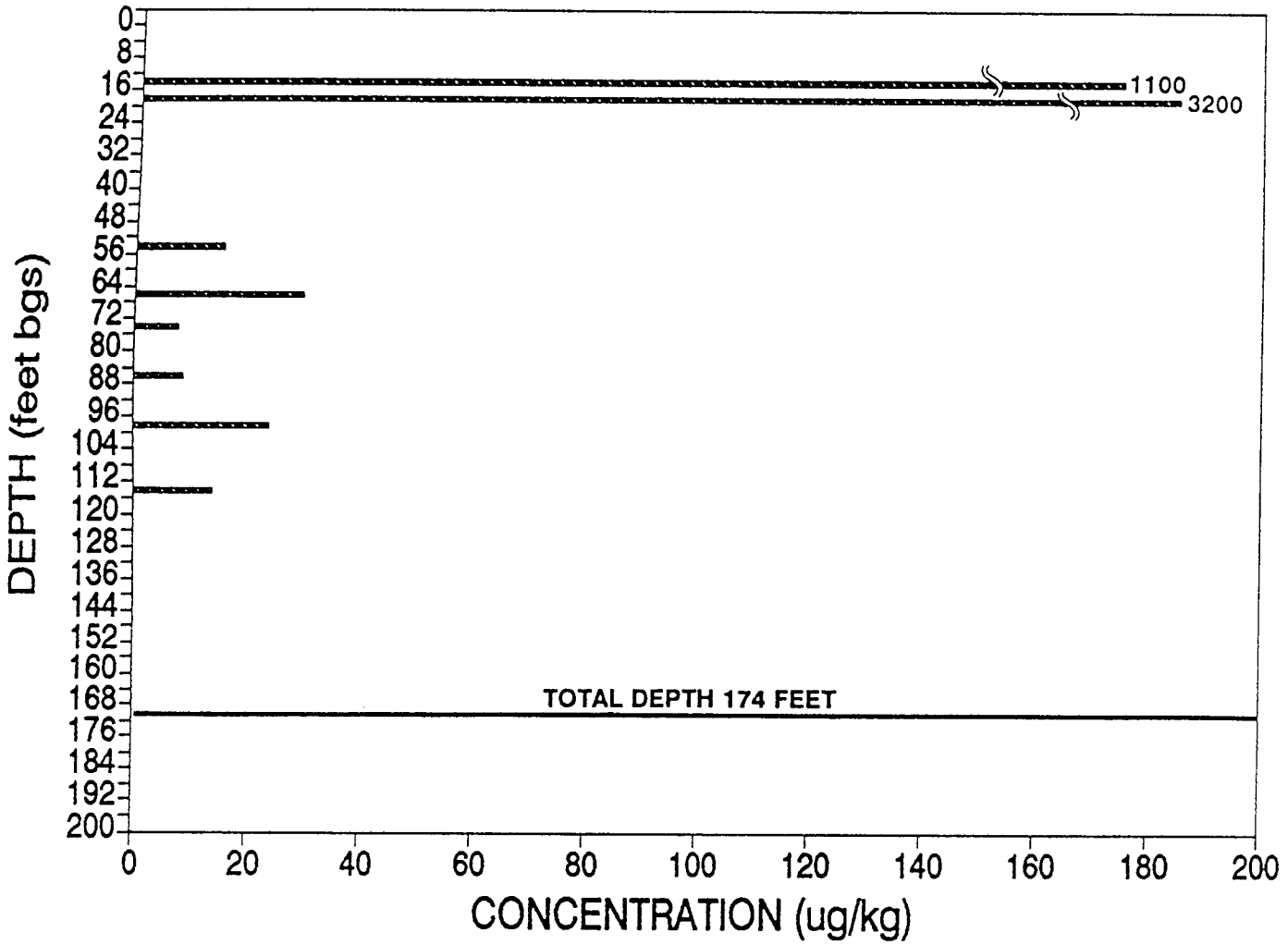
OIL & SOLVENT PROCESS COMPANY

OSCO - BORING 2R
TOLUENE

FIGURE
F-7

1990-211

11/15/91



MEREDITH/BOLI & ASSOCIATES, INC.

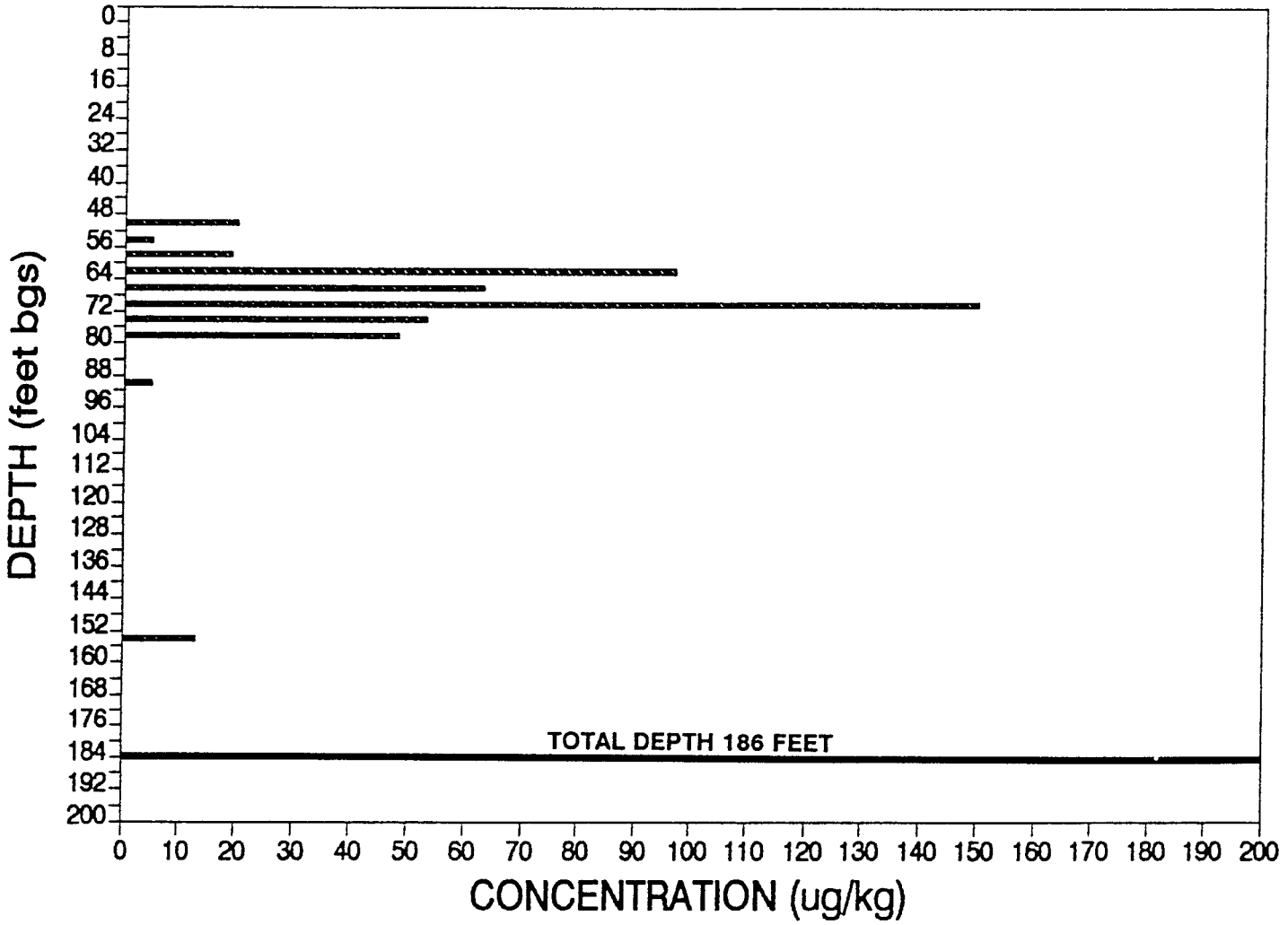
OIL & SOLVENT PROCESS COMPANY

OSCO - BORING 2R
XYLENES

FIGURE
F-8

1990-211

11/15/91



MEREDITH/BOLI & ASSOCIATES, INC.

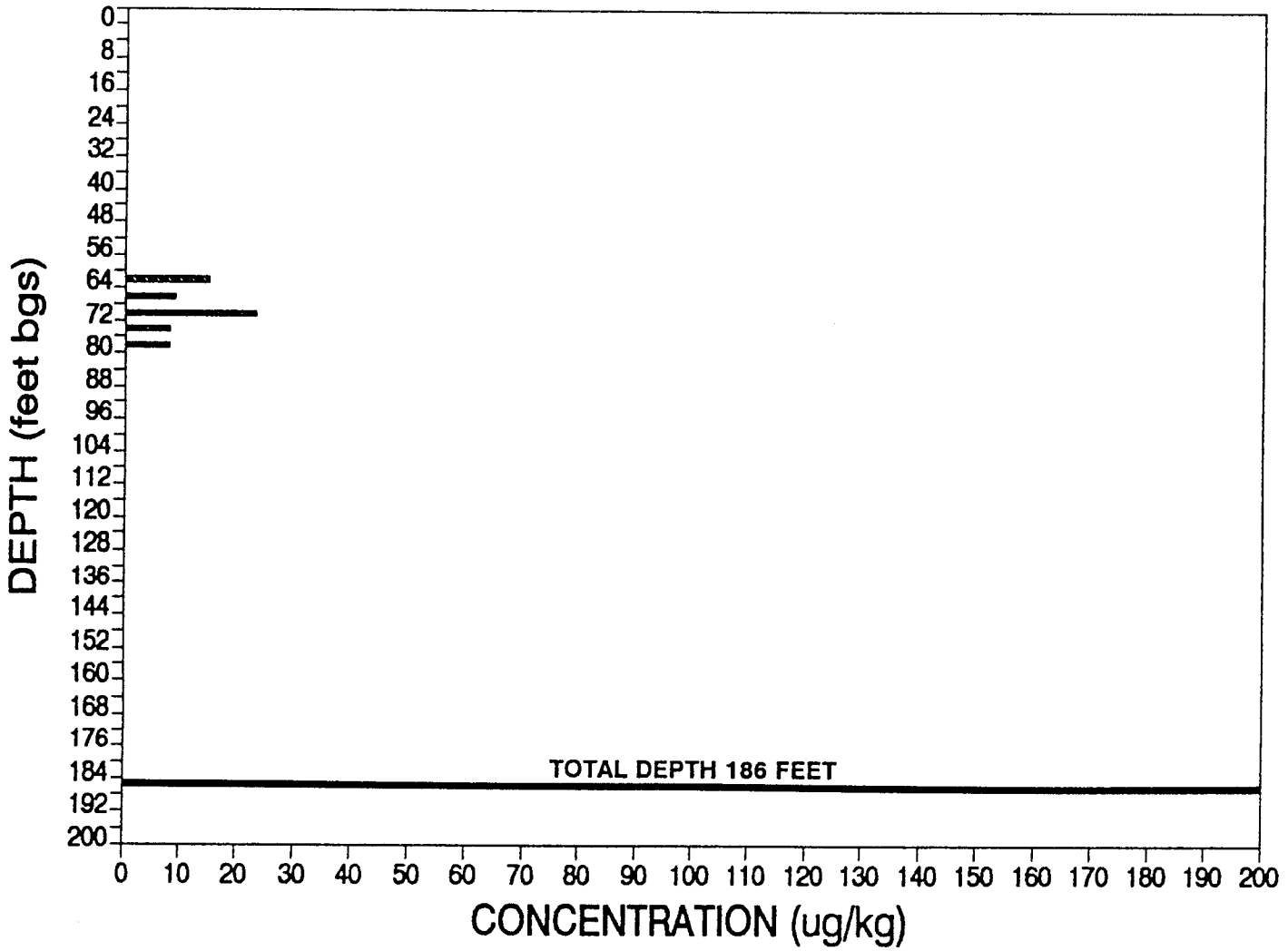
OIL & SOLVENT PROCESS COMPANY

OSCO - BORING 4
PCE

FIGURE
F-9

1990-211

11/15/91



MEREDITH/BOLI & ASSOCIATES, INC.

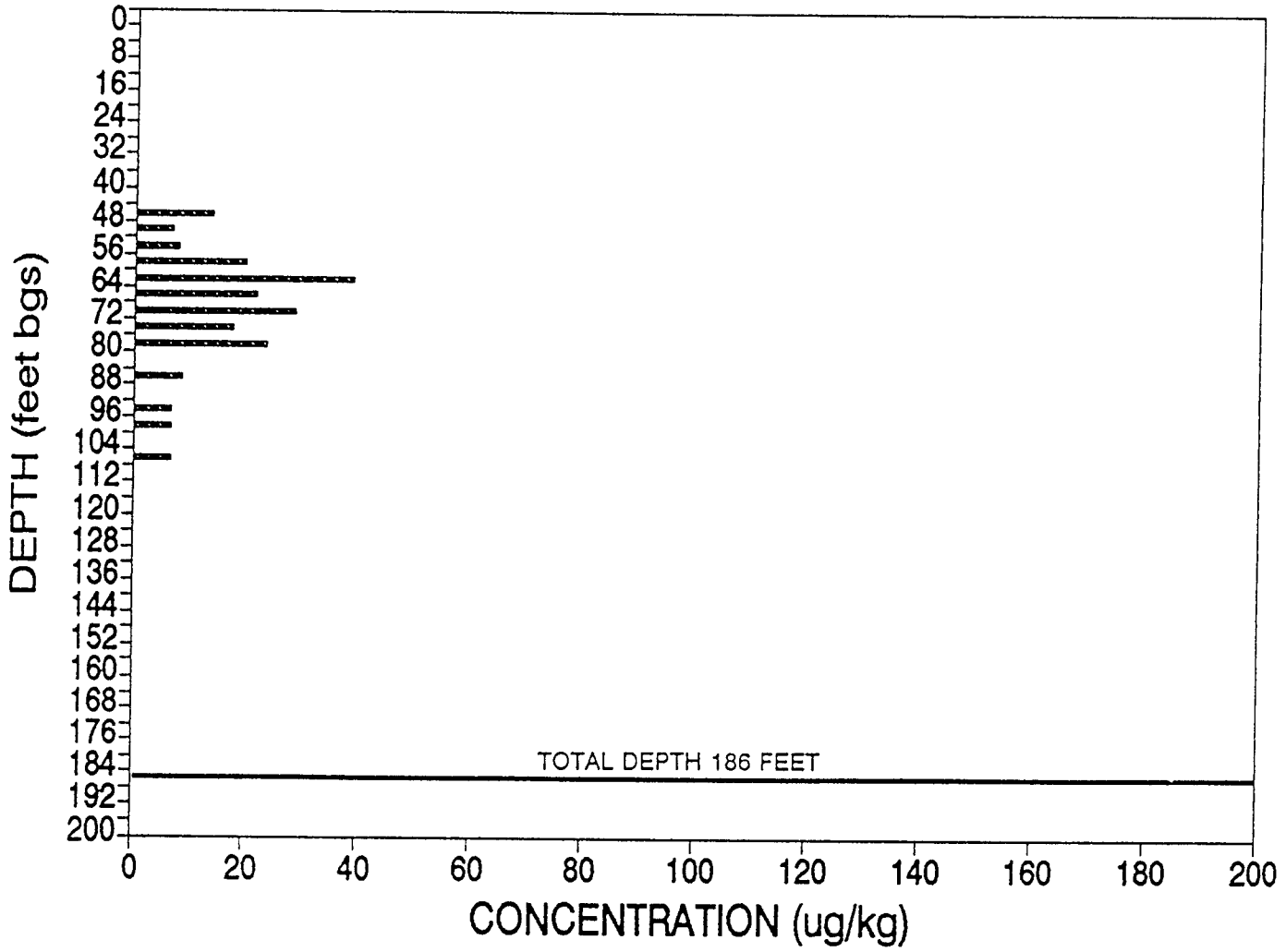
OIL & SOLVENT PROCESS COMPANY

OSCO - BORING 4
1,1,1-TCA

FIGURE
F-10

1990-211

11/15/91



MEREDITH/BOLI & ASSOCIATES, INC.

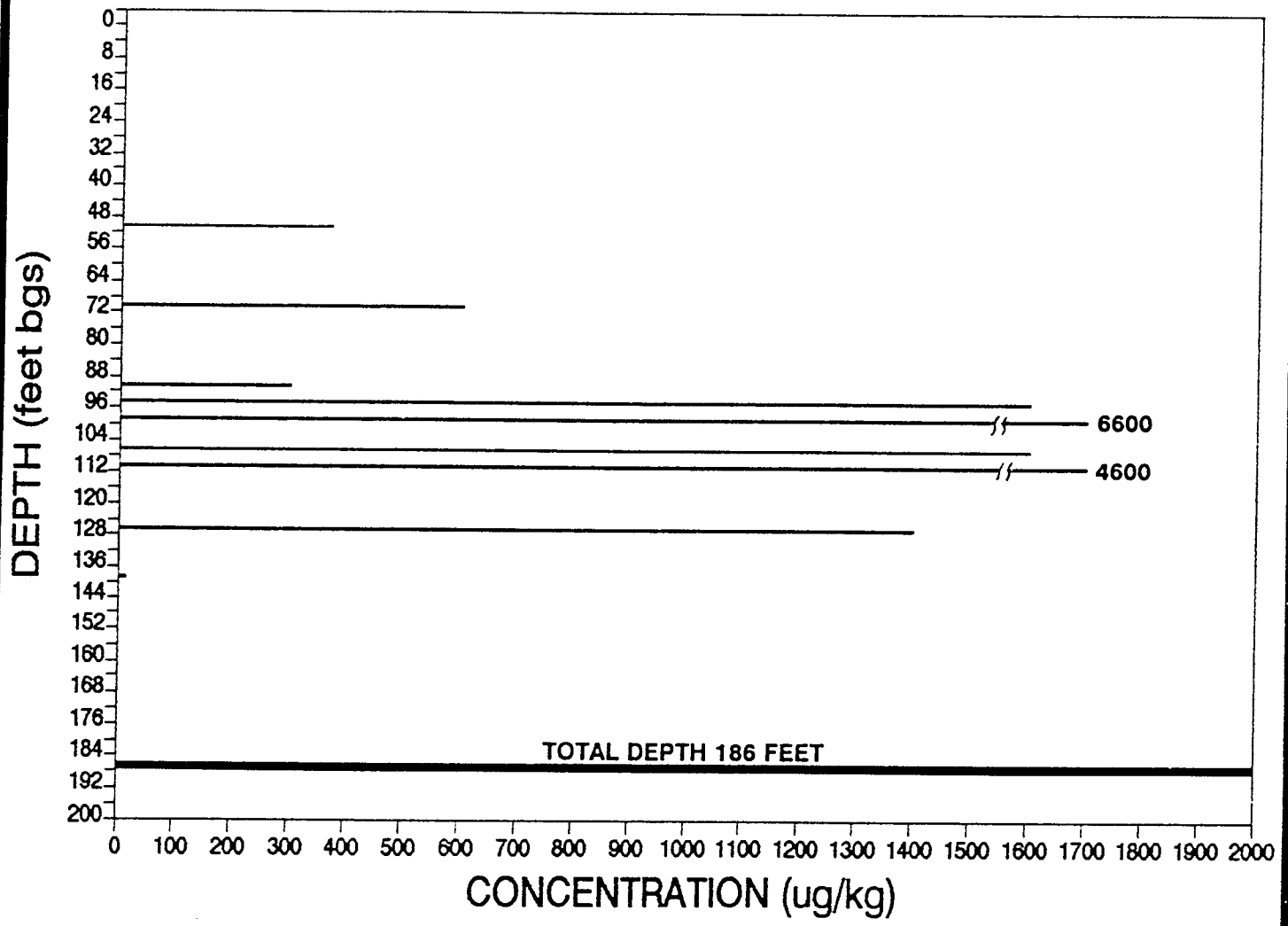
OIL & SOLVENT PROCESS COMPANY

OSCO - BORING 4
TOLUENE

FIGURE
F-11

1990-211

11/15/91



MEREDITH/BOLI & ASSOCIATES, INC.

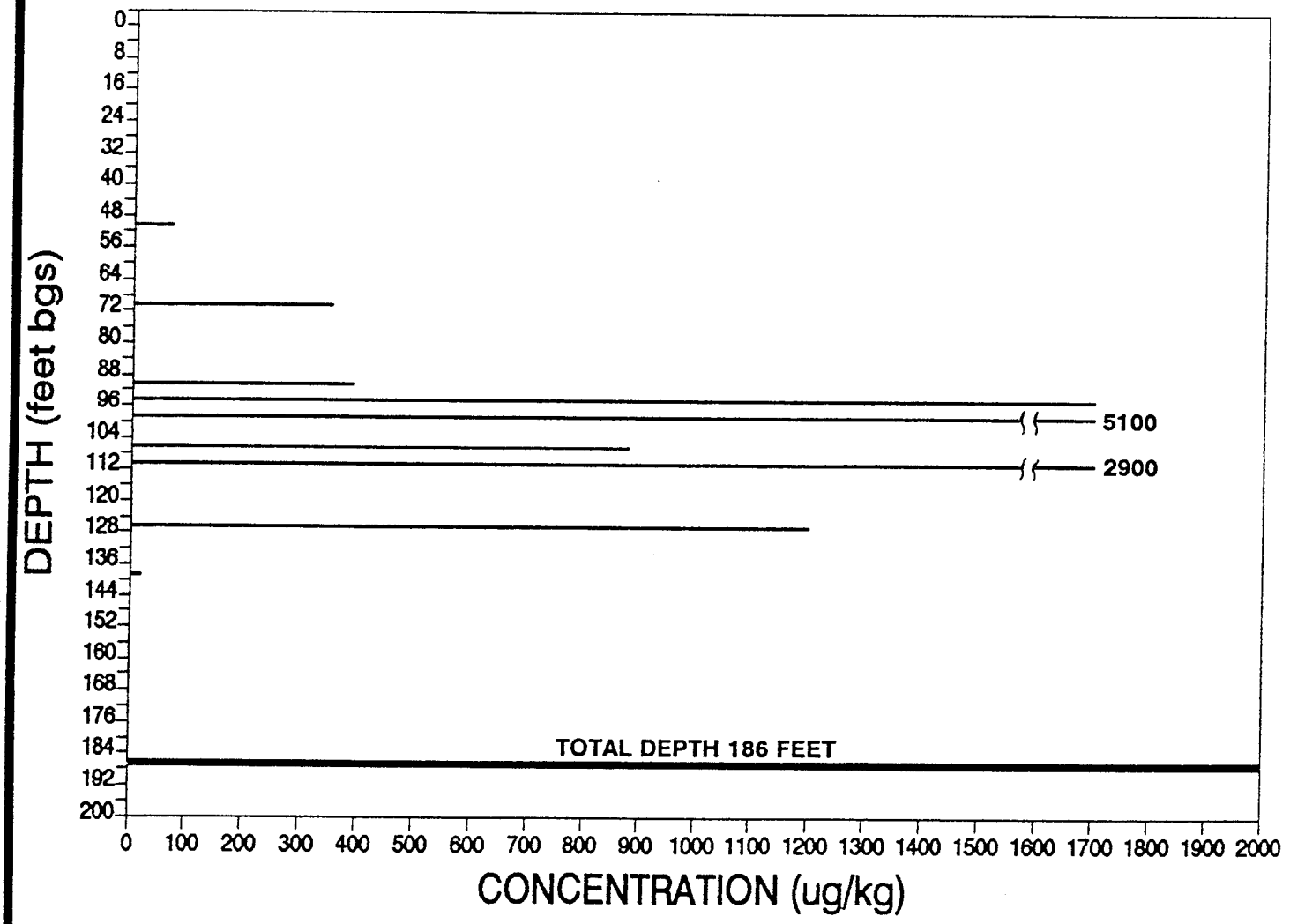
OIL & SOLVENT PROCESS COMPANY

OSCO - BORING 4
ACETONE

FIGURE
F-12

1990-211

11/15/91



MEREDITH/BOLI & ASSOCIATES, INC.

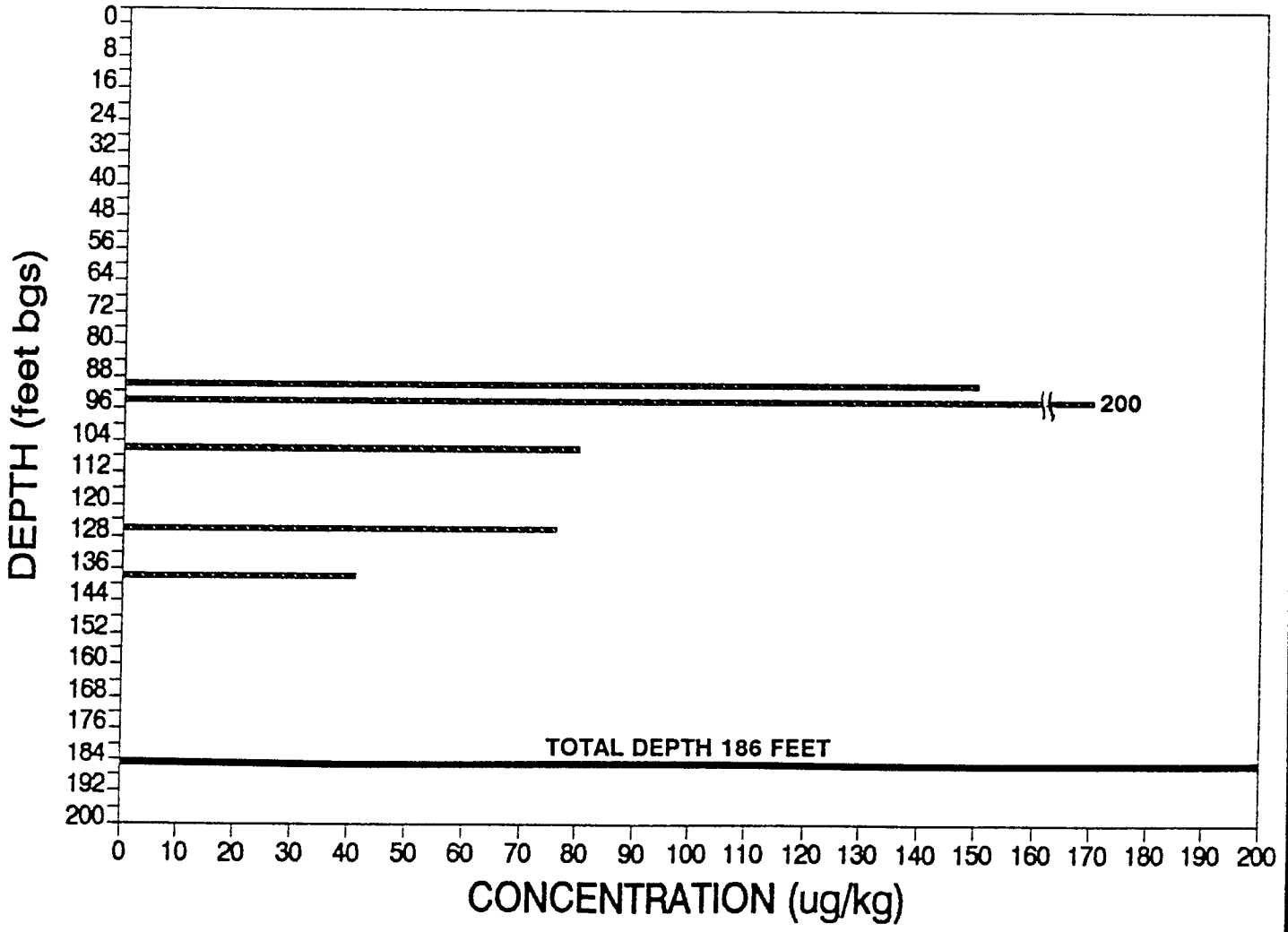
OIL & SOLVENT PROCESS COMPANY

OSCO - BORING 4
MEK

FIGURE
F-13

1990-211

11/15/91



MEREDITH/BOLI & ASSOCIATES, INC.

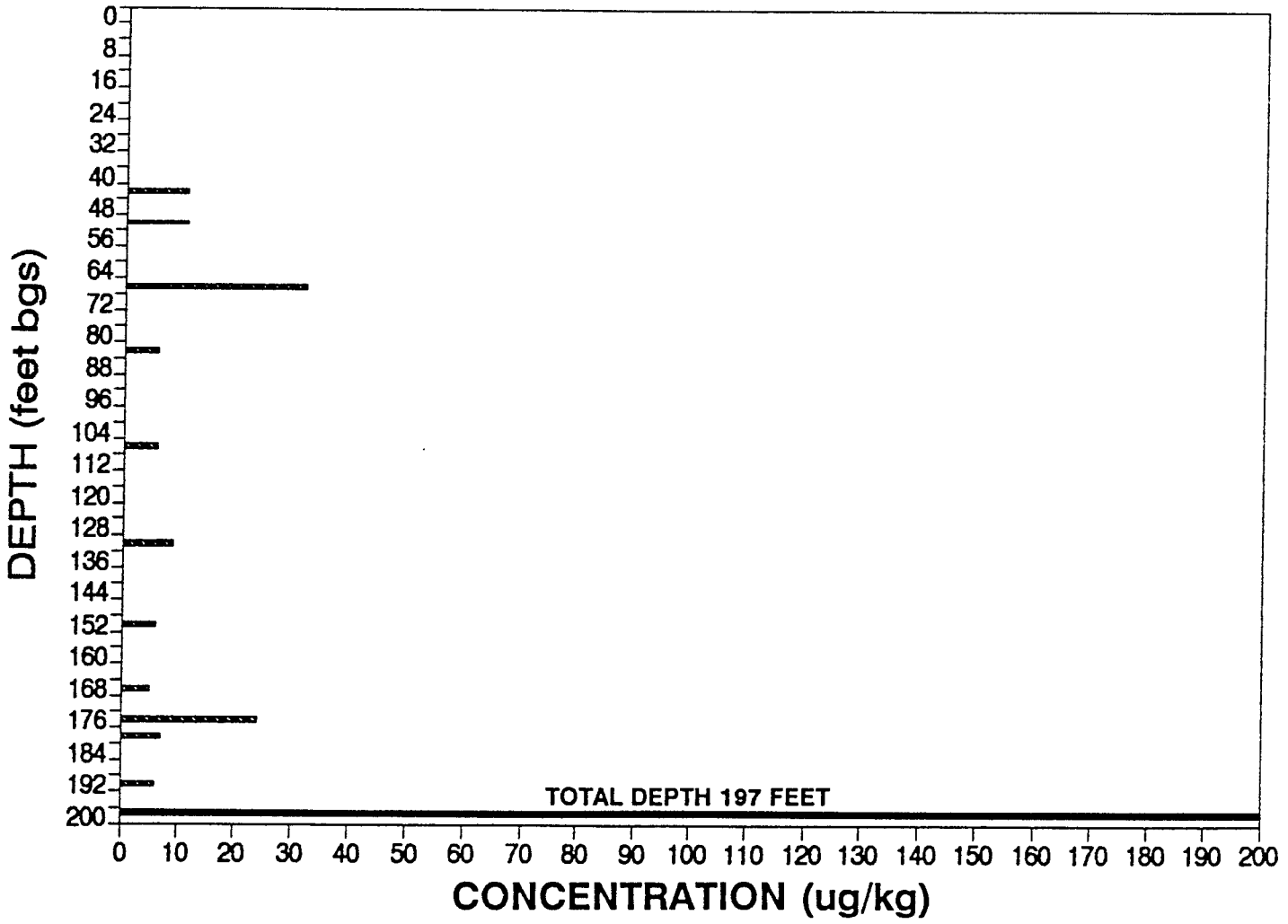
OIL & SOLVENT PROCESS COMPANY

OSCO - BORING 4
MIBK

FIGURE
F-14

1990-211

11/15/91



MEREDITH/BOLI & ASSOCIATES, INC.

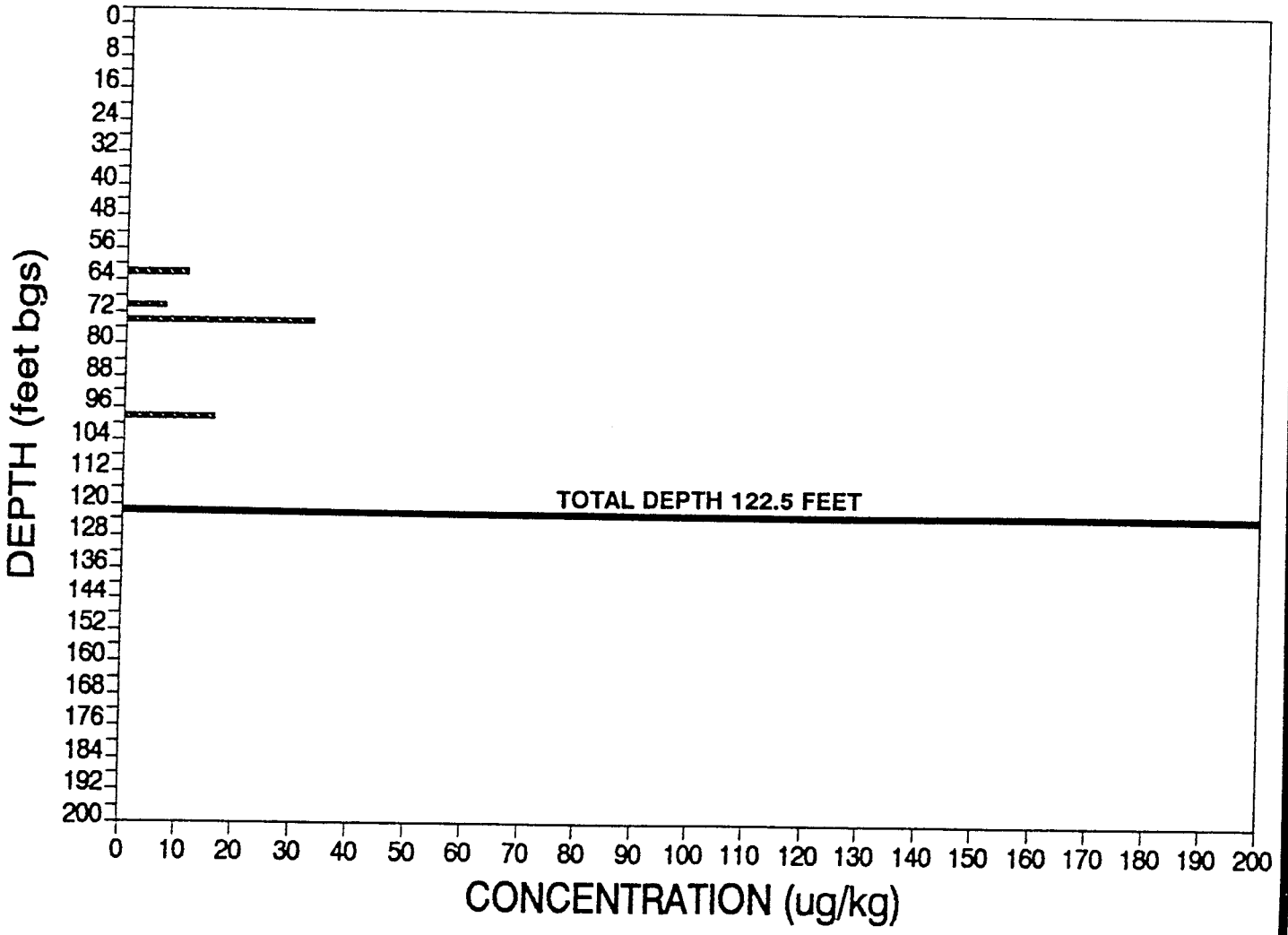
OIL & SOLVENT PROCESS COMPANY

OSCO - BORING 6
PCE

FIGURE
F-15

1990-211

11/15/91



MEREDITH/BOLI & ASSOCIATES, INC.

OIL & SOLVENT PROCESS COMPANY

OSCO - BORING 8R
PCE

FIGURE
F-16

1990-211

11/15/91

APPENDIX G

INTERPHASE SOIL VAPOR STUDY

INTERPHASE

ENVIRONMENTAL CHEMISTRY SPECIALISTS

SOIL VAPOR RESEARCH STUDY
CHEMICAL WASTE MANAGEMENT, INC.
(OSCO FACILITY)
AZUSA, CALIFORNIA
PROJECT #9122

11558 SORRENTO VALLEY ROAD

SAN DIEGO · CA 92121

619·481·2200 FAX 619·481·1855

TABLE OF CONTENTS

	Page
Background	2
Scope of Services	3
Field Procedures	3
Sampling/Analytical Results	5
Site-Specific Parameters	8
Permeability and Radius of Influence	9
Equilibrium Partitioning	13
Vapor Phase Transport	17
Summary	20
Uncertainty & Limitations	21
References	21

Tables & Figures:

Table 1. Chemical Data for Phase 1

Table 2. Chemical Data for Phase 2 (August 1991 Test)

Table 3. Chemical Data for Phase 2 (September 1991 Test)

Table 4. Flow/Vacuum Data from Phase 2 Tests (August 1991 Test)

Table 5. Flow/Vacuum Data from Phase 2 Tests (September 1991 Test)

Table 6. Physical Properties of Soil

Table 7. Physical Properties of Indicator Compounds

Table 8. Projected VOC Concentrations in Soil Compartments

Table of Contents continued...

Table 9. Projected and Observed VOC Concentrations, B1

Table 10. Projected and Obersved VOC Concentrations, B4

Table 11. Projected and Observed Phase 2 VOC Concentrations, B1

Table 12. Predicted VOC Concentrations Associated with Regional Groundwater Contamination

Figure 1. Vapor Well Locations/Site Plan

Figure 2. Variation in Vacuum Pressure with Time during September 24 Pump Test

Figure 3. Flow/Vacuum Curve for Step Test

Figure 4. Predicted Flow Rates for Soil Permeabilities

Figure 5. VOC Concentrations vs. Time for the September 24 Pump Test

Figure 6. Soil vs. Vapor Concentrations for TCE

Figure 7. Soil vs. Vapor Concentrations for MEK

Figure 8. Soil vs. Vapor Concentrations for Toluene

Appendices:

Appendix A. Flow/Vacuum Data from Phase 1 Tests

Appendix B. Vapor Analyses Report by Performance Analytical Inc.

Appendix C. Input/Output for SOIL Model

INTERPHASE

ENVIRONMENTAL CHEMISTRY SPECIALISTS

November 14, 1991

MEREDITH/BOLI & ASSOCIATES, INC.
6701 Center Drive West, Suite 900
Los Angeles, California 90045-1535
Attention: Dr. Ron Cavagrotti

SOIL VAPOR RESEARCH STUDY
CHEMICAL WASTE MANAGEMENT, INC. (OSCO FACILITY)
AZUSA, CALIFORNIA
PROJECT #9122

Dr. Cavagrotti:

InterPhase is pleased to submit this report summarizing the results of a vapor research study which was conducted at the OSCO solvent recycling facility in Azusa, California. The study was designed to assess air flow characteristics of the vadose zone and the soil/vapor partitioning of selected volatile chemicals. This study was performed in accordance with our proposal dated August 9, 1991, which was authorized by you as a representative of Meredith/Boli & Associates, Inc. (M/B&A).

If you have any questions regarding the results, interpretations, or calculations contained in this report, we would be pleased to discuss them with you. We appreciate the opportunity to have worked with you on this project and look forward to working with you in the future.

Sincerely,
InterPhase

John Adriany, M.S.
Senior Chemist

Donn L. Marrin, Ph.D.
Principal Scientist

attachment:

11558 SORRENTO VALLEY ROAD
SAN DIEGO · CA 92121
619·481·2200 FAX 619·481·1855

SOIL VAPOR RESEARCH STUDY
CHEMICAL WASTE MANAGEMENT, INC. (OSCO FACILITY)
AZUSA, CALIFORNIA
PROJECT #9122

1.0 BACKGROUND

We understand that Meredith/Boli & Associates, Inc. (M/B&A) is interested in assessing the relationship between measurements of VOC concentrations from soil and vapor samples collected beneath the OSCO solvent processing facility and in understanding the spatial distribution of VOCs in the vadose zone. Solvent contamination in soil was measured at depths ranging from 1 to 191 feet below ground surface (bgs) in the coarse, vadose zone soils (M/B&A 1991). Regional groundwater in the vicinity of the OSCO facility is contaminated with aromatic and chlorinated solvents, which may be contributing to VOC levels in soil gas beneath the site. A shallow soil gas survey was conducted by Tracer Research Corporation at this site; however, the results could not be used to assess the vertical extent of VOCs in soil or to assess the contribution of volatile compounds from groundwater (Western Technologies 1990). Due to the difficulty in securing entirely representative samples by conventional means, the existing chemical data for on-site soils are not adequate to assess whether VOCs underlying the OSCO facility have reached the groundwater or whether the contaminant mass has been contained within the vadose zone. To augment its soil sampling, M/B&A installed nine vadose wells at locations of suspected surface contamination for purposes of sampling soil vapor and evaluating air flow characteristics.

1.1 Approach

The project was completed in two phases. During the first phase, soil vapor was collected under relatively low flow conditions from all screened depth intervals within the existing wells. Samples were analyzed on a real-time basis for fixed/biogenic gases and the major VOCs that have been identified in on-site soils and regional groundwater. Primary objectives of the first phase included (i) evaluating the soil vapor chemistry at various depths and locations in the vadose zone, (ii) assessing the vertical connection between different depths in the same vapor well, and (iii) developing a physically-based, mathematical relationship between VOC concentrations in soil vapor and soil.

The second phase of field research consisted of pumping soil vapor at relatively high flow rates from a single well in order to assess subsurface flow parameters (e.g., permeability, radius of influence, average soil pore velocity). VOCs and fixed/biogenic gases were analyzed in blower exhaust to document any changes associated with wellhead flow dynamics or radius of influence. Vacuum pressures were monitored at various depth intervals within the adjacent vapor wells in order to evaluate horizontal and vertical pressure gradients. Primary objectives of the second phase of work included (i) documenting the air flow characteristics of the vadose zone, (ii) evaluating advective and diffusive models which describe the migration of VOCs from soil and groundwater, and (iii) assessing the potential effects of air movement in and out of the vadose zone wells.

This study was designed to augment the more conventional subsurface investigations that have been conducted at the OSCO facility. The use of data collected during this study to predict VOC concentrations in various compartments or phases of the soil is influenced by the

representativeness of the field measurements as well as by the identification of the pertinent physical and chemical processes. Estimated VOC concentrations and migration pathways presented in this study are dependent, in part, on the accuracy of the analytical data that have been cited.

2.0 SCOPE OF SERVICES

The scope of services associated with Phases 1 and 2 of the study included the following:

*Mobilization of the InterPhase vehicle and vapor monitoring equipment;

*Setup of air sampling systems (i.e., positive displacement blower, vacuum pump, manometers, flow gauges, and appropriate controls and valves);

*Measurement of flow rates and vacuum pressures at various depth intervals within the extraction wells;

*Measurement of vacuum pressures at observation wells located adjacent to the extraction well;

*Analysis of blower exhaust and ambient air samples for total volatile hydrocarbons (TVH as hexane), various fixed/biogenic gases, and selected chlorinated, aromatic and ketone solvents;

*Application of mathematical relationships to describe the partitioning of VOCs between soil and soil gas (based on data from this investigation and on site-specific data provided by M/B&A) and to estimate the vapor migration of VOCs; and

*Preparation of a report which includes: (i) tables of analytical data, (ii) a description of sampling and analytical procedures, (iii) equations used to describe the relationship between VOC levels in soil and vapor phases, (iv) QA/QC documentation, and (v) appropriate explanations, interpretations and recommendations for further study.

3.0 FIELD PROCEDURES

3.1 Equipment/Instrumentation

The field sampling equipment included the following:

*Ford E350 modified vans;
*Two gasoline powered generators (110 volts/AC);
*Hydraulic system designed for installing and removing soil gas probes (used for monitoring vacuum pressures);
*Hydraulically-operated drill capable of drilling through concrete/asphalt up to 8 inches in thickness;
*Low-volume air pump and evacuation chamber capable of collecting exact volumes of gas at ambient pressures;
*Rotron model DR4 blower with variable recirculation valve;
*Ingersoll-Rand constant volume vacuum pump (5 hp/3 phase);

*Various manometers and Magnahelic gauges for measuring vacuum pressures;
*Sampling ports for collecting vapor from the discharge lines;
*Safety equipment including first aid, fire, and chemical protection.

Analytical instruments used for quantification of the target compounds included:

*Varian 3400 and Hewlett-Packard 5890 gas chromatographs;
*Computerized data management and GC integration systems;
*ECD, FID, and TCD detectors;
*Commercially-prepared analytical standards for purgeable priority pollutants, low-molecular weight hydrocarbons, and fixed/biogenic gases;
*Glass syringes ranging from 10 uL to 10 mL in volume;
*Packed and capillary gas chromatographic columns;
*All fittings and tools required for normal GC operation.

3.2 Sampling Procedures

Soil gas was withdrawn from the on-site vapor wells by connecting the 1-inch diameter PVC risers to either a positive displacement blower (used for low volume sampling) or a constant volume vacuum pump (used for testing the flow characteristics of the vadose zone). The connection was achieved through the use of reducing bushings and valves. Flows from the well were measured via an in-line pressure drop probe, and wellhead vacuum pressures were measured with either a Magnahelic gauge or an incline manometer.

Vapor exhaust samples were collected from a sampling port on the exhaust site of the blower or vacuum pump. Additional grab samples were collected from ambient air in the vicinity of the test unit. Vapor samples were withdrawn using a 10 cc glass syringe, which was immediately transferred to the analytical van. All sampling syringes were decontaminated and analyzed prior to reuse.

3.3 Analytical Procedures

The 10 cc soil gas samples were subsampled according to analytical requirements, and duplicates were injected into the gas chromatograph for documentation of reproducibility. The number of required injections was dependent on the reproducibility of results as well as the success in separating individual compounds during a GC run.

Analytes were identified by their respective elution times through the various columns and detectors. Retention or elution times were compared with external gas-phase standards and analyte concentrations estimated by comparing the detector response for a known concentration of the external standard with the detector response for the sample. Calibration curves were computer-generated by plotting the detector response for external standards which vary over a 100-fold range in concentration. Detector response was checked periodically to ensure that calibration curves were accurate.

Vapor sampled from the soil-gas probes was analyzed for total volatile hydrocarbons (TVH as hexane), toluene, C_8 aromatics (xylene isomers plus ethylbenzene), 2-propanone (acetone), 2-butanone (methylethylketone), tetrachloroethene (PCE), trichloroethene (TCE), 1,1,1-trichloroethane (TCA), carbon dioxide, oxygen, and methane. Detection limits for the analytes were less than 0.1 ppmv for the aromatic hydrocarbons, less than 1 ppmv for TVH and the ketones, less than 0.1 ppbv for the chlorinated solvents, and 0.1% for the fixed and biogenic gases.

4.0 SAMPLING/ANALYTICAL RESULTS

4.1 Phase 1

Soil gas samples were collected at various depths from the nine vapor wells which are shown on Figure 1. Seven of the nine wells were screened over more than one depth interval; therefore, a total of 17 discrete sampling points were surveyed during the first phase of this study. The results of analyzing soil vapor from these 17 sampling points are listed on Table 1. Multiple samples were analyzed at vapor well B4 in order to evaluate changes in VOC concentrations over time.

4.1.1 *VOC Concentrations*

Chemical analyses of the soil vapor indicate that chlorinated and ketone solvents are present at considerably higher concentrations than are aromatic hydrocarbons. While neither of the aromatic solvents exceeded 140 ppmv in soil gas samples, PCE was encountered at a maximum concentration of 1100 ppmv and MEK was present at levels as high as 13,000 ppmv or 1.3% of the soil vapor by volume. For vapor samples collected from well B1, the highest concentration of aromatic and chlorinated solvents were present in the upper depth interval (66-71 feet bgs), while the highest concentration of the ketones were present in the lower interval (132-137 feet bgs). These data can be compared to the corresponding soil chemistry data from B1, which indicate that toluene and TCA were detected at their highest concentrations from 55 to 77 feet bgs, while the highest MEK and acetone levels were analyzed in soils collected from the 123-foot depth (M/B&A 1991).

Similar to the correlation observed at well B1, the highest concentrations of PCE in soil collected from B6 and B8R were encountered in approximately the same depth interval as the highest soil vapor levels. For example, PCE concentrations in soil samples from B6 were reported to be 32 and 24 ug/kg at the 67- and 175-foot depths, respectively. Soil vapor sampled from the 65-70 foot and 185-190 foot depth intervals at well B6 contained PCE concentrations of 300 and 290 ppmv, respectively. Furthermore, the highest PCE concentration in soil gas from B8R was present in the sample from the 67-72 foot depth interval, which corresponded to the highest soil concentration of 33 ug/kg at 75.5 feet bgs. Higher concentrations of all solvents were present in soil and vapor samples associated with the upper, compared to the lower, screened interval at vapor well B4. For instance, the highest ketone concentrations in soil from B4 were present in the depth range of 98 to 128 feet bgs, which is closer to the upper screened interval (70-75 feet bgs) than to the lower vapor sampling interval (170-175 feet bgs). While the screened intervals of the vapor wells and the depth of soil sample collection are not perfectly matched, it appears that the highest VOC concentrations in soil generally correspond to the highest levels in soil vapor. Variations among the concentrations of the VOCs in soil may be related to the mass of each solvent introduced to the subsurface, as well as to differences in compound solubility, retardation, and degradation.

4.1.2 *Fixed Gas Concentrations*

Levels of carbon dioxide and oxygen analyzed in soil gas from this site suggest that there was minimal mixing of soil gas with atmospheric air. As indicated by the analysis of an ambient air sample, CO_2 and O_2 levels in atmospheric air are generally $<0.1\%$ and 20%, respectively. Only the shallow vapor sample from well B2R and the initial two samples from the deep interval at B4 indicate that atmospheric air may have been introduced to the system. Background oxygen and carbon dioxide levels in soil gas are usually 12-18% and $<4\%$,

respectively. Higher CO_2/O_2 ratios (i.e., approaching or exceeding one) are normally observed in the vicinity of contaminated soil or groundwater, where an increase in the biodegradation of non-refractory organic substrates has occurred. While CO_2/O_2 ratios may be elevated due to the degradation of natural organic material, root respiration or dissolution of carbonate rocks, site conditions and soil types present at the OSCO facility minimize the probability that these mechanisms are important. Fixed/biogenic gas results from this site suggest that soil conditions are relatively aerobic, perhaps due to (i) the coarse-grained texture of the soil, (ii) the refractory nature of chlorinated solvents, or (iii) the introduction of atmospheric air via the annular space of the wells.

4.1.3 *Temporal Variations in VOC Concentrations*

The Phase 1 field study also investigated the change in chemical composition of the soil vapor as a function of time. The results indicate that VOC concentrations varied by several orders-of-magnitude at well B4, where samples were collected over a time period of 58 minutes or more. Generally, VOC levels in the blower exhaust increased markedly before stabilizing at about 10 to 15 minutes into the pumping, probably corresponding to the removal of atmospheric air from the system and the initial withdrawal of gas from the native formation (as opposed to the sand backfill around the casing). After 10 to 15 minutes of purging (i.e., the sampling time designated for other wells and screened intervals), VOC concentrations in soil gas exhibited variations of less than 3-fold (e.g., both increases and decreases), which are normally observed during a vapor extraction pilot study.

In addition to temporal variations in VOC concentrations, the Phase 1 data were designed to investigate the effects of soil vapor extraction on other screened intervals (i.e., either 1 or 2) within the same well. The vacuum/flow observations recorded at the wells, along with the times corresponding to vapor sample collection, are presented in Appendix A. The data suggest that the Rotron blower was not able to induce a high enough vacuum at any of the extraction wells to create a discernible vacuum drop in the adjacent screened intervals. While these data do not preclude a vertical connection among horizontal soil strata underlying this site, they do indicate that no connection could be detected (e.g., either through the native soils or the annular space of the well) under the vacuum pressures and sampling periods employed during Phase 1. These results suggest that VOC concentrations analyzed at each of the discrete depth intervals are representative of conditions in the adjacent soil and annular space, rather than substantial vertical transport of VOCs over the length of the wells.

4.2 Phase 2

The field tasks associated with Phase 2 were completed during two different time periods. An initial attempt was made to collect flow/vacuum data on August 26, 1991; however, the positive displacement blower could not induce formation vacuum pressures adequate to measure resulting pressure differences at the surrounding observation points. The inadequacy of the blower was related to large frictional losses in the 1-inch diameter PVC tubing, through which soil vapor was extracted. On September 24, 1991, a constant volume vacuum pump was used to generate wellhead vacuum pressures that were high enough to induce pressure changes in the observation wells. On the basis of distances between the wells, and the suite of compounds identified in Phase 1 efforts, B1 was selected as the extraction well. Induced changes in subsurface pressure were monitored at the extraction well as well as the various screened intervals in the adjacent vadose zone wells; B4, B2 and B8.

4.2.1 *VOC and Fixed Gas Concentrations*

Chemical data collected from extraction well B1 during the August 26 and September 24 portions of the Phase 2 study are presented on Tables 2 and 3, respectively. The concentration of some analytes were higher during the September sampling, indicating that the higher pumping rates and larger radii of influence achieved during the second test probably affected the analytical results. During the August 26 testing, split samples of the soil vapor were collected and submitted by M/B&A to Performance Analytical Inc. (PAI) for chemical analyses. Appendix B indicates that PAI detected TCA, TCE, PCE, toluene and C_8 aromatics (total xylenes plus ethylbenzene) at concentrations of 610, 150, 2800, 200, and 265 ppmv, respectively. According to the sampling times shown on Table 2, the tedlar bag was filled at approximately the time that sample 1S-3 was withdrawn from the blower exhaust. InterPhase reported concentrations of 490, 220, 3300, 10 and 120 ppmv for TCA, TCE, PCE, toluene and C_8 aromatics, respectively, in the 1S-3 vapor sample.

Agreement among concentrations of the chlorinated solvents in the split samples was relatively good, with variations among the reported concentrations of 15% to 32%. A 20-fold difference in the toluene concentrations reported by InterPhase and PAI is probably related to the differing analytical procedures and to chromatographic interference experienced by InterPhase. High concentrations of chlorinated solvents in soil gas at this location were detected by the flame ionization detector, which is used by InterPhase to detect the aromatic solvents. The presence of these chlorinated solvents on the FID chromatogram (usually detected only by the ECD) complicated the qualification of toluene as a result of their similar elution times. This interference may have resulted in our underestimating the concentration of toluene during the Phase 2 sampling at well B1. PAI employed a cryogenic trapping procedure along with analysis according to GC/MS and, therefore, was not subject to the same constraints.

The problem associated with the quantification of toluene during the August 26 sampling was not experienced during Phase 1 because PCE concentrations were generally lower. Similarly, this difficulty was not experienced during the September 24 sampling because a different stationary phase and column temperature were used. In addition to the analytes reported by InterPhase, PAI detected Freon-113 (trichlorotrifluoroethane), 1,1-dichloroethane, styrene and two dichloroethene isomers at concentrations ranging from trace to 370 ppmv. A review of the InterPhase chromatograms suggests that these additional halocarbons were present in vapor samples, but not reported because they were not indicator compounds. Styrene, which was reported by PAI at a trace concentration, was not identified on InterPhase chromatograms.

4.2.2 *Flow/Vacuum Data*

Flow/vacuum data recorded from pump tests conducted in August and September are presented on Tables 4 and 5, respectively. As stated previously, the August data indicate that no discernible vacuum could be read at the observation points as a consequence of extracting soil vapor under wellhead vacuum pressures as high as 41 inches of water. By contrast, vacuum data collected from observation points during the September pump test suggest that wellhead vacuum pressures in excess of 100 inches of water were sufficient to induce a measurable pressure wave. Observation wells located closest to B1 (the extraction well) responded with vacuum pressures as high as 0.21 inches of water. Changes in vacuum pressure with time during the September test are shown on Figure 2. The remarkably straight line indicates that steady-state conditions were approached at a formation vacuum pressure of 17 inches of water (108 inches of water at the wellhead) and a flow rate of 37 scfm.

After permitting steady-state conditions to be approached, a step test was conducted in order to generate the flow/vacuum curve shown in Figure 3. Fitting the points with a power curve

indicates that air flows in excess of 90 scfm could be achieved in these soils with formational vacuum pressures of less than 50 inches of water. These results support the hypothesis that soils underlying the site have a relatively high horizontal air permeability. Figure 4 presents a characteristic range of horizontal air permeabilities for a number of soil types (Johnson et al. 1990). The vertical air permeability of soils could not be estimated from the flow/vacuum data due to (i) the relatively low formational vacuums that could be established, (ii) the distance between extraction and observation wells, and (iii) the background fluctuations in vacuum pressure caused by temperature and barometric pressure changes. During the pump test, ambient changes in vacuum pressure were monitored in the observation wells; however, only those wells screened within the same strata as the extraction well exhibited pressure changes which were distinguishable from ambient.

4.2.3 *Temporal Variations in Soil Gas Chemistry*

VOC concentrations analyzed in blower exhaust during the Phase 2 tests were relatively stable shortly after start-up, suggesting that steady-state flow conditions were approached. The relationship between selected VOC concentrations and duration of the soil vapor pump test is shown graphically on Figure 5. Slight variations in VOC concentrations reported by InterPhase during the course of the pump test are probably related to temporal changes in equilibrium conditions, air flow characteristics, and interception of contamination located at greater distances from the extraction well.

The analytical results from the September test indicate no substantial changes in the soil/vapor partitioning of VOCs during the course of the high volume pump test. Furthermore, the CO_2/O_2 ratios in excess of one suggest that soil gas samples are not being diluted with atmospheric air. Slightly higher VOC levels and CO_2/O_2 ratios present in soil vapor during the September pump test (compared to those analyzed during Phase 1) may reflect a greater contribution of vapor from the formation relative to that from the annular space or backfill. As the formation vacuum pressure is increased, the radius of influence increases and, consequently, a greater proportion of the vapor is extracted from the formation compared to the annular space. The increased radius of influence may have also intercepted contaminated soil at greater distances from the well; however, the effect of intercepting this contaminated soil would be dampened because soil air velocities decrease exponentially with distance from the well.

5.0 SITE-SPECIFIC PARAMETERS

5.1 Soil Characteristics

The success of using soil vapor analyses to estimate the levels of VOCs in adjacent vadose zone materials is dependent on a number of site characteristics. In particular, the physical properties of the soil are important because they influence the partitioning of VOCs between mineral, aqueous or organic phases and the vapor phase. This equilibrium or kinetically-controlled partitioning determines, in large part, the feasibility of using soil vapor concentrations to estimate VOC levels in the surrounding soil. The most critical soil properties include water content, organic carbon content (natural and contamination), porosity, bulk density, and permeability (vertical and horizontal).

Although soil samples obtained by M/B&A from the air percussion drill rig were submitted to the Earth Technology Corporation for analysis of physical properties, all data except total

organic carbon (TOC) were considered by M/B&A to be unreliable and, consequently, were not used in the modeling. TOC was not detected above the analytical detection limit of 0.1%; therefore, a very low f_{oc} of 0.05% (i.e., equal to half of the detection limit) was used to represent the organic carbon fraction of these soils.

Estimates for the physical properties of soil are presented on Table 6 and were estimated from several different sources. The estimates represent average values reported for sandy gravels, and include bulk density and total porosity according to Hillel (1971), and Freeze and Cherry (1979). Volumetric water content was estimated from the model SOILPROP (Environmental Systems & Tech. 1989), which is an interactive program for the estimation of hydraulic properties. Grain size distribution (the primary input to SOILPROP) was estimated from Buchan (1989) based on descriptions provided in the M/B&A boring logs for this site.

Although no site-specific data regarding VOC levels in ground water currently exist, investigations performed at nearby sites indicated that VOCs are present. England Shahin & Associates (1991) have detected both chlorinated and aromatic compounds in ground water underlying the NORAC site, which is located adjacent to the subject site. The VOC concentrations reported in ground water from this site were used to estimate the relative contribution of regional water contamination to observed VOC levels in soil gas beneath the OSCO facility.

5.2 Compound Properties

According to the soil chemical data compiled by M/B&A (1991) during its subsurface investigation, a variety of chlorinated, aromatic, and ketone solvents are present in the soil. While these three compound groups have similar vapor pressures, their partitioning among phases of the soil differ considerably due to differences in hydrophobicity. These differences in physical properties should permit a comparison of model results among compounds that differ substantially in their environmental behavior. Pertinent compound properties for the seven indicator compounds, as presented by Montgomery & Welkom (1990) and MacKay & Shiu (1981), are shown on Table 7.

6.0 PERMEABILITY AND RADIUS OF INFLUENCE

Advective or diffusive migration of vapors in the vadose zone is influenced by the permeability of the soil materials to gases. In order to evaluate the relative contribution of VOCs from different sources and to assess the capture zone of a gas sampling well, the air permeability and radius of influence must be evaluated. Vapor flow through the subsurface may be evaluated by the application of Darcy's Law and the continuity equation, which are described by Equations 1 and 2, respectively (Bear et. al. 1987).

$$\underline{u} = - k/\nu \, (\text{grad}P + p(g)z) \qquad (1)$$

where, $\underline{u}$ = darcian velocity
grad P = pressure gradient
g = gravity
z = vertical distance
p = density
ν = viscosity

$$d(\text{ap density m})/dt = -\text{grad}\ (\rho m \underline{u}) \qquad (2)$$

where, ap = air porosity
m = unit thickness
t = time
$\underline{u}$ = darcian velocity
grad = gradient operator
ρ = density

This approach to estimating air permeability and other subsurface flow characteristics has been applied by Johnson et al. (1990) to soil venting studies. Equations 1 and 2 relate the darcian vapor velocity ($\underline{u}$) to pressure, permeability, and mass conservation within the subsurface. The combination of these two equations generates Equation 3, which relates temporal pressure distributions to permeability. Under conditions of steady-state flow, Equation 3 can be expressed as Equation 4 and solved using flow and pressure observations (Johnson et al. 1990). The spatial distribution of vacuum pressures at extraction and observation wells, along with the corresponding air flow rates, were recorded during the pilot tests and are shown on Table 5.

$$(2e\nu/k)\,\frac{dP}{dt} = \text{grad}^2 P^2 \qquad (3)$$

where, e = air porosity
ν = viscosity
k = air permeability
other values previously defined

$$P' = Q/4\text{pim}(k/\nu) \int_{\frac{r^2 e}{4ktP_{atm}}}^{\text{inf.}} \left(\frac{e^{-x}}{x}\right) dx \qquad (4)$$

where, Q = volumetric flow rate
P_{atm} = atmospheric pressure
inf. = infinity
other values previously defined

6.1 Frictional Losses

The first attempt to measure vacuum pressures in wells surrounding B1 was unsuccessful because a sufficient vacuum pressure could not be induced over the screened interval at 66 to 71 feet bgs. This inability to establish a measurable vacuum pressure at the observation wells suggested that there was a substantial pressure loss in the 1-inch diameter PVC tubing. Although a greater vacuum was eventually applied to the extraction well, it was evident that

the frictional losses in the PVC needed to be estimated in order to assess the vacuum that was actually applied to the formation.

The losses attributable to friction in drawing vapor at high flow rates through vapor well B1 were estimated by application of the Engineering Bernoulli Relationship (Equation 5), which describes the conservation of energy for a Newtonian fluid and is derived directly from the first law of thermodynamics (Denn 1980).

$$1/2v_2^2 + gh_2 = 1/2v_1^2 + gh_1 - \int_{P_1}^{P^2} \frac{(dP)}{p} - l_v \qquad (5)$$

where, v1 = linear velocity of vapor in B1 at 21.3m (bgs)
v2 = linear velocity of vapor in B1 at the surface
h1 = bottom of the well B1, 0 meters
h2 = height of well B1, 21.3 meters
P = pressure distribution within well B1
g = 9.8 m/sec^2
lv = viscous losses
p = density

Energy is presumed to be preserved throughout the well, with the exception of frictional losses from flow across the well walls. Inputting data for (i) change in vapor velocity, (ii) height or length of the well and (iii) viscous losses experienced during flow through the well conduit, the estimated pressure loss in the well was calculated according to Equation 5.

Viscous losses (lv) were evaluated as a function of the Reynold's number for flow through the well (Equation 6). The Reynold's number is often used as a criterion to distinguish laminar from turbulent flow and as a ratio of inertial to viscous forces (Denn 1980).

$$Re = \text{distance}\,(V_{avg})\,p\,/\,v \qquad (6)$$

where, Re = Reynold's Number
V_{avg} = average velocity
v = kinematic viscosity
distance = diameter of vapor well

The frictional factor (f), a unique function of the Reynold's number for the flow of all incompressible Newtonian Fluids through smooth pipe, was estimated by Equation 7, and viscous losses were evaluated by Equation 8.

$$f = 0.079\,Re^{-.25} \qquad (7)$$

$$lv = 2(V_{avg}^2)Lf/D \qquad (8)$$

Assuming a mass balance of gases through the well and the behavior of soil vapor as an ideal gas, the Bernoulli Equation can be solved for the pressure loss in the well. Solving Equation 8 by iteration yields a pressure loss of 91 inches of water through the 1-inch diameter PVC tubing. This pressure loss indicates that, at the sustained flow rate of 37 scfm measured during this study, the vacuum pressure exerted on the formation is 91 inches of water less than that read at the wellhead. This calculation suggests that approximately 84% of the vacuum

applied to the well is dissipated due to frictional losses before reaching the screened interval at 66 to 71 feet bgs.

6.2 Air Permeability

Air permeability was estimated from flow rates achieved at the extraction well and transient pressure data observed during the three hour pilot test. The expected change in the subsurface pressure distribution with time P'(r,t) is predicted by Equation 4, which was presented in the previous section. The integral may be approximated by Equation 9 according to Bear (1979).

$$P' = Q/4pi(mk/\nu)[-0.5772 - \ln(r^2 e\nu/4kP_{atm}) + \ln(t)] \qquad (9)$$

where, Q = volumetric flow rate
m = unit thickness
k = air permeability
ν = kinematic viscosity
r = radial distance of observation
e = air porosity
P_{atm} = atmospheric pressure
t = time

The slope of P' versus ln(t) is described by the term Q/[4pi(mk/u)]. Conditions approaching steady-state were assumed to be achieved during the soil vapor pump test on the basis of flow/vacuum observations in the field and calculations for the lower limit of the integral presented in Equation 4. The flow/vacuum data shown on Table 5 suggest that constant values were recorded after 15 minutes, thus supporting the hypothesis that steady-state or near steady-state conditions were achieved during the test. Further evidence of near steady-state conditions was provided by the solution to Equation 4, which indicates that the asymptotic limit of the integral was approached. Steady-state is defined as a constancy in the pressure distribution at distance from the extraction well.

The air permeability of soils surrounding well B1 was estimated by rearranging the terms in Equation 9 and solving for "k." Based on the flow/vacuum data obtained from the pump test and on the aforementioned assumptions, the air permeability was calculated at 44 to 47 darcys. The narrow range of permeabilities, calculated using data from various observation points surrounding the extraction well, suggests that soil conditions at this site are horizontally isotropic.

6.3 Radius of Influence

An estimate for the radius of influence achieved during the soil vapor pump test may be obtained by substituting the observed distribution of radial vacuum pressures into the steady-state, radial distribution relationship presented by Johnson et al. (1990) in Equation 10.

$$P(r) = Pw\,[1+(1-(Patm/Pw)^2)\ln(r/Rw)/\ln(Rw/Ri)]^{1/2} \qquad (10)$$

where, P = pressure at radial distance r
P_{atm} = atmospheric pressure
P_w = pressure at wellhead
R_w = radius of extraction well
R_i = radius of influence

As noted previously, field data collected during soil vapor pump test indicate minimal variations in the pressure/flow characteristics at the extraction well after "steady-state"

conditions were established. As expected, a time lag was noted between the start of the pumping and the observation of pressure readings at the monitoring wells. This latency or time lag is related to the velocity of the pressure wave through the vadose zone and is a function of both the air permeability of the formation and the distance between extraction and monitoring wells. For purposes of this study, radius of influence was defined as the distance from the extraction well at which the observed vacuum pressure cannot be distinguished from atmospheric pressure.

Radii of influence for the Phase 2 test (i.e., formational vacuum of 17 inches of water and air flow of 37 scfm under "steady-state" conditions) were estimated at 23.3, 25.8, and 34.3 meters for observation data collected at wells B2R, B4, and B8R, respectively. It is likely that the data collected from well B8R yield the most accurate calculation for radius of influence because pressure changes measured furthest from the extraction well generally provide the most accurate solution to the integral.

6.4 Capture Zone

The volume of soil from which vapor was sampled during Phase 1 was estimated on the basis of (i) the volume of vapor withdrawn from the wells, (ii) the length of the screened interval, and (iii) the air-filled porosity of soil. Soil gas samples were collected after purging the well for approximately 5 minutes. Flow rates induced by the Rotron blower ranged from 5 to 12 scfm. Assuming that soil vapor flow around the screened interval is perfectly isotropic, an average capture zone with a radius of about one meter would be expected. This estimate suggests that a relatively small volume of native soil outside the borehole was sampled during Phase 1. Based on the same assumptions and calculations, the radii of capture zones achieved during the Phase 2 test were less than 1.6 meters on August 26 and ranged from 2.3 to 5.8 meters on September 24. As noted previously, the soil air velocity decreases exponentially with distance from the well; therefore, the relative contribution of soil vapor from periphery of the estimated capture zone is small. In addition, there is increased dilution of soil vapor drawn from greater distances from the well, suggesting that the migration of "VOC slugs" in soil gas is unlikely to be observed in the blower exhaust.

7.0 EQUILIBRIUM PARTITIONING

Due to the rate-limiting desorption of organic chemicals from soils, initial VOC concentrations in soil vapor are controlled by second-order kinetics. Hence, VOC concentrations measured in soil vapor during the pump test are probably a function of time, as well as VOC concentrations in the adjacent soil. Typical partitioning models are based on the instantaneous establishment of equilibrium conditions and do not consider kinetically-controlled desorption processes. In order to use an equilibrium model, the validity of discounting kinetic processes should be demonstrated. Based on the soil air velocity and the time required for VOCs in product and vapor phases to reach equilibrium, a distance or path length over which equilibrium assumptions are valid can be estimated. Equation 11 (Johnson et al. 1988) presents a relationship among soil air velocity, path length and time required for the system to reach chemical equilibrium.

$$z = 2\,\underline{u}\,L^2 / D \qquad (11)$$

where, $\underline{u}$=darcian vapor velocity
L=distance between soil pores

D=air diffusivity

Given the flow rates induced during Phase 1 of this investigation, it is unlikely that soil air velocities exceeded 1 centimeter per second. At this velocity, Equation 11 predicts that chemical equilibrium between VOCs in product and vapor phases could be established over a path length or interparticle distance of 2 millimeters (mm). This estimate represents a relatively short distance compared to the average particle diameter of 0.5 to 1 mm, which the USDA uses to describe a coarse sand (Hillel 1971). A comparison of particle diameter and path length suggests that chemical equilibrium should be reached over a distance of 2 to 4 sand grains.

Based on a comparison of fugacities and partial pressures, it is unlikely that any of the solvents are present in pure or product form. Therefore, a second kinetic process (i.e., desorption of VOCs from the various phases of the soil) should be considered. These intraparticle desorption processes vary markedly on the basis (i) sorbent characteristics, (ii) molecular weight of sorbate, and (iii) various interfacial phenomena. The limited data set did not permit a mathematical estimate of desorption kinetics; however, researchers have postulated that chemical equilibrium among soil phases may be attained on the order of hours to days (Swann & Eschenroeder 1983; Ball & Roberts 1991).

7.1 Fugacity Model

The partitioning of volatile hydrocarbons among the soil, vapor, aqueous, and free product phases of the soil may be described by the thermodynamic concept of fugacity (MacKay & Patterson 1981). Under equilibrium conditions, the fugacities (or escape tendencies) of a compound in the various phases of the soil are equal. The fugacities of a compound in various phases of the soil can be described according to the mathematical expression provided in Equation 12 (MacKay & Patterson 1981). Concentrations of an analyte within each phase of the soil may be estimated from the thermodynamic escape tendency, Z (see Equation 13), which is related to the more common physical property of activity coefficients.

$$f_{soil} = f_{pore\ water} = f_{soil\ gas} = f_{free\ product} \qquad (12)$$

where, f=fugacity (Pa)

$$C = Z(f) \qquad (13)$$

where, C=concentration (mol/m^3)
Z=fugacity capacity(mol/m^3/Pascals)
f=fugacity (Pascals)

Equation 14 describes the relationship between VOC concentrations in the soil (sorbed) and vapor phases.

$$Cs = (Zs/Za)\ Cg \qquad (14)$$

where, Cg=VOC concentration in soil gas (mg/l)
Za=fugacity capacity in gas phase (0.404 mol/m^3 kPa)
Zs=fugacity capacity in sorbed phase
[*Kd*/HLC] (mol/m^3 kPa)
Kd=soil/water distribution coeff. [K_{oc} f_{oc}] (l/kg)
f_{oc}=organic carbon content of soil
Cs=VOC concentration in soil [sorbed] (mg/kg)

K_{oc}=organic matter/water partitioning coeff. (l/kg)
HLC=Henry's Law constant (kPa m^3/mol).

The soil/water distribution coefficient (*Kd*) for contaminated soil may actually differ from that calculated for background soils because the f_{oc} of contaminated soil has a higher organic carbon content (i.e., natural organic carbon plus contaminant organic carbon). This is particularly important in assessing the partitioning of single compounds from complex mixtures such as fuels. In this case, we are interested in the partitioning of VOCs which may be associated with an organic solvent "mixture." Because the volatilities of the indicator compounds were relatively similar, it was assumed that individual solvents partitioned independently and there were no effects of co-solubilization or vapor pressure lowering.

The equilibrium distribution of a chemical between the aqueous and sorbed phases in soil may be described by Equation 15, while the equilibrium partitioning between aqueous and vapor phases can be calculated according to Equation 16 (MacKay 1991). Although normally less important than partitioning into aqueous and organic phases, sorption onto the mineral phase of the soil can be significant for polar compounds such as ketones or for hydrophobic contaminants present in soils containing a low organic carbon content. The partitioning of a VOC between the vapor and mineral fractions of the soil is represented by Equation 17. The distribution of VOCs among various phases of the soil were calculated according to the fugacity model, SOIL (MacKay 1991).

$$Cw = (Zw/Zs)\ Cs \tag{15}$$

$$Cg = (Za/Zw)\ Cw \tag{16}$$

$$Cm = (Zm/Zw)\ Cw \tag{17}$$

where, Cw=VOC conc. in soil pore water (mg/l)
Zw=fugacity in aqueous phase [1/HLC] (mol/kPa m^3)
C_m = concentration in the mineral phase
Z_m = fugacity capacity of mineral phase [$K_m(p)Z_w/1000$]
p = particle density (g/cc)
K_m = mineral/water partitioning coeff.
Zs, Za, Cg and Cs have been previously defined.

7.2 Soil/Vapor Partitioning

Output data from the equilibrium partitioning model, SOIL, are presented in Appendix C and summarized on Tables 8 through 11. Table 8 lists the projected VOC concentrations in various phases of the soil as a function of the observed concentrations in soil vapor during the Phase 1 sampling of well B1. Predicted VOC partitioning into the aqueous, mineral and organic phases of the soil suggest that MEK should be present at substantially higher concentrations in all soil compartments than are TCE or toluene. As a result of the high vapor-phase concentration of MEK and its affinity for the aqueous and mineral fractions of the soil, it is likely that the ketones are present at considerably higher concentrations in soil than are the chlorinated or aromatic solvents. The soil chemistry data presented by M/B&A (1991) suggest that, in fact, the ketones are present at considerably higher concentrations at B1 than are the other solvents. The relatively low estimated percentage of contaminant mass associated with the soil organic phase (to which all compounds have a high affinity) is due to the low organic carbon content (f_{oc}) of coarse sandy material.

In soils containing a natural organic carbon fraction (f_{oc}) greater than 0.5%, sorption of organic contaminants on the mineral phase of the soil is minimal because the hydrophobic compounds cannot compete with water and other polar species for the adsorption sites. Due to the coarse-grained soils and low f_{oc} at this site, concentrations of VOCs on soil were projected for a 4-phase system (i.e., mineral, organic, aqueous and vapor). Model results presented on Table 9 compare the projected to the observed VOC concentrations in soil at B1. Predicted VOC levels (according to equilibrium assumptions during Phase 1 sampling) in soil from boring B1 were two to five orders-of-magnitude greater than the highest concentrations reported by M/B&A in the 65 to 75 foot depth range. Projected VOC concentrations in soil may be underestimated by the assumption of equilibrium conditions. If the desorption of VOCs from the soil to soil vapor were limited by kinetic processes, which is more likely, the concentration of solvents in soil would be even greater than projected. For example, InterPhase scientists have recorded VOC concentrations in the blower exhaust from vapor extraction pilot tests that are as much as 100 times less than those predicted from soil chemistry data (assuming equilibrium conditions). However, if inputs to the model (which represented estimates rather than measurements) may have overestimated the sorption capacity for VOCs by the mineral and aqueous phases of the soil, a closer approximation of projected and observed soil concentrations would be expected.

The data presented in Table 9 also indicate that divergence in predicted and observed values for soil VOC concentrations increases as the polarity or dipole moment of the compound increases (e.g., MEK > TCE > toluene). There are several possible explanations for this observation. First, VOCs were probably lost preferentially from the aqueous and mineral phases (as opposed to the organic phase) during sampling from the air percussion drill rig. Finally, the observed differences between solvent groups may be related to their re-adsorption onto the soil during migration in the vapor phase. The ketones would be expected to be more retarded during vapor-phase transport due to their affinity for the aqueous/mineral phase, which may substantially reduce their concentration in soil gas samples (compared to vapor concentrations in equilibrium with the contaminated soil).

Table 10 presents the projected VOC concentrations in soil at well B4 as a function of the vapor levels reported in the Phase 1 data. Similar to the model predictions for well B1 (see Table 9), projected VOC concentrations in soil exceeded the observed levels by 1.5 to 5 orders-of-magnitude. Again, the ketones showed the greatest divergence in predicted and measured soil concentrations, while the aromatic hydrocarbons generally characterized by the least divergence. A notable difference between the modeling results at wells B1 and B4 is that the projected PCE concentration in soil at B4 is closer to the observed concentration than that projected at B1. This observation may be related to differences in the mass and/or lateral extent of PCE contained in soil adjacent to the respective wells or to the persistence of this highly refractory compound in the soil vapor.

Projected VOC concentrations in soil using the Phase 2 soil vapor results are presented for well B1 on Table 11. In contrast to the predictions specified for the Phase 1 data (see Table 9), differences between projected and observed VOC concentrations in soil were in the range of 3 to 6 orders-of-magnitude. This represents a greater difference than was predicted using the Phase 1 soil gas data and may reflect the larger capture zone estimated for the Phase 2 sampling. This larger capture zone may intercept soil contamination at greater distances from the well and produce samples which contain a higher percentage of vapor from the formation (as opposed to vapor from the annular space). Similar to the predictions using Phase 1 soil gas data, Table 11 indicates that the difference between observed and predicted VOC concentrations in soil is greatest for the ketone solvents.

The relationship between VOC concentrations in soil and vapor compartments for three indicator compounds are shown on Figures 6 through 8. A comparison the three compounds

was made for vapor concentrations exceeding 10 ppmv because the detection limits varied so greatly among the analytes. TCE is characterized by the highest percentage of apparent "false positives" or sampling locations at which high concentrations were present in the vapor phase and no contamination was reported on the adjacent soil. This supports the contention that chlorinated compounds are substantially more persistent in the vapor phase (due principally to their refractory behavior under aerobic conditions) than are toluene and MEK. In addition, TCE has a considerably higher Henry's Law Constant than the other two compounds (MacKay & Shiu 1981), resulting in a higher TCE concentration in the vapor phase for a given solvent concentration in the aqueous/mineral phase of the soil.

7.3 Groundwater/Vapor Partitioning

In order to evaluate the potential contribution of VOCs migrating vertically from the regional water table, VOC partitioning across the capillary fringe was estimated on the basis of reported concentrations in the ground water and the fugacity model presented by MacKay & Patterson (1981). Among the compounds analyzed, toluene and TCE were detected in both the regional ground water and in soil gas underlying the OSCO facility. The observed concentrations of these compounds in ground water and the predicted concentrations in soil vapor above the capillary fringe are shown on Table 12. While soil vapor concentrations as high as 21 ppmv were predicted for TCE at the capillary fringe, the diffusive and advective transport mechanisms described in the following section provide an estimation of resulting VOC levels in soil gas at shallower depths.

8.0 VAPOR PHASE TRANSPORT

Transport of a solute through the vadose zone may occur via the displacement of the medium (i.e., flow of soil gas) or by its travel through a stationary medium. Both processes, advection and diffusion, were evaluated to assess vapor-phase contributions from groundwater and soil contamination. Diffusion is the response to a localized concentration of a solute in a homogeneous medium. The processes is extremely slow because it is a microscopic event and depends on molecular velocity. Individual molecules moving randomly at relatively slow speeds usually do not result in high concentrations at great distances from the source. Advection, by contrast, is primarily a macroscopic phenomenon and is affected by intensive properties such as temperature and pressure rather than by physical characteristics of the contaminant.

8.1 Diffusive Transport

Diffusive flux is the primary non-advective, non-bulk transport mechanism for the migration of VOCs through soil vapor. In the absence of pressure or temperature effects, Fick's first law of diffusion (Equation 18) describes the flux of a VOC in response to a chemical concentration gradient.

$$J = -D \frac{dC}{dx} \qquad (18)$$

where, J = mass flux
D = diffusion coefficient
C = concentration

x=distance from source

The rate of diffusion depends on the diffusivity of the compound as well the properties of the medium through which it migrates. Air diffusivities for the VOCs modeled during this study were calculated according to the method described by Fuller et al. (1966). Diffusion coefficients can be corrected for the tortuosity of the soil and for contaminant retardation according to Equation 19 (Silka et al. 1988). Retardation of VOCs relative to the diffusion of a conservative vapor-phase tracer results from partitioning onto aqueous and organic phases of the soil.

$$Dsg = D_a\ (ap^{3.3}/tp^2)\ [(bd\ Kd/HLC)+(wc/HLC)+ap] \qquad (19)$$

where, Dsg=effective diffusion coefficient (m^2/day)
D_a=air diffusivity (m^2/day)
b=height of soil through which compounds diffuse (m)
ap=air-filled porosity of soil
bd=dry bulk density (kg/l)
Kd=soil/water partition coefficient (l/kg) {Koc foc}
HLC=Henry's Law Constant (dimensionless)
wc=volumetric water content of soil
tp=total porosity of soil.

Fick's Second Law of diffusion (Equation 20) states that the rate at which the concentration of a compound may change due to diffusion is proportional to the variation in the concentration gradient with distance.

$$\frac{dC}{dt} = D\ \frac{d^2 C}{d^2 x} \qquad (20)$$

where, C=concentration
t=time
D=diffusion coefficient
x=distance from source

Under the assumptions that (i) bare soil covers the entire site, (ii) no surface or subsurface barriers to vapor migration exist, and (iii) the VOC concentration is zero at the ground surface and maximal at the source (i.e., the capillary fringe), Equation 19 may be evaluated by the Gaussian Error Function, which is presented as Equation 21.

$$c(x,t) = 1 - c_o\ \mathrm{erf}\ [x/(2(dt)^{0.5})] \qquad (21)$$

where, t=time
x=distance
c_o=concentration at t=0 and x=0
erf=Gaussian Error Function

Projected concentrations of VOCs in equilibrium with regional groundwater were made in section 7.3. Estimated VOC concentrations in the soil column due to diffusive transport from the water table to 70 feet bgs (the depth of the upper screened interval at well B1) are presented on Table 10. This transient-state model predicts that the concentration of TCE and toluene (due solely to migration from the water table) would be negligible.

It should be noted that the preceding estimates are based on the assumption that ground water is the sole source of VOCs in soil gas. Under more realistic site conditions, VOC concentrations measured in shallow soil gas are higher than those projected to be present above the water table; hence, the diffusive flux should be downward, rather than upward, from the 70-foot depth. Molecular diffusion results in the net movement of a solute from a location of high concentration to a location of lower concentration.

Although vertical diffusion of VOCs from the water table is probably not a major transport mechanism under current site conditions, lateral diffusion of VOCs from the vadose zone sources to the vapor wells is possible. Lateral, as well as vertical, concentration gradients created by high solvent concentrations in soil often result in the rapid diffusion of VOCs over relatively short distances. For example, the diffusive flux calculated for TCE migration vertically from the water table to the shallow soil gas (i.e., 0.3 mg/m^2-day) is a factor of 50 less than that calculated for TCE to diffuse 6 meters (20 feet) away from the contaminated soil at well B1. VOC concentrations in soil gas at levels exceeding 100 to 500 ppmv are normally observed near structures (e.g., sumps, tanks, clarifiers) or adjacent to contaminated soil or ground water, where diffusion has resulted in a minimal attenuation of the equilibrium vapor concentration established at the source. InterPhase scientists have rarely noted VOC concentrations in soil gas in the hundreds of ppmv which are due solely to vapor migration from a distant surface or subsurface source.

8.2 Advective Transport

The mass flux of an solute moving under advective forces is expressed by Equation 22 (Welty 1984).

$$J = V_{avg} C \qquad (22)$$

where, J=mass flux
V_{avg}=average velocity of soil gas
C=concentration of solute

The diffusive processes presented in the previous section described the movement of a solute through a stationary medium (i.e., the soil gas through which the VOC diffuses was assumed to be immobile). Transport by advective processes depends solely on the vector of soil gas flow and not on any specific properties of the compound. The velocity and direction of this flow may be induced by temperature and/or pressure gradients.

Due to the thermal capacity of soils, thermal heating is unlikely to affect soils deeper than 2 meters bgs. Therefore, the advective mass transport of VOCs from the 100-meter deep water table as a result of thermal gradients is unlikely. The non-uniform spatial distribution of VOCs in soil gas also suggest that advective migration is not a major vertical transport mechanism from the water table because advection through 200 feet of soil should result in substantial mixing/dispersion and relatively uniform concentrations in shallow soil gas.

Background pressures measured in vapor wells over the course of this study indicate that a positive pressure increased throughout the day and subsided with the arrival of sunset. Air pressures among wells were uniform for any given depth, with the greatest pressures measured in wells screened below 130 feet bgs. Observed maximum pressures at the deeper wells were just over 0.5 inches of water, suggesting that advective flow, if occurring, would be predominantly vertical. The limited data for vertical distribution of VOC concentrations

observed at this site do not suggest that vertical advective flow is a predominant mechanism. Large differences in VOC concentrations over relatively short vertical and horizontal distances at this site, as were observed in Phase 1 soil vapor data, are more indicative of migration by localized diffusion (due to steep concentration gradients) than by regional pressure-driven processes in the vadose zone. Regional advective processes occurring in a relatively isotropic medium would be expected to create more uniform VOC concentrations in soil gas than were observed during this study.

Observations recorded by M/B&A personnel for ambient temperature and pressure indicate that both parameters were highly variable over a 24-hour period (e.g., temperatures varied by 14°C and atmospheric pressure varied by 4.8 millibars). All pressures measured in the wells were relative to the ambient or atmospheric pressure. Therefore, it is likely that the observed changes in pressure in the wells are a direct result of changing meteorological conditions. This hypothesis is supported by a comparison of the daily surface variations in temperature and atmospheric pressure to the relatively small variations in pressure reported from the vapor wells. For example, well pressures differed from atmospheric pressure by 0.1%, while absolute changes in atmospheric pressure were as great as 5%. As such, the subsurface may be acting as a reservoir of constant pressure and exhibiting either inward or outward air flow from wells as a result of ambient changes. Although InterPhase results seem to suggest a difference in well pressures due to temperature changes during the day, the M/B&A observations indicate that these very slight temperature effects may be masked by the larger changes in barometric pressure.

9.0 SUMMARY

A summarization of major points suggested by the results of the soil vapor research study include the following:

(1) Soils permeabilities are quite high (44 to 47 darcys) and advective flow to the vapor wells, established during the pump tests, appears to be relatively isotropic.

(2) Migration of VOCs in soil vapor is probably controlled to a greater extent by molecular diffusion than by advective processes.

(3) VOC concentrations analyzed in soil gas are more indicative of soil conditions in the general vicinity of the vapor well than of solvent transport from distant sources.

(4) It is very unlikely that the migration of VOCs from the water table are significantly influencing VOC concentrations analyzed in soil gas samples collected during this study.

(5) Although the adsorption/desorption kinetics of VOCs from soil phases may be important for long-term pumping events (e.g., vapor extraction remediation), it is likely that VOC concentrations present in soil gas represent conditions which approach chemical equilibrium.

(6) According to the vapor/soil partitioning models, the concentration of VOCs reported in soil samples by M/B&A probably underestimate the actual levels in soil.

The feasibility of using soil vapor analyses to estimate the vertical extent of soil contamination underlying the OSCO site will depend on the concentration of solvents in soil and the resolution which is required for these estimates. Generally, VOC concentrations in soil gas should be indicative of soil conditions within limited radii of the vapor well and should be

more reliable for ketones and aromatics than for chlorinated compounds. The difference in reliability is related to differences in degradability (chemical and biochemical), retardation, and phase equilibria.

10.0 UNCERTAINTY & LIMITATIONS

The results of modeling the partitioning and transport of VOCs underlying the OSCO facility are based solely on the sources cited herein. Predicting the subsurface behavior of organic chemicals requires the use of various simplifying assumptions which may differ from actual site conditions. Projections and conclusions regarding the migration/degradation of these chemicals are based on our experience and on current professional standards.

11.0 REFERENCES

Wilson, J.T., C.G. Enfield, W.J. Dunlap, R.L. Crosby, D.A. Foster & L.B. Baskin. **J. Environ. Qual.**, vol. 10:501-506.

MacKay, D. & S. Patterson. 1981. **Environ. Sci. & Tech.**, vol. 15:1006-1014.

Boyd, S.A. & S. Sun. 1990. **Environ. Sci. & Tech.**, vol. 24:142-144.

MacKay, D. & W.Y. Shiu. 1981. **J. Phys. Chem. Ref. Data**, vol. 10:1175-1199.

Bear, J. 1979. Hydraulics of Groundwater. McGraw-Hill.

Denn, M.M. 1980. Process Fluid Mechanics. Prentis-Hall.

Johnson, P.C., M. Kemblowski & J. Colthart. 1990. **Ground Water**, vol. 28:413-429.

MacKay, D. & S. Patterson. 1981. **Environ. Sci. & Tech.**, vol. 15:1006-1014.

MacKay, D. 1991. Multimedia Environmental Models. Lewis Publishers, Chelsea, MI.

Silka, L.R. 1988. **Ground Water Monitor. Rev.**, vol. 8:115.

Johnson, P.C., C. Stanley, M. Kemblowski, D. Byers & J. Colthart. 1990. **Ground Water Monitor. Rev.**, vol 10, no. 20:159-178.

Block R.N. and T.P. Clark, 1990. Biological Teatment of Soils Contaminated by Petroleum Products. Petroleum Contaminated Soils v.3, pp. 167-175, Lewis Publishers Chelsea, Michigan.

Fuller, E.N., P.D. Schettler & J.C. Giddings. 1966. **Indus. Engr. Chem.**, vol. 58:18.

Lyman, W.J., W. Reehl & D. Rosenblatt. 1982. Handbook of Chemical Property Estimation Methods. McGraw-Hill Publ. Co., New York, NY.

Montgomery, J.H. & L.M. Welkom. 1990. Groundwater Chemicals Desk Reference, Lewis Publishers, Chelsea, MI.

Verscheuren, K. 1983. Handbook of Environmental Data on Organic Chemicals, Van Nostrand-Reinhold Publ., New York, NY.

Wilson J.T., C.G. Enfield, W.J. Dunlap, R.L. Crosby, D.A. Foster & L.B. Baskin **J. of Environ. Qual.**, vol. 10:501-506.

Buchan, G.D. 1989. Soil Science, vol. 147: 155-161.

Hillel, D. 1971. Soil and Water. Academic Press, Inc., New York, NY.

Welty, J.R., C.E. Wicks & R.E. Wilson. 1984. Fundamentals of Momentum, Heat and Mass Transfer, John Wiley and Sons, New York, NY.

Ball, W.R. & P.V. Roberts. 1991. **Environ. Sci. & Tech.**, vol. 25: 1223-1237.

Freeze, R.A. & J.A. Cherry. 1979. Groundwater. Prentice-Hall, Inc., Englewood Cliffs, N.J.

Environmental Systems & Technology. 1989. SOILPROP: A Program for Estimating Unsaturated Hydraulic Properties, Blacksburg, VA.

Swann, R.L. & A. Eschenroeder. 1983. Fate of Chemicals in the Environment, American Chemical Society, Washington, D.C.

Meredith/Boli and Associates. 1991. RCRA Facility Investigation (IIb): Deep Soil Sampling Program, OSCO Facility, Azusa, CA.

Western Technologies. 1990. Phase 1-1A Soil Gas Investigation, OSCO Facility, Azusa, CA.

TABLES AND FIGURES

TABLE 1. Concentration of analytes from vapor wells analyzed at Chemical Waste Management Inc., OSCO Facility; Azusa, California

ANALYZED BY: Tony Bode

DATE: 19,20 AUG 91

Sample #	Time min.	1,1,1-TCA ppmv	TCE ppmv	PCE ppmv	Toluene ppmv	C8Aromatic ppmv	Acetone ppmv	MEK ppmv	CO2 %	O2 %	CO2/O2 Ratio
AMBIENT AIR		0.01	0.0007	0.03	<0.1	<0.1	<20	<20	0.1	18.9	0.0
PUMP BLANK		0.3	0.05	0.2	<0.1	<0.1	<20	<20	0.1	19.4	0.0
AMBIENT AIR		0.015	0.02	0.2	<0.1	<0.1	<20	<20	0.1	20.1	0.0
1S-1	10	1000	330	320	140	110	380	520	5.7	7.4	0.8
1D-1	15	47	13	17	75	100	12000	13000	4.6	10.6	0.4
2-1	10	32	7	13	41	143	<20	<20	5	8.1	0.6
2RS-1	12	15	1	10	4	<0.1	160	<20	0.2	20.3	0.0
2RD-1	11	8	2	10	2	2	78	<20	0.4	19.3	0.0
3S-1	10	92	2	56	<0.1	NA	<20	<20	2.6	15.9	0.2
3D-1	10	85	8	40	<0.1	NA	<20	<20	2.4	14.3	0.2
4S-1	2	74	39	130	3	<0.1	2100	<20	4.7	13	0.4
4S-2	17	270	42	830	130	142	1800	4300	4.2	9.1	0.5
4S-3	15	NA	NA	NA	NA	NA	4400	9400	5.6	9.1	0.6
4S-4	38	330	56	1100	NA	NA	3200	6900	5.3	10.1	0.5
4S-5	58	260	54	1100	NA	NA	4500	10000	5.9	10.6	0.6
4D-1	NA	0.1	0.008	0.002	<0.1	<0.1	<20	<20	0.1	20.7	0.0
4D-2	1	0.4	0.2	0.6	<0.1	<0.1	<20	<20	0.1	20.8	0.0
4D-3	15	35	27	170	8	6	<20	<20	3.5	13.7	0.3
4D-4	30	62	40	220	8	11	<20	<20	4.6	11.5	0.4
4D-5	49	51	34	200	6	7	<20	<20	4.1	11.6	0.4
4D-6	64	53	31	190	4	7	<20	<20	3.7	11.4	0.3
5S-1	10	47	1	22	<0.1	NA	<20	<20	3.6	12.3	0.3
5D-1	14	35	21	21	<0.1	NA	<20	<20	2.2	13.5	0.2
6S-1	12	760	19	300	<0.1	<0.1	<20	<20	2.1	15	0.1
6D-1	10	630	270	290	<0.1	<0.1	<20	<20	2.6	14.7	0.2
8-1	15	34	14	82	1	<0.1	<20	<20	2.9	15.7	0.2
8RS-1	11	35	9	150	2	NA	<20	<20	2.9	12.7	0.2
8RM-1	12	63	29	720	1	NA	<20	<20	5.8	8.8	0.7
8RD-1	10	52	26	280	<0.1	<0.1	<20	<20	3.8	12.1	0.3

ppmv : parts per million by volume
< : less than
% : percent
NA : not analyzed

TCA : trichloroethane
TCE : trichlorethene
PCE : tetrachloroethene
C8 Aromatic: xylene&ethylbenzene

MEK : methylethylketone
CO2 : carbon dioxide
O2 : oxygen
Time : elapsed time before sampling

TABLE 2. Concentration of analytes from vapor wells analyzed at Chemical Waste Management Inc., OSCO Facility; Azusa, California

ANALYZED BY: Tony Bode

DATE: 26 AUG 91

Sample #	Time min.	1,1,1-TCA ppmv	TCE ppmv	PCE ppmv	Toluene ppmv	C8Aromatic ppmv	Acetone ppmv	MEK ppmv	CO2 %	O2 %	CO2/O2 Ratio
AMBIENT	AIR	0.01	0.0007	0.03	<0.1	<0.1	<20	<20	0.1	18.9	0.0
1S-2	3	180	73	1700	51	350	160	270	3.6	13.3	0.3
1S-3	6	490	220	3300	10	120	370	670	5.8	8.4	0.7
1S-4	20	520	240	5900	13	120	420	840	5.7	8.9	0.6
1S-5	45	540	240	5900	16	160	760	1400	5.8	8.4	0.7
1S-6	66	520	220	6200	17	160	850	1200	7.5	7.5	1.0
1D-2	17	170	57	520	9	20	8400	11000	5.3	9.5	0.6
1D-3	26	160	54	580	10	20	9700	12000	5.4	9	0.6

ppmv : parts per million by volume
< : less than
% : percent
NA : not analyzed

TCA : trichloroethane
TCE : trichlorethene
PCE : tetrachloroethene
C8 Aromatic: xylene&ethylbenzene

MEK : methylethylketone
CO2 : carbon dioxide
O2 : oxygen
Time : elapsed time before sampling

TABLE 3. Concentration of analytes from vapor wells analyzed at Chemical Waste Management Inc., OSCO Facility; Azusa, California

ANALYZED BY : Jim Borowiec

DATE: 24 SEP 91

Sample #	TIME (minutes)	1,1,1-TCA ppmv	TCE ppmv	PCE ppmv	Toluene ppmv	C8 Aromatics ppmv	Acetone ppmv	MEK ppmv	CO2 %	O2 %	CO2/O2 Ratio
AMBIENT AIR	NA	0.1	<0.001	0.04	<0.1	<0.1	<20	<20	0.1	19	0.01
PUMP BLANK	0	0.3	0.05	0.3	<0.1	<0.1	<20	<20	0.1	19	0.01
1S-1	15	1500	400	3000	520	1180	2000	7000	7.7	2	3.8
1S-2	39	1500	350	3900	660	1400	3800	6100	8	2	4
1S-3	57	1600	400	4000	760	1420	2400	8300	8.7	1.7	5.1
1S-4	81	1700	500	4100	800	1530	2400	8000	7.5	2	3.8
1S-5	127	1900	770	4400	990	1880	2300	8000	7.4	2	3.7
1S-6	178	1700	450	4400	1000	2000	2200	8000	8	2.6	3.1
1S-7	211	1600	400	3800	910	1660	3000	8500	8	2.4	3.3
STEP TEST	211	-	-	-	-	-	-	-	-	-	-
1S-8	222	1500	430	4100	990	1780	2500	6700	9.3	2.4	3.9
1S-9	245	1300	300	3000	610	970	2400	5500	8	3.8	2.1

ppmv : parts per million by volume
< : less than
% : percent
NA : not analyzed

TCA : trichloroethane
TCE : trichlorethene
PCE : tetrachloroethene
C8 Aromatics: ethylbenzene and xylene

MEK : methylethylketone
CO2 : carbon dioxide
O2 : oxygen

TABLE 6. PHYSICAL PROPERTIES OF THE SOIL

Bulk Density (bd) = 1.62 gm/mol

Total Porosity (tp) = 50%

Volumetric water content (wc) = 20%

Air-filled porosity (ap) = 30%

Organic carbon content (foc) = 0.05%

Distance to groundwater = 300 feet (bgs) below ground surface

TABLE 7. PHYSICAL PROPERTIES OF INDICATOR COMPOUNDS

Toluene

Molecular Weight	92.13 gm/mol
Henry's Law Coeficient	0.679 kPa m3/mol
Vapor Pressure	3.8 kPa
Diffusion Coefficient	0.097 cm^2/sec
Log Koc	2.06
$K_{mineral/water}$ distribution coefficient	1

Trichloroethene

Molecular Weight	131.4 gm/mol
Henry's Law Coeficient	1.179 kPa m3/mol
Vapor Pressure	9.87 kPa
Diffusion Coefficient	0.0855 cm^2/sec
Log Koc	1.81
$K_{mineral/water}$ distribution coefficient	1

Methylethylketone

Molecular Weight	72.11 gm/mol
Henry's Law Coeficient	0.002 kPa m3/mol
Vapor Pressure	10.4 kPa
Log Koc	0.09
$K_{mineral/water}$ distribution coefficient	1

Acetone

Molecular Weight	58.08 gm/mol
Henry's Law Coeficient	0.004 kPa m3/mol
Vapor Pressure	35.4 kPa
Log Koc	-0.43
$K_{mineral/water}$ distribution coefficient	1

TABLE 7. (continued)

Tetrachloroethene	
Molecular Weight	165.83 gm/mol
Henry's Law Coeficient	2.742 kPa m3/mol
Vapor Pressure	2.48 kPa
Log Koc	2.42
$K_{mineral/water}$ distribution coefficient	1
1,1,1-Trichloroethane	
Molecular Weight	133.4 gm/mol
Henry's Law Coeficient	2.8 kPa m3/mol
Vapor Pressure	16.53 kPa
Log Koc	2.18
$K_{mineral/water}$ distribution coefficient	1
C8 Aromatics	
Molecular Weight	106.17 gm/mol
Henry's Law Coeficient	0.459 kPa m3/mol
Vapor Pressure	0.882 kPa
Log Koc	2.11
$K_{mineral/water}$ distribution coefficient	1

TABLE 8. PROJECTED VOC CONCENTRATIONS IN SOIL AND SOIL PORE WATER AT WELL B1 (69'-71') ACCORDING TO PHASE 1 SOIL GAS DATA

Compound	Observed soil gas concentration (ppm)	Predicted soil pore water concentration (mg/kg)	Predicted mineral phase concentration (mg/kg)	Predicted soil-organic phase concentration (mg/kg)
Toluene	140	0.3	1.7	0.1
C8 Aromatics	110	0.4	2	0.2
MEK	520	250	1600	1
Acetone	380	78	490	0.1
PCE	320	0.3	2	0.3
TCA	1000	78	488	43
TCE	330	0.5	3	0.1

PCE: tetrachloroethene
TCA: tetrachloroethane
TCE: trichloroethylene
MEK: methylethyl ketone
C8 Aromatics: ethylbenzene + total xylenes
Predicted concentrations are expressed as mg VOC/ kg soil

TABLE 9. PROJECTED AND OBSERVED VOC CONCENTRATIONS IN MULTI-PHASE SOILS FROM WELL B1

Compound	Observed soil gas concentration (ppm)	Predicted soil concentration for four-phase soil (mg/kg)	Observed soil concentrations (mg/kg)
Toluene	140	2	0.016
C8 Aromatics	110	3	<0.005
MEK	520	1800	0.029
Acetone	380	570	0.077
PCE	320	3	<0.005
TCA	1000	610	0.012
TCE	330	4	<0.005

PCE: tetrachloroethene
TCA: 1, 1, 1-trichloroethane
TCE: trichloroethene
MEK: methylethylketone
Observed soil concentrations are based on samples analyzed between 65 and 75 feet bgs.

TABLE 10. PROJECTED AND OBSERVED VOC CONCENTRATIONS IN MULTI-PHASE SOILS FROM THE SHALLOW DEPTH INTERVAL AT WELL B4

Compound	Observed* soil gas concentration (ppm)	Predicted soil concentration for four-phase soil (mg/kg)	Observed** soil concentrations (mg/kg)
Toluene	130	1.9	0.029
C8 Aromatics	142	3.6	0.072
MEK	4300	15000	0.6
Acetone	1800	2700	0.35
PCE	830	5.9	0.15
TCA	270	165	0.023
TCE	42	0.5	<0.005

BGS: below ground surface
TCE: trichloroethene
MEK: methylethylketone
PCE: tetrachloroethene
TCA: tetrachloroethane
*Soil gas samples were collected from the screened interval at 70-75 feet bgs.
**Observed soil concentrations are based on samples collected between 65 and 75 feet bgs.

TABLE 11. PROJECTED AND OBSERVED PHASE 2 VOC CONCENTRATIONS IN MULTI-PHASE SOILS FROM WELL B1

Compound	Observed* soil gas concentration (ppm)	Predicted soil concentration for four-phase soil (mg/kg)	Observed** soil concentrations (mg/kg)
Toluene	1000	15	0.016
C8 Aromatics	2000	48	<0.005
MEK	8500	30000	0.029
Acetone	3800	5700	0.077
PCE	4400	31	<0.005
TCA	1900	1200	0.012
TCE	770	9	<0.005

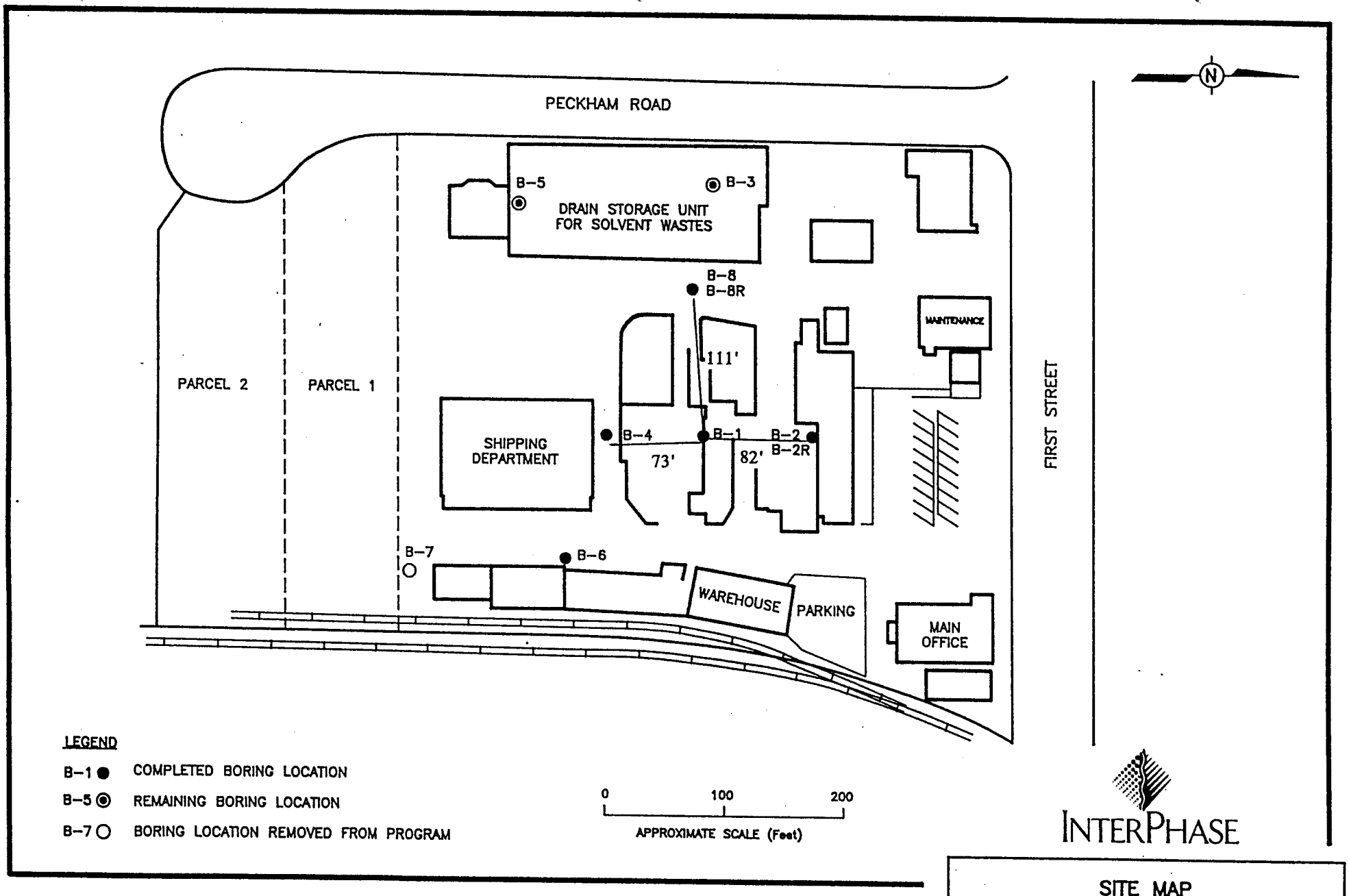
PCE: tetrachloroethene
TCA: 1, 1, 1-trichloroethane
TCE: trichloroethene
MEK: methylethylketone
*Soil gas samples were collected from the screened interval at 66-71 feet bgs.
**Observed soil concentrations are based on samples collected between 65 and 75 feet bgs.

TABLE 12. PREDICTED VOC CONCENTRATIONS IN SOIL VAPOR

Compound	Observed(1) ground water concentration (ug/L)	Predicted soil gas concentrations at water table (ppm)	Predicted soil gas concentrations at 70 ft. (bgs) (ppm)	Observed soil gas(2) concentrations at 70 ft. (bgs)
Toluene	4	0.3	1E-300	17
TCE	300	21	1E-300	240

TCE: trichloroethene
below ground level

(1) Groundwater concentrations reflect regional data for the NORAC Site
(2) VOC concentrations analyzed from vapor-well B1



SITE MAP
OSCO FACILITY

Project No. 9122 Figure No.: 1

SOURCE: Meredith/Boli & Associates, Inc.
Map No. 1990-211, May 1991

Figure 2. Vacuum Pressure vs. Time during Phase 2 Pump Test (September 24, 1991)

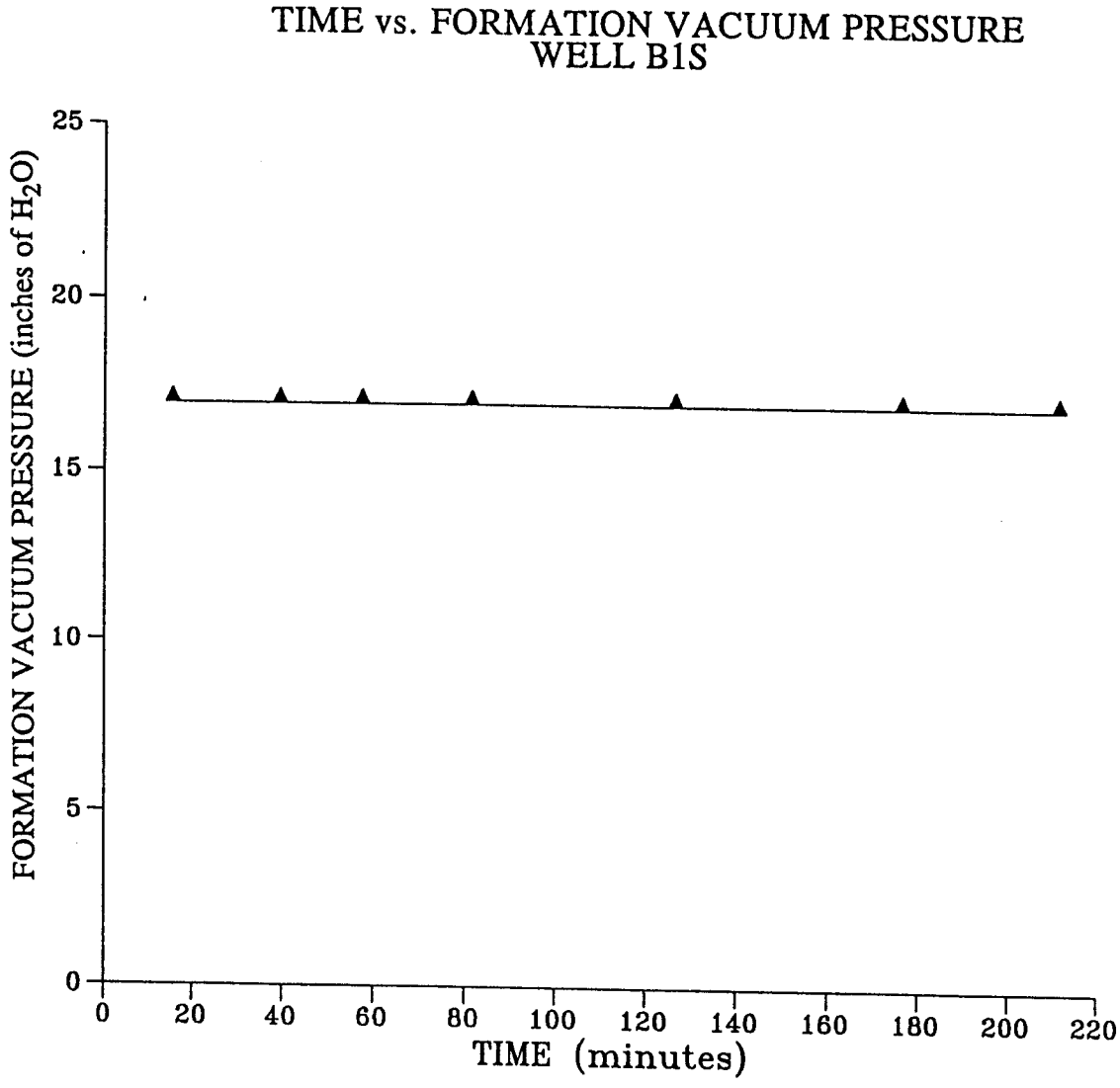


Figure 3. Flow/Vacuum Curve for Step Test (September 24, 1991)

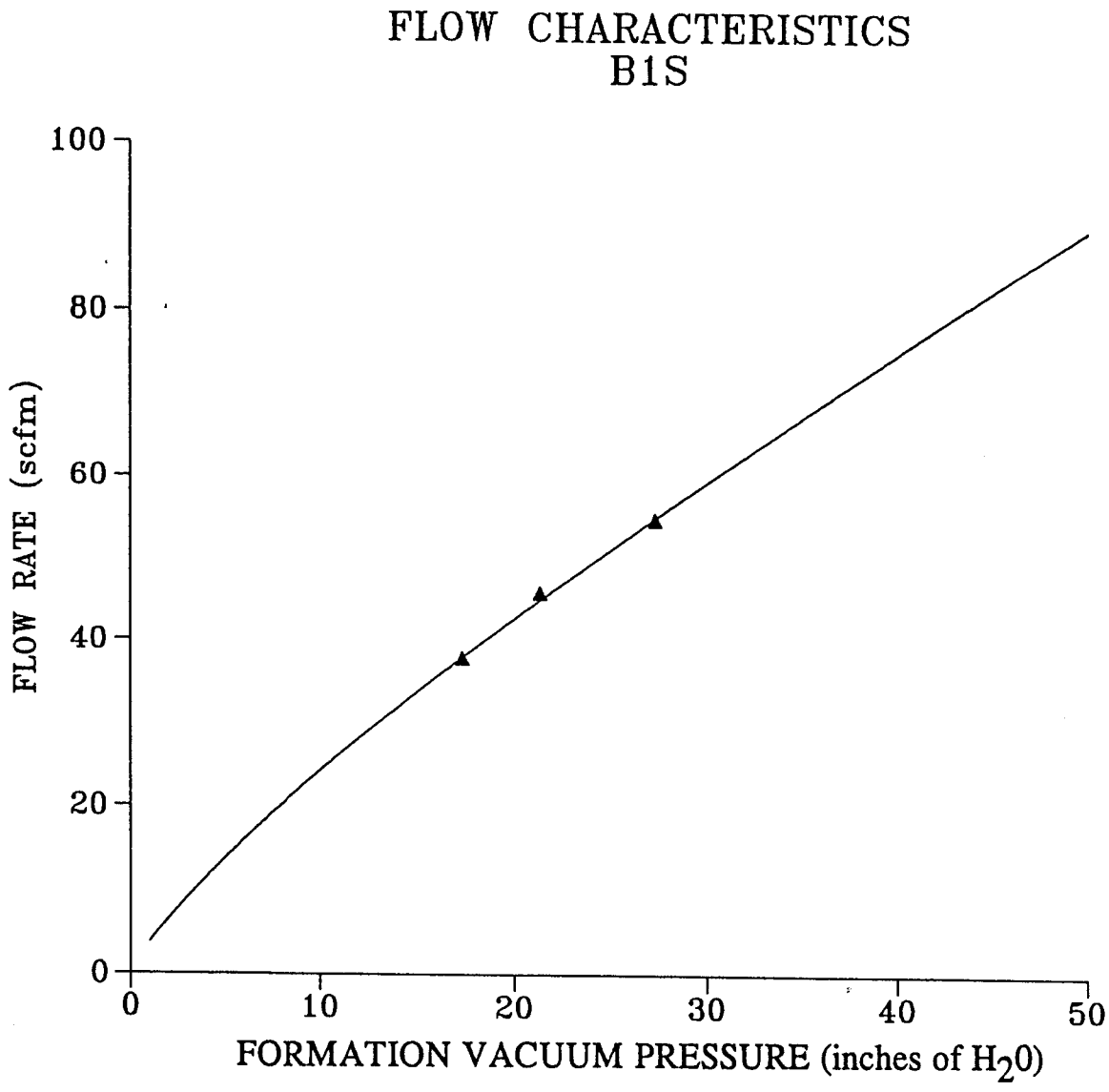
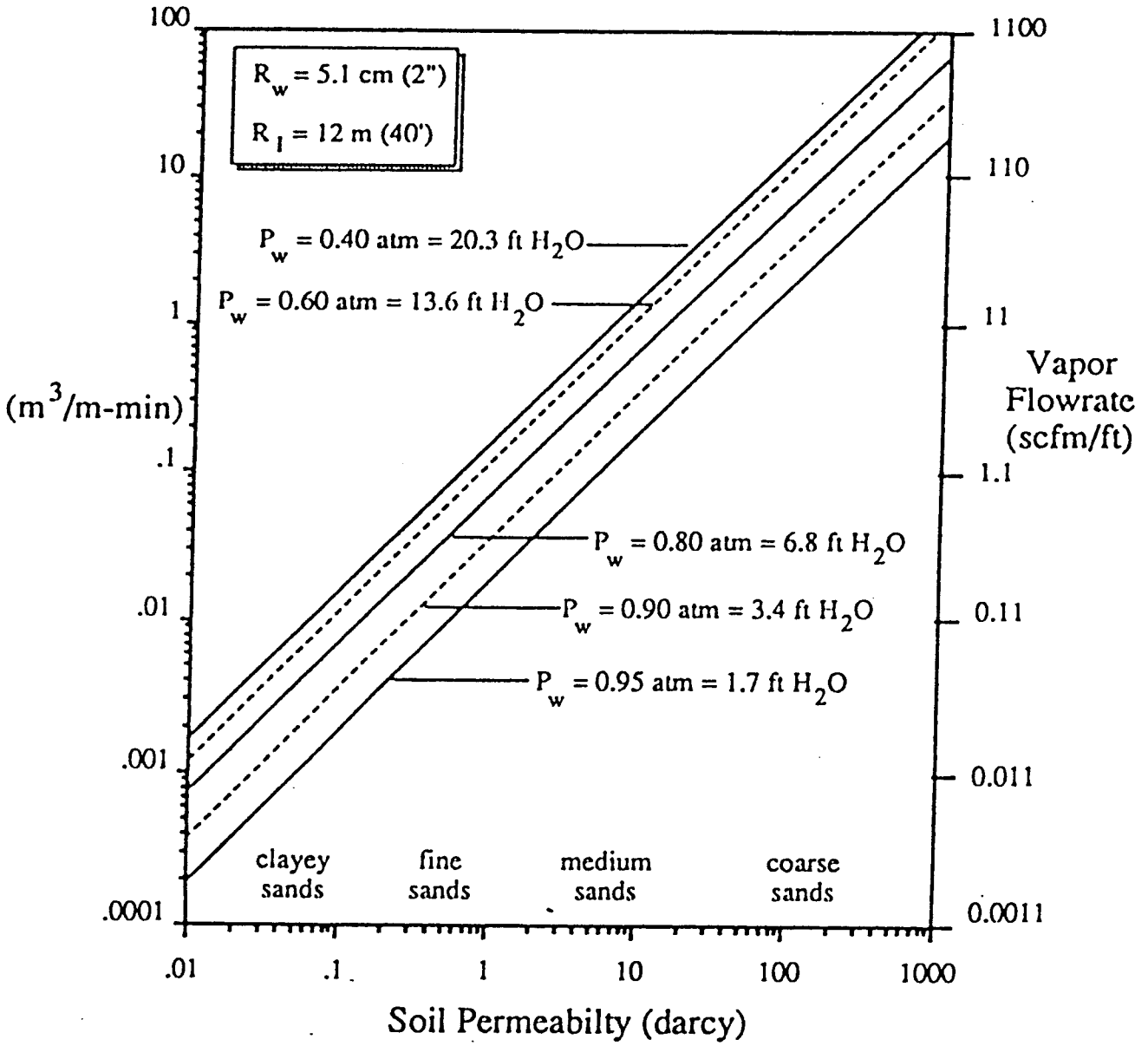


Figure 4. Predicted Flow Rates for a range of Soil Permeabilities



(Reprinted from Johnson, et al. 1990)

Figure 5. VOC Concentrations vs. Time during the Phase 2 Pump Test (September 24, 1991)

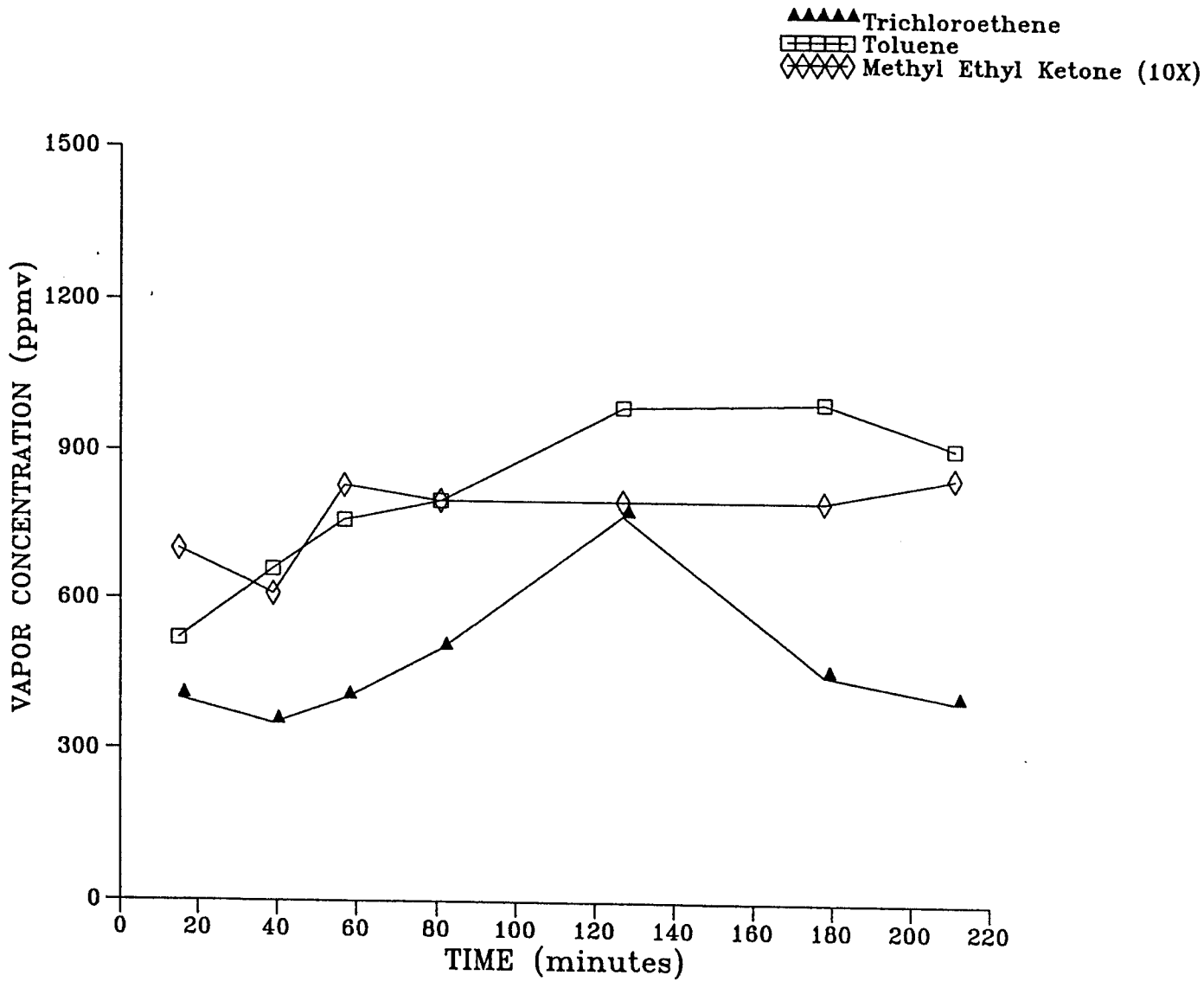


Figure 6. Soil vs. Vapor Concentrations of TCE

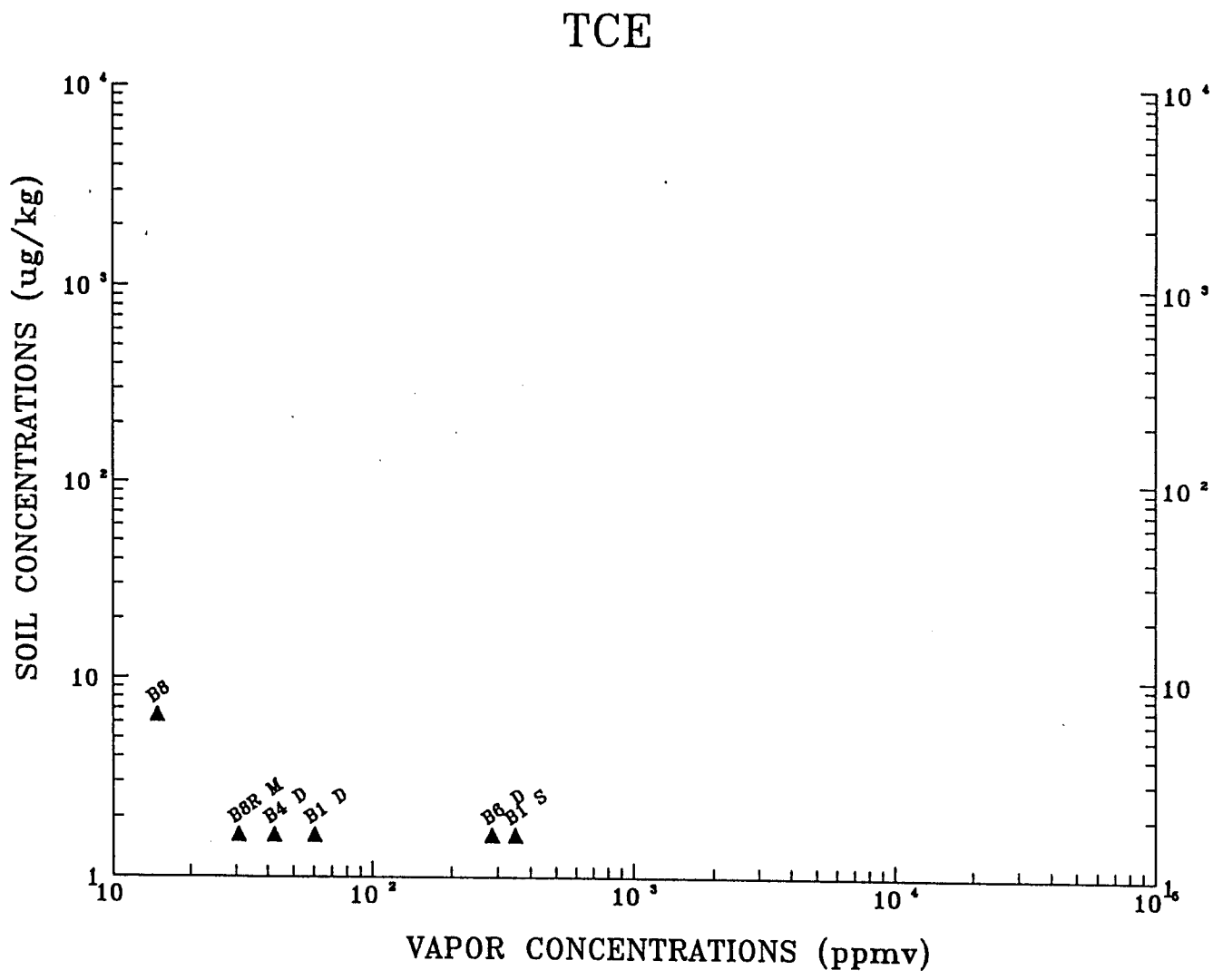


Figure 7. Soil vs. Vapor Concentrations of MEK

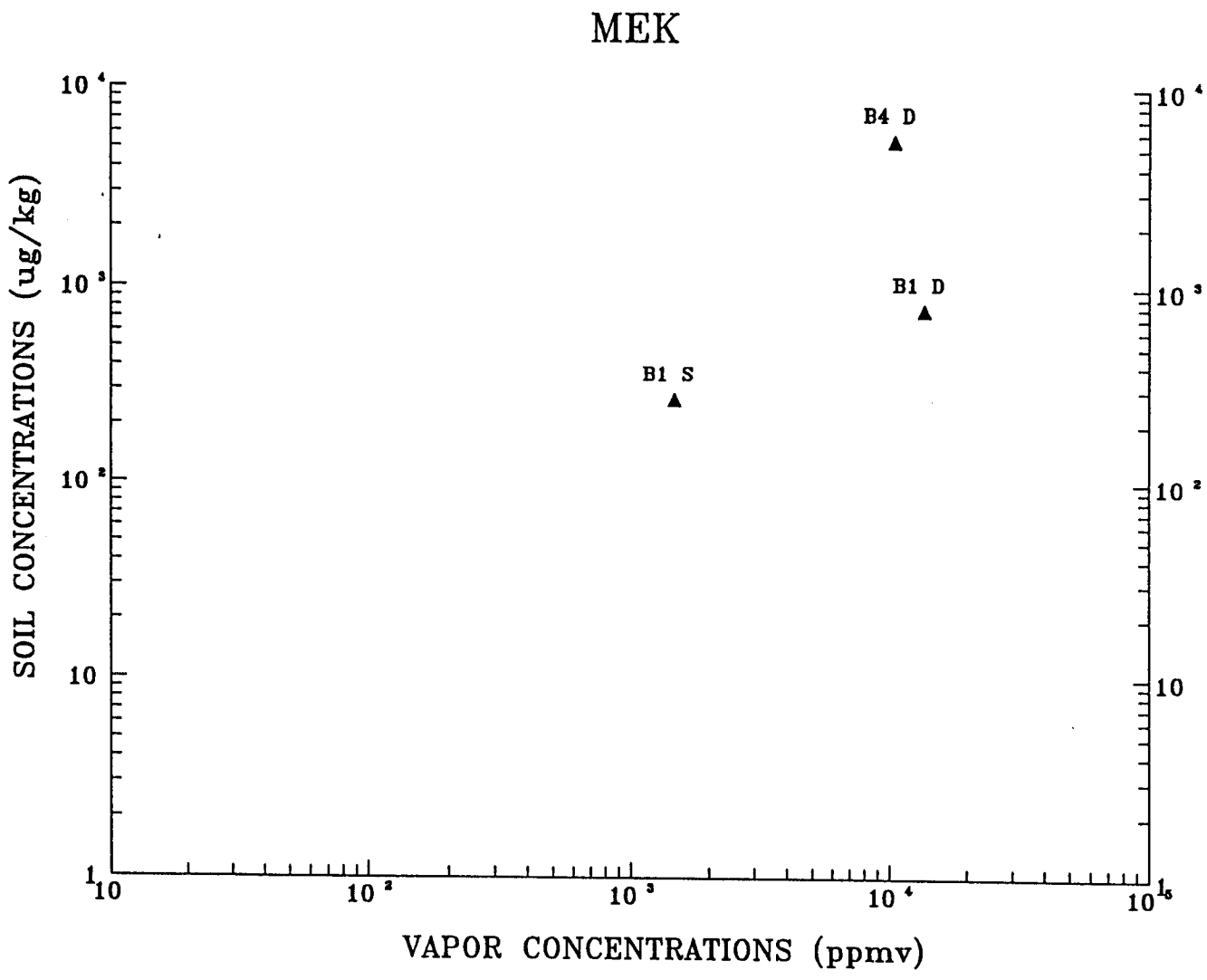
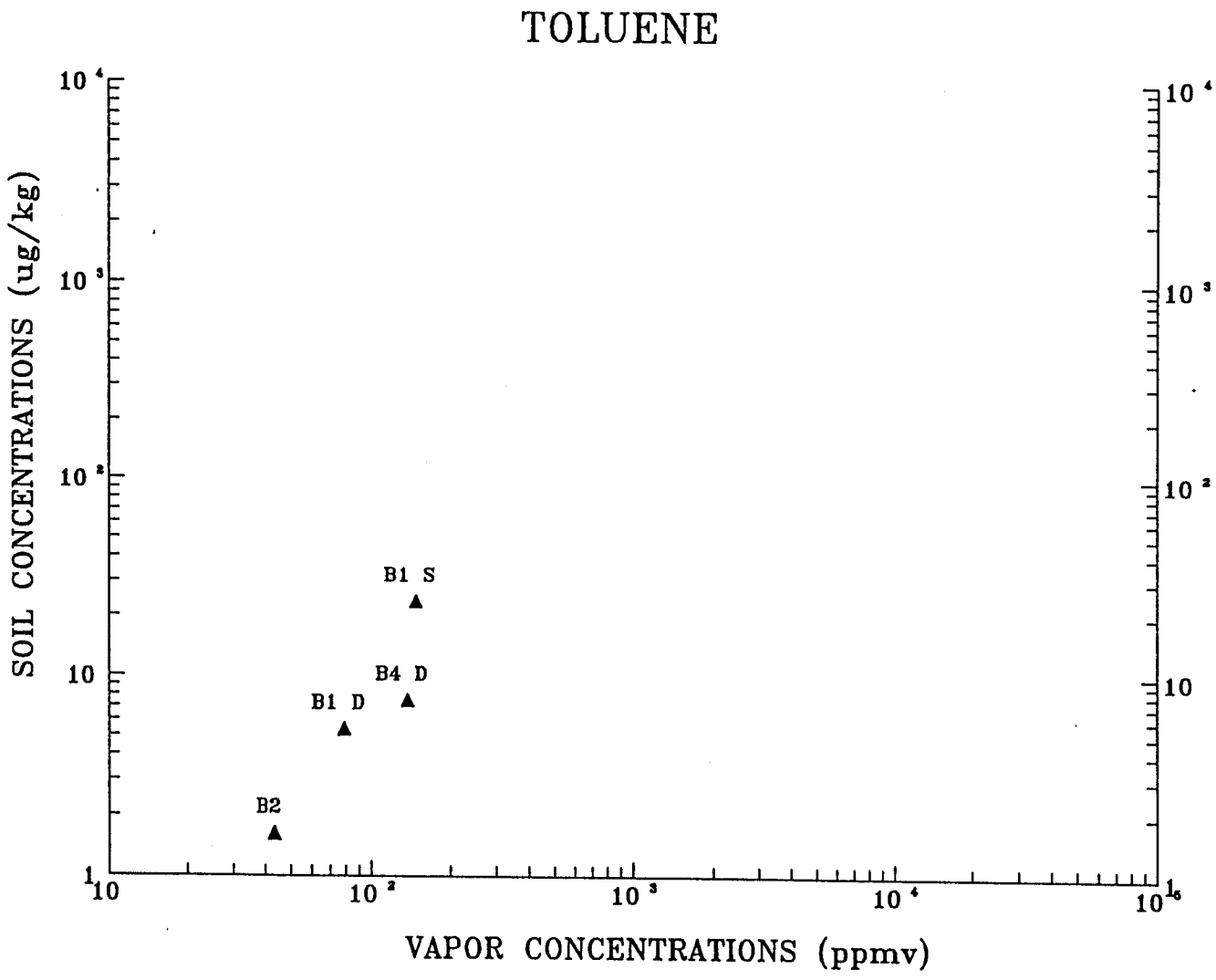


Figure 8. Soil vs. Vapor Concentrations of Toluene



APPENDIX A

FLOW/VACUUM DATA FROM PHASE 1 TEST

DATE : 19 AUGUST 1991
WELL #4; BACKGROUND : 4S = 0.016" H2O, 4D = 0.01" H2O

TIME	DEPTH	OBS	SAMPLE
10:50	SHALLOW	SAMPLE W/O PUMP	4S-1
11:31	START PUMP		
11:31	SHALLOW	11 SCFM/7.70" H2O	4S-2
11:44	READ VAC ON DEEP INTERVAL	DEEP INTERVAL = 0.005" H2O	
11:46	SHALLOW	11 SCFM/8.45" H2O	4S-3
11:52	READ VAC ON DEEP INTERVAL	DEEP INTERVAL = 0.02" H2O	
12:01	SHALLOW	11 SCFM/8.40" H2O	4S-4
12:13	CHANGE FLOW	8 SCFM/8.10" H2O	
12:20	SHALLOW	8 SCFM/8.10" H2O	4S-5
12:35	SHALLOW	8 SCFM/8.10" H2O	4S-6
12:38	SHUT DOWN VAC ON SHALLOW; START DEEP WELL		
12:40	DEEP	9 SCFM/9.9" H2O	4D-1
12:55	DEEP	9 SCFM/9.9" H2O	4D-2

DATE : 19 AUGUST 1991
WELL #s 2 & 2R; BACKGROUND : 2 = 0.02" H2O, 2RS = 0.03" H2O, 2RD = -0.28" H2O

TIME	VACUUM/FLOW	OBS	SAMPLE
14:40	9.2" H2O/7 scfm	-0.30" H2O	2RS-1
14:52	9.1" H2O/7 scfm	-0.33" H2O	2RS-1
14:55	9.05" H2O/5 scfm	-0.04" H2O	2RD-1
15:06	9.05" H2O/5 scfm	-0.25" H2O	2RD-1
15:15	9.25" H2O/9 scfm	-0.43" H2O	2-1
	9.10" H2O/9 scfm	-0.05" H2O	

DATE : 19 AUGUST 1991
WELL #1

TIME	VACUUM/FLOW	OBS	SAMPLE
16:00	8.95" H2O/9 scfm		
16:10	8.95" H2O/10 scfm		
16:15	9.05" H2O/6 scfm		
16:30	8.95" H2O/6 scfm		

DATE : 19 AUGUST 1991
WELL #6

TIME	VACUUM/FLOW	OBS	SAMPLE
16:52	8.95" H2O/5 scfm		
17:05	8.90" H2O/5 scfm		
17:10	9.05" H2O/5 scfm		
17:20	8.95" H2O/5 scfm		

DATE : 20 AUGUST 1991
WELL #4; BACKGROUND : 4S = 0.215" H2O, 4D = 0.05" H2O

TIME	VACUUM/FLOW	OBS	SAMPLE
08:36	9.00" H2O/8scfm	0.235" H2O	
08:46	8.85" H2O/5 scfm	0.210" H2O	
08:49	8.85" H2O/5 scfm	0.220" H2O	4D-3
09:12	8.85" H2O/5 scfm	0.240" H2O	4D-4
09:32	8.80" H2O/5scfm	0.190" H2O	4D-5

DATE : 20 AUGUST 1991
WELL #8RS

TIME	VACUUM/FLOW	OBS	SAMPLE
10:01		8RS : 0.020" H2O	
10:01		8RM : 0.025" H2O	
10:02		8RD : 0.090" H2O	
10:05		8 : 0.015" H2O	
10:08	9.00" H2O/5 scfm		
10:11		8RM : 0.015" H2O	
10:12		8RD : 0.070" H2O	
10:13		8 : 0.090" H2O	
10:19	8.85" H2O/5 scfm		8RS-1
10:19		8 : 0.100" H2O	
10:21		8RM : 0.030" H2O	
10:21		8RD : 0.090" H2O	

DATE : 20 AUGUST 1991
WELL #8RM

TIME	VACUUM/FLOW	OBS	SAMPLE
10:24		8RS : 0.030" H2O	
10:25		8RD : 0.078" H2O	
10:26		8 : 0.090" H2O	
10:27	9.00" H2O/5 scfm		
10:28		8RS : 0.010" H2O	
10:29		8RD : 0.070" H2O	
10:30		8 : 0.010" H2O	
10:39	8.80" H2O/5 scfm		8RM-1
10:40		8RS : 0.025" H2O	
10:41		8RD : 0.060" H2O	
10:42		8 : 0.005" H2O	

DATE : 20 AUGUST 1991
WELL #8RD

TIME	VACUUM/FLOW	OBS	SAMPLE
10:50		8 : -0.005" H2O	
10:52		8RS : 0.000" H2O	
10:53		8RM : 0.005" H2O	
10:54		8RD : 0.030" H2O	
10:55	9.15" H2O/5 scfm		
11:00		8RS : -0.010" H2O	
11:01		8RM : 0.010" H2O	
11:02		8 : -0.005" H2O	
11:05	9.00" H2O/5 scfm		8RD-1
11:06		8 : -0.005" H2O	
11:07		8RS : -0.010" H2O	
11:08		8RM : -0.005" H2O	

DATE : 20 AUGUST 1991
WELL #8

TIME	VACUUM/FLOW	OBS	SAMPLE
11:12		8RS : 0.010" H2O	
11:13		8RM : 0.010" H2O	
11:14		8RD : 0.045" H2O	
11:15	9.10" H2O/8 scfm		
11:16		8RD : 0.040" H2O	
11:17		8RS : 0.125" H2O	
11:18		8RM : 0.005" H2O	
11:30	8.95" H2O/8 scfm		8-1
11:31		8RM : 0.010" H2O	
11:32		8RS : 0.145" H2O	
11:33		8RD : -0.030" H2O	
11:36		STATIC; 8RD : -0.070" H2O	
11:37		STATIC; 8RS : -0.055" H2O	
11:38		STATIC; 8RM : -0.030" H2O	
11:40		STATIC; 8 : -0.040" H2O	

DATE : 20 AUGUST 1991
WELL #5S

TIME	VACUUM/FLOW	OBS	SAMPLE
14:11		5S : -0.095" H2O	
14:12		5D : -0.550" H2O	
14:16	9.10" H2O/6 scfm		
14:17		5D : -0.540" H2O	
14:26	8.95" H2O/6 scfm	5D : -0.565" H2O	5S-1

DATE : 20 AUGUST 1991
WELL #5D

TIME	VACUUM/FLOW	OBS	SAMPLE
14:29		5S : -0.075" H2O	
14:30		5D : -0.565" H2O	
14:31	9.10" H2O/5 scfm		
14:32		5S : -0.095" H2O	
14:45			5D-1
14:47	8.95" H2O/5 scfm		
14:48		5D : -0.565" H2O	
14:50		STATIC; 5S : -0.110" H2O	
14:51		STATIC; 5D : -0.670" H2O	

DATE : 20 AUGUST 1991
WELL #3S

TIME	VACUUM/FLOW	OBS	SAMPLE
15:14		STATIC; 3S : -0.085" H2O	
15:15		STATIC; 3D : -0.335" H2O	
15:17	9.10" H2O/6 scfm		
15:18		3D : -0.340" H2O	
15:27	8.85" H2O/5 scfm	3D : -0.335" H2O	3S-1

DATE : 20 AUGUST 1991
WELL #3D

TIME	VACUUM/FLOW	OBS	SAMPLE
15:30		STATIC; 3D : -0.335" H2O	
15:31		STATIC; 3S : -0.080" H2O	
15:32	9.00" H2O/5 scfm		
15:33		3S : -0.080" H2O	
15:42			3D-1
15:43	8.90" H2O/5 scsm	3S : -0.085" H2O	
15:45		STATIC; 3S : -0.090" H2O	
15:49		STATIC; 3D : -0.330" H2O	

APPENDIX B

VAPOR ANALYSES REPORT BY PERFORMANCE ANALYTICAL, INC.

Performance Analytical Inc.
Environmental Testing and Consulting

RECEIVED
SEP 03 1991
M/B & A

LABORATORY REPORT

Client:	Meredith/Boli & Associates, Inc.	Date of Report:	08/30/91
Address:	6701 Center Drive West, Suite 900	Date Received:	08/27/91
	Los Angeles, CA 90045-1535	Purchase Order:	90-211
Contact:	Mr. Roger McCracken	PAI Project No:	3488

Client Project ID: OSCO #90-211

Two (2) Tedlar Bag Samples labeled: "B1" and "B1-D"

The samples were received at the laboratory under chain of custody on August 27, 1991. All samples were received intact. The chain of custody requested that sample "B1-D" be placed on hold. The sample was analyzed on August 27, 1991.

Volatile Organic Compound Analysis

The sample was analyzed by combined gas chromatography/mass spectrometry (GC/MS) for Volatile Organic compounds. The analyses were performed according to the methodology outlined in EPA Method TO-14 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, EPA 600/4-84-041, U.S. Environmental Protection Agency, Research Triangle Park, NC, April, 1984 and May, 1988. The Method was modified for using Tedlar Bags. The analyses were performed by gas chromatography/ mass spectrometry, utilizing a direct cryogenic trapping technique. The analytical system used was comprised of a Finnigan Model 4500C GC/MS/DS interfaced to a Tekmar 5010 Automatic Desorber. A thick film (5 micron) crossbonded 100% Dimethyl polysiloxane megabore column (RT_x-1, Restek Corporation, Bellefonte, PA) was used to achieve chromatographic separation.

The results of analysis are given on the attached data summary sheets.

Data Release Authorization:

Joseph Cook
Senior Chemist

Reviewed and Approved:

Michael Tuday
Laboratory Director

20954 Osborne Street, Canoga Park, CA 91304 • Phone 818 709-1159 • Fax 818 709-2915

Performance Analytical Inc.
Environmental Testing and Consulting

PERFORMANCE ANALYTICAL INC.

RESULTS OF ANALYSIS

Client: Meredith / Boli & Associates, Inc.

Client Sample ID: B1 (08/26/91) (10:45)

PAI Sample ID: 9102941

Test Code: GC/MS Mod. EPA TO-14
Analyst: Joseph Cook
Instrument ID: Finnigan 4500C/Tekmar 5010
Verified by: Michael Tuday

Matrix: Tedlar Bag
Date Received: 08/27/91
Date Analyzed: 08/27/91
Volume Analyzed: 0.50 ml
0.10 ml

CAS #	COMPOUND	RESULT (MG/M^3)	DETECTION LIMIT (MG/M^3)	RESULT (PPM)	DETECTION LIMIT (PPM)
74-87-3	CHLOROMETHANE	ND	10	ND	4.9
75-01-4	VINYL CHLORIDE	ND	10	ND	3.9
75-00-3	CHLOROETHANE	ND	10	ND	3.8
74-83-9	BROMOMETHANE	ND	10	ND	2.6
75-69-4	TRICHLOROFLUOROMETHANE	ND	10	ND	1.8
75-35-4	1,1-DICHLOROETHENE	68	10	17	2.5
75-09-2	METHYLENE CHLORIDE	ND	10	ND	2.9
75-15-0	CARBON DISULFIDE	ND	10	ND	3.2
76-13-1	TRICHLOROTRIFLUOROETHANE	850	10	110	1.3
156-60-5	TRANS-1,2-DICHLOROETHENE	ND	10	ND	2.5
156-59-2	CIS-1,2-DICHLOROETHENE	1500	10	370	2.5
75-34-3	1,1-DICHLOROETHANE	30	10	7.5	2.5
67-66-3	CHLOROFORM	ND	10	ND	2.1
107-06-2	1,2-DICHLOROETHANE	ND	10	ND	2.5
71-55-6	1,1,1-TRICHLOROETHANE	3300	10	610	1.9
71-43-2	BENZENE	ND	10	ND	3.1
56-23-5	CARBON TETRACHLORIDE	ND	10	ND	1.6
78-87-5	1,2-DICHLOROPROPANE	ND	10	ND	2.2
75-27-4	BROMODICHLOROMETHANE	ND	10	ND	1.5
79-01-6	TRICHLOROETHENE	820	10	150	1.9
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	10	ND	2.2

ND = Not Detected TR = Trace Level - Below Indicated Detection Limit

20954 Osborne Street, Canoga Park, CA 91304 • Phone 818 709 1139 • Fax 818 709 2915

Performance Analytical Inc.
Environmental Testing and Consulting

PERFORMANCE ANALYTICAL INC.

RESULTS OF ANALYSIS (Continued)

Client: Meredith / Boli & Associates, Inc.

Client Sample ID: B1 (08/26/91) (10:45)

PAI Sample ID: 9102941

Test Code: GC/MS Mod. EPA TO-14
Analyst: Joseph Cook
Instrument ID: Finnigan 4500C/Tekmar 5010
Verified by: Michael Tuday

Matrix: Tedlar Bag
Date Received: 08/27/91
Date Analyzed: 08/27/91
Volume Analyzed: 0.50 ml
0.10 ml

CAS #	COMPOUND	RESULT (MG/M^3)	DETECTION LIMIT (MG/M^3)	RESULT (PPM)	DETECTION LIMIT (PPM)
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	10	ND	2.2
79-00-5	1,1,2-TRICHLOROETHANE	ND	10	ND	1.9
108-88-3	TOLUENE	760	10	200	2.7
124-48-1	DIBROMOCHLOROMETHANE	ND	10	ND	1.2
106-93-4	1,2-DIBROMOETHANE	ND	10	ND	1.3
127-18-4	TETRACHLOROETHENE	19000	10	2800	1.5
108-90-7	CHLOROBENZENE	ND	10	ND	2.2
100-41-4	ETHYLBENZENE	200	10	45	2.3
75-25-2	BROMOFORM	ND	10	ND	0.98
100-42-5	STYRENE	5.2 TR	10	1.2 TR	2.4
1330-20-7	TOTAL XYLENES	970	10	220	2.3
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	10	ND	1.5
541-73-1	1,3-DICHLOROBENZENE	ND	10	ND	1.7
106-46-7	1,4-DICHLOROBENZENE	ND	10	ND	1.7
95-50-1	1,2-DICHLOROBENZENE	ND	10	ND	1.7

ND = Not Detected TR = Trace Level - Below Indicated Detection Limit

20954 Osborne Street, Canoga Park, CA 91304 • Phone 818 709-1139 • Fax 818 709-2915

Performance Analytical Inc.
Environmental Testing and Consulting

PERFORMANCE ANALYTICAL INC.

RESULTS OF ANALYSIS

Client: Meredith / Boli & Associates, Inc.

Client Sample ID: N/A

PAI Sample ID: PAI Method Blank

Test Code: GC/MS Mod. EPA TO-14
Analyst: Joseph Cook
Instrument ID: Finnigan 4500C/Tekmar 5010
Verified by: Michael Tuday

Matrix: Tedlar Bag
Date Received: N/A
Date Analyzed: 08/27/91
Volume Analyzed: 1.00 Liter

CAS #	COMPOUND	RESULT (UG/M^3)	DETECTION LIMIT (UG/M^3)	RESULT (PPB)	DETECTION LIMIT (PPB)
74-87-3	CHLOROMETHANE	ND	5.0	ND	2.4
75-01-4	VINYL CHLORIDE	ND	5.0	ND	2.0
75-00-3	CHLOROETHANE	ND	5.0	ND	1.9
74-83-9	BROMOMETHANE	ND	5.0	ND	1.3
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.0	ND	0.90
75-35-4	1,1-DICHLOROETHENE	ND	5.0	ND	1.3
75-09-2	METHYLENE CHLORIDE	ND	5.0	ND	1.5
75-15-0	CARBON DISULFIDE	ND	5.0	ND	1.6
76-13-1	TRICHLOROTRIFLUOROETHANE	ND	5.0	ND	0.66
156-60-5	TRANS-1,2-DICHLOROETHENE	ND	5.0	ND	1.3
156-59-2	CIS-1,2-DICHLOROETHENE	ND	5.0	ND	1.3
75-34-3	1,1-DICHLOROETHANE	ND	5.0	ND	1.2
67-66-3	CHLOROFORM	ND	5.0	ND	1.0
107-06-2	1,2-DICHLOROETHANE	ND	5.0	ND	1.2
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.0	ND	0.93
71-43-2	BENZENE	ND	5.0	ND	1.6
56-23-5	CARBON TETRACHLORIDE	ND	5.0	ND	0.80
78-87-5	1,2-DICHLOROPROPANE	ND	5.0	ND	1.1
75-27-4	BROMODICHLOROMETHANE	ND	5.0	ND	0.75
79-01-6	TRICHLOROETHENE	ND	5.0	ND	0.94
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.0	ND	1.1

ND = Not Detected TR = Trace Level - Below Indicated Detection Limit

20954 Osborne Street, Canoga Park, CA 91304 • Phone 818 709-1139 • Fax 818 709-2915

Performance Analytical Inc.
Environmental Testing and Consulting

PERFORMANCE ANALYTICAL INC.

RESULTS OF ANALYSIS (Continued)

Client: Meredith / Boli & Associates, Inc.

Client Sample ID: N/A

PAI Sample ID: PAI Method Blank

Test Code: GC/MS Mod. EPA TO-14
Analyst: Joseph Cook
Instrument ID: Finnigan 4500C/Tekmar 5010
Verified by: Michael Tuday

Matrix: Tedlar Bag
Date Received: N/A
Date Analyzed: 08/27/91
Volume Analyzed: 1.00 Liter

CAS #	COMPOUND	RESULT (UG/M^3)	DETECTION LIMIT (UG/M^3)	RESULT (PPB)	DETECTION LIMIT (PPB)
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.0	ND	1.1
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.0	ND	0.93
108-88-3	TOLUENE	ND	5.0	ND	1.3
124-48-1	DIBROMOCHLOROMETHANE	ND	5.0	ND	0.59
106-93-4	1,2-DIBROMOETHANE	ND	5.0	ND	0.65
127-18-4	TETRACHLOROETHENE	ND	5.0	ND	0.75
108-90-7	CHLOROBENZENE	ND	5.0	ND	1.1
100-41-4	ETHYLBENZENE	ND	5.0	ND	1.2
75-25-2	BROMOFORM	ND	5.0	ND	0.49
100-42-5	STYRENE	ND	5.0	ND	1.2
1330-20-7	TOTAL XYLENES	ND	5.0	ND	1.2
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.0	ND	0.74
541-73-1	1,3-DICHLOROBENZENE	ND	5.0	ND	0.84
106-46-7	1,4-DICHLOROBENZENE	ND	5.0	ND	0.84
95-50-1	1,2-DICHLOROBENZENE	ND	5.0	ND	0.84

ND = Not Detected TR = Trace Level - Below Indicated Detection Limit

20954 Osborne Street, Canoga Park, CA 91304 • Phone 818 709-1139 • Fax 818 709-2915

CHAIN OF CUSTODY RECORD

MEREDITH/BOLI & ASSOCIATES, INC.
SCIENTIFIC and REGULATORY CONSULTANTS
6701 Center Drive West, Suite 900 Los Angeles, California 90045-1535
phone (213) 670-9221 fax (213) 670-9512

#3488

CONTACT PERSON: Roger McCracken

SAMPLE LOCATION: OSCO

PHONE # 213/670-9221

SOURCE of WASTE: SOIL GAS

PROJECT # 90-211

PO # 90-211

ANALYSIS REQUESTED

TURNAROUND TIME: NORMAL / RUSH

COMMENTS (Precautions/Hazards/Field Conditions)

SAMPLE ID #	LAB ID#	DATE	TIME	SAMPLE TYPE	# of CONTAINERS	PRESERV. ATION	OTHER	418.1 (TRPH)	8015 MODIFIED (TPH)	DOHS LUFT (TPH)	8020 (BTXE)	8010 (VOCs)	8240 (VOCs)	8270 (BNAs)	8080 (PCBs)	CAC METALS	8015 Mod/8020	8010/8020	OTHER TO-14	NOTES
✓ B1		8/26/91	10:45	GAS	1														X	9102941
✓ B1-D		8/26/91	10:45	GAS	1															HOLD 9102942

Field Analysis found PCE over 4000 PPM

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
COLLECTED by [signature]	R. McCracken	M/BEA	8/27/91	8:00
RELEASED to				
RELEASED to				
RECEIVED by LABORATORY [signature]	L. Casteel	PAI	8/27/91	8:00

APPENDIX C

INPUT/OUTPUT FOR SOIL MODEL

PROGRAM 'SOIL', CALCULATION OF CHEMICAL BEHAVIOR IN SURFACE SOIL

DISTRIBUTION AND FATE OF TOLUENE

PROPERTIES AT TEMPERATURE OF 25 deg C

MOLECULAR WEIGHT g/mol	92.14	
SOLUBILITY g/m3	515	
VAPOR PRESSURE Pa	3800	
VAPOR DENSITY g/m3	141.3206	
HENRY'S LAW CONSTANT Pa.m3/mol	679.868	
AIR WATER PARTITION COEFFICIENT	.274409	
ORGANIC CARBON PARTITION COEFF L/kg	114.82	
ORGANIC MATTER PARTITION COEFF L/kg	64.2992	
MINERAL-WATER PARTITION COEFF L/kg	1	
REACTION HALF LIFE hours and days	0	0

AREA m2 10 DEPTH m 91.44 DIFFUSION DISTANCE m 0
CHEMICAL DOSAGE kg/ha 20456 AMOUNT grams 20456 moles 222.01

	AIR	WATER	ORGANIC MATTER	MINERAL MATTER
DENSITIES	1.186	1000.000	1000.000	2500.000
VOLUMES	2.743E+02	1.829E+02	1.019E+00	4.562E+02
VOL FRACTNS	3.000E-01	2.000E-01	1.115E-03	4.989E-01
MASS kg	3.253E+02	1.829E+05	1.019E+03	1.140E+06
Z VALUES	4.036E-04	1.471E-03	9.458E-02	3.677E-03
CONC mol/m3	4.161E-02	1.516E-01	9.750E+00	3.791E-01
CONC g/m3	3.834E+00	1.397E+01	8.983E+02	3.493E+01
CONC ug/g	3.233E+03	1.397E+01	8.983E+02	1.397E+01
MOLES	1.141E+01	2.773E+01	9.936E+00	1.729E+02
GRAMS	1.052E+03	2.555E+03	9.155E+02	1.593E+04
PERCENT	5.14131	12.49063	4.47567	77.89239

FUGACITY Pa	103.0896
TOTAL SOIL VOLUME m3	914.4
TOTAL SOIL MASS kg	1324677
TOTAL DRY SOIL MASS kg	1141471
MASS ORGANIC CARBON kg	570.7357
SOIL DENSITY kg/m3	1448.684
ORGANIC CARBON CONTENT g/g DRY SOIL	.0005
ORGANIC MATTER CONTENT g/g DRY SOIL	8.928572E-04
MINERAL-WATER PARTITION COEFF d'less	2.5
WATER LEACHING RATE mm/day	0

PROCESS	D VALUES	FLUXES mol/h	FLUXES g/h	PERCENTS
REACTION	1.701E+38	1.701E+38	1.701E+38	1.000E+00
LEACHING	0.000E+00	0.000E+00	0.000E+00	0.000E+00
VOLATILZATN	1.522E-02	1.569E+00	1.446E+02	9.225E-37
TOTAL	1.701E+38	1.701E+38	1.701E+38	

AIR DIFFUSION D VALUE	1.701412E+38	
WATER DIFFUSION D VALUE	1.701412E+38	
AIR BOUNDARY LAYER D VALUE	.0152243	
VOLATILIZATION HALF LIFE hours & days	98.02874	4.084531
LEACHING HALF LIFE hours & days	1.701412E+38	
7.089216E+36		
REACTION HALF LIFE hours & days	0	0
OVERALL HALF LIFE hours & days	8.771651E-39	
0		

PROGRAM 'SOIL', CALCULATION OF CHEMICAL BEHAVIOR IN SURFACE SOIL

DISTRIBUTION AND FATE OF XYLENE

PROPERTIES AT TEMPERATURE OF 25 deg C

MOLECULAR WEIGHT g/mol	106.17	
SOLUBILITY g/m3	204	
VAPOR PRESSURE Pa	882	
VAPOR DENSITY g/m3	37.79585	
HENRY'S LAW CONSTANT Pa.m3/mol	459.0291	
AIR WATER PARTITION COEFFICIENT	.1852738	
ORGANIC CARBON PARTITION COEFF L/kg	129	
ORGANIC MATTER PARTITION COEFF L/kg	72.24	
MINERAL-WATER PARTITION COEFF L/kg	1	
REACTION HALF LIFE hours and days	0	0

AREA m2 10 DEPTH m 91.44 DIFFUSION DISTANCE m 0

CHEMICAL DOSAGE kg/ha 58672 AMOUNT grams 58672 moles 552.6232

	AIR	WATER	ORGANIC MATTER	MINERAL MATTER
DENSITIES	1.186	1000.000	1000.000	2500.000
VOLUMES	2.743E+02	1.829E+02	1.019E+00	4.562E+02
VOL FRACTNS	3.000E-01	2.000E-01	1.115E-03	4.989E-01
MASS kg	3.253E+02	1.829E+05	1.019E+03	1.140E+06
Z VALUES	4.036E-04	2.179E-03	1.574E-01	5.446E-03
CONC mol/m3	7.072E-02	3.817E-01	2.757E+01	9.543E-01
CONC g/m3	7.508E+00	4.053E+01	2.928E+03	1.013E+02
CONC ug/g	6.331E+03	4.053E+01	2.928E+03	4.053E+01
MOLES	1.940E+01	6.981E+01	2.810E+01	4.353E+02
GRAMS	2.060E+03	7.411E+03	2.984E+03	4.622E+04
PERCENT	3.51050	12.63176	5.08522	78.77251

FUGACITY Pa	175.2133
TOTAL SOIL VOLUME m3	914.4
TOTAL SOIL MASS kg	1324677
TOTAL DRY SOIL MASS kg	1141471
MASS ORGANIC CARBON kg	570.7357
SOIL DENSITY kg/m3	1448.684
ORGANIC CARBON CONTENT g/g DRY SOIL	.0005
ORGANIC MATTER CONTENT g/g DRY SOIL	8.928572E-04
MINERAL-WATER PARTITION COEFF d'less	2.5
WATER LEACHING RATE mm/day	0

PROCESS	D VALUES	FLUXES mol/h	FLUXES g/h	PERCENTS
REACTION	1.701E+38	1.701E+38	1.701E+38	1.000E+00
LEACHING	0.000E+00	0.000E+00	0.000E+00	0.000E+00
VOLATILZATN	1.522E-02	2.667E+00	2.832E+02	1.568E-36
TOTAL	1.701E+38	1.701E+38	1.701E+38	

AIR DIFFUSION D VALUE	1.701412E+38	
WATER DIFFUSION D VALUE	1.701412E+38	
AIR BOUNDARY LAYER D VALUE	.0152243	
VOLATILIZATION HALF LIFE hours & days	143.5681	5.982006
LEACHING HALF LIFE hours & days	1.701412E+38	
7.089216E+36		
REACTION HALF LIFE hours & days	0	0
OVERALL HALF LIFE hours & days	1.284653E-38	
0		

PROGRAM 'SOIL', CALCULATION OF CHEMICAL BEHAVIOR IN SURFACE SOIL

DISTRIBUTION AND FATE OF MEK

PROPERTIES AT TEMPERATURE OF 25 deg C

MOLECULAR WEIGHT g/mol	72.11	
SOLUBILITY g/m3	353000	
VAPOR PRESSURE Pa	10400	
VAPOR DENSITY g/m3	302.6931	
HENRY'S LAW CONSTANT Pa.m3/mol	2.124487	
AIR WATER PARTITION COEFFICIENT	8.574875E-04	
ORGANIC CARBON PARTITION COEFF L/kg	1.23	
ORGANIC MATTER PARTITION COEFF L/kg	.6888	
MINERAL-WATER PARTITION COEFF L/kg	1	
REACTION HALF LIFE hours and days	0	0

AREA m2 10 DEPTH m 91.44 DIFFUSION DISTANCE m 0
CHEMICAL DOSAGE kg/ha 3.944844E+07 AMOUNT grams 3.944844E+07 moles
547059.2

	AIR	WATER	ORGANIC MATTER	MINERAL MATTER
DENSITIES	1.186	1000.000	1000.000	2500.000
VOLUMES	2.743E+02	1.829E+02	1.019E+00	4.562E+02
VOL FRACTNS	3.000E-01	2.000E-01	1.115E-03	4.989E-01
MASS kg	3.253E+02	1.829E+05	1.019E+03	1.140E+06
Z VALUES	4.036E-04	4.707E-01	3.242E-01	1.177E+00
CONC mol/m3	3.542E-01	4.131E+02	2.845E+02	1.033E+03
CONC g/m3	2.554E+01	2.979E+04	2.052E+04	7.447E+04
CC ug/g	2.154E+04	2.979E+04	2.052E+04	2.979E+04
MOLES	9.717E+01	7.555E+04	2.900E+02	4.711E+05
GRAMS	7.007E+03	5.448E+06	2.091E+04	3.397E+07
PERCENT	0.01776	13.80988	0.05301	86.11934

FUGACITY Pa	877.6312
TOTAL SOIL VOLUME m3	914.4
TOTAL SOIL MASS kg	1324677
TOTAL DRY SOIL MASS kg	1141471
MASS ORGANIC CARBON kg	570.7357
SOIL DENSITY kg/m3	1448.684
ORGANIC CARBON CONTENT g/g DRY SOIL	.0005
ORGANIC MATTER CONTENT g/g DRY SOIL	8.928572E-04
MINERAL-WATER PARTITION COEFF d'less	2.5
WATER LEACHING RATE mm/day	0

PROCESS	D VALUES	FLUXES mol/h	FLUXES g/h	PERCENTS
REACTION	1.701E+38	1.701E+38	1.701E+38	1.000E+00
LEACHING	0.000E+00	0.000E+00	0.000E+00	0.000E+00
VOLATILZATN	1.522E-02	1.336E+01	9.635E+02	7.853E-36
TOTAL	1.701E+38	1.701E+38	1.701E+38	

AIR DIFFUSION D VALUE	1.701412E+38
WATER DIFFUSION D VALUE	1.701412E+38
AIR BOUNDARY LAYER D VALUE	.0152243

VOLATILIZATION HALF LIFE hours & days	28373.85	1182.244
LEACHING HALF LIFE hours & days	1.701412E+38	
7.089216E+36		
REACTION HALF LIFE hours & days	0	0
OVERALL HALF LIFE hours & days	2.538903E-36	

PROGRAM 'SOIL', CALCULATION OF CHEMICAL BEHAVIOR IN SURFACE SOIL

DISTRIBUTION AND FATE OF ACETONE

PROPERTIES AT TEMPERATURE OF 25 deg C

MOLECULAR WEIGHT g/mol	58.08	
SOLUBILITY g/m3	512000	
VAPOR PRESSURE Pa	35378	
VAPOR DENSITY g/m3	829.3419	
HENRY'S LAW CONSTANT Pa.m3/mol	4.013192	
AIR WATER PARTITION COEFFICIENT	1.619808E-03	
ORGANIC CARBON PARTITION COEFF L/kg	.37	
ORGANIC MATTER PARTITION COEFF L/kg	.2072	
MINERAL-WATER PARTITION COEFF L/kg	1	
REACTION HALF LIFE hours and days	0	0

AREA m2 10 DEPTH m 91.44 DIFFUSION DISTANCE m 0
CHEMICAL DOSAGE kg/ha 7516780 AMOUNT grams 7516780 moles 129421.1

	AIR	WATER	ORGANIC MATTER	MINERAL MATTER
DENSITIES	1.186	1000.000	1000.000	2500.000
VOLUMES	2.743E+02	1.829E+02	1.019E+00	4.562E+02
VOL FRACTNS	3.000E-01	2.000E-01	1.115E-03	4.989E-01
MASS kg	3.253E+02	1.829E+05	1.019E+03	1.140E+06
Z VALUES	4.036E-04	2.492E-01	5.163E-02	6.229E-01
CONC mol/m3	1.583E-01	9.775E+01	2.025E+01	2.444E+02
CONC g/m3	9.196E+00	5.677E+03	1.176E+03	1.419E+04
CONC ug/g	7.754E+03	5.677E+03	1.176E+03	5.677E+03
MOLES	4.344E+01	1.788E+04	2.064E+01	1.115E+05
GRAMS	2.523E+03	1.038E+06	1.199E+03	6.475E+06
PERCENT	0.03356	13.81282	0.01595	86.13768

FUGACITY Pa	392.2936
TOTAL SOIL VOLUME m3	914.4
TOTAL SOIL MASS kg	1324677
TOTAL DRY SOIL MASS kg	1141471
MASS ORGANIC CARBON kg	570.7357
SOIL DENSITY kg/m3	1448.684
ORGANIC CARBON CONTENT g/g DRY SOIL	.0005
ORGANIC MATTER CONTENT g/g DRY SOIL	8.928572E-04
MINERAL-WATER PARTITION COEFF d'less	2.5
WATER LEACHING RATE mm/day	0

PROCESS	D VALUES	FLUXES mol/h	FLUXES g/h	PERCENTS
REACTION	1.701E+38	1.701E+38	1.701E+38	1.000E+00
LEACHING	0.000E+00	0.000E+00	0.000E+00	0.000E+00
VOLATILZATN	1.522E-02	5.972E+00	3.469E+02	3.510E-36
TOTAL	1.701E+38	1.701E+38	1.701E+38	

AIR DIFFUSION D VALUE	1.701412E+38	
WATER DIFFUSION D VALUE	1.701412E+38	
AIR BOUNDARY LAYER D VALUE	.0152243	
VOLATILIZATION HALF LIFE hours & days	15017.24	625.7182
LEACHING HALF LIFE hours & days	1.701412E+38	7.089216E+36
REACTION HALF LIFE hours & days	0	0
OVERALL HALF LIFE hours & days	1.343748E-36	5.598951E-38

PROGRAM 'SOIL', CALCULATION OF CHEMICAL BEHAVIOR IN SURFACE SOIL

DISTRIBUTION AND FATE OF PCE

PROPERTIES AT TEMPERATURE OF 25 deg C

MOLECULAR WEIGHT g/mol	165.83	
SOLUBILITY g/m3	150	
VAPOR PRESSURE Pa	2480	
VAPOR DENSITY g/m3	165.9925	
HENRY'S LAW CONSTANT Pa.m3/mol	2741.723	
AIR WATER PARTITION COEFFICIENT	1.106617	
ORGANIC CARBON PARTITION COEFF L/kg	263	
ORGANIC MATTER PARTITION COEFF L/kg	147.28	
MINERAL-WATER PARTITION COEFF L/kg	1	
REACTION HALF LIFE hours and days	0	0

AREA m2 10 DEPTH m 91.44 DIFFUSION DISTANCE m 0
CHEMICAL DOSAGE kg/ha 49137 AMOUNT grams 49137 moles 296.3095

	AIR	WATER	ORGANIC MATTER	MINERAL MATTER
DENSITIES	1.186	1000.000	1000.000	2500.000
VOLUMES	2.743E+02	1.829E+02	1.019E+00	4.562E+02
VOL FRACTNS	3.000E-01	2.000E-01	1.115E-03	4.989E-01
MASS kg	3.253E+02	1.829E+05	1.019E+03	1.140E+06
Z VALUES	4.036E-04	3.647E-04	5.372E-02	9.118E-04
CONC mol/m3	1.845E-01	1.667E-01	2.456E+01	4.169E-01
CONC g/m3	3.060E+01	2.765E+01	4.073E+03	6.913E+01
CONC ug/g	2.580E+04	2.765E+01	4.073E+03	2.765E+01
MOLES	5.062E+01	3.049E+01	2.503E+01	1.902E+02
GRAMS	8.394E+03	5.057E+03	4.150E+03	3.154E+04
PERCENT	17.08314	10.29151	8.44679	64.17857

FUGACITY Pa	457.1746
TOTAL SOIL VOLUME m3	914.4
TOTAL SOIL MASS kg	1324677
TOTAL DRY SOIL MASS kg	1141471
MASS ORGANIC CARBON kg	570.7357
SOIL DENSITY kg/m3	1448.684
ORGANIC CARBON CONTENT g/g DRY SOIL	.0005
ORGANIC MATTER CONTENT g/g DRY SOIL	8.928572E-04
MINERAL-WATER PARTITION COEFF d'less	2.5
WATER LEACHING RATE mm/day	0

PROCESS	D VALUES	FLUXES mol/h	FLUXES g/h	PERCENTS
REACTION	1.103E+38	1.701E+38	1.701E+38	1.000E+00
LEACHING	0.000E+00	0.000E+00	0.000E+00	0.000E+00
VOLATILZATN	1.522E-02	6.960E+00	1.154E+03	4.091E-36
TOTAL	1.103E+38	1.701E+38	1.701E+38	

AIR DIFFUSION D VALUE	1.701412E+38	
WATER DIFFUSION D VALUE	1.701412E+38	
AIR BOUNDARY LAYER D VALUE	.0152243	
VOLATILIZATION HALF LIFE hours & days	29.50255	1.229273
LEACHING HALF LIFE hours & days	1.701412E+38	
7.89216E+36		
REACTION HALF LIFE hours & days	0	0
OVERALL HALF LIFE hours & days	4.073089E-39	
0		

PROGRAM 'SOIL', CALCULATION OF CHEMICAL BEHAVIOR IN SURFACE SOIL

DISTRIBUTION AND FATE OF TCA

PROPERTIES AT TEMPERATURE OF 25 deg C

MOLECULAR WEIGHT g/mol	133.4	
SOLUBILITY g/m3	720	
VAPOR PRESSURE Pa	16.53	
VAPOR DENSITY g/m3	.8900254	
HENRY'S LAW CONSTANT Pa.m3/mol	3.062642	
AIR WATER PARTITION COEFFICIENT	1.236146E-03	
ORGANIC CARBON PARTITION COEFF L/kg	151.4	
ORGANIC MATTER PARTITION COEFF L/kg	84.78399	
MINERAL-WATER PARTITION COEFF L/kg	1	
REACTION HALF LIFE hours and days	0	0

AREA m2 10 DEPTH m 91.44 DIFFUSION DISTANCE m 0

CHEMICAL DOSAGE kg/ha 1515189 AMOUNT grams 1515189 moles 11358.24

	AIR	WATER	ORGANIC MATTER	MINERAL MATTER
DENSITIES	1.186	1000.000	1000.000	2500.000
VOLUMES	2.743E+02	1.829E+02	1.019E+00	4.562E+02
VOL FRACTNS	3.000E-01	2.000E-01	1.115E-03	4.989E-01
MASS kg	3.253E+02	1.829E+05	1.019E+03	1.140E+06
Z VALUES	4.036E-04	3.265E-01	2.768E+01	8.163E-01
CONC mol/m3	9.957E-03	8.055E+00	6.829E+02	2.014E+01
CONC g/m3	1.328E+00	1.075E+03	9.110E+04	2.686E+03
CONC ug/g	1.120E+03	1.075E+03	9.110E+04	1.075E+03
MOLES	2.731E+00	1.473E+03	6.960E+02	9.186E+03
GRAMS	3.644E+02	1.965E+05	9.285E+04	1.225E+06
PERCENT	0.02405	12.96949	6.12781	80.87864

FUGACITY Pa	24.66971
TOTAL SOIL VOLUME m3	914.4
TOTAL SOIL MASS kg	1324677
TOTAL DRY SOIL MASS kg	1141471
MASS ORGANIC CARBON kg	570.7357
SOIL DENSITY kg/m3	1448.684
ORGANIC CARBON CONTENT g/g DRY SOIL	.0005
ORGANIC MATTER CONTENT g/g DRY SOIL	8.928572E-04
MINERAL-WATER PARTITION COEFF d'less	2.5
WATER LEACHING RATE mm/day	0

PROCESS	D VALUES	FLUXES mol/h	FLUXES g/h	PERCENTS
REACTION	1.701E+38	1.701E+38	1.701E+38	1.000E+00
LEACHING	0.000E+00	0.000E+00	0.000E+00	0.000E+00
VOLATILZATN	1.522E-02	3.756E-01	5.010E+01	2.207E-37
TOTAL	1.701E+38	1.701E+38	1.701E+38	

AIR DIFFUSION D VALUE	1.701412E+38	
WATER DIFFUSION D VALUE	1.701412E+38	
AIR BOUNDARY LAYER D VALUE	.0152243	
VOLATILIZATION HALF LIFE hours & days	20957.67	873.2363
LEACHING HALF LIFE hours & days	1.701412E+38	
7.089216E+36		
REACTION HALF LIFE hours & days	0	0
OVERALL HALF LIFE hours & days	1.875301E-36	
7.813752E-38		

PROGRAM 'SOIL', CALCULATION OF CHEMICAL BEHAVIOR IN SURFACE SOIL

DISTRIBUTION AND FATE OF TCE

PROPERTIES AT TEMPERATURE OF 25 deg C

MOLECULAR WEIGHT g/mol	131.39	
SOLUBILITY g/m3	1100	
VAPOR PRESSURE Pa	9870	
VAPOR DENSITY g/m3	523.4235	
HENRY'S LAW CONSTANT Pa.m3/mol	1178.927	
AIR WATER PARTITION COEFFICIENT	.4758395	
ORGANIC CARBON PARTITION COEFF L/kg	64.56	
ORGANIC MATTER PARTITION COEFF L/kg	36.1536	
MINERAL-WATER PARTITION COEFF L/kg	1	
REACTION HALF LIFE hours and days	0	0

AREA m2 10 DEPTH m 91.44 DIFFUSION DISTANCE m 0

CHEMICAL DOSAGE kg/ha 13285 AMOUNT grams 13285 moles 101.1112

	AIR	WATER	ORGANIC MATTER	MINERAL MATTER
DENSITIES	1.186	1000.000	1000.000	2500.000
VOLUMES	2.743E+02	1.829E+02	1.019E+00	4.562E+02
VOL FRACTNS	3.000E-01	2.000E-01	1.115E-03	4.989E-01
MASS kg	3.253E+02	1.829E+05	1.019E+03	1.140E+06
Z VALUES	4.036E-04	8.482E-04	3.067E-02	2.121E-03
CONC mol/m3	3.228E-02	6.783E-02	2.452E+00	1.696E-01
CONC g/m3	4.241E+00	8.912E+00	3.222E+02	2.228E+01
CONC ug/g	3.576E+03	8.912E+00	3.222E+02	8.912E+00
MOLES	8.854E+00	1.240E+01	2.499E+00	7.735E+01
GRAMS	1.163E+03	1.630E+03	3.284E+02	1.016E+04
PERCENT	8.75638	12.26798	2.47168	76.50395

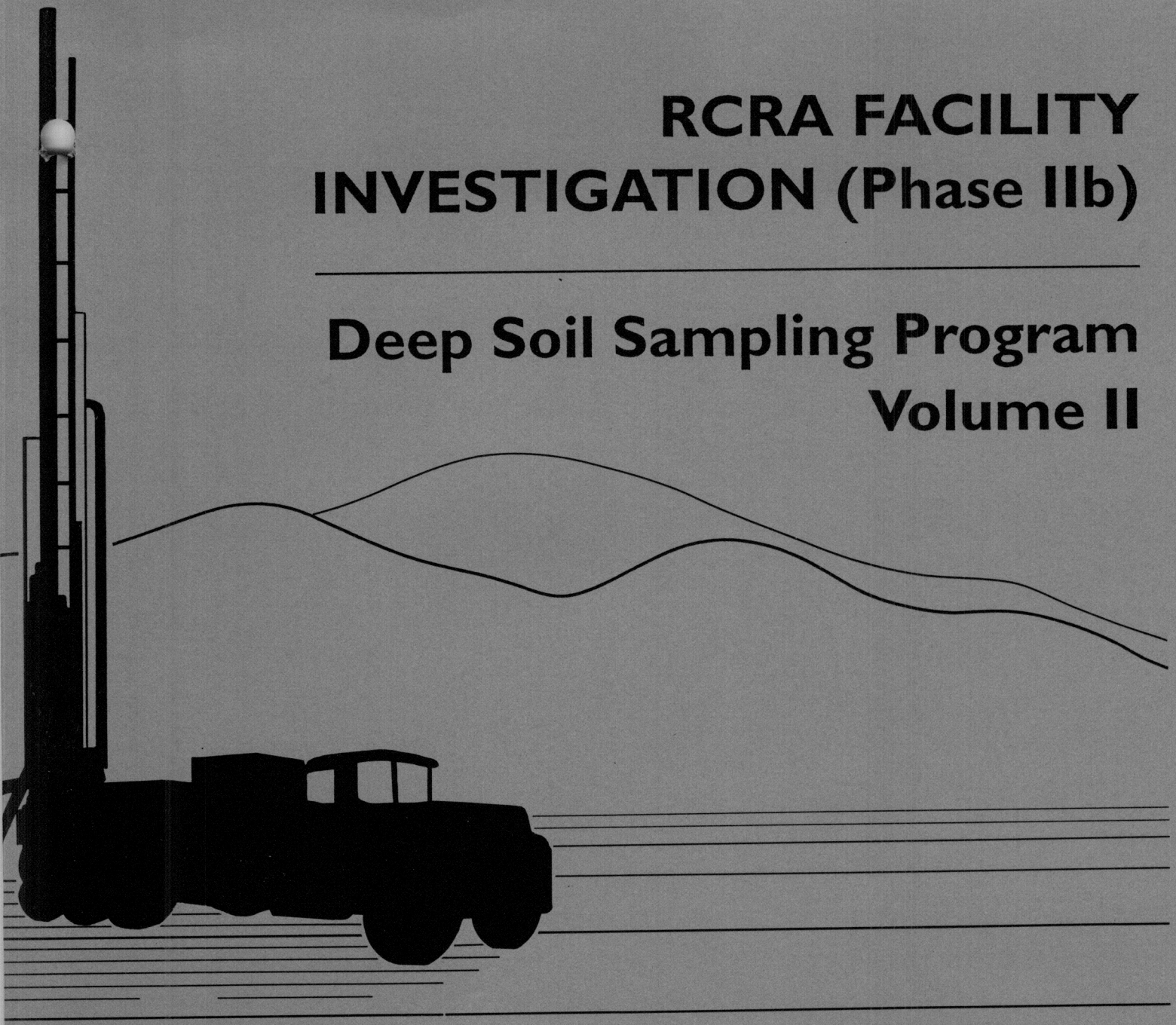
FUGACITY Pa	79.9637
TOTAL SOIL VOLUME m3	914.4
TOTAL SOIL MASS kg	1324677
TOTAL DRY SOIL MASS kg	1141471
MASS ORGANIC CARBON kg	570.7357
SOIL DENSITY kg/m3	1448.684
ORGANIC CARBON CONTENT g/g DRY SOIL	.0005
ORGANIC MATTER CONTENT g/g DRY SOIL	8.928572E-04
MINERAL-WATER PARTITION COEFF d'less	2.5
WATER LEACHING RATE mm/day	0

PROCESS	D VALUES	FLUXES mol/h	FLUXES g/h	PERCENTS
REACTION	1.701E+38	1.701E+38	1.701E+38	1.000E+00
LEACHING	0.000E+00	0.000E+00	0.000E+00	0.000E+00
VOLATILZATN	1.522E-02	1.217E+00	1.600E+02	7.155E-37
TOTAL	1.701E+38	1.701E+38	1.701E+38	

AIR DIFFUSION D VALUE	1.701412E+38	
WATER DIFFUSION D VALUE	1.701412E+38	
AIR BOUNDARY LAYER D VALUE	.0152243	
VOLATILIZATION HALF LIFE hours & days	57.55756	2.398232
LEACHING HALF LIFE hours & days	1.701412E+38	
7.089216E+36		
REACTION HALF LIFE hours & days	0	0
OVERALL HALF LIFE hours & days	5.150273E-39	
0		

RCRA FACILITY INVESTIGATION (Phase IIb)

Deep Soil Sampling Program
Volume II



OIL & SOLVENT PROCESS COMPANY
AZUSA, CALIFORNIA

MEREDITH/BOLI & ASSOCIATES, INC.

SCIENTIFIC and REGULATORY CONSULTANTS

6701 Center Drive West, Suite 900
Los Angeles, California 90045-1535
(213) 670-9221

RCRA FACILITY INVESTIGATION (PHASE IIb)
DEEP SOIL SAMPLING PROGRAM

Oil & Solvent Process Company
Azusa, California

VOLUME II

Prepared for:

OIL & SOLVENT PROCESS COMPANY
1704 West First Street
Azusa, California 91702

Submitted to:

US ENVIRONMENTAL PROTECTION AGENCY
Region IX
75 Hawthorne Street
San Francisco, California 94105

and

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
Department of Toxic Substances Control
Region III
1405 North San Fernando Boulevard, Suite 300
Burbank, California 91504

18 November 1991

APPENDIX H

LABORATORY REPORTS FOR DEEP SOIL BORING PROGRAM

Appendix H.1 -- Soil Physical Analysis Laboratory Report

Appendix H.2 -- Soil Vapor Sample Laboratory Report

Appendix H.3 -- Soil Chemistry Analysis Laboratory Reports

Boring B-1
Boring B-2
Boring B-2R
Boring B-3
Boring B-4
Boring B-5
Boring B-6
Boring B-8
Boring B-8R

APPENDIX H.1

SOIL PHYSICAL ANALYSIS LABROATORY REPORT

The Earth Technology Corporation®

18411 Gothard Street, Unit F
Huntington Beach, California 92648
Telephone: (714) 842-7011 / Fax: (714) 842-3735

July 17, 1991

Knight Piésold and Co.
30 Hughes, Suite 205
Irvine, CA 92718

Attention: Mr. Frank J. Hagar

Subject: Report/Laboratory Testing Results
Project: Osco, Azusa
TETC Project No.: 91-211-3201

Dear Mr. Hagar:

Enclosed is results of laboratory testing conducted on samples from the Osco, Azusa project. The testing performed for this program was completed in general accordance with ASTM and ASA-SSSA procedures as follows:

TEST TYPE	TEST PROCEDURE
Sieve Analysis	ASTM D 422
Atterberg Limits	ASTM D 4318
Total Organic Carbon	ASA-SSSA, Chapter 29

ASTM: American Society for Testing and Materials, Annual Book of ASTM Standards, Section 4, Volume 04.08, Soil and Rock; Dimension Stone; Geosynthetics, 1991.

ASA-SSSA: American Society of Agronomy, Inc./Soil Science Society of America, Inc., Methods of Soil Analysis, Part 2, Chemical and Microbiological Properties, Second Edition, 1982.

We appreciate the opportunity to provide testing services to Knight Piésold and Co. If you have any questions regarding the test results, please contact us.

Very truly yours,

THE EARTH TECHNOLOGY CORPORATION (Commercial)

Kean Tan
Supervisor, Geomechanics Laboratory

RECEIVED 9/22/91

KT/mgw
Enclosures

SUMMARY OF TEST RESULTS

PROJECT NAME: OSCO, AZUSA

TETC NO.: 91-211-3201

PROJECT NO.:

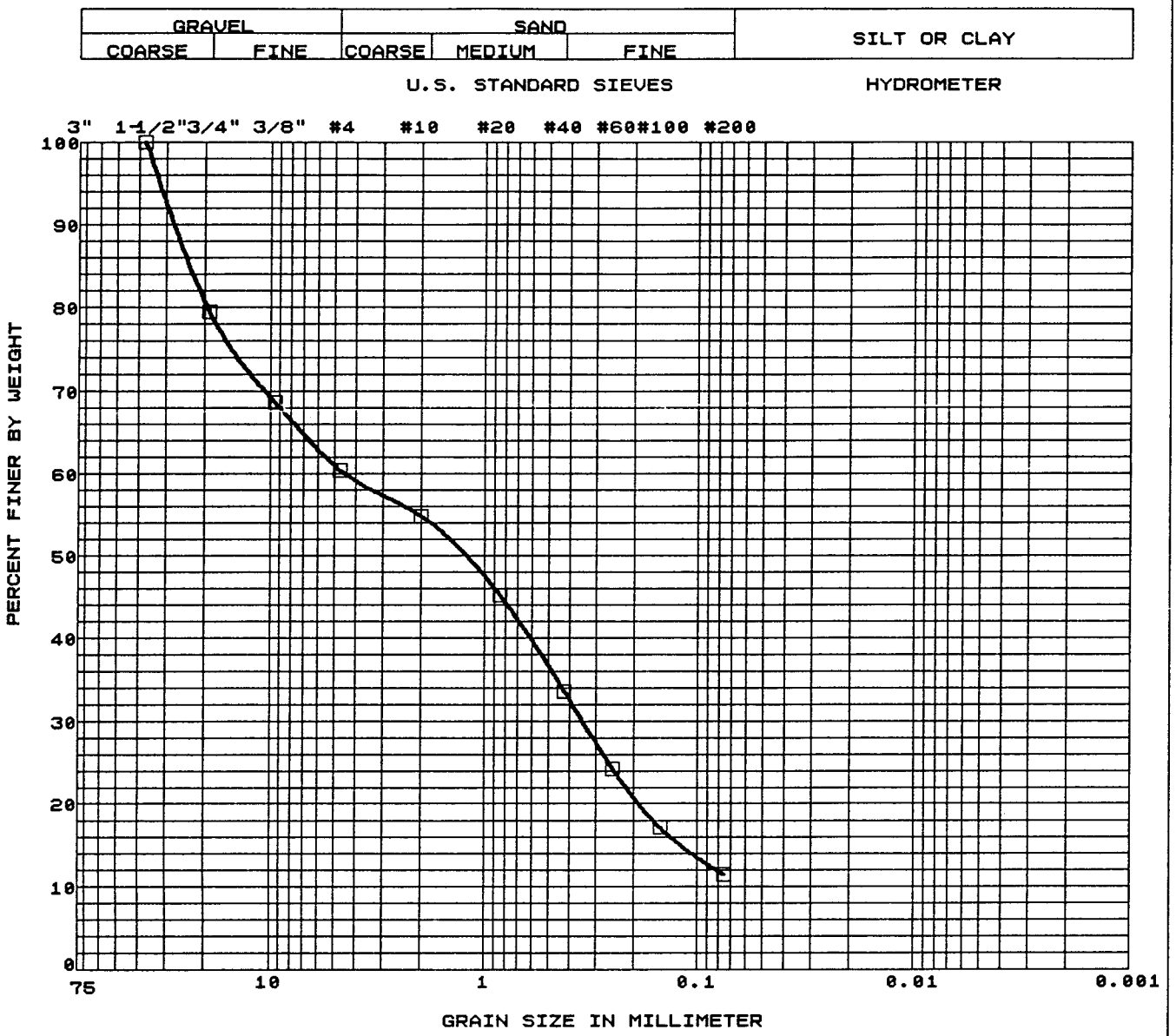
CLIENT: KNIGHT PIESOLD AND CO.

DATE: 7/18/91

SUMMARIZED BY: KEAN TAN

BORING NO.	SAMPLE NO.	DEPTH (FT)	USCS CLASS.	GRAIN SIZE DIST. (GR:SA:FI)	ATTERBERG LIMITS			TOTAL ORGANIC CARBON (%)
					LIQUID LIMITS	PLASTIC LIMITS	PI	
-	B5-65	-	SP-SM	40:49:11			NP	ND*
-	B6-86	-	SM	26:58:16			NP	ND*
-	B6-97	-	SW-SM	31:59:10			NP	ND*

* DETECTION LIMIT 0.1%



SYMBOL	BORING NO.	SAMPLE NO.	DEPTH (FT)	SAMPLE TYPE	SOIL TYPE	LIQUID LIMIT	PLASTI-CITY INDEX
□		B5-65		BAG	SP-SM	NP	NP

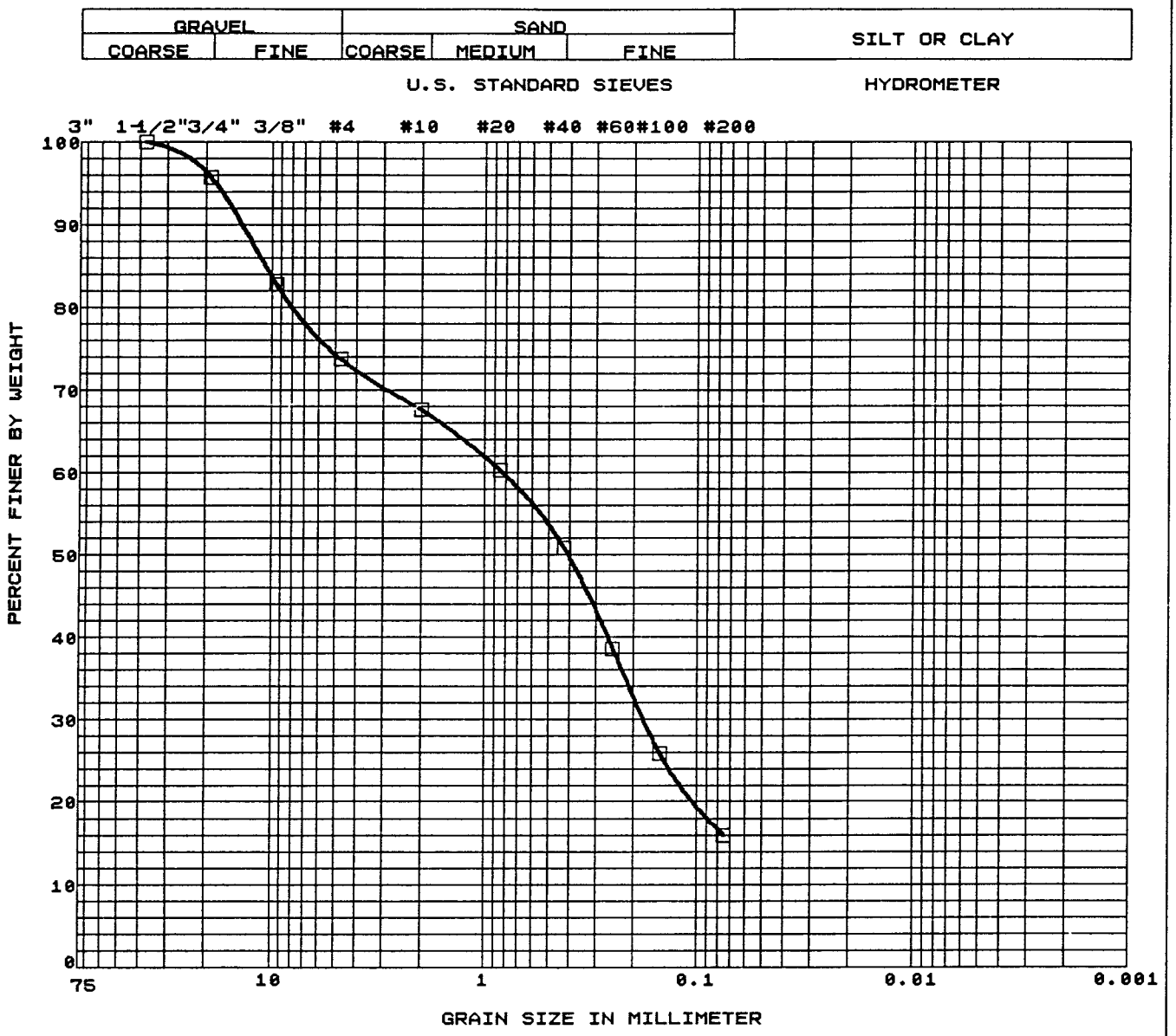
The Earth Technology Corporation

PROJECT NAME: OSCO, AZUSA

GRAIN SIZE DISTRIBUTION CURVE

7/91

FIGURE 1



SYMBOL	BORING NO.	SAMPLE NO.	DEPTH (FT)	SAMPLE TYPE	SOIL TYPE	LIQUID LIMIT	PLASTI-CITY INDEX
□		B6-86		BAG	SM	NP	NP

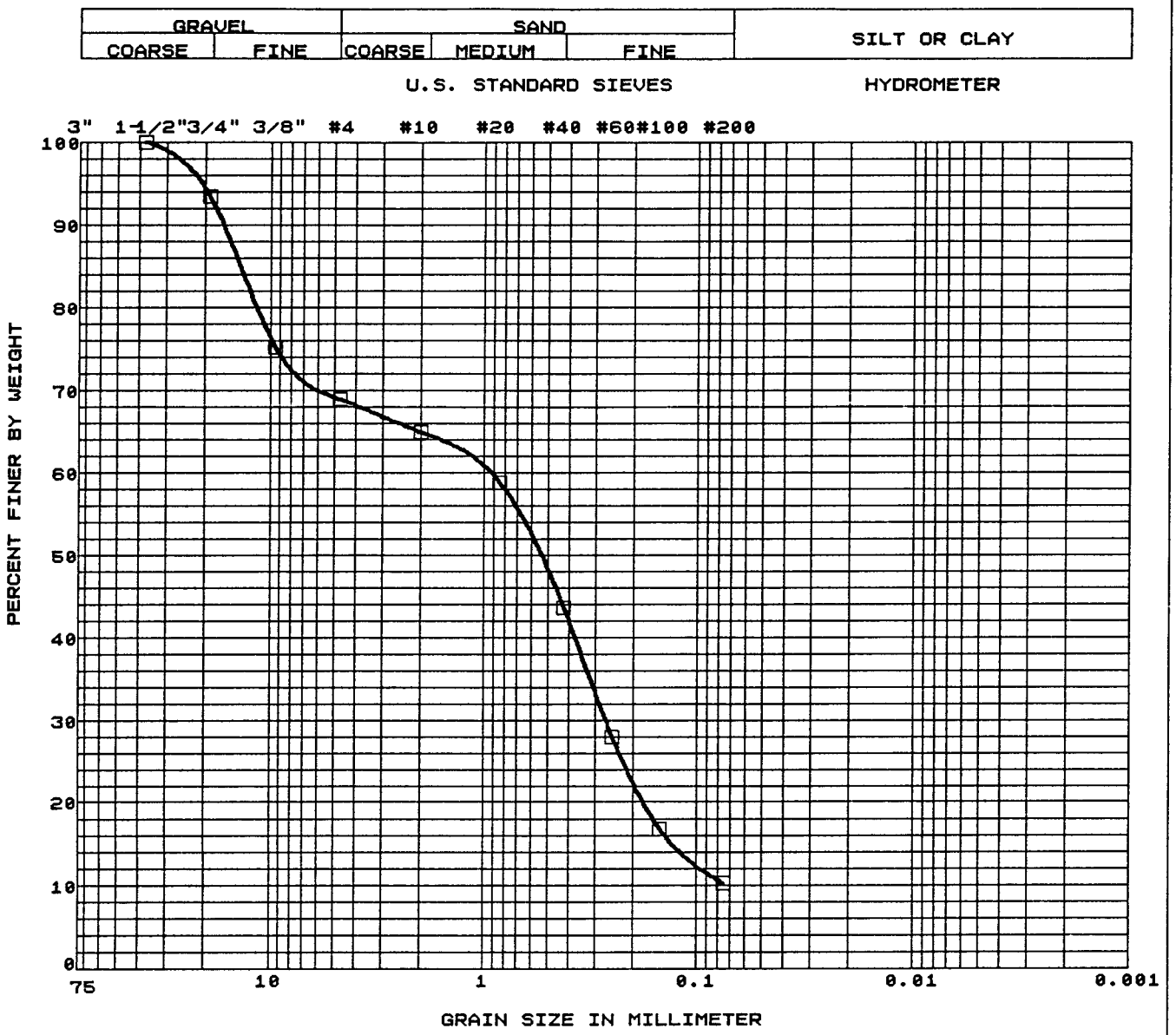
The Earth Technology Corporation

PROJECT NAME: OSCO, AZUSA

GRAIN SIZE DISTRIBUTION CURVE

7/91

FIGURE 2



SYMBOL	BORING NO.	SAMPLE NO.	DEPTH (FT)	SAMPLE TYPE	SOIL TYPE	LIQUID LIMIT	PLASTI-CITY INDEX
□		B6-97		BAG	SW-SM	NP	NP

The Earth Technology Corporation

PROJECT NAME: OSCO, AZUSA

GRAIN SIZE DISTRIBUTION CURVE

7/91

FIGURE 3

APPENDIX H.2

SOIL VAPOR SAMPLE LABORATORY REPORT

Performance Analytical Inc.
Environmental Testing and Consulting

RECEIVED
SEP 03 1991
M/B & A

LABORATORY REPORT

Client:	Meredith/Boli & Associates, Inc.	Date of Report:	08/30/91
Address:	6701 Center Drive West, Suite 900	Date Received:	08/27/91
	Los Angeles, CA 90045-1535	Purchase Order:	90-211
Contact:	Mr. Roger McCracken	PAI Project No:	3488

Client Project ID: OSCO #90-211

Two (2) Tedlar Bag Samples labeled: "B1" and "B1-D"

The samples were received at the laboratory under chain of custody on August 27, 1991. All samples were received intact. The chain of custody requested that sample "B1-D" be placed on hold. The sample was analyzed on August 27, 1991.

Volatile Organic Compound Analysis

The sample was analyzed by combined gas chromatography/mass spectrometry (GC/MS) for Volatile Organic compounds. The analyses were performed according to the methodology outlined in EPA Method TO-14 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, EPA 600/4-84-041, U.S. Environmental Protection Agency, Research Triangle Park, NC, April, 1984 and May, 1988. The Method was modified for using Tedlar Bags. The analyses were performed by gas chromatography/ mass spectrometry, utilizing a direct cryogenic trapping technique. The analytical system used was comprised of a Finnigan Model 4500C GC/MS/DS interfaced to a Tekmar 5010 Automatic Desorber. A thick film (5 micron) crossbonded 100% Dimethyl polysiloxane megabore column (RT_x-1, Restek Corporation, Bellefonte, PA) was used to achieve chromatographic separation.

The results of analysis are given on the attached data summary sheets.

Data Release Authorization:

Joseph Cook
Senior Chemist

Reviewed and Approved:

Michael Tuday
Laboratory Director

20954 Osborne Street, Canoga Park, CA 91304 • Phone 818 709-1139 • Fax 818 709-2915

Performance Analytical Inc.
Environmental Testing and Consulting

PERFORMANCE ANALYTICAL INC.

RESULTS OF ANALYSIS

Client: Meredith / Boli & Associates, Inc.

Client Sample ID: B1 (08/26/91) (10:45)

PAI Sample ID: 9102941

Test Code: GC/MS Mod. EPA TO-14
Analyst: Joseph Cook
Instrument ID: Finnigan 4500C/Tekmar 5010
Verified by: Michael Tuday

Matrix: Tedlar Bag
Date Received: 08/27/91
Date Analyzed: 08/27/91
Volume Analyzed: 0.50 ml
0.10 ml

CAS #	COMPOUND	RESULT (MG/M^3)	DETECTION LIMIT (MG/M^3)	RESULT (PPM)	DETECTION LIMIT (PPM)
74-87-3	CHLOROMETHANE	ND	10	ND	4.9
75-01-4	VINYL CHLORIDE	ND	10	ND	3.9
75-00-3	CHLOROETHANE	ND	10	ND	3.8
74-83-9	BROMOMETHANE	ND	10	ND	2.6
75-69-4	TRICHLOROFLUOROMETHANE	ND	10	ND	1.8
75-35-4	1,1-DICHLOROETHENE	68	10	17	2.5
75-09-2	METHYLENE CHLORIDE	ND	10	ND	2.9
75-15-0	CARBON DISULFIDE	ND	10	ND	3.2
76-13-1	TRICHLOROTRIFLUOROETHANE	850	10	110	1.3
156-60-5	TRANS-1,2-DICHLOROETHENE	ND	10	ND	2.5
156-59-2	CIS-1,2-DICHLOROETHENE	1500	10	370	2.5
75-34-3	1,1-DICHLOROETHANE	30	10	7.5	2.5
67-66-3	CHLOROFORM	ND	10	ND	2.1
107-06-2	1,2-DICHLOROETHANE	ND	10	ND	2.5
71-55-6	1,1,1-TRICHLOROETHANE	3300	10	610	1.9
71-43-2	BENZENE	ND	10	ND	3.1
56-23-5	CARBON TETRACHLORIDE	ND	10	ND	1.6
78-87-5	1,2-DICHLOROPROPANE	ND	10	ND	2.2
75-27-4	BROMODICHLOROMETHANE	ND	10	ND	1.5
79-01-6	TRICHLOROETHENE	820	10	150	1.9
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	10	ND	2.2

ND = Not Detected TR = Trace Level - Below Indicated Detection Limit

20954 Osborne Street, Canoga Park, CA 91304 • Phone 818 709 1159 • Fax 818 709 2915

Performance Analytical Inc.
Environmental Testing and Consulting

PERFORMANCE ANALYTICAL INC.

RESULTS OF ANALYSIS (Continued)

Client: Meredith / Boli & Associates, Inc.

Client Sample ID: B1 (08/26/91) (10:45)

PAI Sample ID: 9102941

Test Code: GC/MS Mod. EPA TO-14
Analyst: Joseph Cook
Instrument ID: Finnigan 4500C/Tekmar 5010
Verified by: Michael Tuday

Matrix: Tedlar Bag
Date Received: 08/27/91
Date Analyzed: 08/27/91
Volume Analyzed: 0.50 ml
0.10 ml

CAS #	COMPOUND	RESULT (MG/M^3)	DETECTION LIMIT (MG/M^3)	RESULT (PPM)	DETECTION LIMIT (PPM)
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	10	ND	2.2
79-00-5	1,1,2-TRICHLOROETHANE	ND	10	ND	1.9
108-88-3	TOLUENE	760	10	200	2.7
124-48-1	DIBROMOCHLOROMETHANE	ND	10	ND	1.2
106-93-4	1,2-DIBROMOETHANE	ND	10	ND	1.3
127-18-4	TETRACHLOROETHENE	19000	10	2800	1.5
108-90-7	CHLOROBENZENE	ND	10	ND	2.2
100-41-4	ETHYLBENZENE	200	10	45	2.3
75-25-2	BROMOFORM	ND	10	ND	0.98
100-42-5	STYRENE	5.2 TR	10	1.2 TR	2.4
1330-20-7	TOTAL XYLENES	970	10	220	2.3
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	10	ND	1.5
541-73-1	1,3-DICHLOROBENZENE	ND	10	ND	1.7
106-46-7	1,4-DICHLOROBENZENE	ND	10	ND	1.7
95-50-1	1,2-DICHLOROBENZENE	ND	10	ND	1.7

ND = Not Detected TR = Trace Level - Below Indicated Detection Limit

20954 Osborne Street, Canoga Park, CA 91304 • Phone 818 709-1139 • Fax 818 709-2915

Performance Analytical Inc.
Environmental Testing and Consulting

PERFORMANCE ANALYTICAL INC.

RESULTS OF ANALYSIS

Client: Meredith / Boli & Associates, Inc.

Client Sample ID: N/A

PAI Sample ID: PAI Method Blank

Test Code: GC/MS Mod. EPA TO-14
Analyst: Joseph Cook
Instrument ID: Finnigan 4500C/Tekmar 5010
Verified by: Michael Tuday

Matrix: Tedlar Bag
Date Received: N/A
Date Analyzed: 08/27/91
Volume Analyzed: 1.00 Liter

CAS #	COMPOUND	RESULT (UG/M^3)	DETECTION LIMIT (UG/M^3)	RESULT (PPB)	DETECTION LIMIT (PPB)
74-87-3	CHLOROMETHANE	ND	5.0	ND	2.4
75-01-4	VINYL CHLORIDE	ND	5.0	ND	2.0
75-00-3	CHLOROETHANE	ND	5.0	ND	1.9
74-83-9	BROMOMETHANE	ND	5.0	ND	1.3
75-69-4	TRICHLOROFLUOROMETHANE	ND	5.0	ND	0.90
75-35-4	1,1-DICHLOROETHENE	ND	5.0	ND	1.3
75-09-2	METHYLENE CHLORIDE	ND	5.0	ND	1.5
75-15-0	CARBON DISULFIDE	ND	5.0	ND	1.6
76-13-1	TRICHLOROTRIFLUOROETHANE	ND	5.0	ND	0.66
156-60-5	TRANS-1,2-DICHLOROETHENE	ND	5.0	ND	1.3
156-59-2	CIS-1,2-DICHLOROETHENE	ND	5.0	ND	1.3
75-34-3	1,1-DICHLOROETHANE	ND	5.0	ND	1.2
67-66-3	CHLOROFORM	ND	5.0	ND	1.0
107-06-2	1,2-DICHLOROETHANE	ND	5.0	ND	1.2
71-55-6	1,1,1-TRICHLOROETHANE	ND	5.0	ND	0.93
71-43-2	BENZENE	ND	5.0	ND	1.6
56-23-5	CARBON TETRACHLORIDE	ND	5.0	ND	0.80
78-87-5	1,2-DICHLOROPROPANE	ND	5.0	ND	1.1
75-27-4	BROMODICHLOROMETHANE	ND	5.0	ND	0.75
79-01-6	TRICHLOROETHENE	ND	5.0	ND	0.94
10061-01-5	CIS-1,3-DICHLOROPROPENE	ND	5.0	ND	1.1

ND = Not Detected TR = Trace Level - Below Indicated Detection Limit

20954 Osborne Street Canoga Park, CA 91304 • Phone 818 709-1139 • Fax 818 709-2915

Performance Analytical Inc.
Environmental Testing and Consulting

PERFORMANCE ANALYTICAL INC.

RESULTS OF ANALYSIS (Continued)

Client: Meredith / Boli & Associates, Inc.

Client Sample ID: N/A

PAI Sample ID: PAI Method Blank

Test Code:	GC/MS Mod. EPA TO-14	Matrix:	Tedlar Bag
Analyst:	Joseph Cook	Date Received:	N/A
Instrument ID:	Finnigan 4500C/Tekmar 5010	Date Analyzed:	08/27/91
Verified by:	Michael Tuday	Volume Analyzed:	1.00 Liter

CAS #	COMPOUND	RESULT (UG/M^3)	DETECTION LIMIT (UG/M^3)	RESULT (PPB)	DETECTION LIMIT (PPB)
10061-02-6	TRANS-1,3-DICHLOROPROPENE	ND	5.0	ND	1.1
79-00-5	1,1,2-TRICHLOROETHANE	ND	5.0	ND	0.93
108-88-3	TOLUENE	ND	5.0	ND	1.3
124-48-1	DIBROMOCHLOROMETHANE	ND	5.0	ND	0.59
106-93-4	1,2-DIBROMOETHANE	ND	5.0	ND	0.65
127-18-4	TETRACHLOROETHENE	ND	5.0	ND	0.75
108-90-7	CHLOROBENZENE	ND	5.0	ND	1.1
100-41-4	ETHYLBENZENE	ND	5.0	ND	1.2
75-25-2	BROMOFORM	ND	5.0	ND	0.49
100-42-5	STYRENE	ND	5.0	ND	1.2
1330-20-7	TOTAL XYLENES	ND	5.0	ND	1.2
79-34-5	1,1,2,2-TETRACHLOROETHANE	ND	5.0	ND	0.74
541-73-1	1,3-DICHLOROBENZENE	ND	5.0	ND	0.84
106-46-7	1,4-DICHLOROBENZENE	ND	5.0	ND	0.84
95-50-1	1,2-DICHLOROBENZENE	ND	5.0	ND	0.84

ND = Not Detected TR = Trace Level - Below Indicated Detection Limit

20954 Osborne Street, Canoga Park, CA 91304 • Phone 818 709-1139 • Fax 818 709-2915

CHAIN OF CUSTODY RECORD

MEREDITH/BOLI & ASSOCIATES, INC.
SCIENTIFIC and REGULATORY CONSULTANTS

6701 Center Drive West, Suite 900 Los Angeles, California 90045-1535
phone (213) 670-9221 fax (213) 670-9512

#3488

CONTACT PERSON: Roger McCracken

SAMPLE LOCATION: OSCO

PHONE # 213/670-9221

SOURCE of WASTE: SOIL GAS

PROJECT # 90-211

PO # 90-211

ANALYSIS REQUESTED

TURNAROUND TIME: NORMAL / RUSH

COMMENTS (Precautions/Hazards/Field Conditions)

SAMPLE ID #	LAB ID#	DATE	TIME	SAMPLE TYPE	# of CONTAINERS	PRESERV. ATION	OTHER	418.1 (TRPH)	8015 MODIFIED (TPH)	DOHS LUFT (TPH)	8020 (BTXE)	8010 (VOCs)	8240 (VOCs)	8270 (BNAs)	8080 (PCBs)	CAC METALS	8015 Mod/8020	8010/8020	OTHER TO-14	NOTES
✓ B1		8/26/91	10:45	GAS	1														X	9102941
✓ B1-D		8/26/91	10:45	GAS	1					Field Analysis found PCE over 4000 PPM										HOLD 9102942

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
COLLECTED by [signature]	R. McCracken	M/B&A	8/27/91	8:00
RELEASED to				
RELEASED to				
RECEIVED by LABORATORY [signature]	L. Casteel	PAI	8/27/91	8:00

APPENDIX H.3

SOIL CHEMISTRY ANALYSIS LABORATORY REPORTS

BORING B-1

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

13-MAR-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: B519
ANALYSES: 8010,8020

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B030791-001/002.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

Dat Kummerer
REVIEWED AND APPROVED

3-13-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Project: 90-211

Analysis No.: M-B030791-001/002
Date Sampled: 7-MAR-1991
Date Sample Rec'd: 7-MAR-1991
Date Analyzed: 7-MAR-1991
Sample Type: SOLID

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
B-1-20 200'	ND(5)	ND(5)	ND(5)	ND(15)
B-1-5-1	ND(5)	ND(5)	ND(5)	ND(15)
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B030791-001
Date Sampled: 7-MAR-1991
Date Sample Rec'd: 7-MAR-1991
Sample Type: SOLID
Date Analyzed: 7-MAR-1991 By: JS

Project: 90-211
Sample ID: B-1-20 200'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B030791-002
Date Sampled: 7-MAR-1991
Date Sample Rec'd: 7-MAR-1991
Sample Type: SOLID
Date Analyzed: 7-MAR-1991 By: JS

Project: 90-211
Sample ID: B-1-5-1

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B030791-001/002
Date Sampled: 7-MAR-1991
Date Sample Rec'd: 7-MAR-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B030791-001	CHLOROFORM (EPA 8010)	ug/kg	ND	113	101	100	113	101	107	11
B030791-001	CARBON TETRACHLORIDE (EPA 8010)	ug/kg	ND	83.6	86.5	100	84	87	85	3
B030791-001	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	129	123	100	129	123	126	5
B030791-001	TETRACHLOROETHENE (EPA 8010)	ug/kg	ND	125	116	100	125	116	121	8
B030791-001	CHLOROBENZENE (EPA 8010)	ug/kg	ND	101	101	100	101	101	101	0
B030791-001	BENZENE (EPA 8020)	ug/kg	ND	118	101	100	118	101	110	16
B030791-001	TOLUENE (EPA 8020)	ug/kg	ND	85.8	92.7	100	86	93	89	8
B030791-001	ETHYLBENZENE (EPA 8020)	ug/kg	ND	86.7	94.6	100	87	95	91	9
B030791-001	XYLENES, TOTAL (EPA 8020)	ug/kg	ND	93.1	101	100	93	101	97	8

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B030791-001	7-MAR-1991	CHLOROFORM (EPA 8010)	M-B030791-001
			M-B030791-002
	7-MAR-1991	CARBON TETRACHLORIDE (EPA 8010)	M-B030791-001
			M-B030791-002
	7-MAR-1991	TRICHLOROETHENE (EPA 8010)	M-B030791-001
			M-B030791-002
	7-MAR-1991	TETRACHLOROETHENE (EPA 8010)	M-B030791-001
			M-B030791-002
	7-MAR-1991	CHLOROBENZENE (EPA 8010)	M-B030791-001
			M-B030791-002
	7-MAR-1991	BENZENE (EPA 8020)	M-B030791-001
			M-B030791-002
	7-MAR-1991	TOLUENE (EPA 8020)	M-B030791-001
			M-B030791-002
	7-MAR-1991	ETHYLBENZENE (EPA 8020)	M-B030791-001
			M-B030791-002
	7-MAR-1991	XYLENES, TOTAL (EPA 8020)	M-B030791-001
			M-B030791-002

CHAIN OF CUSTODY RECORD

BCA Log Number _____

Client name: Meredith Boli / Associates, Inc
Project or PO#: 90-211
Address: 6701 Center Drive West, Suite 900
Phone #: (213) 670-9221
City, State, Zip: Los Angeles, CA 90045
Report attention: Ron Cavagrotti

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sampled by / Sample description	Number of containers	8010	8020						Hazardous sample Special handling required	Remarks
B-1-20	3-7-91	1422	SO	Boring-1 @ 20.0'	1	1	1							
B-1-S-1	3-7-91		SO	Boring-1 (Field Blank)	1	1	1							

	Signature	Print Name	Company	Date	Time
Relinquished by	Mark T. Noonan	Mark T. Noonan	Knight Piesold and Co	3-7-91	1622
Received by					
Relinquished by					
Received by					
Relinquished by					
Received by Laboratory	John E. Scholl	John E. Scholl	ENSECO-CRL	3-7-91	1623

B C ANALYTICAL

☐ 1255 Powell Street, Emeryville, CA 94608 (415) 428-2300

☐ 801 Western Avenue, Glendale, CA 91201 (818) 247-5737

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.

Disposal arrangements: _____

*KEY: AQ—Aqueous NA—Nonaqueous SL—Sludge GW—Groundwater SO—Soil OT—Other PE—Petroleum

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

18-MAR-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: B521
ANALYSES: 8010,8020

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B031191-001/009.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

Pat Kammerer
REVIEWED AND APPROVED

3-19-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Project: 90-211

Analysis No.: M-B031191-001/009
Date Sampled: 11-MAR-1991
Date Sample Rec'd: 11-MAR-1991
Date Analyzed: 14-MAR-1991
Sample Type: SOLID

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
B-1-47	ND(5)	ND(5)	ND(5)	ND(15)
B-1-49	ND(5)	ND(5)	ND(5)	ND(15)
B-1-49D	ND(5)	ND(5)	ND(5)	ND(15)
B-1-55	ND(5)	22	ND(5)	ND(15)
B-1-61	ND(5)	ND(5)	ND(5)	ND(15)
B-1-65	ND(5)	16	ND(5)	ND(150)
B-1-66.5	ND(5)	13	ND(5)	ND(15)
B-1-70	ND(5)	11	ND(5)	ND(15)
B-1-77	ND(5)	18	ND(5)	ND(15)
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B031191-001
Date Sampled: 11-MAR-1991
Date Sample Rec'd: 11-MAR-1991
Sample Type: SOLID
Date Analyzed: 14-MAR-1991 By: PN

Project: 90-211
Sample ID: B-1-47

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B031191-002
Date Sampled: 11-MAR-1991
Date Sample Rec'd: 11-MAR-1991
Sample Type: SOLID
Date Analyzed: 14-MAR-1991 By: PN

Project: 90-211
Sample ID: B-1-49

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B031191-003
Date Sampled: 11-MAR-1991
Date Sample Rec'd: 11-MAR-1991
Sample Type: SOLID
Date Analyzed: 14-MAR-1991 By: PN

Project: 90-211
Sample ID: B-1-49D

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B031191-004
Date Sampled: 11-MAR-1991
Date Sample Rec'd: 11-MAR-1991
Sample Type: SOLID
Date Analyzed: 14-MAR-1991 By: PN

Project: 90-211
Sample ID: B-1-55

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	6	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	20	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B031191-005
Date Sampled: 11-MAR-1991
Date Sample Rec'd: 11-MAR-1991
Sample Type: SOLID
Date Analyzed: 14-MAR-1991 By: PN

Project: 90-211
Sample ID: B-1-61

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B031191-006
Date Sampled: 11-MAR-1991
Date Sample Rec'd: 11-MAR-1991
Sample Type: SOLID
Date Analyzed: 14-MAR-1991 By: PN

Project: 90-211
Sample ID: B-1-65

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	6	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	12	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B031191-007
Date Sampled: 11-MAR-1991
Date Sample Rec'd: 11-MAR-1991
Sample Type: SOLID
Date Analyzed: 14-MAR-1991 By: PN

Project: 90-211
Sample ID: B-1-66.5

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	7	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	11	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B031191-008
Date Sampled: 11-MAR-1991
Date Sample Rec'd: 11-MAR-1991
Sample Type: SOLID
Date Analyzed: 14-MAR-1991 By: PN

Project: 90-211
Sample ID: B-1-70

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	7	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	10	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B031191-009
Date Sampled: 11-MAR-1991
Date Sample Rec'd: 11-MAR-1991
Sample Type: SOLID
Date Analyzed: 14-MAR-1991 By: PN

Project: 90-211
Sample ID: B-1-77

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	6	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	21	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B031191-001/009
Date Sampled: 11-MAR-1991
Date Sample Rec'd: 11-MAR-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B031191-005	1,1-DICHLOROETHENE (EPA 8010)	ug/kg	ND	110.	104.	100	110	104	107	5
B031191-005	CHLOROFORM (EPA 8010)	ug/kg	ND	113.	103.	100	113	103	108	9
B031191-005	1,1,1-TRICHLOROETHANE (EPA 8010)	ug/kg	ND	105.	108.	100	105	109	107	3
B031191-005	BROMODICHLOROMETHANE (EPA 8010)	ug/kg	ND	107.	117.	100	107	117	112	9
B031191-005	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	79.4	88.1	100	79	88	84	10
B031191-005	BENZENE (EPA 8020)	ug/kg	ND	97.1	97.4	100	97	97	97	0
B031191-005	TOLUENE (EPA 8020)	ug/kg	ND	91.9	90.5	100	92	91	91	2
B031191-005	ETHYLBENZENE (EPA 8020)	ug/kg	ND	94.1	94.9	100	94	95	95	1
B031191-005	XYLENES, TOTAL (EPA 8020)	ug/kg	ND	94.0	94.9	100	94	95	94	1

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B031191-005	14-MAR-1991	1,1-DICHLOROETHENE (EPA 8010)	M-B031191-001
			M-B031191-002
			M-B031191-003
			M-B031191-004
			M-B031191-005
			M-B031191-006
			M-B031191-007
			M-B031191-008
			M-B031191-009
	14-MAR-1991	CHLOROFORM (EPA 8010)	M-B031191-001
			M-B031191-002
			M-B031191-003
			M-B031191-004
			M-B031191-005
			M-B031191-006
			M-B031191-007
			M-B031191-008
			M-B031191-009
	14-MAR-1991	1,1,1-TRICHLOROETHANE (EPA 8010)	M-B031191-001
			M-B031191-002
			M-B031191-003
			M-B031191-004
			M-B031191-005
			M-B031191-006
			M-B031191-007
			M-B031191-008
			M-B031191-009
	14-MAR-1991	BROMODICHLOROMETHANE (EPA 8010)	M-B031191-001
			M-B031191-002
			M-B031191-003
			M-B031191-004
			M-B031191-005
			M-B031191-006
			M-B031191-007
			M-B031191-008
			M-B031191-009
	14-MAR-1991	TRICHLOROETHENE (EPA 8010)	M-B031191-001
			M-B031191-002
			M-B031191-003
			M-B031191-004
			M-B031191-005
			M-B031191-006
			M-B031191-007
			M-B031191-008
			M-B031191-009
	14-MAR-1991	BENZENE (EPA 8020)	M-B031191-001
			M-B031191-002
			M-B031191-003
			M-B031191-004
			M-B031191-005
			M-B031191-006

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
			M-B031191-007
			M-B031191-008
			M-B031191-009
	14-MAR-1991	TOLUENE (EPA 8020)	M-B031191-001
			M-B031191-002
			M-B031191-003
			M-B031191-004
			M-B031191-005
			M-B031191-006
			M-B031191-007
			M-B031191-008
			M-B031191-009
	14-MAR-1991	ETHYLBENZENE (EPA 8020)	M-B031191-001
			M-B031191-002
			M-B031191-003
			M-B031191-004
			M-B031191-005
			M-B031191-006
			M-B031191-007
			M-B031191-008
			M-B031191-009
	14-MAR-1991	XYLENES, TOTAL (EPA 8020)	M-B031191-001
			M-B031191-002
			M-B031191-003
			M-B031191-004
			M-B031191-005
			M-B031191-006
			M-B031191-007
			M-B031191-008
			M-B031191-009

CHAIN OF CUSTODY RECORD

BCA Log Number _____

Client name: Meredith/Boli Associates, Inc
Project or PO#: 90-211
Address: 6701 Center Drive West, Suite 900
Phone #: (213) 670-9221
City, State, Zip: Los Angeles, CA 90045
Report attention: Ron Caungrotti
Sampled by: Mark T. Noonan

Analyses required: 8010, 8020

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sample description	Number of containers	8010	8020						Hazardous sample Special handling required	Remarks
B-1-47	3/11/91	1046	SO	Boring-1 @ 47'	1	1	1							
B-1-49	3/11/91	1157	SO	Boring-1 @ 49'	1	1	1							
B-1-49D	3/11/91	1157	SO	Boring-1 @ 49'	1	1	1							(Dup)
B-1-55	3/11/91	1400	SO	Boring-1 @ 55'	1	1	1							
B-1-61	3/11/91	1459	SO	Boring-1 @ 61'	1	1	1							
B-1-65	3/11/91	1520	SO	Boring-1 @ 65'	1	1	1							
B-1-66.5	3/11/91	1545	SO	Boring-1 @ 66.5'	1	1	1							
B-1-70	3/11/91	1608	SO	Boring-1 @ 70.0'	1	1	1							
B-1-77	3/11/91	1735	SO	Boring-1 @ 77.0	1	1	1							

	Signature	Print Name	Company	Date	Time
Relinquished by	Mark T. Noonan	Mark T. Noonan	Knight Piesold and Co	3/11/91	1740
Received by					
Relinquished by					
Received by					
Relinquished by					
Received by Laboratory	John E Schall	John E Schall	ENSECO	3/11/91	1740

B C ANALYTICAL

- ☐ 1255 Powell Street, Emeryville, CA 94608 (415) 428-2300
- ☐ 801 Western Avenue, Glendale, CA 91201 (818) 247-5737
- ☐ 1200 Pacifico Avenue, Anaheim, CA 92805 (714) 978-0113

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.

Disposal arrangements: _____

*KEY: AQ—Aqueous NA—Nonaqueous SL—Sludge GW—Groundwater SO—Soil OT—Other PE—Petroleum

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

18-MAR-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: B522
ANALYSES: 8010,8020

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B031291-001/005.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

Dat Kommers
REVIEWED AND APPROVED

3-19-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Project: 90-211

Analysis No.: M-B031291-001/005
Date Sampled: 12-MAR-1991
Date Sample Rec'd: 12-MAR-1991
Date Analyzed: 13-MAR-1991
Sample Type: SOLID

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
B-1-79	ND(5)	ND(5)	ND(5)	ND(15)
B-1-93	ND(5)	ND(5)	ND(5)	ND(15)
B-1-93D	ND(5)	ND(5)	ND(5)	ND(15)
B-1-101.5	ND(5)	ND(5)	ND(5)	ND(15)
B-1-108	ND(5)	ND(5)	ND(5)	ND(15)
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B031291-001
Date Sampled: 12-MAR-1991
Date Sample Rec'd: 12-MAR-1991
Sample Type: SOLID
Date Analyzed: 13-MAR-1991 By: PN

Project: 90-211
Sample ID: B-1-79

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B031291-002
Date Sampled: 12-MAR-1991
Date Sample Rec'd: 12-MAR-1991
Sample Type: SOLID
Date Analyzed: 13-MAR-1991 By: PN

Project: 90-211
Sample ID: B-1-93

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B031291-003
Date Sampled: 12-MAR-1991
Date Sample Rec'd: 12-MAR-1991
Sample Type: SOLID
Date Analyzed: 13-MAR-1991 By: PN

Project: 90-211
Sample ID: B-1-93D

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B031291-004
Date Sampled: 12-MAR-1991
Date Sample Rec'd: 12-MAR-1991
Sample Type: SOLID
Date Analyzed: 13-MAR-1991 By: PN

Project: 90-211
Sample ID: B-1-101.5

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B031291-005
Date Sampled: 12-MAR-1991
Date Sample Rec'd: 12-MAR-1991
Sample Type: SOLID
Date Analyzed: 13-MAR-1991 By: PN

Project: 90-211
Sample ID: B-1-108

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B031291-001/005
Date Sampled: 12-MAR-1991
Date Sample Rec'd: 12-MAR-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B031191-005	1,1-DICHLOROETHENE (EPA 8010)	ug/kg	ND	110.	104.	100	110	104	107	5
B031191-005	CHLOROFORM (EPA 8010)	ug/kg	ND	113.	103.	100	113	103	108	9
B031191-005	1,1,1-TRICHLOROETHANE (EPA 8010)	ug/kg	ND	105.	108.	100	105	109	107	3
B031191-005	BROMODICHLOROMETHANE (EPA 8010)	ug/kg	ND	107.	117.	100	107	117	112	9
B031191-005	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	79.4	88.1	100	79	88	84	10
B031191-005	BENZENE (EPA 8020)	ug/kg	ND	97.1	97.4	100	97	97	97	0
B031191-005	TOLUENE (EPA 8020)	ug/kg	ND	91.9	90.5	100	92	91	91	2
B031191-005	ETHYLBENZENE (EPA 8020)	ug/kg	ND	94.1	94.9	100	94	95	95	1
B031191-005	XYLENES, TOTAL (EPA 8020)	ug/kg	ND	94.0	94.9	100	94	95	94	1

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B031191-005	14-MAR-1991	1,1-DICHLOROETHENE (EPA 8010)	M-B031291-001
			M-B031291-002
			M-B031291-003
			M-B031291-004
			M-B031291-005
	14-MAR-1991	CHLOROFORM (EPA 8010)	M-B031291-001
			M-B031291-002
			M-B031291-003
			M-B031291-004
			M-B031291-005
	14-MAR-1991	1,1,1-TRICHLOROETHANE (EPA 8010)	M-B031291-001
			M-B031291-002
			M-B031291-003
			M-B031291-004
			M-B031291-005
	14-MAR-1991	BROMODICHLOROMETHANE (EPA 8010)	M-B031291-001
			M-B031291-002
			M-B031291-003
			M-B031291-004
			M-B031291-005
	14-MAR-1991	TRICHLOROETHENE (EPA 8010)	M-B031291-001
			M-B031291-002
			M-B031291-003
			M-B031291-004
			M-B031291-005
	14-MAR-1991	BENZENE (EPA 8020)	M-B031291-001
			M-B031291-002
			M-B031291-003
			M-B031291-004
			M-B031291-005
	14-MAR-1991	TOLUENE (EPA 8020)	M-B031291-001
			M-B031291-002
			M-B031291-003
			M-B031291-004
			M-B031291-005
	14-MAR-1991	ETHYLBENZENE (EPA 8020)	M-B031291-001
			M-B031291-002
			M-B031291-003
			M-B031291-004
			M-B031291-005
	14-MAR-1991	XYLENES, TOTAL (EPA 8020)	M-B031291-001
			M-B031291-002
			M-B031291-003
			M-B031291-004
			M-B031291-005

CHAIN OF CUSTODY RECORD

BCA Log Number _____

Client name: Meredith Boli/Associates, Inc
Project or PO#: 90-211
Address: 6701 Center Drive, West Suite 900
Phone #: (213) 670-9221
City, State, Zip: Los Angeles, CA 90045
Report attention: Ron Cavagrotti

Sampled by: Mark Noonan

Analyses required: 8010, 8020, Hazardous sample Special handling required

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sample description	Number of containers	8010	8020							Remarks
B-1-79	3/12/91	0840	SO	Boring-1 @ 79'	1	1	1							B031291-1
B-1-93	3/12/91	1054	SO	Boring-1 @ 93'	1	1	1							B031291-2
B-1-93D	3/12/91	1054	SO	Boring-1 @ 93'	1	1	1							B031291-3 Split Sample
B-1-101.5	3/12/91	1219	SO	Boring-1 @ 101.5'	1	1	1							B031291-4
B-1-108	3/12/91	1507	SO	Boring-1 @ 108'	1	1	1							B031291-5

	Signature	Print Name	Company	Date	Time
Relinquished by	Mark T. Noonan	Mark T. Noonan	Knight Piesold and Co	3/12/91	1528
Received by					
Relinquished by					
Received by					
Relinquished by					
Received by Laboratory	Philip Norton	PHILIP NORTON	ENSECO - CRL	3/12/91	15:30

B C ANALYTICAL

- ☐ 1255 Powell Street, Emeryville, CA 94608 (415) 428-2300
- ☐ 801 Western Avenue, Glendale, CA 91201 (818) 247-5737
- ☐ 1200 Pacifico Avenue, Anaheim, CA 92805 (714) 978-0113

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.

Disposal arrangements: _____

*KEY: AQ—Aqueous NA—Nonaqueous SL—Sludge GW—Groundwater SO—Soil OT—Other PE—Petroleum

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

RECEIVED
MAR 25 1991
M/B & A

20-MAR-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: B524
ANALYSES: 8010,8020

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B031491-001/002.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

Pat Hammers
REVIEWED AND APPROVED

3-20-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Project: 90-211

Analysis No.: M-B031491-001/002
Date Sampled: 14-MAR-1991
Date Sample Rec'd: 14-MAR-1991
Date Analyzed: 15-MAR-1991
Sample Type: SOLID

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
B-1-110	ND(5)	ND(5)	ND(5)	ND(15)
B-1-123	ND(5)	ND(5)	ND(5)	ND(15)
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B031491-001
Date Sampled: 14-MAR-1991
Date Sample Rec'd: 14-MAR-1991
Sample Type: SOLID
Date Analyzed: 15-MAR-1991 By: PN

Project: 90-211
Sample ID: B-1-110

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B031491-002
Date Sampled: 14-MAR-1991
Date Sample Rec'd: 14-MAR-1991
Sample Type: SOLID
Date Analyzed: 15-MAR-1991 By: PN

Project: 90-211
Sample ID: B-1-123

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B031491-001/002
Date Sampled: 14-MAR-1991
Date Sample Rec'd: 14-MAR-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B031491-001	1,1-DICHLOROETHENE (EPA 8010)	ug/kg	ND	98.0	101	100	98	101	100	3
B031491-001	CHLOROFORM (EPA 8010)	ug/kg	ND	102	104	100	102	104	103	2
B031491-001	BROMODICHLOROMETHANE (EPA 8010)	ug/kg	ND	109	110	100	109	110	110	1
B031491-001	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	83.2	83.1	100	83	83	83	0
B031491-001	CHLOROBENZENE (EPA 8010)	ug/kg	ND	101	98.9	100	101	99	100	2
B031491-001	BENZENE (EPA 8020)	ug/kg	ND	88.3	87.6	100	88	88	88	1
B031491-001	TOLUENE (EPA 8020)	ug/kg	ND	84.2	83.1	100	84	83	84	1
B031491-001	ETHYLBENZENE (EPA 8020)	ug/kg	ND	86.2	89.0	100	86	89	88	3
B031491-001	XYLENES, TOTAL (EPA 8020)	ug/kg	ND	87.0	88.5	100	87	89	88	2

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B031491-001	15-MAR-1991	1,1-DICHLOROETHENE (EPA 8010)	M-B031491-001
			M-B031491-002
	15-MAR-1991	CHLOROFORM (EPA 8010)	M-B031491-001
			M-B031491-002
	15-MAR-1991	BROMODICHLOROMETHANE (EPA 8010)	M-B031491-001
			M-B031491-002
	15-MAR-1991	TRICHLOROETHENE (EPA 8010)	M-B031491-001
			M-B031491-002
	15-MAR-1991	CHLOROBENZENE (EPA 8010)	M-B031491-001
			M-B031491-002
	15-MAR-1991	BENZENE (EPA 8020)	M-B031491-001
			M-B031491-002
	15-MAR-1991	TOLUENE (EPA 8020)	M-B031491-001
			M-B031491-002
	15-MAR-1991	ETHYLBENZENE (EPA 8020)	M-B031491-001
			M-B031491-002
	15-MAR-1991	XYLENES, TOTAL (EPA 8020)	M-B031491-001
			M-B031491-002

CHAIN OF CUSTODY RECORD

BCA Log Number _____

Client name: Meredith Boli/Associates
Project or PO#: 90-211
Address: 6701 Center Drive, West Suite 900
Phone #: (213) 670-9221
City, State, Zip: Los Angeles, CA 90045
Report attention: Ron Caragrotti

Sampled by: Mark Noonan

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sample description	Number of containers	8010	8020						Hazardous sample Special handling required	Remarks
B-1-110	3/14/91	1009	SO	Boring-1 @ 110'	1	1	1							B031491-1
B-1-123	↓	1140	SO	Boring-1 @ 123'										B031491-2

	Signature	Print Name	Company	Date	Time
Relinquished by	Mark T. Noonan	Mark T. Noonan	Knight Piesold and Co	3/14/91	1438
Received by					
Relinquished by					
Received by					
Relinquished by					
Received by Laboratory	[illegible]	PHILIP NORTON	ENSECO - CRC	3/14/91	14:40

B C ANALYTICAL

- ☐ 1255 Powell Street, Emeryville, CA 94608 (415) 428-2300
- ☐ 801 Western Avenue, Glendale, CA 91201 (818) 247-5737
- ☐ 1200 Pacifico Avenue, Anaheim, CA 92805 (714) 978-0113

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.

Disposal arrangements: _____

*KEY: AQ—Aqueous NA—Nonaqueous SL—Sludge GW—Groundwater SO—Soil OT—Other PE—Petroleum

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

21-MAR-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: B525
ANALYSES: 8010,8020

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B031591-001/004.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

Pat Kammerer
REVIEWED AND APPROVED

3-21-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B031591-001/004
Date Sampled: 15-MAR-1991
Date Sample Rec'd: 15-MAR-1991
Date Analyzed: 15-MAR-1991
18-MAR-1991
Sample Type: SOLID

Project: 90-211

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
B-1-132	ND(5)	ND(5)	ND(5)	ND(15)
B-1-132D	ND(5)	ND(5)	ND(5)	ND(15)
B-1-134	ND(5)	ND(5)	ND(5)	ND(15)
B-1-137	ND(5)	ND(5)	ND(5)	ND(15)
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B031591-001
Date Sampled: 15-MAR-1991
Date Sample Rec'd: 15-MAR-1991
Sample Type: SOLID
Date Analyzed: 15-MAR-1991 By: PN

Project: 90-211
Sample ID: B-1-132

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B031591-002
Date Sampled: 15-MAR-1991
Date Sample Rec'd: 15-MAR-1991
Sample Type: SOLID
Date Analyzed: 18-MAR-1991 By: JS

Project: 90-211
Sample ID: B-1-132D

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B031591-003
Date Sampled: 15-MAR-1991
Date Sample Rec'd: 15-MAR-1991
Sample Type: SOLID
Date Analyzed: 18-MAR-1991 By: JS

Project: 90-211
Sample ID: B-1-134

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B031591-004
Date Sampled: 15-MAR-1991
Date Sample Rec'd: 15-MAR-1991
Sample Type: SOLID
Date Analyzed: 18-MAR-1991 By: JS

Project: 90-211
Sample ID: B-1-137

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B031591-001/004
Date Sampled: 15-MAR-1991
Date Sample Rec'd: 15-MAR-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B031591-001A	1,1-DICHLOROETHENE (EPA 8010)	ug/kg	ND	112.5	117.1	100	113	117	115	4
B031591-003A	1,1-DICHLOROETHENE (EPA 8010)	ug/kg	ND	93.7	98.2	100	94	98	96	5
B031591-001A	CHLOROFORM (EPA 8010)	ug/kg	ND	118.4	130.3	100	118	130	124	10
B031591-003A	CHLOROFORM (EPA 8010)	ug/kg	ND	89.6	91.2	100	90	91	90	2
B031591-001A	CARBON TETRACHLORIDE (EPA 8010)	ug/kg	ND	118.1	119.0	100	118	119	119	1
B031591-003A	BROMODICHLOROMETHANE (EPA 8010)	ug/kg	ND	111	111	100	111	111	111	0
B031591-001A	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	119.0	107.5	100	119	108	113	10
B031591-003A	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	77.4	100.7	100	77	101	89	26
B031591-001A	CHLOROBENZENE (EPA 8010)	ug/kg	ND	116.4	120.6	100	116	121	119	4
B031591-003A	CHLOROBENZENE (EPA 8010)	ug/kg	ND	91.4	89.7	100	91	90	91	2
B031591-003A	BENZENE (EPA 8020)	ug/kg	ND	106	104	100	106	104	105	2
B031591-001A	BENZENE (EPA 8020)	ug/kg	ND	81.8	81.5	100	82	82	82	0
B031591-003A	TOLUENE (EPA 8020)	ug/kg	ND	96.9	96.2	100	97	96	97	1
B031591-001A	TOLUENE (EPA 8020)	ug/kg	ND	70.7	79.6	100	71	80	75	12
B031591-003A	ETHYLBENZENE (EPA 8020)	ug/kg	ND	104	102	100	104	102	103	2
B031591-001A	ETHYLBENZENE (EPA 8020)	ug/kg	ND	84.0	84.4	100	84	84	84	1
B031591-003A	XYLENES, TOTAL (EPA 8020)	ug/kg	ND	100	98.9	100	100	99	99	1
B031591-001A	XYLENES, TOTAL (EPA 8020)	ug/kg	ND	83.8	84.2	100	84	84	84	1

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B031591-001A	15-MAR-1991	1,1-DICHLOROETHENE (EPA 8010)	M-B031591-001
	15-MAR-1991	CHLOROFORM (EPA 8010)	M-B031591-001
	15-MAR-1991	CARBON TETRACHLORIDE (EPA 8010)	M-B031591-001
	15-MAR-1991	TRICHLOROETHENE (EPA 8010)	M-B031591-001
	15-MAR-1991	CHLOROBENZENE (EPA 8010)	M-B031591-001
	15-MAR-1991	BENZENE (EPA 8020)	M-B031591-001
	15-MAR-1991	TOLUENE (EPA 8020)	M-B031591-001
	15-MAR-1991	ETHYLBENZENE (EPA 8020)	M-B031591-001
	15-MAR-1991	XYLENES, TOTAL (EPA 8020)	M-B031591-001
B031591-003A	18-MAR-1991	1,1-DICHLOROETHENE (EPA 8010)	M-B031591-002
			M-B031591-003
			M-B031591-004
	18-MAR-1991	CHLOROFORM (EPA 8010)	M-B031591-002
			M-B031591-003
			M-B031591-004
	18-MAR-1991	BROMODICHLOROMETHANE (EPA 8010)	M-B031591-002
			M-B031591-003
			M-B031591-004
	18-MAR-1991	TRICHLOROETHENE (EPA 8010)	M-B031591-002
			M-B031591-003
			M-B031591-004
	18-MAR-1991	CHLOROBENZENE (EPA 8010)	M-B031591-002
			M-B031591-003
			M-B031591-004
	18-MAR-1991	BENZENE (EPA 8020)	M-B031591-002
			M-B031591-003
			M-B031591-004
	18-MAR-1991	TOLUENE (EPA 8020)	M-B031591-002
			M-B031591-003
			M-B031591-004
	18-MAR-1991	ETHYLBENZENE (EPA 8020)	M-B031591-002
			M-B031591-003
			M-B031591-004
	18-MAR-1991	XYLENES, TOTAL (EPA 8020)	M-B031591-002
			M-B031591-003
			M-B031591-004

CHAIN OF CUSTODY RECORD

BCA Log Number _____

Client name: Meredith Boli / Associates, Inc	Project or PO#: 90-211
Address: 6701 Center Drive, West Suite 900	Phone #: (213) 670-9221
City, State, Zip: Los Angeles, CA 90045	Report attention: Ron-Cavagrotti

Sampled by: Mar

Analyses required

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sample description	Number of containers	8010	8020						Hazardous sample Special handling required	Remarks
B-1-132	3/15/91	0956	SO	Boring-1 @ 132'	1	1	1							B031591-1
B-1-132D	3/15/91	0956	SO	" " "	1	1	1							B031591-2 Duplicate
B-1-134	3/15/91		SO	Boring-1 @ 134'	1	1	1							B031591-3
B-1-137	3/15/91	1234	SO	Boring-2 @ 137'	1	1	1							B031591-4
														Hold

	Signature	Print Name	Company	Date	Time
Relinquished by	[signature]	Manuel T. Noonan	Knight Piesold and Co	3/15/91	1420
Received by					
Relinquished by					
Received by					
Relinquished by					
Received by Laboratory	[signature]	PHILIP NORTON	ENSECO - CRC	3/15/91	14:20

B C ANALYTICAL

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. *KEY: AQ - Aqueous; NA - Non-aqueous; SL - Sludge

Analytical Report

LOG NO: G91-03-228

Received: 12 MAR 91

Mailed: 3/26/91

Mr. Ron Cavagrotti
Meredith Boli & Associates, Inc.
6701 Center Drive West, Suite 900
Los Angeles,CA 90045-1535

Project: 90-211

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-228-1	B-1-49	11 MAR 91
03-228-2	B-1-66.5	11 MAR 91
03-228-3	B-1-77	11 MAR 91

PARAMETER	03-228-1	03-228-2	03-228-3
EPA Method 8010			
Date Analyzed	03/18/91	03/18/91	03/18/91
Date Extracted	03/18/91	03/18/91	03/18/91
Date Confirmed	03/18/91	03/18/91	03/18/91
Dilution Factor, Times 1	1	1	1
1,1,1-Trichloroethane, ug/kg	<5	<5	<5
1,1,2,2-Tetrachloroethane, ug/kg	<5	<5	<5
1,1,2-Trichloroethane, ug/kg	<5	<5	<5
1,1-Dichloroethane, ug/kg	<5	<5	<5
1,1-Dichloroethene, ug/kg	<5	<5	<5
1,2-Dichloroethane, ug/kg	<5	<5	<5
1,2-Dichlorobenzene, ug/kg	<5	<5	<5
1,2-Dichloropropane, ug/kg	<5	<5	<5
1,3-Dichlorobenzene, ug/kg	<5	<5	<5
1,4-Dichlorobenzene, ug/kg	<5	<5	<5
2-Chloroethylvinylether, ug/kg	<5	<5	<5
Bromodichloromethane, ug/kg	<5	<5	<5
Bromomethane, ug/kg	<5	<5	<5
Bromoform, ug/kg	<5	<5	<5
Chlorobenzene, ug/kg	<5	<5	<5
Carbon Tetrachloride, ug/kg	<5	<5	<5
Chloroethane, ug/kg	<5	<5	<5
Chloroform, ug/kg	<5	<5	<5
Chloromethane, ug/kg	<5	<5	<5
Dibromochloromethane, ug/kg	<5	<5	<5
Dichlorodifluoromethane, ug/kg	<5	<5	<5

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Analytical Report

LOG NO: G91-03-228

Received: 12 MAR 91

Mr. Ron Cavagrotti
Meredith Boli & Associates, Inc.
6701 Center Drive West, Suite 900
Los Angeles,CA 90045-1535

Project: 90-211

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-228-1	B-1-49	11 MAR 91
03-228-2	B-1-66.5	11 MAR 91
03-228-3	B-1-77	11 MAR 91

PARAMETER	03-228-1	03-228-2	03-228-3
Freon 113, ug/kg	<5	<5	<5
Methylene chloride, ug/kg	<5	<5	<5
Trichloroethene, ug/kg	<5	<5	<5
Trichlorofluoromethane, ug/kg	<5	<5	<5
Tetrachloroethene, ug/kg	<5	<5	<5
Vinyl chloride, ug/kg	<5	<5	<5
cis-1,2-Dichloroethene, ug/kg	<5	<5	<5
cis-1,3-Dichloropropene, ug/kg	<5	<5	<5
trans-1,2-Dichloroethene, ug/kg	<5	<5	<5
trans-1,3-Dichloropropene, ug/kg	<5	<5	<5

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Analytical Report

LOG NO: G91-03-228

Received: 12 MAR 91

Mr. Ron Cavagrotti
Meredith Boli & Associates, Inc.
6701 Center Drive West, Suite 900
Los Angeles,CA 90045-1535

Project: 90-211

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-228-1	B-1-49	11 MAR 91
03-228-2	B-1-66.5	11 MAR 91
03-228-3	B-1-77	11 MAR 91

PARAMETER	03-228-1	03-228-2	03-228-3
EPA Method 8020			
Date Analyzed	03/18/91	03/18/91	03/18/91
Date Extracted	03/18/91	03/18/91	03/18/91
Date Confirmed	03/18/91	03/18/91	03/18/91
Dilution Factor, Times 1	1	1	1
1,2-Dichlorobenzene, ug/kg	<5	<5	<5
1,3-Dichlorobenzene, ug/kg	<5	<5	<5
1,4-Dichlorobenzene, ug/kg	<5	<5	<5
Benzene, ug/kg	<5	<5	<5
Chlorobenzene, ug/kg	<5	<5	<5
Ethylbenzene, ug/kg	<5	<5	<5
Toluene, ug/kg	<5	<5	<5
Total Xylene Isomers, ug/kg	<20	<20	<20

Jeffrey A. Erion, Laboratory Manager

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Analytical Report

LOG NO: G91-03-247

Received: 13 MAR 91

Mailed: 3/26/91

Mr. Ron Cavagrotti
Meredith Boli & Associates, Inc.
6701 Center Drive West, Suite 900
Los Angeles,CA 90045-1535

Purchase Order: 90-211

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-247-1	B-1-108C	12 MAR 91
03-247-2	B-1-108	12 MAR 91

PARAMETER	03-247-1	03-247-2
TPH - Modified 8015		
Date Analyzed	03/22/91	---
Dilution Factor, Times 1	1	---
Total Fuel Hydrocarbons, mg/kg	<5	---
Other TPH - Modified 8015	---	---

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Analytical Report

LOG NO: G91-03-247

Received: 13 MAR 91

Mr. Ron Cavagrotti
Meredith Boli & Associates, Inc.
6701 Center Drive West, Suite 900
Los Angeles,CA 90045-1535

Purchase Order: 90-211

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-247-1	B-1-108C	12 MAR 91
03-247-2	B-1-108	12 MAR 91

PARAMETER	03-247-1	03-247-2
EPA Method 8010		
Date Analyzed	03/18/91	03/18/91
Date Extracted	03/18/91	03/18/91
Date Confirmed	03/18/91	03/18/91
Dilution Factor, Times 1	1	1
1,1,1-Trichloroethane, ug/kg	<5	<5
1,1,2,2-Tetrachloroethane, ug/kg	<5	<5
1,1,2-Trichloroethane, ug/kg	<5	<5
1,1-Dichloroethane, ug/kg	<5	<5
1,1-Dichloroethene, ug/kg	<5	<5
1,2-Dichloroethane, ug/kg	<5	<5
1,2-Dichlorobenzene, ug/kg	<5	<5
1,2-Dichloropropane, ug/kg	<5	<5
1,3-Dichlorobenzene, ug/kg	<5	<5
1,4-Dichlorobenzene, ug/kg	<5	<5
2-Chloroethylvinylether, ug/kg	<5	<5
Bromodichloromethane, ug/kg	<5	<5
Bromomethane, ug/kg	<5	<5
Bromoform, ug/kg	<5	<5
Chlorobenzene, ug/kg	<5	<5
Carbon Tetrachloride, ug/kg	<5	<5
Chloroethane, ug/kg	<5	<5
Chloroform, ug/kg	<5	<5
Chloromethane, ug/kg	<5	<5
Dibromochloromethane, ug/kg	<5	<5
Dichlorodifluoromethane, ug/kg	<5	<5
Freon 113, ug/kg	<5	<5

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Analytical Report

LOG NO: G91-03-247

Received: 13 MAR 91

Mr. Ron Cavagrotti
Meredith Boli & Associates, Inc.
6701 Center Drive West, Suite 900
Los Angeles,CA 90045-1535

Purchase Order: 90-211

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-247-1	B-1-108C	12 MAR 91
03-247-2	B-1-108	12 MAR 91

PARAMETER	03-247-1	03-247-2
Methylene chloride, ug/kg	<5	<5
Trichloroethene, ug/kg	<5	<5
Trichlorofluoromethane, ug/kg	<5	<5
Tetrachloroethene, ug/kg	<5	<5
Vinyl chloride, ug/kg	<5	<5
cis-1,2-Dichloroethene, ug/kg	<5	<5
cis-1,3-Dichloropropene, ug/kg	<5	<5
trans-1,2-Dichloroethene, ug/kg	<5	<5
trans-1,3-Dichloropropene, ug/kg	<5	<5
EPA Method 8020		
Date Analyzed	03/18/91	03/18/91
Date Extracted	03/18/91	03/18/91
Date Confirmed	03/18/91	03/18/91
Dilution Factor, Times 1	1	1
1,2-Dichlorobenzene, ug/kg	<5	<5
1,3-Dichlorobenzene, ug/kg	<5	<5
1,4-Dichlorobenzene, ug/kg	<5	<5
Benzene, ug/kg	<5	<5
Chlorobenzene, ug/kg	<5	<5
Ethylbenzene, ug/kg	<5	<5
Toluene, ug/kg	<5	<5
Total Xylene Isomers, ug/kg	<20	<20

Jeffrey A. Erion, Laboratory Manager

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Analytical Report

LOG NO: G91-03-311

Received: 15 MAR 91

Mailed: 3/20/91

Mr. Ron Cavagrotti
Meredith Boli & Associates, Inc.
6701 Center Drive West, Suite 900
Los Angeles,CA 90045-1535

Purchase Order: 90-211

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-311-1	B1-123C	14 MAR 91
03-311-2	B1-110	14 MAR 91
03-311-3	B1-123	14 MAR 91

PARAMETER	03-311-1	03-311-2	03-311-3
TPH - Modified 8015			
Date Analyzed	03/21/91	---	---
Dilution Factor, Times 1	1	---	---
Carbon Range, .	C6-C8	---	---
Total Fuel Hydrocarbons, mg/kg	6.1	---	---
Fuel Character, .	LIGHT H.C.	---	---

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Analytical Report

LOG NO: G91-03-311

Received: 15 MAR 91

Mr. Ron Cavagrotti
Meredith Boli & Associates, Inc.
6701 Center Drive West, Suite 900
Los Angeles,CA 90045-1535

Purchase Order: 90-211

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-311-1	B1-123C	14 MAR 91
03-311-2	B1-110	14 MAR 91
03-311-3	B1-123	14 MAR 91

PARAMETER	03-311-1	03-311-2	03-311-3
EPA Method 8010			
Date Analyzed	03/18/91	03/18/91	03/18/91
Date Extracted	03/18/91	03/18/91	03/18/91
Date Confirmed	03/18/91	03/18/91	03/18/91
Dilution Factor, Times 1	1	1	1
1,1,1-Trichloroethane, ug/kg	<5	<5	<5
1,1,2,2-Tetrachloroethane, ug/kg	<5	<5	<5
1,1,2-Trichloroethane, ug/kg	<5	<5	<5
1,1-Dichloroethane, ug/kg	<5	<5	<5
1,1-Dichloroethene, ug/kg	<5	<5	<5
1,2-Dichloroethane, ug/kg	<5	<5	<5
1,2-Dichlorobenzene, ug/kg	<5	<5	<5
1,2-Dichloropropane, ug/kg	<5	<5	<5
1,3-Dichlorobenzene, ug/kg	<5	<5	<5
1,4-Dichlorobenzene, ug/kg	<5	<5	<5
2-Chloroethylvinylether, ug/kg	<5	<5	<5
Bromodichloromethane, ug/kg	<5	<5	<5
Bromomethane, ug/kg	<5	<5	<5
Bromoform, ug/kg	<5	<5	<5
Chlorobenzene, ug/kg	<5	<5	<5
Carbon Tetrachloride, ug/kg	<5	<5	<5
Chloroethane, ug/kg	<5	<5	<5
Chloroform, ug/kg	<5	<5	<5
Chloromethane, ug/kg	<5	<5	<5
Dibromochloromethane, ug/kg	<5	<5	<5
Dichlorodifluoromethane, ug/kg	<5	<5	<5

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Analytical Report

LOG NO: G91-03-311

Received: 15 MAR 91

Mr. Ron Cavagrotti
Meredith Boli & Associates, Inc.
6701 Center Drive West, Suite 900
Los Angeles,CA 90045-1535

Purchase Order: 90-211

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-311-1	B1-123C	14 MAR 91
03-311-2	B1-110	14 MAR 91
03-311-3	B1-123	14 MAR 91

PARAMETER	03-311-1	03-311-2	03-311-3
Freon 113, ug/kg	<5	<5	<5
Methylene chloride, ug/kg	<5	<5	<5
Trichloroethene, ug/kg	<5	<5	<5
Trichlorofluoromethane, ug/kg	<5	<5	<5
Tetrachloroethene, ug/kg	<5	<5	<5
Vinyl chloride, ug/kg	<5	<5	<5
cis-1,2-Dichloroethene, ug/kg	9	<5	<5
cis-1,3-Dichloropropene, ug/kg	<5	<5	<5
trans-1,2-Dichloroethene, ug/kg	<5	<5	<5
trans-1,3-Dichloropropene, ug/kg	<5	<5	<5

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Analytical Report

LOG NO: G91-03-311

Received: 15 MAR 91

Mr. Ron Cavagrotti
Meredith Boli & Associates, Inc.
6701 Center Drive West, Suite 900
Los Angeles,CA 90045-1535

Purchase Order: 90-211

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-311-1	B1-123C	14 MAR 91
03-311-2	B1-110	14 MAR 91
03-311-3	B1-123	14 MAR 91

PARAMETER	03-311-1	03-311-2	03-311-3
EPA Method 8020			
Date Analyzed	03/18/91	03/18/91	03/18/91
Date Extracted	03/18/91	03/18/91	03/18/91
Date Confirmed	03/18/91	03/18/91	03/18/91
Dilution Factor, Times 1	1	1	1
1,2-Dichlorobenzene, ug/kg	<5	<5	<5
1,3-Dichlorobenzene, ug/kg	<5	<5	<5
1,4-Dichlorobenzene, ug/kg	<5	<5	<5
Benzene, ug/kg	<5	<5	<5
Chlorobenzene, ug/kg	<5	<5	<5
Ethylbenzene, ug/kg	<5	<5	<5
Toluene, ug/kg	5	<5	<5
Total Xylene Isomers, ug/kg	<20	<20	<20

Jeffrey A. Erion, Laboratory Manager

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Analytical Report

LOG NO: G91-03-343

Received: 18 MAR 91

Mailed: 3/26/91

Mr. Ron Cavagrotti
Meredith Boli & Associates, Inc.
6701 Center Drive West, Suite 900
Los Angeles,CA 90045-1535

Purchase Order: 90-211

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-343-1	B-1-137	15 MAR 91

PARAMETER	03-343-1
EPA Method 8010	
Date Analyzed	03/21/91
Date Extracted	03/21/91
Date Confirmed	03/21/91
Dilution Factor, Times 1	1
1,1,1-Trichloroethane, ug/kg	<5
1,1,2,2-Tetrachloroethane, ug/kg	<5
1,1,2-Trichloroethane, ug/kg	<5
1,1-Dichloroethane, ug/kg	<5
1,1-Dichloroethene, ug/kg	<5
1,2-Dichloroethane, ug/kg	<5
1,2-Dichlorobenzene, ug/kg	<5
1,2-Dichloropropane, ug/kg	<5
1,3-Dichlorobenzene, ug/kg	<5
1,4-Dichlorobenzene, ug/kg	<5
2-Chloroethylvinylether, ug/kg	<5
Bromodichloromethane, ug/kg	<5
Bromomethane, ug/kg	<5
Bromoform, ug/kg	<5
Chlorobenzene, ug/kg	<5
Carbon Tetrachloride, ug/kg	<5
Chloroethane, ug/kg	<5
Chloroform, ug/kg	<5
Chloromethane, ug/kg	<5
Dibromochloromethane, ug/kg	<5
Dichlorodifluoromethane, ug/kg	<5
Freon 113, ug/kg	<5
Methylene chloride, ug/kg	<5

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Analytical Report

LOG NO: G91-03-343

Received: 18 MAR 91

Mr. Ron Cavagrotti
Meredith Boli & Associates, Inc.
6701 Center Drive West, Suite 900
Los Angeles,CA 90045-1535

Purchase Order: 90-211

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-343-1	B-1-137	15 MAR 91

PARAMETER	03-343-1
Trichloroethene, ug/kg	<5
Trichlorofluoromethane, ug/kg	<5
Tetrachloroethene, ug/kg	<5
Vinyl chloride, ug/kg	<5
cis-1,2-Dichloroethene, ug/kg	<5
cis-1,3-Dichloropropene, ug/kg	<5
trans-1,2-Dichloroethene, ug/kg	<5
trans-1,3-Dichloropropene, ug/kg	<5
EPA Method 8020	
Date Analyzed	03/21/91
Date Extracted	03/21/91
Date Confirmed	03/21/91
Dilution Factor, Times 1	1
1,2-Dichlorobenzene, ug/kg	<5
1,3-Dichlorobenzene, ug/kg	<5
1,4-Dichlorobenzene, ug/kg	<5
Benzene, ug/kg	<5
Chlorobenzene, ug/kg	<5
Ethylbenzene, ug/kg	<5
Toluene, ug/kg	<5
Total Xylene Isomers, ug/kg	<20

Jeffrey A. Erion, Laboratory Manager

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

RECEIVED
APR 01 1991
M/B &

27-MAR-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: N1126
ANALYSES: 8240

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B031291-004 and B031491-001.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

Cross Reference

Mobile Laboratory Number	Garden Grove Number	Meredith/Boli Number
M-B031291-004	G-9107801-001	B-1-101.5
M-B031491-001	G-9107801-002	B-1-110

REVIEWED AND APPROVED

3/28/91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco - CRL
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL
FAX: (714) 891-5917

Enseco
A CORNING Company

March 27, 1991

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. BOB SUNDBERG

Analysis No.: G-9107801-001/002
Date Sampled: 12-MAR-1991
14-MAR-1991
Date Sample Rec'd: 19-MAR-1991
Project: OSCO AZUSA

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-9107801-001/002 shown above.

The samples were received by CRL in a chilled state, intact and with the chain-of-custody record attached.

Note that ND means not detected at the reporting limit expressed. The reporting limit is raised to reflect the dilution factor of the sample.

Solid samples are reported on "as received" basis.

Reviewed

Approved

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. BOB SUNDBERG

Analysis No.: G-9107801-001
Date Sampled: 12-MAR-1991
Date Sample Rec'd: 19-MAR-1991
Sample Type: SOLID
Date Prepared: 19-MAR-1991
Prep Method: EPA 5030 By: JC
Date Analyzed: 19-MAR-1991 By: JC

Project: OSCO AZUSA
Sample ID: B031291-4

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	10	ND	10
Bromomethane	ND	10	ND	10
Vinyl Chloride	ND	10	ND	10
Chloroethane	ND	10	ND	10
Methylene Chloride	ND	5	ND	5
Acetone	230	10	ND	10
Carbon Disulfide	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
Total 1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
2-Butanone	260	10	ND	10
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Vinyl Acetate	ND	10	ND	10
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
Benzene	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	10	ND	10
Bromoform	ND	5	ND	5
4-Methyl-2-pentanone	36	10	ND	10
2-Hexanone	ND	10	ND	10
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Toluene	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
Ethylbenzene	ND	5	ND	5
Styrene	ND	5	ND	5
Xylenes, Total	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. BOB SUNDBERG

Analysis No.: G-9107801-001
Date Sampled: 12-MAR-1991
Date Sample Rec'd: 19-MAR-1991
Sample Type: SOLID

Project: OSCO AZUSA

Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
19-MAR-1991	1,2 DICHLOROETHANE-D4 (EPA 8240)	83	70-135
19-MAR-1991	TOLUENE-D8 (EPA 8240)	95	69-138
19-MAR-1991	BROMOFLUOROBENZENE (EPA 8240)	87	60-137

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. BOB SUNDBERG
Project: OSCO AZUSA

Analysis No.: G-9107801-001
Date Sampled: 12-MAR-1991
Date Sample Rec'd: 19-MAR-1991
Sample Type: SOLID

Purgeable Organics, EPA 8240 Tentatively Identified Compounds

Units: ug/kg

Parameter	Result
ALCOHOL	8 J
ALCOHOL	7 J

J Result is detected below the reporting limit or is an estimated concentration.

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. BOB SUNDBERG

Analysis No.: G-9107801-002
Date Sampled: 14-MAR-1991
Date Sample Rec'd: 19-MAR-1991
Sample Type: SOLID
Date Prepared: 19-MAR-1991
Prep Method: EPA 5030 By: JC
Date Analyzed: 19-MAR-1991 By: JC

Project: OSCO AZUSA
Sample ID: B031491-1

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL	FN
Chloromethane	ND	50	ND	10	o
Bromomethane	ND	50	ND	10	o
Vinyl Chloride	ND	50	ND	10	o
Chloroethane	ND	50	ND	10	o
Methylene Chloride	ND	25	ND	5	o
Acetone	630	50	ND	10	o
Carbon Disulfide	ND	25	ND	5	o
Trichlorofluoromethane	ND	25	ND	5	o
1,1-Dichloroethene	ND	25	ND	5	o
1,1-Dichloroethane	ND	25	ND	5	o
Total 1,2-Dichloroethene	ND	25	ND	5	o
Chloroform	ND	25	ND	5	o
1,2-Dichloroethane	ND	25	ND	5	o
2-Butanone	330	50	ND	10	o
1,1,1-Trichloroethane	ND	25	ND	5	o
Carbon Tetrachloride	ND	25	ND	5	o
Vinyl Acetate	ND	50	ND	10	o
Bromodichloromethane	ND	25	ND	5	o
1,2-Dichloropropane	ND	25	ND	5	o
cis-1,3-Dichloropropene	ND	25	ND	5	o
Trichloroethene	ND	25	ND	5	o
Dibromochloromethane	ND	25	ND	5	o
1,1,2-Trichloroethane	ND	25	ND	5	o
Benzene	ND	25	ND	5	o
trans-1,3-Dichloropropene	ND	25	ND	5	o
2-Chloroethylvinyl ether	ND	50	ND	10	o
Bromoform	ND	25	ND	5	o
4-Methyl-2-pentanone	ND	50	ND	10	o
2-Hexanone	ND	50	ND	10	o
Tetrachloroethene	ND	25	ND	5	o
1,1,2,2-Tetrachloroethane	ND	25	ND	5	o
Toluene	ND	25	ND	5	o
Chlorobenzene	ND	25	ND	5	o
Ethylbenzene	ND	25	ND	5	o
Styrene	ND	25	ND	5	o
Xylenes, Total	ND	25	ND	5	o

o Reporting limit raised due to high level of analyte present in sample.

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. BOB SUNDBERG

Analysis No.: G-9107801-002
Date Sampled: 14-MAR-1991
Date Sample Rec'd: 19-MAR-1991
Sample Type: SOLID

Project: OSCO AZUSA

Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
19-MAR-1991	1,2 DICHLOROETHANE-D4 (EPA 8240)	69	70-135
19-MAR-1991	TOLUENE-D8 (EPA 8240)	78	69-138
19-MAR-1991	BROMOFLUOROBENZENE (EPA 8240)	71	60-137

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB	Analysis No.: G-9107801-002
7440 LINCOLN WAY	Date Sampled: 14-MAR-1991
GARDEN GROVE, CA 92641	Date Sample Rec'd: 19-MAR-1991
ATTN: MR. BOB SUNDBERG	Sample Type: SOLID
Project: OSCO AZUSA	

Purgeable Organics, EPA 8240 Tentatively Identified Compounds

Units: ug/kg

Parameter	Result
ALCOHOL	25 J

J Result is detected below the reporting limit or is an estimated concentration.

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. BOB SUNDBERG

Project: OSCO AZUSA

Analysis No.: G-9107801-001/002
Date Sampled: 12-MAR-1991
14-MAR-1991
Date Sample Rec'd: 19-MAR-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
9106705-001B	1,1-DICHLOROETHENE (EPA 8240)	ug/kg	ND	38.1	35.2	50.0	76	70	73	8
9106705-001B	TRICHLOROETHENE (EPA 8240)	ug/kg	ND	42.2	37.6	50.0	84	75	80	12
9106705-001B	BENZENE (EPA 8240)	ug/kg	ND	44.4	39.3	50.0	89	79	84	12
9106705-001B	TOLUENE (EPA 8240)	ug/kg	ND	44.4	41.2	50.0	89	82	86	8
9106705-001B	CHLOROBENZENE (EPA 8240)	ug/kg	ND	45.6	43.6	50.0	91	87	89	5

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
9106705-001B	19-MAR-1991	1,1-DICHLOROETHENE (EPA 8240)	G-9107801-001
			G-9107801-002
	19-MAR-1991	TRICHLOROETHENE (EPA 8240)	G-9107801-001
			G-9107801-002
	19-MAR-1991	BENZENE (EPA 8240)	G-9107801-001
			G-9107801-002
	19-MAR-1991	TOLUENE (EPA 8240)	G-9107801-001
			G-9107801-002
	19-MAR-1991	CHLOROBENZENE (EPA 8240)	G-9107801-001
			G-9107801-002

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. BOB SUNDBERG

Project: OSCO AZUSA

Analysis No.: G-9107801-001/002
Date Sampled: 12-MAR-1991
14-MAR-1991
Date Sample Rec'd: 19-MAR-1991
Sample Type: SOLID

Laboratory Control Sample Report

QC Batch	Parameter (Method)	Amt. Spiked	Units	Avg. Spike Recov.	Acceptable Range	Rel. Pct. Diff.	Acceptable Range
L91079030	1,1-DICHLOROETHENE (EPA 8240)	50.0	ug/kg	87.	30-151	0.	36
L91079030	TRICHLOROETHENE (EPA 8240)	50.0	ug/kg	88.	36-150	5.	33
L91079030	BENZENE (EPA 8240)	50.0	ug/kg	83.	32-150	7.	35
L91079030	TOLUENE (EPA 8240)	50.0	ug/kg	84.	34-151	3.	34
L91079030	CHLOROBENZENE (EPA 8240)	50.0	ug/kg	90.	33-151	3.	35

Enseco
A Corning Company

Laboratory Control Sample Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
L91079030	19-MAR-1991	1,1-DICHLOROETHENE (EPA 8240)	G-9107801-001
			G-9107801-002
		TRICHLOROETHENE (EPA 8240)	G-9107801-001
			G-9107801-002
		BENZENE (EPA 8240)	G-9107801-001
			G-9107801-002
		TOLUENE (EPA 8240)	G-9107801-001
			G-9107801-002
		CHLOROBENZENE (EPA 8240)	G-9107801-001
			G-9107801-002

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

4-APR-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: N1127
ANALYSES: 8240

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B030791-001/002, B031191-002/005,007/009, B031291-001/003,005, B031491-002, and M-B031591-001/004.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

CROSS REFERENCE

Mobile Lab ID	Garden Grove ID	Client ID
B030791-001	G-9108111-001	B-1-20 200'
B030791-002	G-9108111-002	B-1-5-1
B031191-002	G-9108111-003	B-1-49
B031191-003	G-9108111-004	B-1-49D
B031191-004	G-9108111-005	B-1-55
B031191-005	G-9108111-006	B-1-61
B031191-007	G-9108111-007	B-1-66.5
B031191-008	G-9108111-008	B-1-70
B031191-009	G-9108111-009	B-1-77
B031291-001	G-9108111-010	B-1-79
B031291-002	G-9108111-011	B-1-93
B031291-003	G-9108111-012	B-1-93D
B031291-005	G-9108111-013	B-1-108
B031491-002	G-9108111-014	B-1-123
B031591-001	G-9108111-015	B-1-132
B031591-002	G-9108111-016	B-1-132D
B031591-003	G-9108111-017	B-1-134
B031591-004	G-9108111-018	B-1-137

Paul Kammer
REVIEWED AND APPROVED

4-8-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco - CRL
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL
FAX: (714) 891-5917

Enseco
A CORNING Company

April 2, 1991

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-001/018
Date Sampled: 7/11/12/14/15-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Project: MEREDITH BOLI OSCO, AZUSA

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-9108111-001/018 shown above.

The samples were received by CRL intact and with the chain-of-custody record attached.

Note that ND means not detected at the reporting limit expressed. The reporting limit is raised to reflect the dilution factor of the sample.

Solid samples are reported on "as received" basis.

Reviewed

Approved

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-003
Date Sampled: 11-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID
Date Prepared: 25-MAR-1991
Prep Method: EPA 5030 By: JC
Date Analyzed: 25-MAR-1991 By: JC

Project: MEREDITH BOLI OSCO, AZUSA
Sample ID: B031191-2

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	10	ND	10
Bromomethane	ND	10	ND	10
Vinyl Chloride	ND	10	ND	10
Chloroethane	ND	10	ND	10
Methylene Chloride	ND	5	ND	5
Acetone	52	10	ND	10
Carbon Disulfide	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
Total 1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
2-Butanone	18	10	ND	10
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Vinyl Acetate	ND	10	ND	10
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
Benzene	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	10	ND	10
Bromoform	ND	5	ND	5
4-Methyl-2-pentanone	ND	10	ND	10
2-Hexanone	ND	10	ND	10
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Toluene	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
Ethylbenzene	ND	5	ND	5
Styrene	ND	5	ND	5
Xylenes, Total	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-003
Date Sampled: 11-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID

Project: MEREDITH BOLI OSCO, AZUSA

Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
25-MAR-1991	1,2 DICHLOROETHANE-D4 (EPA 8240)	105	70-135
25-MAR-1991	TOLUENE-D8 (EPA 8240)	122	69-138
25-MAR-1991	BROMOFLUOROBENZENE (EPA 8240)	112	60-137

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-004
Date Sampled: 11-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID
Date Prepared: 25-MAR-1991
Prep Method: EPA 5030 By: JC
Date Analyzed: 25-MAR-1991 By: JC

Project: MEREDITH BOLI OSCO, AZUSA
Sample ID: B031191-3

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	10	ND	10
Bromomethane	ND	10	ND	10
Vinyl Chloride	ND	10	ND	10
Chloroethane	ND	10	ND	10
Methylene Chloride	ND	5	ND	5
Acetone	25	10	ND	10
Carbon Disulfide	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
Total 1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
2-Butanone	ND	10	ND	10
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Vinyl Acetate	ND	10	ND	10
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
Benzene	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	10	ND	10
Bromoform	ND	5	ND	5
4-Methyl-2-pentanone	ND	10	ND	10
2-Hexanone	ND	10	ND	10
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Toluene	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
Ethylbenzene	ND	5	ND	5
Styrene	ND	5	ND	5
Xylenes, Total	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-004
Date Sampled: 11-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID

Project: MEREDITH BOLI OSCO, AZUSA

Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
25-MAR-1991	1,2 DICHLOROETHANE-D4 (EPA 8240)	113	70-135
25-MAR-1991	TOLUENE-D8 (EPA 8240)	126	69-138
25-MAR-1991	BROMOFLUOROBENZENE (EPA 8240)	119	60-137

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-005
Date Sampled: 11-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID
Date Prepared: 25-MAR-1991
Prep Method: EPA 5030 By: JC
Date Analyzed: 25-MAR-1991 By: JC

Project: MEREDITH BOLI OSCO, AZUSA
Sample ID: B031191-4

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	10	ND	10
Bromomethane	ND	10	ND	10
Vinyl Chloride	ND	10	ND	10
Chloroethane	ND	10	ND	10
Methylene Chloride	ND	5	ND	5
Acetone	23	10	ND	10
Carbon Disulfide	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
Total 1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
2-Butanone	ND	10	ND	10
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Vinyl Acetate	ND	10	ND	10
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
Benzene	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	10	ND	10
Bromoform	ND	5	ND	5
4-Methyl-2-pentanone	ND	10	ND	10
2-Hexanone	ND	10	ND	10
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Toluene	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
Ethylbenzene	ND	5	ND	5
Styrene	ND	5	ND	5
Xylenes, Total	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-005
Date Sampled: 11-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID

Project: MEREDITH BOLI OSCO, AZUSA

Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
25-MAR-1991	1,2 DICHLOROETHANE-D4 (EPA 8240)	108	70-135
25-MAR-1991	TOLUENE-D8 (EPA 8240)	119	69-138
25-MAR-1991	BROMOFLUOROBENZENE (EPA 8240)	115	60-137

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-006
Date Sampled: 11-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID
Date Prepared: 25-MAR-1991
Prep Method: EPA 5030 By: JC
Date Analyzed: 25-MAR-1991 By: JC

Project: MEREDITH BOLI OSCO, AZUSA
Sample ID: B031191-5

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	10	ND	10
Bromomethane	ND	10	ND	10
Vinyl Chloride	ND	10	ND	10
Chloroethane	ND	10	ND	10
Methylene Chloride	ND	5	ND	5
Acetone	28	10	ND	10
Carbon Disulfide	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
Total 1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
2-Butanone	ND	10	ND	10
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Vinyl Acetate	ND	10	ND	10
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
Benzene	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	10	ND	10
Bromoform	ND	5	ND	5
4-Methyl-2-pentanone	ND	10	ND	10
2-Hexanone	ND	10	ND	10
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Toluene	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
Ethylbenzene	ND	5	ND	5
Styrene	ND	5	ND	5
Xylenes, Total	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-006
Date Sampled: 11-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID

Project: MEREDITH BOLI OSCO, AZUSA

Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
25-MAR-1991	1,2 DICHLOROETHANE-D4 (EPA 8240)	102	70-135
25-MAR-1991	TOLUENE-D8 (EPA 8240)	116	69-138
25-MAR-1991	BROMOFLUOROBENZENE (EPA 8240)	107	60-137

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-007
Date Sampled: 11-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID
Date Prepared: 25-MAR-1991
Prep Method: EPA 5030 By: JC
Date Analyzed: 25-MAR-1991 By: JC

Project: MEREDITH BOLI OSCO, AZUSA
Sample ID: B031191-7

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	10	ND	10
Bromomethane	ND	10	ND	10
Vinyl Chloride	ND	10	ND	10
Chloroethane	ND	10	ND	10
Methylene Chloride	ND	5	ND	5
Acetone	77	10	ND	10
Carbon Disulfide	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
Total 1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
2-Butanone	29	10	ND	10
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Vinyl Acetate	ND	10	ND	10
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
Benzene	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	10	ND	10
Bromoform	ND	5	ND	5
4-Methyl-2-pentanone	ND	10	ND	10
2-Hexanone	ND	10	ND	10
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Toluene	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
Ethylbenzene	ND	5	ND	5
Styrene	ND	5	ND	5
Xylenes, Total	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-007
Date Sampled: 11-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID

Project: MEREDITH BOLI OSCO, AZUSA

Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
25-MAR-1991	1,2 DICHLOROETHANE-D4 (EPA 8240)	102	70-135
25-MAR-1991	TOLUENE-D8 (EPA 8240)	119	69-138
25-MAR-1991	BROMOFLUOROBENZENE (EPA 8240)	111	60-137

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-008
Date Sampled: 11-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID
Date Prepared: 25-MAR-1991
Prep Method: EPA 5030 By: JC
Date Analyzed: 25-MAR-1991 By: JC

Project: MEREDITH BOLI OSCO, AZUSA
Sample ID: B031191-8

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	10	ND	10
Bromomethane	ND	10	ND	10
Vinyl Chloride	ND	10	ND	10
Chloroethane	ND	10	ND	10
Methylene Chloride	ND	5	ND	5
Acetone	50	10	ND	10
Carbon Disulfide	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
Total 1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
2-Butanone	17	10	ND	10
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Vinyl Acetate	ND	10	ND	10
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
Benzene	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	10	ND	10
Bromoform	ND	5	ND	5
4-Methyl-2-pentanone	ND	10	ND	10
2-Hexanone	ND	10	ND	10
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Toluene	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
Ethylbenzene	ND	5	ND	5
Styrene	ND	5	ND	5
Xylenes, Total	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-008
Date Sampled: 11-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID

Project: MEREDITH BOLI OSCO, AZUSA

Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
25-MAR-1991	1,2 DICHLOROETHANE-D4 (EPA 8240)	111	70-135
25-MAR-1991	TOLUENE-D8 (EPA 8240)	126	69-138
25-MAR-1991	BROMOFLUOROBENZENE (EPA 8240)	118	60-137

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-009
Date Sampled: 11-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID
Date Prepared: 25-MAR-1991
Prep Method: EPA 5030 By: JC
Date Analyzed: 25-MAR-1991 By: JC

Project: MEREDITH BOLI OSCO, AZUSA
Sample ID: B031191-9

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	10	ND	10
Bromomethane	ND	10	ND	10
Vinyl Chloride	ND	10	ND	10
Chloroethane	ND	10	ND	10
Methylene Chloride	ND	5	ND	5
Acetone	31	10	ND	10
Carbon Disulfide	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
Total 1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
2-Butanone	ND	10	ND	10
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Vinyl Acetate	ND	10	ND	10
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
Benzene	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	10	ND	10
Bromoform	ND	5	ND	5
4-Methyl-2-pentanone	ND	10	ND	10
2-Hexanone	ND	10	ND	10
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Toluene	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
Ethylbenzene	ND	5	ND	5
Styrene	ND	5	ND	5
Xylenes, Total	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-009
Date Sampled: 11-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID

Project: MEREDITH BOLI OSCO, AZUSA

Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
25-MAR-1991	1,2 DICHLOROETHANE-D4 (EPA 8240)	93	70-135
25-MAR-1991	TOLUENE-D8 (EPA 8240)	114	69-138
25-MAR-1991	BROMOFLUOROBENZENE (EPA 8240)	104	60-137

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-010
Date Sampled: 12-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID
Date Prepared: 25-MAR-1991
Prep Method: EPA 5030 By: JC
Date Analyzed: 25-MAR-1991 By: JC

Project: MEREDITH BOLI OSCO, AZUSA
Sample ID: B031291-1

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	10	ND	10
Bromomethane	ND	10	ND	10
Vinyl Chloride	ND	10	ND	10
Chloroethane	ND	10	ND	10
Methylene Chloride	ND	5	ND	5
Acetone	210	10	ND	10
Carbon Disulfide	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
Total 1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
2-Butanone	250	10	ND	10
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Vinyl Acetate	ND	10	ND	10
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
Benzene	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	10	ND	10
Bromoform	ND	5	ND	5
4-Methyl-2-pentanone	16	10	ND	10
2-Hexanone	ND	10	ND	10
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Toluene	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
Ethylbenzene	ND	5	ND	5
Styrene	ND	5	ND	5
Xylenes, Total	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-010
Date Sampled: 12-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID

Project: MEREDITH BOLI OSCO, AZUSA

Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
25-MAR-1991	1,2 DICHLOROETHANE-D4 (EPA 8240)	107	70-135
25-MAR-1991	TOLUENE-D8 (EPA 8240)	118	69-138
25-MAR-1991	BROMOFLUOROBENZENE (EPA 8240)	113	60-137

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-011
Date Sampled: 12-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID
Date Prepared: 26-MAR-1991
Prep Method: EPA 5030 By: JC
Date Analyzed: 26-MAR-1991 By: JC

Project: MEREDITH BOLI OSCO, AZUSA
Sample ID: B031291-2

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	50	ND	10
Bromomethane	ND	50	ND	10
Vinyl Chloride	ND	50	ND	10
Chloroethane	ND	50	ND	10
Methylene Chloride	ND	25	ND	5
Acetone	200	50	ND	10
Carbon Disulfide	ND	25	ND	5
Trichlorofluoromethane	ND	25	ND	5
1,1-Dichloroethene	ND	25	ND	5
1,1-Dichloroethane	ND	25	ND	5
Total 1,2-Dichloroethene	ND	25	ND	5
Chloroform	ND	25	ND	5
1,2-Dichloroethane	ND	25	ND	5
2-Butanone	290	50	ND	10
1,1,1-Trichloroethane	ND	25	ND	5
Carbon Tetrachloride	ND	25	ND	5
Vinyl Acetate	ND	50	ND	10
Bromodichloromethane	ND	25	ND	5
1,2-Dichloropropane	ND	25	ND	5
cis-1,3-Dichloropropene	ND	25	ND	5
Trichloroethene	ND	25	ND	5
Dibromochloromethane	ND	25	ND	5
1,1,2-Trichloroethane	ND	25	ND	5
Benzene	ND	25	ND	5
trans-1,3-Dichloropropene	ND	25	ND	5
2-Chloroethylvinyl ether	ND	50	ND	10
Bromoform	ND	25	ND	5
4-Methyl-2-pentanone	ND	50	ND	10
2-Hexanone	ND	50	ND	10
Tetrachloroethene	ND	25	ND	5
1,1,2,2-Tetrachloroethane	ND	25	ND	5
Toluene	ND	25	ND	5
Chlorobenzene	ND	25	ND	5
Ethylbenzene	ND	25	ND	5
Styrene	ND	25	ND	5
Xylenes, Total	ND	25	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-011
Date Sampled: 12-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID

Project: MEREDITH BOLI OSCO, AZUSA

Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
26-MAR-1991	1,2 DICHLOROETHANE-D4 (EPA 8240)	92	70-135
26-MAR-1991	TOLUENE-D8 (EPA 8240)	102	69-138
26-MAR-1991	BROMOFLUOROBENZENE (EPA 8240)	98	60-137

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-012
Date Sampled: 12-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID
Date Prepared: 25-MAR-1991
Prep Method: EPA 5030 By: JC
Date Analyzed: 25-MAR-1991 By: JC

Project: MEREDITH BOLI OSCO, AZUSA
Sample ID: B031291-3

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	10	ND	10
Bromomethane	ND	10	ND	10
Vinyl Chloride	ND	10	ND	10
Chloroethane	ND	10	ND	10
Methylene Chloride	ND	5	ND	5
Acetone	170	10	ND	10
Carbon Disulfide	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
Total 1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
2-Butanone	250	10	ND	10
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Vinyl Acetate	ND	10	ND	10
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
Benzene	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	10	ND	10
Bromoform	ND	5	ND	5
4-Methyl-2-pentanone	34	10	ND	10
2-Hexanone	ND	10	ND	10
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Toluene	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
Ethylbenzene	ND	5	ND	5
Styrene	ND	5	ND	5
Xylenes, Total	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-012
Date Sampled: 12-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID

Project: MEREDITH BOLI OSCO, AZUSA

Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
25-MAR-1991	1,2 DICHLOROETHANE-D4 (EPA 8240)	107	70-135
25-MAR-1991	TOLUENE-D8 (EPA 8240)	120	69-138
25-MAR-1991	BROMOFLUOROBENZENE (EPA 8240)	113	60-137

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-013
Date Sampled: 12-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID
Date Prepared: 25-MAR-1991
Prep Method: EPA 5030 By: JC
Date Analyzed: 25-MAR-1991 By: JC

Project: MEREDITH BOLI OSCO, AZUSA
Sample ID: B031291-5

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	10	ND	10
Bromomethane	ND	10	ND	10
Vinyl Chloride	ND	10	ND	10
Chloroethane	ND	10	ND	10
Methylene Chloride	ND	5	ND	5
Acetone	130	10	ND	10
Carbon Disulfide	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
Total 1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
2-Butanone	150	10	ND	10
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Vinyl Acetate	ND	10	ND	10
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
Benzene	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	10	ND	10
Bromoform	ND	5	ND	5
4-Methyl-2-pentanone	27	10	ND	10
2-Hexanone	ND	10	ND	10
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Toluene	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
Ethylbenzene	ND	5	ND	5
Styrene	ND	5	ND	5
Xylenes, Total	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-013
Date Sampled: 12-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID

Project: MEREDITH BOLI OSCO, AZUSA

Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
25-MAR-1991	1,2 DICHLOROETHANE-D4 (EPA 8240)	103	70-135
25-MAR-1991	TOLUENE-D8 (EPA 8240)	120	69-138
25-MAR-1991	BROMOFLUOROBENZENE (EPA 8240)	110	60-137

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-014
Date Sampled: 14-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID
Date Prepared: 26-MAR-1991
Prep Method: EPA 5030 By: LR
Date Analyzed: 26-MAR-1991 By: LR

Project: MEREDITH BOLI OSCO, AZUSA
Sample ID: B031491-2

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	50	ND	10
Bromomethane	ND	50	ND	10
Vinyl Chloride	ND	50	ND	10
Chloroethane	ND	50	ND	10
Methylene Chloride	ND	25	ND	5
Acetone	2000	50	ND	10
Carbon Disulfide	ND	25	ND	5
Trichlorofluoromethane	ND	25	ND	5
1,1-Dichloroethene	ND	25	ND	5
1,1-Dichloroethane	ND	25	ND	5
Total 1,2-Dichloroethene	ND	25	ND	5
Chloroform	ND	25	ND	5
1,2-Dichloroethane	ND	25	ND	5
2-Butanone	720	50	ND	10
1,1,1-Trichloroethane	ND	25	ND	5
Carbon Tetrachloride	ND	25	ND	5
Vinyl Acetate	ND	50	ND	10
Bromodichloromethane	ND	25	ND	5
1,2-Dichloropropane	ND	25	ND	5
cis-1,3-Dichloropropene	ND	25	ND	5
Trichloroethene	ND	25	ND	5
Dibromochloromethane	ND	25	ND	5
1,1,2-Trichloroethane	ND	25	ND	5
Benzene	ND	25	ND	5
trans-1,3-Dichloropropene	ND	25	ND	5
2-Chloroethylvinyl ether	ND	50	ND	10
Bromoform	ND	25	ND	5
4-Methyl-2-pentanone	ND	50	ND	10
2-Hexanone	ND	50	ND	10
Tetrachloroethene	ND	25	ND	5
1,1,2,2-Tetrachloroethane	ND	25	ND	5
Toluene	ND	25	ND	5
Chlorobenzene	ND	25	ND	5
Ethylbenzene	ND	25	ND	5
Styrene	ND	25	ND	5
Xylenes, Total	ND	25	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-014
Date Sampled: 14-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID

Project: MEREDITH BOLI OSCO, AZUSA

Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
26-MAR-1991	1,2 DICHLOROETHANE-D4 (EPA 8240)	91	70-135
26-MAR-1991	TOLUENE-D8 (EPA 8240)	99	69-138
26-MAR-1991	BROMOFLUOROBENZENE (EPA 8240)	97	60-137

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-015
Date Sampled: 15-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID
Date Prepared: 26-MAR-1991
Prep Method: EPA 5030 By: LR
Date Analyzed: 26-MAR-1991 By: LR

Project: MEREDITH BOLI OSCO, AZUSA
Sample ID: B031591-1

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	10	ND	10
Bromomethane	ND	10	ND	10
Vinyl Chloride	ND	10	ND	10
Chloroethane	ND	10	ND	10
Methylene Chloride	ND	5	ND	5
Acetone	50	10	ND	10
Carbon Disulfide	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
Total 1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
2-Butanone	25	10	ND	10
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Vinyl Acetate	ND	10	ND	10
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
Benzene	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	10	ND	10
Bromoform	ND	5	ND	5
4-Methyl-2-pentanone	10	10	ND	10
2-Hexanone	ND	10	ND	10
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Toluene	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
Ethylbenzene	ND	5	ND	5
Styrene	ND	5	ND	5
Xylenes, Total	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-015
Date Sampled: 15-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID

Project: MEREDITH BOLI OSCO, AZUSA

Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
26-MAR-1991	1,2 DICHLOROETHANE-D4 (EPA 8240)	88	70-135
26-MAR-1991	TOLUENE-D8 (EPA 8240)	96	69-138
26-MAR-1991	BROMOFLUOROBENZENE (EPA 8240)	93	60-137

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-016
Date Sampled: 15-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID
Date Prepared: 26-MAR-1991
Prep Method: EPA 5030 By: LR
Date Analyzed: 26-MAR-1991 By: LR

Project: MEREDITH BOLI OSCO, AZUSA
Sample ID: B031591-2

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	10	ND	10
Bromomethane	ND	10	ND	10
Vinyl Chloride	ND	10	ND	10
Chloroethane	ND	10	ND	10
Methylene Chloride	ND	5	ND	5
Acetone	39	10	ND	10
Carbon Disulfide	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
Total 1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
2-Butanone	18	10	ND	10
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Vinyl Acetate	ND	10	ND	10
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
Benzene	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	10	ND	10
Bromoform	ND	5	ND	5
4-Methyl-2-pentanone	ND	10	ND	10
2-Hexanone	ND	10	ND	10
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Toluene	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
Ethylbenzene	ND	5	ND	5
Styrene	ND	5	ND	5
Xylenes, Total	ND	5	ND	5

BORING B-2

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-016
Date Sampled: 15-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID

Project: MEREDITH BOLI OSCO, AZUSA

Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
26-MAR-1991	1,2 DICHLOROETHANE-D4 (EPA 8240)	91	70-135
26-MAR-1991	TOLUENE-D8 (EPA 8240)	96	69-138
26-MAR-1991	BROMOFLUOROBENZENE (EPA 8240)	93	60-137

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-017
Date Sampled: 15-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID
Date Prepared: 26-MAR-1991
Prep Method: EPA 5030 By: LR
Date Analyzed: 26-MAR-1991 By: LR

Project: MEREDITH BOLI OSCO, AZUSA
Sample ID: B031591-3

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	50	ND	10
Bromomethane	ND	50	ND	10
Vinyl Chloride	ND	50	ND	10
Chloroethane	ND	50	ND	10
Methylene Chloride	ND	25	ND	5
Acetone	500	50	ND	10
Carbon Disulfide	ND	25	ND	5
Trichlorofluoromethane	ND	25	ND	5
1,1-Dichloroethene	ND	25	ND	5
1,1-Dichloroethane	ND	25	ND	5
Total 1,2-Dichloroethene	ND	25	ND	5
Chloroform	ND	25	ND	5
1,2-Dichloroethane	ND	25	ND	5
2-Butanone	170	50	ND	10
1,1,1-Trichloroethane	ND	25	ND	5
Carbon Tetrachloride	ND	25	ND	5
Vinyl Acetate	ND	50	ND	10
Bromodichloromethane	ND	25	ND	5
1,2-Dichloropropane	ND	25	ND	5
cis-1,3-Dichloropropene	ND	25	ND	5
Trichloroethene	ND	25	ND	5
Dibromochloromethane	ND	25	ND	5
1,1,2-Trichloroethane	ND	25	ND	5
Benzene	ND	25	ND	5
trans-1,3-Dichloropropene	ND	25	ND	5
2-Chloroethylvinyl ether	ND	50	ND	10
Bromoform	ND	25	ND	5
4-Methyl-2-pentanone	ND	50	ND	10
2-Hexanone	ND	50	ND	10
Tetrachloroethene	ND	25	ND	5
1,1,2,2-Tetrachloroethane	ND	25	ND	5
Toluene	ND	25	ND	5
Chlorobenzene	ND	25	ND	5
Ethylbenzene	ND	25	ND	5
Styrene	ND	25	ND	5
Xylenes, Total	ND	25	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-017
Date Sampled: 15-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID

Project: MEREDITH BOLI OSCO, AZUSA

Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
26-MAR-1991	1,2 DICHLOROETHANE-D4 (EPA 8240)	94	70-135
26-MAR-1991	TOLUENE-D8 (EPA 8240)	102	69-138
26-MAR-1991	BROMOFLUOROBENZENE (EPA 8240)	99	60-137

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-018
Date Sampled: 15-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID
Date Prepared: 26-MAR-1991
Prep Method: EPA 5030 By: LR
Date Analyzed: 26-MAR-1991 By: LR

Project: MEREDITH BOLI OSCO, AZUSA
Sample ID: B031591-4

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	10	ND	10
Bromomethane	ND	10	ND	10
Vinyl Chloride	ND	10	ND	10
Chloroethane	ND	10	ND	10
Methylene Chloride	ND	5	ND	5
Acetone	260	10	ND	10
Carbon Disulfide	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
Total 1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
2-Butanone	170	10	ND	10
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Vinyl Acetate	ND	10	ND	10
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
Benzene	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	10	ND	10
Bromoform	ND	5	ND	5
4-Methyl-2-pentanone	29	10	ND	10
2-Hexanone	ND	10	ND	10
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Toluene	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
Ethylbenzene	ND	5	ND	5
Styrene	ND	5	ND	5
Xylenes, Total	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-018
Date Sampled: 15-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID

Project: MEREDITH BOLI OSCO, AZUSA

Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
26-MAR-1991	1,2 DICHLOROETHANE-D4 (EPA 8240)	96	70-135
26-MAR-1991	TOLUENE-D8 (EPA 8240)	101	69-138
26-MAR-1991	BROMOFLUOROBENZENE (EPA 8240)	96	60-137

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-001/018
Date Sampled: 7-MAR-1991
11-MAR-1991
12-MAR-1991
14-MAR-1991
15-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID

Project: MEREDITH BOLI OSCO, AZUSA

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
9108111-003	1,1-DICHLOROETHENE (EPA 8240)	ug/kg	ND	37.7	44.5	50.0	75	89	82	17
9108012-003	1,1-DICHLOROETHENE (EPA 8240)	ug/kg	ND	43.2	41.3	50.0	86	83	85	5
9108111-003	TRICHLOROETHENE (EPA 8240)	ug/kg	ND	37.8	44.7	50.0	76	89	83	17
9108012-003	TRICHLOROETHENE (EPA 8240)	ug/kg	ND	46.7	44.8	50.0	93	90	92	4
9108111-003	BENZENE (EPA 8240)	ug/kg	ND	44.7	52.9	50.0	89	106	98	17
9108012-003	BENZENE (EPA 8240)	ug/kg	ND	40.9	38.9	50.0	82	78	80	5
9108111-003	TOLUENE (EPA 8240)	ug/kg	ND	41.8	51.7	50.0	84	103	94	21
9108012-003	TOLUENE (EPA 8240)	ug/kg	ND	42.5	40.0	50.0	85	80	83	6
9108111-003	CHLOROBENZENE (EPA 8240)	ug/kg	ND	46.4	54.2	50.0	93	108	101	16
9108012-003	CHLOROBENZENE (EPA 8240)	ug/kg	ND	46.2	44.2	50.0	92	88	90	4

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
9108012-003	27-MAR-1991	1,1-DICHLOROETHENE (EPA 8240)	G-9108111-011
			G-9108111-014
			G-9108111-015
			G-9108111-016
			G-9108111-017
			G-9108111-018
	27-MAR-1991	TRICHLOROETHENE (EPA 8240)	G-9108111-011
			G-9108111-014
			G-9108111-015
			G-9108111-016
			G-9108111-017
			G-9108111-018
	27-MAR-1991	BENZENE (EPA 8240)	G-9108111-011
			G-9108111-014
			G-9108111-015
			G-9108111-016
			G-9108111-017
			G-9108111-018
	27-MAR-1991	TOLUENE (EPA 8240)	G-9108111-011
			G-9108111-014
			G-9108111-015
			G-9108111-016
			G-9108111-017
			G-9108111-018
	27-MAR-1991	CHLOROBENZENE (EPA 8240)	G-9108111-011
			G-9108111-014
			G-9108111-015
			G-9108111-016
			G-9108111-017
			G-9108111-018
9108111-003	25-MAR-1991	1,1-DICHLOROETHENE (EPA 8240)	G-9108111-003
			G-9108111-004
			G-9108111-005
			G-9108111-006
			G-9108111-007
			G-9108111-008
			G-9108111-009
			G-9108111-010
			G-9108111-012
			G-9108111-013
	25-MAR-1991	TRICHLOROETHENE (EPA 8240)	G-9108111-003
			G-9108111-004
			G-9108111-005
			G-9108111-006
			G-9108111-007
			G-9108111-008
			G-9108111-009
			G-9108111-010
			G-9108111-012
			G-9108111-013

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
	25-MAR-1991	BENZENE (EPA 8240)	G-9108111-003
			G-9108111-004
			G-9108111-005
			G-9108111-006
			G-9108111-007
			G-9108111-008
			G-9108111-009
			G-9108111-010
			G-9108111-012
			G-9108111-013
	25-MAR-1991	TOLUENE (EPA 8240)	G-9108111-003
			G-9108111-004
			G-9108111-005
			G-9108111-006
			G-9108111-007
			G-9108111-008
			G-9108111-009
			G-9108111-010
			G-9108111-012
			G-9108111-013
	25-MAR-1991	CHLOROBENZENE (EPA 8240)	G-9108111-003
			G-9108111-004
			G-9108111-005
			G-9108111-006
			G-9108111-007
			G-9108111-008
			G-9108111-009
			G-9108111-010
			G-9108111-012
			G-9108111-013

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9108111-001/018
Date Sampled: 7-MAR-1991
11-MAR-1991
12-MAR-1991
14-MAR-1991
15-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID

Project: MEREDITH BOLI OSCO, AZUSA

Laboratory Control Sample Report

QC Batch	Parameter (Method)	Amt. Spiked	Units	Avg. Spike Recov.	Acceptable Range	Rel. Pct. Diff.	Acceptable Range
L91086018	1,1-DICHLOROETHENE (EPA 8240)	50.0	ug/kg	84.	30-151	3.	36
L91086033	1,1-DICHLOROETHENE (EPA 8240)	50.0	ug/kg	84.	30-151	1.	36
L91086018	TRICHLOROETHENE (EPA 8240)	50.0	ug/kg	96.	36-150	10.	33
L91086033	TRICHLOROETHENE (EPA 8240)	50.0	ug/kg	94.	36-150	2.	33
L91086018	BENZENE (EPA 8240)	50.0	ug/kg	94.	32-150	7.	35
L91086033	BENZENE (EPA 8240)	50.0	ug/kg	90.	32-150	2.	35
L91086018	TOLUENE (EPA 8240)	50.0	ug/kg	90.	34-151	11.	34
L91086033	TOLUENE (EPA 8240)	50.0	ug/kg	91.	34-151	0.	34
L91086018	CHLOROBENZENE (EPA 8240)	50.0	ug/kg	96.	33-151	8.	35
L91086033	CHLOROBENZENE (EPA 8240)	50.0	ug/kg	99.	33-151	2.	35

Enseco
A Corning Company

Laboratory Control Sample Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
L91086018	23-MAR-1991	1,1-DICHLOROETHENE (EPA 8240)	G-9108111-003
			G-9108111-004
			G-9108111-005
			G-9108111-006
			G-9108111-007
			G-9108111-008
			G-9108111-009
			G-9108111-010
			G-9108111-012
			G-9108111-013
		TRICHLOROETHENE (EPA 8240)	G-9108111-003
			G-9108111-004
			G-9108111-005
			G-9108111-006
			G-9108111-007
			G-9108111-008
			G-9108111-009
			G-9108111-010
			G-9108111-012
			G-9108111-013
		BENZENE (EPA 8240)	G-9108111-003
			G-9108111-004
			G-9108111-005
			G-9108111-006
			G-9108111-007
			G-9108111-008
			G-9108111-009
			G-9108111-010
			G-9108111-012
			G-9108111-013
		TOLUENE (EPA 8240)	G-9108111-003
			G-9108111-004
			G-9108111-005
			G-9108111-006
			G-9108111-007
			G-9108111-008
			G-9108111-009
			G-9108111-010
			G-9108111-012
			G-9108111-013
		CHLOROBENZENE (EPA 8240)	G-9108111-003
			G-9108111-004
			G-9108111-005
			G-9108111-006
			G-9108111-007
			G-9108111-008
			G-9108111-009
			G-9108111-010
			G-9108111-012
			G-9108111-013

Enseco
A Corning Company

Laboratory Control Sample Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
L91086033	26-MAR-1991	1,1-DICHLOROETHENE (EPA 8240)	G-9108111-011
			G-9108111-014
			G-9108111-015
			G-9108111-016
			G-9108111-017
			G-9108111-018
		TRICHLOROETHENE (EPA 8240)	G-9108111-011
			G-9108111-014
			G-9108111-015
			G-9108111-016
			G-9108111-017
			G-9108111-018
		BENZENE (EPA 8240)	G-9108111-011
			G-9108111-014
			G-9108111-015
			G-9108111-016
			G-9108111-017
			G-9108111-018
		TOLUENE (EPA 8240)	G-9108111-011
			G-9108111-014
			G-9108111-015
			G-9108111-016
			G-9108111-017
			G-9108111-018
		CHLOROBENZENE (EPA 8240)	G-9108111-011
			G-9108111-014
			G-9108111-015
			G-9108111-016
			G-9108111-017
			G-9108111-018

Enseco
A CORNING Company

☐ 7440 Lincoln Way, Garden Grove, CA 92641, (714) 8[illegible]0
☐ 2810 Bunsen Ave., Unit A Ventura, CA 93003, (805) [illegible]46
☐ 2325 Skyway Dr., Unit K, Santa Maria, CA 93455, (805) 922-2776
☐ 9537 Telstar Ave., Unit 118, El Monte, CA 91731, (818) 442-8400
☑ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTO[illegible] ECORD

Date 3-22-91 Page 1 of 2

Lab Number 9108111

CLIENT ENSECO-CRU mobile Lab

ADDRESS

PROJECT NAME MEREDITH BOLI OSCO, AZUSA

CONTRACT / PURCHASE ORDER / QUOTE #

PROJECT MANAGER D. KAMMERER

PHONE NUMBER

SITE CONTACT

ANALYSES

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	8240							Sample Condition/ REMARKS
B030791-1	3-7					X	1-40 VOA	X							
-2	↓					X	↓	X							
B031191-2	3-11					X		X							
-3	↓					X		X							
-4						X		X							
-5						X		X							
-7						X		X							
-8						X		X							
-9	↓					X		X							
B031291-1	3-12					X	↓	X							

SAMPLERS: (Signature)

Relinquished by: (Signature)

Received by: (Signature) Date Time

Received by: (Signature) Date Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Relinquished by: (Signature)	Date	Time	Received for Laboratory by:	Date RECEIVED	Time	Date ACCEPTED	Time
Arnie Almagro	3-22-91	2:00pm	[illegible]	3-22-91	1400		

Method of Shipment:

Special Instructions: Due date: 4-4-91 Normal T.A.T.

SAMPLE DISPOSITION:
1. Storage time requested:_____days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as appropriate, according to legal requirements.)

DISTRIBUTION: White with report, Yellow to Enseco, Pink to Courier, Gold to Sample Control

Enseco
A CORNING Company

☐ 7440 Lincoln Way, Garden Grove, CA 92641, (714) 8[illegible] 0
☐ 2810 Bunsen Ave., Unit A Ventura, CA 93003, (805) [illegible]546
☐ 2325 Skyway Dr., Unit K, Santa Maria, CA 93455, (805) 922-2776
☐ 9537 Telstar Ave., Unit 118, El Monte, CA 91731, (818) 442-8400
☑ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTOD[illegible] ECORD

Date 3-22-91 Page 2 of 2

Lab Number 9108111

CLIENT ENSECO-CRL Mobile Lab

ADDRESS

PROJECT NAME MEREDITH BOLI
OSCO, AZ USA

CONTRACT / PURCHASE ORDER / QUOTE #

PROJECT MANAGER
D. KAMMERER

PHONE NUMBER

SITE CONTACT

ANALYSES

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	8240							Sample Condition/ REMARKS
B031291 - 2	3-12					X	1-40 VOA	X							
↓ -3	↓					X	↓	X							
↓ -5	↓					X	↓	X							
B031491 -2	3-14					X	↓	X							
B031591 - 1	3-15					X	↓	X							
↓ -2	↓					X	↓	X							
↓ -3	↓					X	↓	X							
↓ -4	↓					X	↓	X							

SAMPLERS: (Signature)

Received by: (Signature) | Date | Time

Relinquished by: (Signature)

Received by: (Signature) | Date | Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Relinquished by: (Signature)	Date	Time	Received for Laboratory by:	Date RECEIVED	Time	Date ACCEPTED	Time
Arnie Almaguer	3-22-91	2:00 pm	[illegible]	3-22-91	1400		

Method of Shipment:

Special Instructions: Due date: 4-4-91 Normal T.A.T.

SAMPLE DISPOSITION:
1. Storage time requested:_____days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as appropriate, according to legal requirements.)

DISTRIBUTION: White with report, Yellow to Enseco, Pink to Courier, Gold to Sample Control

BORING B-2R

Analytical Report

RECEIVED
FEB 27 1991
M/B & A

LOG NO: G91-02-172

Received: 11 FEB 91

Mailed: 2-25-91

Mr. Ron Cavagrotti
Meredith Boli & Associates, Inc.
6701 Center Drive West, Suite 900
Los Angeles,CA 90045-1535

Project: 90-211

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
02-172-1	B-2-1	08 FEB 91
02-172-2	B-2-2	08 FEB 91
02-172-3	B-2-3	08 FEB 91
02-172-4	B-2-5	08 FEB 91
02-172-5	B-2-7	08 FEB 91

PARAMETER	02-172-1	02-172-2	02-172-3	02-172-4	02-172-5
EPA Method 8010					
Date Analyzed	02/13/91	02/13/91	02/21/91	02/13/91	02/13/91
Date Extracted	02/13/91	02/13/91	02/13/91	02/13/91	02/13/91
Date Confirmed	02/13/91	02/13/91	02/21/91	02/13/91	02/13/91
Dilution Factor, Times 1	1	1	5	1	1
1,1,1-Trichloroethane, ug/kg	<5	<5	<500	<5	<5
1,1,2,2-Tetrachloroethane, ug/kg	<5	<5	<500	<5	<5
1,1,2-Trichloroethane, ug/kg	<5	<5	<500	<5	<5
1,1-Dichloroethane, ug/kg	<5	<5	<500	<5	<5
1,1-Dichloroethene, ug/kg	<5	<5	<500	<5	<5
1,2-Dichloroethane, ug/kg	<5	<5	<500	<5	<5
1,2-Dichlorobenzene, ug/kg	<5	<5	700	<5	<5
1,2-Dichloropropane, ug/kg	<5	<5	<500	<5	<5
1,3-Dichlorobenzene, ug/kg	<5	<5	<500	<5	<5
1,4-Dichlorobenzene, ug/kg	<5	<5	<500	<5	<5
2-Chloroethylvinylether, ug/kg	<5	<5	<500	<5	<5
Bromodichloromethane, ug/kg	<5	<5	<500	<5	<5
Bromomethane, ug/kg	<5	<5	<500	<5	<5
Bromoform, ug/kg	<5	<5	<500	<5	<5
Chlorobenzene, ug/kg	<5	<5	<500	<5	<5
Carbon Tetrachloride, ug/kg	<5	<5	<500	<5	<5
Chloroethane, ug/kg	<5	<5	<500	<5	<5
Chloroform, ug/kg	<5	<5	<500	<5	<5
Chloromethane, ug/kg	<5	<5	<500	<5	<5

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Analytical Report

LOG NO: G91-02-172

Received: 11 FEB 91

Mr. Ron Cavagrotti
Meredith Boli & Associates, Inc.
6701 Center Drive West, Suite 900
Los Angeles,CA 90045-1535

Project: 90-211

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
02-172-1	B-2-1	08 FEB 91
02-172-2	B-2-2	08 FEB 91
02-172-3	B-2-3	08 FEB 91
02-172-4	B-2-5	08 FEB 91
02-172-5	B-2-7	08 FEB 91

PARAMETER	02-172-1	02-172-2	02-172-3	02-172-4	02-172-5
Dibromochloromethane, ug/kg	<5	<5	<500	<5	<5
Dichlorodifluoromethane, ug/kg	<5	<5	<500	<5	<5
Freon 113, ug/kg	<5	<5	<500	<5	<5
Methylene chloride, ug/kg	<5	<5	<500	<5	<5
Trichloroethene, ug/kg	<5	<5	<500	<5	<5
Trichlorofluoromethane, ug/kg	<5	<5	<500	<5	<5
Tetrachloroethene, ug/kg	40	<5	<500	<5	<5
Vinyl chloride, ug/kg	<5	<5	<500	<5	<5
cis-1,2-Dichloroethene, ug/kg	<5	<5	<500	<5	<5
cis-1,3-Dichloropropene, ug/kg	<5	<5	<500	<5	<5
trans-1,2-Dichloroethene, ug/kg	<5	<5	<500	<5	<5
trans-1,3-Dichloropropene, ug/kg	<5	<5	<500	<5	<5

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA *B C Analytical*

Analytical Report

LOG NO: G91-02-172

Received: 11 FEB 91

Mr. Ron Cavagrotti
Meredith Boli & Associates, Inc.
6701 Center Drive West, Suite 900
Los Angeles,CA 90045-1535

Project: 90-211

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
02-172-1	B-2-1	08 FEB 91
02-172-2	B-2-2	08 FEB 91
02-172-3	B-2-3	08 FEB 91
02-172-4	B-2-5	08 FEB 91
02-172-5	B-2-7	08 FEB 91

PARAMETER	02-172-1	02-172-2	02-172-3	02-172-4	02-172-5
EPA Method 8020					
Date Analyzed	02/13/91	02/13/91	02/21/91	02/13/91	02/13/91
Date Extracted	02/13/91	02/13/91	02/13/91	02/13/91	02/13/91
Date Confirmed	02/13/91	02/13/91	02/21/91	02/13/91	02/13/91
Dilution Factor, Times 1	1	1	5	1	1
1,2-Dichlorobenzene, ug/kg	<5	<5	<500	<5	<5
1,3-Dichlorobenzene, ug/kg	<5	<5	<500	<5	<5
1,4-Dichlorobenzene, ug/kg	<5	<5	<500	<5	<5
Benzene, ug/kg	<5	<5	<500	<5	<5
Chlorobenzene, ug/kg	<5	<5	<500	<5	<5
Ethylbenzene, ug/kg	<5	<5	4000	<5	<5
Toluene, ug/kg	<5	<5	<500	<5	<5
Total Xylene Isomers, ug/kg	<20	<20	62000	<20	<20

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Analytical Report

LOG NO: G91-02-172

Received: 11 FEB 91

Mr. Ron Cavagrotti
Meredith Boli & Associates, Inc.
6701 Center Drive West, Suite 900
Los Angeles,CA 90045-1535

Project: 90-211

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
02-172-6	B-2-9	08 FEB 91

PARAMETER	02-172-6
EPA Method 8010	
Date Analyzed	02/13/91
Date Extracted	02/13/91
Date Confirmed	02/13/91
Dilution Factor, Times 1	1
1,1,1-Trichloroethane, ug/kg	<5
1,1,2,2-Tetrachloroethane, ug/kg	<5
1,1,2-Trichloroethane, ug/kg	<5
1,1-Dichloroethane, ug/kg	<5
1,1-Dichloroethene, ug/kg	<5
1,2-Dichloroethane, ug/kg	<5
1,2-Dichlorobenzene, ug/kg	<5
1,2-Dichloropropane, ug/kg	<5
1,3-Dichlorobenzene, ug/kg	<5
1,4-Dichlorobenzene, ug/kg	<5
2-Chloroethylvinylether, ug/kg	<5
Bromodichloromethane, ug/kg	<5
Bromomethane, ug/kg	<5
Bromoform, ug/kg	<5
Chlorobenzene, ug/kg	<5
Carbon Tetrachloride, ug/kg	<5
Chloroethane, ug/kg	<5
Chloroform, ug/kg	<5
Chloromethane, ug/kg	<5
Dibromochloromethane, ug/kg	<5
Dichlorodifluoromethane, ug/kg	<5
Freon 113, ug/kg	<5
Methylene chloride, ug/kg	<5

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Analytical Report

LOG NO: G91-02-172

Received: 11 FEB 91

Mr. Ron Cavagrotti
Meredith Boli & Associates, Inc.
6701 Center Drive West, Suite 900
Los Angeles,CA 90045-1535

Project: 90-211

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
02-172-6	B-2-9	08 FEB 91

PARAMETER	02-172-6
Trichloroethene, ug/kg	<5
Trichlorofluoromethane, ug/kg	<5
Tetrachloroethene, ug/kg	<5
Vinyl chloride, ug/kg	<5
cis-1,2-Dichloroethene, ug/kg	<5
cis-1,3-Dichloropropene, ug/kg	<5
trans-1,2-Dichloroethene, ug/kg	<5
trans-1,3-Dichloropropene, ug/kg	<5
EPA Method 8020	
Date Analyzed	02/13/91
Date Extracted	02/13/91
Date Confirmed	02/13/91
Dilution Factor, Times 1	1
1,2-Dichlorobenzene, ug/kg	<5
1,3-Dichlorobenzene, ug/kg	<5
1,4-Dichlorobenzene, ug/kg	<5
Benzene, ug/kg	<5
Chlorobenzene, ug/kg	<5
Ethylbenzene, ug/kg	<5
Toluene, ug/kg	<5
Total Xylene Isomers, ug/kg	<20

Jeffrey A. Erion, Laboratory Manager

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

20-FEB-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: B506
ANALYSES: 8010,8020

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B021591-001/005.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

REVIEWED AND APPROVED

2/22/91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Project: 90-211

Analysis No.: M-B021591-001/005
Date Sampled: 15-FEB-1991
Date Sample Rec'd: 15-FEB-1991
Date Analyzed: 15-FEB-1991
Sample Type: SOLID

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
B-2R-10 66'	ND(5)	9	5	30
B-2R-11 77.5'	ND(5)	7	ND(5)	8
B-2R-12 89'	ND(5)	5	ND(5)	9
B-2R-13 99'	ND(5)	10	ND(5)	24
B-2R-11D 77.5'	ND(5)	28	8	54
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B021591-001
Date Sampled: 15-FEB-1991
Date Sample Rec'd: 15-FEB-1991
Sample Type: SOLID
Date Prepared: 15-FEB-1991
Prep Method: EPA 8010 By: PT
Date Analyzed: 15-FEB-1991 By: PT

Project: 90-211
Sample ID: B-2R-10 66'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B021591-002
Date Sampled: 15-FEB-1991
Date Sample Rec'd: 15-FEB-1991
Sample Type: SOLID
Date Prepared: 15-FEB-1991
Prep Method: EPA 8010 By: PT
Date Analyzed: 15-FEB-1991 By: PT

Project: 90-211
Sample ID: B-2R-11 77.5'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B021591-003
Date Sampled: 15-FEB-1991
Date Sample Rec'd: 15-FEB-1991
Sample Type: SOLID
Date Prepared: 15-FEB-1991
Prep Method: EPA 8010 By: PT
Date Analyzed: 15-FEB-1991 By: PT

Project: 90-211
Sample ID: B-2R-12 89'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B021591-004
Date Sampled: 15-FEB-1991
Date Sample Rec'd: 15-FEB-1991
Sample Type: SOLID
Date Prepared: 15-FEB-1991
Prep Method: EPA 8010 By: PT
Date Analyzed: 15-FEB-1991 By: PT

Project: 90-211
Sample ID: B-2R-13 99'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	7	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B021591-005
Date Sampled: 15-FEB-1991
Date Sample Rec'd: 15-FEB-1991
Sample Type: SOLID
Date Prepared: 15-FEB-1991
Prep Method: EPA 8010 By: PT
Date Analyzed: 15-FEB-1991 By: PT

Project: 90-211
Sample ID: B-2R-11D 77.5'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	6	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	5	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B021591-001/005
Date Sampled: 15-FEB-1991
Date Sample Rec'd: 15-FEB-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B021591-004	1,1-DICHLOROETHANE (EPA 8010)	ug/kg	ND	87.5	97.2	100	88	97	92	11
B021591-004	CHLOROFORM (EPA 8010)	ug/kg	ND	101.5	101.8	100	102	102	102	0
B021591-004	BROMODICHLOROMETHANE (EPA 8010)	ug/kg	ND	109.1	115.8	100	109	116	112	6
B021591-004	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	129.2	125.7	100	129	126	127	3
B021591-004	CHLOROBENZENE (EPA 8010)	ug/kg	ND	113.9	119.3	100	114	119	117	5
B021591-004	BENZENE (EPA 8020)	ug/kg	ND	86.1	89.0	100	86	89	88	3
B021591-004	TOLUENE (EPA 8020)	ug/kg	ND	88.0	99.7	100	88	100	94	13
B021591-004	ETHYLBENZENE (EPA 8020)	ug/kg	ND	91.8	95.9	100	92	96	94	4
B021591-004	XYLENES, TOTAL (EPA 8020)	ug/kg	ND	96.5	98.0	100	97	98	97	2

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B021591-004	15-FEB-1991	1,1-DICHLOROETHANE (EPA 8010)	M-B021591-001
			M-B021591-002
			M-B021591-003
			M-B021591-004
			M-B021591-005
		CHLOROFORM (EPA 8010)	M-B021591-001
			M-B021591-002
			M-B021591-003
			M-B021591-004
			M-B021591-005
		BROMODICHLOROMETHANE (EPA 8010)	M-B021591-001
			M-B021591-002
			M-B021591-003
			M-B021591-004
			M-B021591-005
		TRICHLOROETHENE (EPA 8010)	M-B021591-001
			M-B021591-002
			M-B021591-003
			M-B021591-004
			M-B021591-005
		CHLOROBENZENE (EPA 8010)	M-B021591-001
			M-B021591-002
			M-B021591-003
			M-B021591-004
			M-B021591-005
		BENZENE (EPA 8020)	M-B021591-001
			M-B021591-002
			M-B021591-003
			M-B021591-004
			M-B021591-005
		TOLUENE (EPA 8020)	M-B021591-001
			M-B021591-002
			M-B021591-003
			M-B021591-004
			M-B021591-005
		ETHYLBENZENE (EPA 8020)	M-B021591-001
			M-B021591-002
			M-B021591-003
			M-B021591-004
			M-B021591-005
		XYLENES, TOTAL (EPA 8020)	M-B021591-001
			M-B021591-002
			M-B021591-003
			M-B021591-004
			M-B021591-005

CHAIN OF CUSTODY RECORD

BCA Log Number _____

Client name: Meredith Boli/Associates, Inc.
Project or PO#: 90-211
Address: 6701 Center Drive West, Suite 900
Phone #: (213) 670-9221
City, State, Zip: Los Angelas, CA 90045
Report attention: Ron Cavagrotti

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sampled by / Sample description	Number of containers	8010	8020						Hazardous sample Special handling required	Remarks
B-2R-10	2-15-91	0840	SO	Boring 2R @ 66'	2	1	1							B021591-1
B-2R-11	↓	0920	↓	@ 77.5'	3	1	1							-2
B-2R-12	↓	1045	↓	@ 89'	2	1	1							-3
B-2R-13	↓	1301	↓	↓ @ 99'	1	1	1							-4
B-2R-11-Dup	2/15/91	0920	SO	Boring 2R @ 77.5'	1	1	1							-5

	Signature	Print Name	Company	Date	Time
Relinquished by	Mark T. Noonan	MARK T. NOONAN	Knight Piesold and Co	2-15-91	1540
Received by					
Relinquished by					
Received by					
Relinquished by					
Received by Laboratory	Phillip Toy	PHILLIP TOY	ENSECO-CRL	2-15-91	15:40

B C ANALYTICAL

- ☐ 1255 Powell Street, Emeryville, CA 94608 (415) 428-2300
- ☐ 801 Western Avenue, Glendale, CA 91201 (818) 247-5737
- ☐ 1200 Pacifico Avenue, Anaheim, CA 92805 (714) 978-0113

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.

Disposal arrangements: _____

*KEY: AQ—Aqueous NA—Nonaqueous SL—Sludge GW—Groundwater SO—Soil OT—Other PE—Petroleum

2R

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

22-FEB-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: B505
ANALYSES: 8010,8020

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B021491-001/001,003/007.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

REVIEWED AND APPROVED

2/22/91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B021491-001/001,003/007
Date Sampled: 14-FEB-1991
Date Sample Rec'd: 14-FEB-1991
Date Analyzed: 14-FEB-1991
15-FEB-1991
Sample Type: SOLID

Project: 90-211

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
B-2R-1 @ 4'	ND(5)	ND(5)	7	ND(15)
B-2R-3 @ 14'	ND(5)	300	1100	1100
B-2R-4 @ 19'	ND(5)	110	400	3200
B-2R-5 @ 27'	ND(5)	ND(5)	ND(5)	ND(15)
2R-8 45.5'	ND(5)	ND(5)	ND(5)	ND(15)
B-2R-9 @ 56'	ND(5)	ND(5)	31	16
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B021491-001
Date Sampled: 14-FEB-1991
Date Sample Rec'd: 14-FEB-1991
Sample Type: SOLID
Date Prepared: 14-FEB-1991
Prep Method: EPA 8010 By: PN
Date Analyzed: 14-FEB-1991 By: PN

Project: 90-211
Sample ID: B-2R-1 @ 4'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B021491-003
Date Sampled: 14-FEB-1991
Date Sample Rec'd: 14-FEB-1991
Sample Type: SOLID
Date Prepared: 14-FEB-1991
Prep Method: EPA 8010 By: PN
Date Analyzed: 14-FEB-1991 By: PN

Project: 90-211
Sample ID: B-2R-3 @ 14'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	8	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	8	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	470	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	180	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B021491-004
Date Sampled: 14-FEB-1991
Date Sample Rec'd: 14-FEB-1991
Sample Type: SOLID
Date Prepared: 14-FEB-1991
Prep Method: EPA 8010 By: PN
Date Analyzed: 14-FEB-1991 By: PN

Project: 90-211
Sample ID: B-2R-4 @ 19'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	6	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	61	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	64	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B021491-005
Date Sampled: 14-FEB-1991
Date Sample Rec'd: 14-FEB-1991
Sample Type: SOLID
Date Prepared: 14-FEB-1991
Prep Method: EPA 8010 By: PN
Date Analyzed: 14-FEB-1991 By: PN

Project: 90-211
Sample ID: B-2R-5 @ 27'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B021491-006
Date Sampled: 14-FEB-1991
Date Sample Rec'd: 14-FEB-1991
Sample Type: SOLID
Date Prepared: 14-FEB-1991
Prep Method: EPA 8010 By: PN
Date Analyzed: 14-FEB-1991 By: PN

Project: 90-211
Sample ID: 2R-8 45.5'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B021491-007
Date Sampled: 14-FEB-1991
Date Sample Rec'd: 14-FEB-1991
Sample Type: SOLID
Date Prepared: 14-FEB-1991
Prep Method: EPA 8010 By: PN
Date Analyzed: 14-FEB-1991 By: PN

Project: 90-211
Sample ID: B-2R-9 @ 56'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B021491-001/001,003/007
Date Sampled: 14-FEB-1991
Date Sample Rec'd: 14-FEB-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B021491-001	1,1-DICHLOROETHENE (EPA 8010)	ug/kg	ND	102.0	104.7	100	102	105	103	3
B021491-001	CHLOROFORM (EPA 8010)	ug/kg	ND	80.8	79.6	100	81	80	80	2
B021491-001	BROMODICHLOROMETHANE (EPA 8010)	ug/kg	ND	113.7	98.3	100	114	98	106	15
B021491-001	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	100.9	112.7	100	101	113	107	11
B021491-001	CHLOROBENZENE (EPA 8010)	ug/kg	ND	116.9	100.1	100	117	100	109	16
B021491-001	BENZENE (EPA 8020)	ug/kg	ND	82.6	85.4	100	83	85	84	3
B021591-004	BENZENE (EPA 8020)	ug/kg	ND	86.1	89.0	100	86	89	88	3
B021491-001	TOLUENE (EPA 8020)	ug/kg	ND	91.8	93.0	100	92	93	92	1
B021591-004	TOLUENE (EPA 8020)	ug/kg	ND	88.0	99.7	100	88	100	94	13
B021491-001	ETHYLBENZENE (EPA 8020)	ug/kg	ND	84.1	85.1	100	84	85	85	1
B021591-004	ETHYLBENZENE (EPA 8020)	ug/kg	ND	91.8	95.9	100	92	96	94	4
B021491-001	XYLENES, TOTAL (EPA 8020)	ug/kg	ND	83.5	85.3	100	84	85	84	2
B021591-004	XYLENES, TOTAL (EPA 8020)	ug/kg	ND	96.5	98.0	100	97	98	97	2

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B021491-001	14-FEB-1991	1,1-DICHLOROETHENE (EPA 8010)	M-B021491-001
			M-B021491-003
			M-B021491-004
			M-B021491-005
			M-B021491-006
			M-B021491-007
		CHLOROFORM (EPA 8010)	M-B021491-001
			M-B021491-003
			M-B021491-004
			M-B021491-005
			M-B021491-006
			M-B021491-007
		BROMODICHLOROMETHANE (EPA 8010)	M-B021491-001
			M-B021491-003
			M-B021491-004
			M-B021491-005
			M-B021491-006
			M-B021491-007
		TRICHLOROETHENE (EPA 8010)	M-B021491-001
			M-B021491-003
			M-B021491-004
			M-B021491-005
			M-B021491-006
			M-B021491-007
		CHLOROBENZENE (EPA 8010)	M-B021491-001
			M-B021491-003
			M-B021491-004
			M-B021491-005
			M-B021491-006
			M-B021491-007
		BENZENE (EPA 8020)	M-B021491-001
			M-B021491-003
			M-B021491-004
			M-B021491-005
		TOLUENE (EPA 8020)	M-B021491-007
			M-B021491-007
			M-B021491-003
			M-B021491-006
		ETHYLBENZENE (EPA 8020)	M-B021491-001
			M-B021491-003
			M-B021491-004
			M-B021491-007
		XYLENES, TOTAL (EPA 8020)	M-B021491-001
			M-B021491-003
			M-B021491-004
			M-B021491-007
B021591-004	15-FEB-1991	BENZENE (EPA 8020)	M-B021491-004
			M-B021491-005
		TOLUENE (EPA 8020)	M-B021491-004
			M-B021491-005

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
		ETHYLBENZENE (EPA 8020)	M-B021491-004
			M-B021491-005
		XYLENES, TOTAL (EPA 8020)	M-B021491-004
			M-B021491-005

CHAIN OF CUSTODY RECORD

BCA Log Number _____

Client name: MEREDITH BOLI / ASSOCIATES, INC.
Project or PO#: 90-211
Address: 6701 Center Drive West, Suite 900
Phone #: (213) 670-9221
City, State, Zip: Los Angeles, CA 90045
Report attention: Ron Cavagrotti

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sampled by / Sample description	Number of containers	8010	8020						Hazardous sample Special handling required	Remarks
B-2R-1	2/14/91	1302	SO	B-2R-1 at 4'	2	X	X							B021491-1
B-2R-2	2/14/91	1310	SO	B-2R-2 at 9'	1	X	X							HOLD B021491-2
B-2R-3	2/14/91	1324	SO	B-2R-3 at 14'	2	X	X							B021491-3
B-2R-4		1337	SO	19' B-2R	2	X	X							B021491-4
B-2R-5		1347	SO	27' "	3	X	X							B021491-5
2R-8		1530	SO	45.5' "	1	X	X							B021491-6
B-2R-9		1554	SO	56' "	1	X	X							B021491-7

	Signature	Print Name	Company	Date	Time
Relinquished by	Mark T. Noonan	MARK T. NOONAN	Knight Piesold	2-14-91	
Received by					1710 MTN
Relinquished by					
Received by					
Relinquished by					
Received by Laboratory	Philip Norton	PHILIP NORTON	ENSECO - CRL	2/14/91	17:10

B C ANALYTICAL

- ☐ 1255 Powell Street, Emeryville, CA 94608 (415) 428-2300
- ☐ 801 Western Avenue, Glendale, CA 91201 (818) 247-5737
- ☐ 1200 Pacifico Avenue, Anaheim, CA 92805 (714) 978-0113

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.

Disposal arrangements: _____

*KEY: AQ—Aqueous NA—Nonaqueous SL—Sludge GW—Groundwater SO—Soil OT—Other PE—Petroleum

2R

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

28-FEB-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: B508
ANALYSES: 8010,8020

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B022091-001/003.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

REVIEWED AND APPROVED

2-28-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Project: 90-211

Analysis No.: M-B022091-001/003
Date Sampled: 20-FEB-1991
Date Sample Rec'd: 20-FEB-1991
Date Analyzed: 20-FEB-1991
Sample Type: SOLID

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
B-2R-14 116.5'	ND(5)	ND(5)	ND(5)	ND(15)
B-2R-15 128'	ND(5)	ND(5)	ND(5)	14
B-2R-17 139'	ND(5)	ND(5)	ND(5)	ND(15)
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B022091-001
Date Sampled: 20-FEB-1991
Date Sample Rec'd: 20-FEB-1991
Sample Type: SOLID
Date Prepared: 20-FEB-1991
Prep Method: EPA 8010 By: PN
Date Analyzed: 20-FEB-1991 By: PN

Project: 90-211
Sample ID: B-2R-14 116.5'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B022091-002
Date Sampled: 20-FEB-1991
Date Sample Rec'd: 20-FEB-1991
Sample Type: SOLID
Date Prepared: 20-FEB-1991
Prep Method: EPA 8010 By: PN
Date Analyzed: 20-FEB-1991 By: PN

Project: 90-211
Sample ID: B-2R-15 128'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B022091-003
Date Sampled: 20-FEB-1991
Date Sample Rec'd: 20-FEB-1991
Sample Type: SOLID
Date Prepared: 20-FEB-1991
Prep Method: EPA 8010 By: PN
Date Analyzed: 20-FEB-1991 By: PN

Project: 90-211
Sample ID: B-2R-17 139'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B022091-001/003
Date Sampled: 20-FEB-1991
Date Sample Rec'd: 20-FEB-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B022091-003	1,1-DICHLOROETHANE (EPA 8010)	ug/kg	ND	105	97.8	100	105	98	101	7
B022091-003	CHLOROFORM (EPA 8010)	ug/kg	ND	110	101	100	110	101	106	9
B022091-003	BROMODICHLOROMETHANE (EPA 8010)	ug/kg	ND	105	105	100	105	105	105	0
B022091-003	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	103	114	100	103	114	109	10
B022091-003	CHLOROBENZENE (EPA 8010)	ug/kg	ND	98.2	99.4	100	98	99	99	1
B022091-003	BENZENE (EPA 8020)	ug/kg	ND	101	102	100	101	102	102	1
B022091-003	TOLUENE (EPA 8020)	ug/kg	ND	91.8	92.3	100	92	92	92	1
B022091-003	ETHYLBENZENE (EPA 8020)	ug/kg	ND	97.3	98.9	100	97	99	98	2
B022091-003	XYLENES, TOTAL (EPA 8020)	ug/kg	ND	99.1	101	100	99	101	100	2

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B022091-003	20-FEB-1991	1,1-DICHLOROETHANE (EPA 8010)	M-B022091-001
			M-B022091-002
			M-B022091-003
		CHLOROFORM (EPA 8010)	M-B022091-001
			M-B022091-002
			M-B022091-003
		BROMODICHLOROMETHANE (EPA 8010)	M-B022091-001
			M-B022091-002
			M-B022091-003
		TRICHLOROETHENE (EPA 8010)	M-B022091-001
			M-B022091-002
			M-B022091-003
		CHLOROBENZENE (EPA 8010)	M-B022091-001
			M-B022091-002
			M-B022091-003
		BENZENE (EPA 8020)	M-B022091-001
			M-B022091-002
			M-B022091-003
		TOLUENE (EPA 8020)	M-B022091-001
			M-B022091-002
			M-B022091-003
		ETHYLBENZENE (EPA 8020)	M-B022091-001
			M-B022091-002
			M-B022091-003
		XYLENES, TOTAL (EPA 8020)	M-B022091-001
			M-B022091-002
			M-B022091-003

CHAIN OF CUSTODY RECORD

BCA Log Number _____

Client name: Meredith Boli/Associates, Inc	Project or PO#: 90-211
Address: 6701 Center Drive West, Suite 900	Phone #: (213) 670-9221
City, State, Zip: Los Angeles, CA 90043	Report attention: Ron Cavagrotti

Sampled by: M. Noonan

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sample description	Number of containers	8010	8020						Hazardous sample Special handling required	Remarks
B-2R-14	2-20-91	1009	SO	Boring 2R @ 116.5'	4	1	1							B022091-1
B-2R-15	2-20-91	1300	SO	Boring 2R @ 128.0'	2	1	1							B022091-2

	Signature	Print Name	Company	Date	Time
Relinquished by	Mark T. Noonan	Mark T. Noonan	Knight Piesold and Co	2-20-91	1600
Received by					
Relinquished by					
Received by					
Relinquished by					
Received by Laboratory	[illegible]	Philip Norton	ENSERO - CRL	2/20/91	16:00

BC ANALYTICAL

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. *KEY: AQ - Aqueous, NA - Nonaqueous, SL - Sludge

CHAIN OF CUSTODY RECORD

BCA Log Number _____

Client name: Meredith Boli/Associates, Inc	Project or PO#: 90-211
Address: 6701 Center Drive West, Suite 900	Phone #: (213) 670-9221
City, State, Zip: Los Angeles, CA 90045	Report attention: Ron Cruzgrott

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sampled by / Sample description	Number of containers	8010	8020						Hazardous sample Special handling required	Remarks
B-2R-17	2-20-91	1615	SO	Boring 2R @ 139'	2	1	1							Use #1 First

Analyses required

	Signature	Print Name	Company	Date	Time
Relinquished by	Mark T. Noonan	MARK T. NOONAN	Knight Resold Snd Co	2-20-91	1709
Received by					
Relinquished by					
Received by					
Relinquished by					
Received by Laboratory	[illegible]	PHILIP NORTON	ENSECO - CRL	2/20/91	17:10

B.C. ANALYTICAL

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. *KEY: AQ - Aqueous, NA - Nonaqueous, SL - Sludge

2 R

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

13-MAR-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: B517
ANALYSES: 8010,8020

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B030591-001/002.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

Dat Hammers
REVIEWED AND APPROVED

3-13-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Project: 90-211

Analysis No.: M-B030591-001/002
Date Sampled: 5-MAR-1991
Date Sample Rec'd: 5-MAR-1991
Date Analyzed: 5-MAR-1991
Sample Type: SOLID

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
B-2R-19 @ 166.0'	ND(5)	ND(5)	ND(5)	ND(15)
B-2R-20 @ 170.0'	ND(5)	ND(5)	ND(5)	ND(15)
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B030591-001
Date Sampled: 5-MAR-1991
Date Sample Rec'd: 5-MAR-1991
Sample Type: SOLID
Date Analyzed: 5-MAR-1991 By: PN

Project: 90-211
Sample ID: B-2R-19 @ 166.0'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B030591-002
Date Sampled: 5-MAR-1991
Date Sample Rec'd: 5-MAR-1991
Sample Type: SOLID
Date Analyzed: 5-MAR-1991 By: PN

Project: 90-211
Sample ID: B-2R-20 @ 170.0'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B030591-001/002
Date Sampled: 5-MAR-1991
Date Sample Rec'd: 5-MAR-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B030591-001	CHLOROFORM (EPA 8010)	ug/kg	ND	86.1	111.5	100	86	112	99	26
B030591-001	1,1,1-TRICHLOROETHANE (EPA 8010)	ug/kg	ND	96.7	108.2	100	97	108	102	11
B030591-001	BROMODICHLOROMETHANE (EPA 8010)	ug/kg	ND	98.8	115.6	100	99	116	107	16
B030591-001	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	86.0	100.2	100	86	100	93	15
B030591-001	CHLOROBENZENE (EPA 8010)	ug/kg	ND	94.96	87.4	100	95	87	91	8
B030591-001	BENZENE (EPA 8020)	ug/kg	ND	87.0	102.1	100	87	102	95	16
B030591-001	TOLUENE (EPA 8020)	ug/kg	ND	94.5	97.3	100	95	97	96	3
B030591-001	ETHYLBENZENE (EPA 8020)	ug/kg	ND	102.	99.9	100	102	100	101	2
B030591-001	XYLENES, TOTAL (EPA 8020)	ug/kg	ND	101	99.1	100	101	99	100	2

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B030591-001	5-MAR-1991	CHLOROFORM (EPA 8010)	M-B030591-001
			M-B030591-002
	5-MAR-1991	1,1,1-TRICHLOROETHANE (EPA 8010)	M-B030591-001
			M-B030591-002
	5-MAR-1991	BROMODICHLOROMETHANE (EPA 8010)	M-B030591-001
			M-B030591-002
	5-MAR-1991	TRICHLOROETHENE (EPA 8010)	M-B030591-001
			M-B030591-002
	5-MAR-1991	CHLOROBENZENE (EPA 8010)	M-B030591-001
			M-B030591-002
	5-MAR-1991	BENZENE (EPA 8020)	M-B030591-001
			M-B030591-002
	5-MAR-1991	TOLUENE (EPA 8020)	M-B030591-001
			M-B030591-002
	5-MAR-1991	ETHYLBENZENE (EPA 8020)	M-B030591-001
			M-B030591-002
	5-MAR-1991	XYLENES, TOTAL (EPA 8020)	M-B030591-001
			M-B030591-002

CHAIN OF CUSTODY RECORD

BCA Log Number _____

Client name: Meredith Boli / Associates, Inc
Project or PO#: 90-211
Address: 6701 Center Drive West, Suite 900
Phone #: (213) 670-
City, State, Zip: Los Angeles, CA
Report attention: Ron Cavagrotti
Sampled by: Mark T. Noonan

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sample description	Number of containers	8010	8020						Hazardous sample Special handling required	Remarks
B-2R-19	3-5-91		SO	B-2R @ 166.0' (#19)	1	1	1							B030591-1
B-2R-20	3-5-91		SO	B-2R @ 170.0' (#20)	1	1	1							B030591-2

	Signature	Print Name	Company	Date	Time
Relinquished by	Mark T. Noonan	Mark T. Noonan	Knight Resolution Co	3-5-91	1550
Received by					
Relinquished by					
Received by					
Relinquished by					
Received by Laboratory	Philip Norton	PHILIP NORTON	ENSECO - CRL	3/5/91	15:50

B C ANALYTICAL

Note: Samples are discarded 30 days after results are reported unless other arrangements are made.

2 R

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

13-MAR-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: B516
ANALYSES: 8010,8020

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B030491-001/001.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

Dot Hammers
REVIEWED AND APPROVED

3-13-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Project: 90-211

Analysis No.: M-B030491-001/001
Date Sampled: 4-MAR-1991
Date Sample Rec'd: 4-MAR-1991
Date Analyzed: 4-MAR-1991
Sample Type: SOLID

Sample ID	Benzene mg/kg EPA 8020	Toluene mg/kg EPA 8020	Ethylbenzene mg/kg EPA 8020	Xylenes, Total mg/kg EPA 8020
B-2R-18 @ 154.0'	ND(5)	ND(5)	ND(5)	ND(5)
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B030491-001
Date Sampled: 4-MAR-1991
Date Sample Rec'd: 4-MAR-1991
Sample Type: SOLID
Date Analyzed: 4-MAR-1991 By: PN

Project: 90-211
Sample ID: B-2R-18 @ 154.0'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B030491-001
Date Sampled: 4-MAR-1991
Date Sample Rec'd: 4-MAR-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B030491-001	CHLOROFORM (EPA 8010)	ug/kg	ND	115	101	100	115	101	108	13
B030491-001	1,1,1-TRICHLOROETHANE (EPA 8010)	ug/kg	ND	111	103	100	111	103	107	8
B030491-001	BROMODICHLOROMETHANE (EPA 8010)	ug/kg	ND	119	106	100	119	106	113	12
B030491-001	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	101	102	100	101	102	102	1
B030491-001	CHLOROBENZENE (EPA 8010)	ug/kg	ND	91.7	103	100	92	103	97	12
B030491-001	BENZENE (EPA 8020)	ug/kg	ND	106	94.0	100	106	94	100	12
B030491-001	TOLUENE (EPA 8020)	ug/kg	ND	108	110	100	108	110	109	2
B030491-001	ETHYLBENZENE (EPA 8020)	ug/kg	ND	104	103	100	104	103	104	1
B030491-001	XYLENES, TOTAL (EPA 8020)	ug/kg	ND	103	104	100	103	104	104	1

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B030491-001	4-MAR-1991	CHLOROFORM (EPA 8010)	M-B030491-001
	4-MAR-1991	1,1,1-TRICHLOROETHANE (EPA 8010)	M-B030491-001
	4-MAR-1991	BROMODICHLOROMETHANE (EPA 8010)	M-B030491-001
	4-MAR-1991	TRICHLOROETHENE (EPA 8010)	M-B030491-001
	4-MAR-1991	CHLOROBENZENE (EPA 8010)	M-B030491-001
	4-MAR-1991	BENZENE (EPA 8020)	M-B030491-001
	4-MAR-1991	TOLUENE (EPA 8020)	M-B030491-001
	4-MAR-1991	ETHYLBENZENE (EPA 8020)	M-B030491-001
	4-MAR-1991	XYLENES, TOTAL (EPA 8020)	M-B030491-001

CHAIN OF CUSTODY RECORD

BCA Log Number _____

Client name: Meredith Boli/Associates, Inc	Project or PO#: 90-211
Address: 6701 Center Drive West, Suite 900	Phone #: (213) 670
City, State, Zip: Los Angeles CA	Report attention: Don Cavagrotti
Sampled by: Mark T. Noonan	

Analyses required

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sample description	Number of containers	8010	8020						Hazardous sample Special handling required	Remarks
B-2R-18	3-4-91	1013	SO	Boring 2R @ 154.0'	1	1	1							B030491-1

	Signature	Print Name	Company	Date	Time
Relinquished by	Mark T. Noonan	Mark T. Noonan	Knight Piesold and Co	3-4-91	1727
Received by					
Relinquished by					
Received by					
Relinquished by					
Received by Laboratory	[illegible]	PHILIP NORTON	ENSECO - CRC	3/4/91	17:30

B C ANALYTICAL

- ☐ 1255 Powell Street, Emeryville, CA 94608 (415) 428-2300
- ☐ 801 Western Avenue, Glendale, CA 91201 (818) 247-5737
- ☐ 1200 Pacifico Avenue, Anaheim, CA 92805 (714) 978-0113

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.

Disposal arrangements: _____

*KEY: AQ—Aqueous NA—Nonaqueous SL—Sludge GW—Groundwater SO—Soil OT—Other PE—Petroleum

Analytical Report

LOG NO: G91-02-315

Received: 19 FEB 91

Mr. Ron Cavagrotti
Meredith Boli & Associates
6701 Center Drive West
Los Angeles, CA 90045-1535

Project: 90-211

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
02-315-4	B-2R-11	15 FEB 91

PARAMETER	02-315-4
Lead, mg/kg	<10
Mercury, mg/kg	<0.2
Nitric Acid Digestion with HCl, Date	03/01/91

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Analytical Report

LOG NO: G91-02-315

Received: 19 FEB 91

Mr. Ron Cavagrotti
Meredith Boli & Associates
6701 Center Drive West
Los Angeles, CA 90045-1535

Project: 90-211

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
02-315-4	B-2R-11	15 FEB 91

PARAMETER	02-315-4
EPA Method 8010	
Date Analyzed	02/22/91
Date Confirmed	02/22/91
Dilution Factor, Times 1	1
1,1,1-Trichloroethane, ug/kg	<5
1,1,2,2-Tetrachloroethane, ug/kg	<5
1,1,2-Trichloroethane, ug/kg	<5
1,1-Dichloroethane, ug/kg	<5
1,1-Dichloroethene, ug/kg	<5
1,2-Dichloroethane, ug/kg	<5
1,2-Dichlorobenzene, ug/kg	<5
1,2-Dichloropropane, ug/kg	<5
1,3-Dichlorobenzene, ug/kg	<5
1,4-Dichlorobenzene, ug/kg	<5
2-Chloroethylvinylether, ug/kg	<5
Bromodichloromethane, ug/kg	<5
Bromomethane, ug/kg	<5
Bromoform, ug/kg	<5
Chlorobenzene, ug/kg	<5
Carbon Tetrachloride, ug/kg	<5
Chloroethane, ug/kg	<5
Chloroform, ug/kg	<5
Chloromethane, ug/kg	<5
Dibromochloromethane, ug/kg	<5
Dichlorodifluoromethane, ug/kg	<5
Freon 113, ug/kg	<5
Methylene chloride, ug/kg	<5
Trichloroethene, ug/kg	<5

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Analytical Report

LOG NO: G91-02-315

Received: 19 FEB 91

Mr. Ron Cavagrotti
Meredith Boli & Associates
6701 Center Drive West
Los Angeles, CA 90045-1535

Project: 90-211

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
02-315-4	B-2R-11	15 FEB 91

PARAMETER	02-315-4
Trichlorofluoromethane, ug/kg	<5
Tetrachloroethene, ug/kg	<5
Vinyl chloride, ug/kg	<5
cis-1,2-Dichloroethene, ug/kg	<5
cis-1,3-Dichloropropene, ug/kg	<5
trans-1,2-Dichloroethene, ug/kg	<5
trans-1,3-Dichloropropene, ug/kg	<5
Other EPA Method 8010	---
EPA Method 8020	
Date Analyzed	02/22/91
Date Confirmed	02/22/91
Dilution Factor, Times 1	1
1,2-Dichlorobenzene, ug/kg	<5
1,3-Dichlorobenzene, ug/kg	<5
1,4-Dichlorobenzene, ug/kg	<5
Benzene, ug/kg	<5
Chlorobenzene, ug/kg	<5
Ethylbenzene, ug/kg	<5
Toluene, ug/kg	<5
Total Xylene Isomers, ug/kg	<20
Other EPA Method 8020	---

Jeffrey A. Brion, Laboratory Manager

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Analytical Report

RECEIVED
MAR 20 1991
M/B &

LOG NO: G91-03-140

Received: 07 MAR 91

Mailed: MAR 18 1991

Mr. Ron Cavagrotti
Meredith Boli & Associates
6701 Center Drive West
Los Angeles, CA 90045-1535

Purchase Order: 90-211

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-140-1	B-2R-167-C @ 167.0'	05 MAR 91
03-140-2	B-2R-174-C @ 174.0'	05 MAR 91

PARAMETER	03-140-1	03-140-2
TPH - Modified 8015		
Date Analyzed	03/13/91	03/13/91
Dilution Factor, Times 1	1	1
Total Fuel Hydrocarbons, mg/kg	<5	<5
Other TPH - Modified 8015	---	---

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Analytical Report

LOG NO: G91-03-140

Received: 07 MAR 91

Mr. Ron Cavagrotti
Meredith Boli & Associates
6701 Center Drive West
Los Angeles, CA 90045-1535

Purchase Order: 90-211

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-140-1	B-2R-167-C @ 167.0'	05 MAR 91
03-140-2	B-2R-174-C @ 174.0'	05 MAR 91

PARAMETER	03-140-1	03-140-2
EPA Method 8010		
Date Analyzed	03/13/91	03/13/91
Date Extracted	03/12/91	03/12/91
Date Confirmed	03/13/91	03/13/91
Dilution Factor, Times 1	1	1
1,1,1-Trichloroethane, ug/kg	<5	<5
1,1,2,2-Tetrachloroethane, ug/kg	<5	<5
1,1,2-Trichloroethane, ug/kg	<5	<5
1,1-Dichloroethane, ug/kg	<5	<5
1,1-Dichloroethene, ug/kg	<5	<5
1,2-Dichloroethane, ug/kg	<5	<5
1,2-Dichlorobenzene, ug/kg	<5	<5
1,2-Dichloropropane, ug/kg	<5	<5
1,3-Dichlorobenzene, ug/kg	<5	<5
1,4-Dichlorobenzene, ug/kg	<5	<5
2-Chloroethylvinylether, ug/kg	<5	<5
Bromodichloromethane, ug/kg	<5	<5
Bromomethane, ug/kg	<5	<5
Bromoform, ug/kg	<5	<5
Chlorobenzene, ug/kg	<5	<5
Carbon Tetrachloride, ug/kg	<5	<5
Chloroethane, ug/kg	<5	<5
Chloroform, ug/kg	<5	<5
Chloromethane, ug/kg	<5	<5
Dibromochloromethane, ug/kg	<5	<5
Dichlorodifluoromethane, ug/kg	<5	<5
Freon 113, ug/kg	<5	<5

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Analytical Report

LOG NO: G91-03-140

Received: 07 MAR 91

Mr. Ron Cavagrotti
Meredith Boli & Associates
6701 Center Drive West
Los Angeles, CA 90045-1535

Purchase Order: 90-211

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-140-1	B-2R-167-C @ 167.0'	05 MAR 91
03-140-2	B-2R-174-C @ 174.0'	05 MAR 91

PARAMETER	03-140-1	03-140-2
Methylene chloride, ug/kg	<5	<5
Trichloroethene, ug/kg	<5	<5
Trichlorofluoromethane, ug/kg	<5	<5
Tetrachloroethene, ug/kg	<5	<5
Vinyl chloride, ug/kg	<5	<5
cis-1,2-Dichloroethene, ug/kg	<5	<5
cis-1,3-Dichloropropene, ug/kg	<5	<5
trans-1,2-Dichloroethene, ug/kg	<5	<5
trans-1,3-Dichloropropene, ug/kg	<5	<5
EPA Method 8020		
Date Analyzed	03/13/91	03/13/91
Date Extracted	03/12/91	03/12/91
Date Confirmed	03/13/91	03/13/91
Dilution Factor, Times 1	1	1
1,2-Dichlorobenzene, ug/kg	<5	<5
1,3-Dichlorobenzene, ug/kg	<5	<5
1,4-Dichlorobenzene, ug/kg	<5	<5
Benzene, ug/kg	<5	<5
Chlorobenzene, ug/kg	<5	<5
Ethylbenzene, ug/kg	<5	<5
Toluene, ug/kg	<5	<5
Total Xylene Isomers, ug/kg	<20	<20

Jeffrey A. Erion, Laboratory Manager

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

BORING B-3

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

20-MAY-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: B547
ANALYSES: 8010,8020

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B051491-001/005.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

Phillip Toy
REVIEWED AND APPROVED

5-20-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B051491-001/005
Date Sampled: 14-MAY-1991
Date Sample Rec'd: 14-MAY-1991
Date Analyzed: 15-MAY-1991
16-MAY-1991
Sample Type: SOLID

Project: 90-211

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
B-3-30	ND(5)	ND(5)	ND(5)	ND(15)
B-3-19	ND(5)	ND(5)	ND(5)	ND(15)
B-3-33	ND(5)	ND(5)	ND(5)	ND(15)
B-3-48	ND(5)	ND(5)	ND(5)	ND(15)
B-3-62.5	ND(5)	ND(5)	ND(5)	ND(15)
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B051491-001
Date Sampled: 14-MAY-1991
Date Sample Rec'd: 14-MAY-1991
Sample Type: SOLID
Date Analyzed: 15-MAY-1991 By: PN

Project: 90-211
Sample ID: B-3-30

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B051491-002
Date Sampled: 14-MAY-1991
Date Sample Rec'd: 14-MAY-1991
Sample Type: SOLID
Date Analyzed: 15-MAY-1991 By: PN

Project: 90-211
Sample ID: B-3-19

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B051491-003
Date Sampled: 14-MAY-1991
Date Sample Rec'd: 14-MAY-1991
Sample Type: SOLID
Date Analyzed: 15-MAY-1991 By: PN

Project: 90-211
Sample ID: B-3-33

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B051491-004
Date Sampled: 14-MAY-1991
Date Sample Rec'd: 14-MAY-1991
Sample Type: SOLID
Date Analyzed: 15-MAY-1991 By: PN

Project: 90-211
Sample ID: B-3-48

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B051491-005
Date Sampled: 14-MAY-1991
Date Sample Rec'd: 14-MAY-1991
Sample Type: SOLID
Date Analyzed: 16-MAY-1991 By: PN

Project: 90-211
Sample ID: B-3-62.5

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B051491-001/005
Date Sampled: 14-MAY-1991
Date Sample Rec'd: 14-MAY-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B051591-001	1,1-DICHLOROETHENE (EPA 8010)	ug/kg	ND	85.0	94.0	100	85	94	89	10
B051491-005	1,1-DICHLOROETHENE (EPA 8010)	ug/kg	ND	99.8	97.4	100	99	97	98	2
B051591-001	CHLOROFORM (EPA 8010)	ug/kg	ND	87.9	94.4	100	87	94	90	7
B051491-005	CHLOROFORM (EPA 8010)	ug/kg	ND	98.5	99.7	100	98	99	98	1
B051591-001	BROMODICHLOROMETHANE (EPA 8010)	ug/kg	ND	95.5	96.3	100	95	96	95	0
B051491-005	BROMODICHLOROMETHANE (EPA 8010)	ug/kg	ND	104	105	100	104	105	104	1
B051591-001	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	93.1	97.9	100	93	97	95	5
B051491-005	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	94.0	98.0	100	94	98	96	4
B051591-001	CHLOROBENZENE (EPA 8010)	ug/kg	ND	93.2	99.4	100	93	99	96	6
B051491-005	CHLOROBENZENE (EPA 8010)	ug/kg	ND	102	106	100	102	106	104	3
B051491-005	BENZENE (EPA 8020)	mg/kg	ND	125	129	100	125	129	127	3
B051591-001	BENZENE (EPA 8020)	mg/kg	ND	114	119	100	114	119	116	4
B051491-005	TOLUENE (EPA 8020)	mg/kg	ND	116	120	100	116	120	118	3
B051591-001	TOLUENE (EPA 8020)	mg/kg	ND	104	107	100	104	107	105	2
B051491-005	ETHYLBENZENE (EPA 8020)	mg/kg	ND	105	108	100	105	108	106	2
B051591-001	ETHYLBENZENE (EPA 8020)	mg/kg	ND	96.3	99.9	100	96	99	97	3
B051491-005	XYLENES, TOTAL (EPA 8020)	mg/kg	ND	106	109	100	106	109	107	2
B051591-001	XYLENES, TOTAL (EPA 8020)	mg/kg	ND	97.2	101	100	97	101	99	3

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B051491-005	16-MAY-1991	1,1-DICHLOROETHENE (EPA 8010)	M-B051491-005
	16-MAY-1991	CHLOROFORM (EPA 8010)	M-B051491-005
	16-MAY-1991	BROMODICHLOROMETHANE (EPA 8010)	M-B051491-005
	16-MAY-1991	TRICHLOROETHENE (EPA 8010)	M-B051491-005
	16-MAY-1991	CHLOROBENZENE (EPA 8010)	M-B051491-005
	16-MAY-1991	BENZENE (EPA 8020)	M-B051491-005
	16-MAY-1991	TOLUENE (EPA 8020)	M-B051491-005
	16-MAY-1991	ETHYLBENZENE (EPA 8020)	M-B051491-005
	16-MAY-1991	XYLENES, TOTAL (EPA 8020)	M-B051491-005
B051591-001	15-MAY-1991	1,1-DICHLOROETHENE (EPA 8010)	M-B051491-001
			M-B051491-002
			M-B051491-003
			M-B051491-004
	15-MAY-1991	CHLOROFORM (EPA 8010)	M-B051491-001
			M-B051491-002
			M-B051491-003
			M-B051491-004
	15-MAY-1991	BROMODICHLOROMETHANE (EPA 8010)	M-B051491-001
			M-B051491-002
			M-B051491-003
			M-B051491-004
	15-MAY-1991	TRICHLOROETHENE (EPA 8010)	M-B051491-001
			M-B051491-002
			M-B051491-003
			M-B051491-004
	15-MAY-1991	CHLOROBENZENE (EPA 8010)	M-B051491-001
			M-B051491-002
			M-B051491-003
			M-B051491-004
	15-MAY-1991	BENZENE (EPA 8020)	M-B051491-001
			M-B051491-002
			M-B051491-003
			M-B051491-004
	15-MAY-1991	TOLUENE (EPA 8020)	M-B051491-001
			M-B051491-002
			M-B051491-003
			M-B051491-004
	15-MAY-1991	ETHYLBENZENE (EPA 8020)	M-B051491-001
			M-B051491-002
			M-B051491-003
			M-B051491-004
	15-MAY-1991	XYLENES, TOTAL (EPA 8020)	M-B051491-001
			M-B051491-002
			M-B051491-003
			M-B051491-004

Enseco
A CORNING Company

☐ 7440 Lincoln Way, Garden Grove, CA 92641, (714) 898-6370
☐ 2810 Bunsen Ave., Unit A Ventura, CA 93003, (805) 650-0546
☐ 2325 Skyway Dr., Unit K, Santa Maria, CA 93455, (805) 922-2776
☐ 9537 Telstar Ave., Unit 118, El Monte, CA 91731, (818) 442-8400
☒ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTODY RECORD

Date 5/14/91 Page 1 of 1
Lab Number 2

CLIENT MEREDITH BOLI
ADDRESS
PROJECT NAME 1704 W. 1st ST, AZUSA
OSCO - CHEMICAL WASTE MGMT
CONTRACT / PURCHASE ORDER / QUOTE #

PROJECT MANAGER
PHONE NUMBER
SITE CONTACT FRANK HAGAR / KNIGHT PIESOLD

ANALYSES

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	8010 (FULL)	8020 BTEX						Sample Condition/ REMARKS
~~B-6-30~~ B-3-30 PM 5/14/91	5/14/91	16:20	805149-1			X	1	X	X						20% FULL
B-3-19			-2			X	1	X	X						50% FULL
B-3-33			-3			X	1	X	X						5% FULL
B-3-48		14:23	-4			X	1	X	X						80% FULL
B-3-62.5		16:15	-5			X	1	X	X						90% FULL

SAMPLERS: (Signature)
Relinquished by: (Signature)
Relinquished by: (Signature)

Received by: (Signature) Date Time
Received by: (Signature) Date Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Date Time
Received for Laboratory by:

Date RECEIVED	Time	Date ACCEPTED	Time
5/15/91	7:20		

Method of Shipment:
Special Instructions:

SAMPLE DISPOSITION:
1. Storage time requested: _____ days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

20-MAY-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: B548
ANALYSES: 8010,8020
601,062

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B051591-001/005.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

Philip Toy
REVIEWED AND APPROVED

5-21-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Project: 90-211

Analysis No.: M-B051591-001/003
Date Sampled: 15-MAY-1991
Date Sample Rec'd: 15-MAY-1991
Date Analyzed: 15-MAY-1991
Sample Type: SOLID

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
B-3-71	ND(5)	ND(5)	ND(5)	ND(15)
B-3-78	ND(5)	ND(5)	ND(5)	ND(15)
B-3-90	ND(5)	ND(5)	ND(5)	ND(15)
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B051591-001
Date Sampled: 15-MAY-1991
Date Sample Rec'd: 15-MAY-1991
Sample Type: SOLID
Date Analyzed: 15-MAY-1991 By: PN

Project: 90-211
Sample ID: B-3-71

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B051591-002
Date Sampled: 15-MAY-1991
Date Sample Rec'd: 15-MAY-1991
Sample Type: SOLID
Date Analyzed: 15-MAY-1991 By: PN

Project: 90-211
Sample ID: B-3-78

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B051591-003
Date Sampled: 15-MAY-1991
Date Sample Rec'd: 15-MAY-1991
Sample Type: SOLID
Date Analyzed: 15-MAY-1991 By: PN

Project: 90-211
Sample ID: B-3-90

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B051591-001/003
Date Sampled: 15-MAY-1991
Date Sample Rec'd: 15-MAY-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B051591-001	1,1-DICHLOROETHENE (EPA 8010)	ug/kg	ND	85.0	94.0	100	85	94	89	10
B051591-001	CHLOROFORM (EPA 8010)	ug/kg	ND	87.9	94.4	100	87	94	90	7
B051591-001	BROMODICHLOROMETHANE (EPA 8010)	ug/kg	ND	95.5	96.3	100	95	96	95	0
B051591-001	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	93.1	97.9	100	93	97	95	5
B051591-001	CHLOROBENZENE (EPA 8010)	ug/kg	ND	93.2	99.4	100	93	99	96	6
B051591-001	BENZENE (EPA 8020)	mg/kg	ND	114	119	100	114	119	116	4
B051591-001	TOLUENE (EPA 8020)	mg/kg	ND	104	107	100	104	107	105	2
B051591-001	ETHYLBENZENE (EPA 8020)	mg/kg	ND	96.3	99.9	100	96	99	97	3
B051591-001	XYLENES, TOTAL (EPA 8020)	mg/kg	ND	97.2	101	100	97	101	99	3

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B051591-001	15-MAY-1991	1,1-DICHLOROETHENE (EPA 8010)	M-B051591-001
			M-B051591-002
			M-B051591-003
	15-MAY-1991	CHLOROFORM (EPA 8010)	M-B051591-001
			M-B051591-002
			M-B051591-003
	15-MAY-1991	BROMODICHLOROMETHANE (EPA 8010)	M-B051591-001
			M-B051591-002
			M-B051591-003
	15-MAY-1991	TRICHLOROETHENE (EPA 8010)	M-B051591-001
			M-B051591-002
			M-B051591-003
	15-MAY-1991	CHLOROBENZENE (EPA 8010)	M-B051591-001
			M-B051591-002
			M-B051591-003
	15-MAY-1991	BENZENE (EPA 8020)	M-B051591-001
			M-B051591-002
			M-B051591-003
	15-MAY-1991	TOLUENE (EPA 8020)	M-B051591-001
			M-B051591-002
			M-B051591-003
	15-MAY-1991	ETHYLBENZENE (EPA 8020)	M-B051591-001
			M-B051591-002
			M-B051591-003
	15-MAY-1991	XYLENES, TOTAL (EPA 8020)	M-B051591-001
			M-B051591-002
			M-B051591-003

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Project: 90-211

Analysis No.: M-B051591-004/005
Date Sampled: 15-MAY-1991
Date Sample Rec'd: 15-MAY-1991
Date Analyzed: 16-MAY-1991
Sample Type: LIQUID

Sample ID	Benzene ug/L EPA 602	Toluene ug/L EPA 602	Ethylbenzene ug/L EPA 602	Xylenes, Total ug/L EPA 602
DISTILLED H2O	ND(0.3)	0.5	ND(0.3)	ND(0.9)
RINSEATE H2O	ND(0.3)	0.4	ND(0.3)	0.9
Blank	ND(0.3)	ND(0.3)	ND(0.3)	ND(0.9)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B051591-004
Date Sampled: 15-MAY-1991
Date Sample Rec'd: 15-MAY-1991
Sample Type: LIQUID
Date Analyzed: 16-MAY-1991 By: PN

Project: 90-211
Sample ID: DISTILLED H2O

Halogenated Volatile Organics, EPA 601

Units: ug/l

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	1	ND	1
Bromomethane	ND	1	ND	1
Vinyl Chloride	ND	1	ND	1
Chloroethane	ND	1	ND	1
Methylene Chloride	ND	1	ND	1
Trichlorofluoromethane	ND	1	ND	1
1,1-Dichloroethene	ND	1	ND	1
1,1-Dichloroethane	ND	1	ND	1
trans-1,2-Dichloroethene	ND	1	ND	1
Chloroform	ND	1	ND	1
1,2-Dichloroethane	ND	1	ND	1
1,1,1-Trichloroethane	ND	1	ND	1
Carbon Tetrachloride	ND	1	ND	1
Bromodichloromethane	ND	1	ND	1
1,2-Dichloropropane	ND	1	ND	1
cis-1,3-Dichloropropene	ND	1	ND	1
Trichloroethene	ND	1	ND	1
Dibromochloromethane	ND	1	ND	1
1,1,2-Trichloroethane	ND	1	ND	1
trans-1,3-Dichloropropene	ND	1	ND	1
2-Chloroethylvinyl ether	ND	1	ND	1
Bromoform	ND	1	ND	1
Tetrachloroethene	ND	1	ND	1
1,1,2,2-Tetrachloroethane	ND	1	ND	1
Chlorobenzene	ND	1	ND	1
1,3-Dichlorobenzene	ND	1	ND	1
1,2-Dichlorobenzene	ND	1	ND	1
1,4-Dichlorobenzene	ND	1	ND	1
Diisopropylether	ND	1	ND	1
Ethylene Dibromide	ND	1	ND	1

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B051591-005
Date Sampled: 15-MAY-1991
Date Sample Rec'd: 15-MAY-1991
Sample Type: LIQUID
Date Analyzed: 16-MAY-1991 By: PN

Project: 90-211
Sample ID: RINSEATE H2O

Halogenated Volatile Organics, EPA 601

Units: ug/l

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	1	ND	1
Bromomethane	ND	1	ND	1
Vinyl Chloride	ND	1	ND	1
Chloroethane	ND	1	ND	1
Methylene Chloride	ND	1	ND	1
Trichlorofluoromethane	ND	1	ND	1
1,1-Dichloroethene	ND	1	ND	1
1,1-Dichloroethane	ND	1	ND	1
trans-1,2-Dichloroethene	ND	1	ND	1
Chloroform	ND	1	ND	1
1,2-Dichloroethane	ND	1	ND	1
1,1,1-Trichloroethane	ND	1	ND	1
Carbon Tetrachloride	ND	1	ND	1
Bromodichloromethane	ND	1	ND	1
1,2-Dichloropropane	ND	1	ND	1
cis-1,3-Dichloropropene	ND	1	ND	1
Trichloroethene	ND	1	ND	1
Dibromochloromethane	ND	1	ND	1
1,1,2-Trichloroethane	ND	1	ND	1
trans-1,3-Dichloropropene	ND	1	ND	1
2-Chloroethylvinyl ether	ND	1	ND	1
Bromoform	ND	1	ND	1
Tetrachloroethene	ND	1	ND	1
1,1,2,2-Tetrachloroethane	ND	1	ND	1
Chlorobenzene	ND	1	ND	1
1,3-Dichlorobenzene	ND	1	ND	1
1,2-Dichlorobenzene	ND	1	ND	1
1,4-Dichlorobenzene	ND	1	ND	1
Diisopropylether	ND	1	ND	1
Ethylene Dibromide	ND	1	ND	1

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B051591-004/005
Date Sampled: 15-MAY-1991
Date Sample Rec'd: 15-MAY-1991
Sample Type: LIQUID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B051591-004	1,1-DICHLOROETHENE (EPA 601)	ug/L	ND	35.3	35.9	40	88	89	88	1
B051591-004	CHLOROFORM (EPA 601)	ug/L	ND	36.3	36.3	40	90	90	90	0
B051591-004	CARBON TETRACHLORIDE (EPA 601)	ug/L	ND	35.0	35.6	40	87	89	88	1
B051591-004	CHLOROBENZENE (EPA 601)	ug/L	ND	38.9	39.6	40	97	99	98	1
B051591-004	BENZENE (EPA 602)	mg/L	ND	48.9	49.8	40	122	124	123	1
B051591-004	TOLUENE (EPA 602)	mg/L	ND	44.7	47.3	40	111	118	114	5
B051591-004	ETHYLBENZENE (EPA 602)	mg/L	ND	41.1	42.3	40	102	105	103	3
B051591-004	XYLENES, TOTAL (EPA 602)	mg/L	ND	41.3	42.7	40	103	106	104	3

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B051591-004	16-MAY-1991	1,1-DICHLOROETHENE (EPA 601)	M-B051591-004
			M-B051591-005
	16-MAY-1991	CHLOROFORM (EPA 601)	M-B051591-004
			M-B051591-005
	16-MAY-1991	CARBON TETRACHLORIDE (EPA 601)	M-B051591-004
			M-B051591-005
	16-MAY-1991	CHLOROBENZENE (EPA 601)	M-B051591-004
			M-B051591-005
	16-MAY-1991	BENZENE (EPA 602)	M-B051591-004
			M-B051591-005
	16-MAY-1991	TOLUENE (EPA 602)	M-B051591-004
			M-B051591-005
	16-MAY-1991	ETHYLBENZENE (EPA 602)	M-B051591-004
			M-B051591-005
	16-MAY-1991	XYLENES, TOTAL (EPA 602)	M-B051591-004
			M-B051591-005

Enseco
A CORNING Company

☐ 7440 Lincoln Way, Garden Grove, CA 92641, (714) 89[illegible]
☐ 2810 Bunsen Ave., Unit A Ventura, CA 93003, (805) 6[illegible].6
☐ 2325 Skyway Dr., Unit K, Santa Maria, CA 93455, (805) 922-2776
☐ 9537 Telstar Ave., Unit 118, El Monte, CA 91731, (818) 442-8400
☒ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTODY RECORD

Date 5/15/91 Page 1 of 1

Lab Number 2

CLIENT MEREDITH BOLI

ADDRESS

PROJECT NAME 1704 W. 1st, ARCUSA
OSCO - CHEMICAL WASTE MGMT.

CONTRACT / PURCHASE ORDER / QUOTE #

PROJECT MANAGER

PHONE NUMBER

SITE CONTACT FRANK HAGAR - 12/16 HT PIESOLD

ANALYSES

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	FULL 8010	F020 BTEX						Sample Condition/ REMARKS
B-3-71	5/15/91	8:10	B051591-1			X	1	X	X						95% FULL
B-3-78	↓	9:00	-2			X	1	X	X						90% FULL
B-3-90		9:50	-3			X	1	X	X						20% FULL
DISTILLED H_2O		15:00	-4	X			1	X	X						
RINSATE H_2O		↓	-5	X			1	X	X						

SAMPLERS: (Signature)

Relinquished by: (Signature)

Received by: (Signature) | Date | Time

Received by: (Signature) | Date | Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Relinquished by: (Signature) | Date | Time

Received for Laboratory by: | Date RECEIVED | Time AS SAMPLED | Date ACCEPTED | Time

Method of Shipment:

Special Instructions:

SAMPLE DISPOSITION:
1. Storage time requested:_____days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as appropriate, according to legal requirements.)

DISTRIBUTION: White with report, Yellow to Enseco, Pink to Courier, Gold to Sample Control

BORING B-4

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

21-MAR-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: B527
ANALYSES: 8010,8020

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B031991-001/002.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

Pat Kemmerer
REVIEWED AND APPROVED

3-21-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Project: 90-211

Analysis No.: M-B031991-001/002
Date Sampled: 19-MAR-1991
Date Sample Rec'd: 19-MAR-1991
Date Analyzed: 20-MAR-1991
Sample Type: SOLID

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
B-4-10	ND(5)	ND(5)	ND(5)	ND(15)
B-4-13	ND(5)	ND(5)	ND(5)	ND(15)
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B031991-001
Date Sampled: 19-MAR-1991
Date Sample Rec'd: 19-MAR-1991
Sample Type: SOLID
Date Analyzed: 20-MAR-1991 By: PN

Project: 90-211
Sample ID: B-4-10

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B031991-002
Date Sampled: 19-MAR-1991
Date Sample Rec'd: 19-MAR-1991
Sample Type: SOLID
Date Analyzed: 20-MAR-1991 By: PN

Project: 90-211
Sample ID: B-4-13

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B031991-001/002
Date Sampled: 19-MAR-1991
Date Sample Rec'd: 19-MAR-1991
Sample Type: SOLID

Laboratory Control Sample Report

QC Batch	Parameter (Method)	Amt. Spiked	Units	Avg. Spike Recov.	Acceptable Range	Rel. Pct. Diff.	Acceptable Range
L91079001	1,1-DICHLOROETHENE (EPA 8010)	100	ug/kg	92.	67-135	2.	19
L91079001	CHLOROFORM (EPA 8010)	100	ug/kg	93.	65-136	2.	21
L91079001	BROMODICHLOROMETHANE (EPA 8010)	100	ug/kg	101.	67-135	2.	20
L91079001	TRICHLOROETHENE (EPA 8010)	100	ug/kg	106.	63-140	3.	23
L91079001	CHLOROBENZENE (EPA 8010)	100	ug/kg	91.	66-136	3.	21
L91079001	BENZENE (EPA 8020)	100	ug/kg	96.	60-120	1.	40
L91079001	TOLUENE (EPA 8020)	100	ug/kg	93.	60-120	5.	40
L91079001	ETHYLBENZENE (EPA 8020)	100	ug/kg	98.	60-120	1.	40
L91079001	XYLENES, TOTAL (EPA 8020)	100	ug/kg	95.	60-120	2.	40

Enseco
A Corning Company

Laboratory Control Sample Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
L91079001	19-MAR-1991	1,1-DICHLOROETHENE (EPA 8010)	M-B031991-001
			M-B031991-002
		CHLOROFORM (EPA 8010)	M-B031991-001
			M-B031991-002
		BROMODICHLOROMETHANE (EPA 8010)	M-B031991-001
			M-B031991-002
		TRICHLOROETHENE (EPA 8010)	M-B031991-001
			M-B031991-002
		CHLOROBENZENE (EPA 8010)	M-B031991-001
			M-B031991-002
		BENZENE (EPA 8020)	M-B031991-001
			M-B031991-002
		TOLUENE (EPA 8020)	M-B031991-001
			M-B031991-002
		ETHYLBENZENE (EPA 8020)	M-B031991-001
			M-B031991-002
		XYLENES, TOTAL (EPA 8020)	M-B031991-001
			M-B031991-002

Enseco
A CORNING Company

☐ 7440 Lincoln Way, Garden Grove, CA 92641, (714) 898-6370
☐ 2810 Bunsen Ave., Unit A Ventura, CA 93003, (805) 650-0546
☐ 2325 Skyway Dr., Unit K, Santa Maria, CA 93455, (805) 922-2776
☐ 9537 Telstar Ave., Unit 118, El Monte, CA 91731, (818) 442-8400
☒ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTODY RECORD

Date 3-19-91 Page 1 of 1

Lab Number Mel Z

CLIENT Meredith Boli/Associates, INC

ADDRESS 6701 Center Drive West, Suite 900
Los Angeles, CA 91704

PROJECT NAME
OSCO/AZUSA

CONTRACT / PURCHASE ORDER / QUOTE #

PROJECT MANAGER
Ron Caungrotti

PHONE NUMBER
(213) 670-9221

SITE CONTACT
M. Cloud

ANALYSES

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	6010.	4020						Sample Condition/ REMARKS
B-4-10 (Boring-4 @10')	3-19	1540	B031991-1			X	1	1	1						20% full
B-4-13 (" " @13')	3-19	1620	-2			X	1	1	1						100% full

SAMPLERS: (Signature) MARK T. NOONAN

Relinquished by: (Signature) [signature]

Relinquished by: (Signature) [signature]

Received by: (Signature) | Date | Time

Received by: (Signature) | Date | Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Date	Time	Received for Laboratory by:	Date RECEIVED	Time	Date ACCEPTED	Time
3-19	1620	John E. Schall	3/19/91	1628		

Method of Shipment:

Special Instructions:

SAMPLE DISPOSITION:
1. Storage time requested:_____days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as appropriate, according to legal requirements.)

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

RECEIVED
MAR 28 1991
M/B & A

25-MAR-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: B529
ANALYSES: 8010,8020

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B032191-001/002.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

Don Kommers
REVIEWED AND APPROVED

3-25-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Project: 90-211

Analysis No.: M-B032191-001/002
Date Sampled: 21-MAR-1991
Date Sample Rec'd: 21-MAR-1991
Date Analyzed: 21-MAR-1991
Sample Type: SOLID

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
B-4-18	ND(5)	ND(5)	ND(5)	ND(15)
B-4-31	ND(5)	ND(5)	ND(5)	ND(15)
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B032191-001
Date Sampled: 21-MAR-1991
Date Sample Rec'd: 21-MAR-1991
Sample Type: SOLID
Date Analyzed: 21-MAR-1991 By: JS

Project: 90-211
Sample ID: B-4-18

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B032191-002
Date Sampled: 21-MAR-1991
Date Sample Rec'd: 21-MAR-1991
Sample Type: SOLID
Date Analyzed: 21-MAR-1991 By: JS

Project: 90-211
Sample ID: B-4-31

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B032191-001/002
Date Sampled: 21-MAR-1991
Date Sample Rec'd: 21-MAR-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B032191-002	1,1-DICHLOROETHENE (EPA 8010)	ug/kg	ND	104	101	100	104	101	103	3
B032191-002	CHLOROFORM (EPA 8010)	ug/kg	ND	106	110	100	106	110	108	4
B032191-002	1,1,1-TRICHLOROETHANE (EPA 8010)	ug/kg	ND	98.6	99.6	100	99	100	99	1
B032191-002	BROMODICHLOROMETHANE (EPA 8010)	ug/kg	ND	103	104	100	103	104	104	1
B032191-002	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	112	116	100	112	116	114	4
B032191-002	BENZENE (EPA 8020)	ug/kg	ND	91.4	94.7	100	91	95	93	4
B032191-002	TOLUENE (EPA 8020)	ug/kg	ND	90.7	93.6	100	91	94	92	3
B032191-002	ETHYLBENZENE (EPA 8020)	ug/kg	ND	89.2	91.7	100	89	92	90	3
B032191-002	XYLENES, TOTAL (EPA 8020)	ug/kg	ND	94.9	98.2	100	95	98	97	3

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B032191-002	22-MAR-1991	1,1-DICHLOROETHENE (EPA 8010)	M-B032191-001
			M-B032191-002
	22-MAR-1991	CHLOROFORM (EPA 8010)	M-B032191-001
			M-B032191-002
	22-MAR-1991	1,1,1-TRICHLOROETHANE (EPA 8010)	M-B032191-001
			M-B032191-002
	22-MAR-1991	BROMODICHLOROMETHANE (EPA 8010)	M-B032191-001
			M-B032191-002
	22-MAR-1991	TRICHLOROETHENE (EPA 8010)	M-B032191-001
			M-B032191-002
	22-MAR-1991	BENZENE (EPA 8020)	M-B032191-001
			M-B032191-002
	22-MAR-1991	TOLUENE (EPA 8020)	M-B032191-001
			M-B032191-002
	22-MAR-1991	ETHYLBENZENE (EPA 8020)	M-B032191-001
			M-B032191-002
	22-MAR-1991	XYLENES, TOTAL (EPA 8020)	M-B032191-001
			M-B032191-002

Enseco
A CORNING Company

☐ 7440 Lincoln Way, Garden Grove, CA 92641, (714) 89[illegible]
☐ 2810 Bunsen Ave., Unit A Ventura, CA 93003, (805) 6[illegible]6
☐ 2325 Skyway Dr., Unit K, Santa Maria, CA 93455, (805) 922-2776
☐ 9537 Telstar Ave., Unit 118, El Monte, CA 91731, (818) 442-8400
☐ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTODY RECORD

Date 3/21/91 Page 1 of 1

Lab Number Mel Z

CLIENT: MEREDITH - BOLI

ADDRESS:

PROJECT NAME: OSCO AZUSA - PHASE II

CONTRACT / PURCHASE ORDER / QUOTE #:

PROJECT MANAGER: RON CAVAGROTT

PHONE NUMBER:

SITE CONTACT: TODD GILMER

ANALYSES

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	8010/8020							Sample Condition/ REMARKS
B-4-18	3/21/91	1353	B032191-1			x	1-40mL VOA	x							85% full
B-4-31		↓	-2			x	↓								85% full

SAMPLERS: (Signature) Todd Gilmer

Relinquished by: (Signature) Todd Gilmer

Received by: (Signature) | Date | Time

Received by: (Signature) | Date | Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Relinquished by: (Signature) | Date | Time

Received for Laboratory by: John E Schell

Date RECEIVED	Time	Date ACCEPTED	Time
3/21/91	16:10		

Method of Shipment:

Special Instructions:

SAMPLE DISPOSITION:
1. Storage time requested: _____ days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as appropriate, according to legal requirements.)

DISTRIBUTION: White with report, Yellow to Enseco, Pink to Courier, Gold to Sample Control

B4

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way ● Garden Grove, CA 92641
(714) 898-6370 ● (800) ENSECO-8
FAX: (714) 893-6709

27-MAR-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: B530
ANALYSES: 8010,8020

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B032291-001/008.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

Phillip L Tay
REVIEWED AND APPROVED

3-30-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Project: 90-211

Analysis No.: M-B032291-001/008
Date Sampled: 22-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Date Analyzed: 22-MAR-1991
Sample Type: SOLID

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
B-4-51	ND(5)	ND(5)	ND(5)	ND(15)
B-4-54	ND(5)	7	ND(5)	ND(15)
B-4-53	ND(5)	14	ND(5)	ND(15)
B-4-56	ND(5)	8	ND(5)	ND(15)
B-4-60	ND(5)	20	5	ND(15)
B-4-62	ND(5)	39	14	38
B-4-68	ND(5)	22	9	24
B-4-72	ND(5)	29	15	57
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B032291-001
Date Sampled: 22-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID
Date Analyzed: 22-MAR-1991 By: PN

Project: 90-211
Sample ID: B-4-51

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B032291-002
Date Sampled: 22-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID
Date Analyzed: 22-MAR-1991 By: PN

Project: 90-211
Sample ID: B-4-54

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	20	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B032291-003
Date Sampled: 22-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID
Date Analyzed: 22-MAR-1991 By: PN

Project: 90-211
Sample ID: B-4-53

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B032291-004
Date Sampled: 22-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID
Date Analyzed: 22-MAR-1991 By: PN

Project: 90-211
Sample ID: B-4-56

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	5	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B032291-005
Date Sampled: 22-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID
Date Analyzed: 22-MAR-1991 By: PN

Project: 90-211
Sample ID: B-4-60

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	19	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B032291-006
Date Sampled: 22-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID
Date Analyzed: 22-MAR-1991 By: PN

Project: 90-211
Sample ID: B-4-62

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	15	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	97	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B032291-007
Date Sampled: 22-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID
Date Analyzed: 22-MAR-1991 By: PN

Project: 90-211
Sample ID: B-4-68

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	9	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	63	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B032291-008
Date Sampled: 22-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID
Date Analyzed: 22-MAR-1991 By: PN

Project: 90-211
Sample ID: B-4-72

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	23	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
*1,1,2-Trichloroethane	6	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	150	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

*Group analytes include Trans 1,3 Dichloropropene, 1,1,2 Trichloroethane, Dibromochloromethane.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B032291-001/008
Date Sampled: 22-MAR-1991
Date Sample Rec'd: 22-MAR-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B032291-002	1,1-DICHLOROETHENE (EPA 8010)	ug/kg	ND	102	99.4	100	102	99	101	3
B032291-002	CHLOROFORM (EPA 8010)	ug/kg	ND	110	104	100	110	104	107	6
B032291-002	BROMODICHLOROMETHANE (EPA 8010)	ug/kg	ND	107	107	100	107	107	107	0
B032291-002	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	110	111	100	110	111	111	1
B032291-002	CHLOROBENZENE (EPA 8010)	ug/kg	ND	92.4	92.6	100	92	93	93	0
B032291-002	BENZENE (EPA 8020)	mg/kg	ND	93.9	92.8	100	94	93	93	1
B032291-002	TOLUENE (EPA 8020)	mg/kg	7	98.5	95.2	100	92	88	90	4
B032291-002	ETHYLBENZENE (EPA 8020)	mg/kg	ND	98.3	94.4	100	98	94	96	4
B032291-002	XYLENES, TOTAL (EPA 8020)	mg/kg	ND	96.6	96.5	100	97	96	96	0

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B032291-002	22-MAR-1991	1,1-DICHLOROETHENE (EPA 8010)	M-B032291-001
			M-B032291-002
			M-B032291-003
			M-B032291-004
			M-B032291-005
			M-B032291-006
			M-B032291-007
			M-B032291-008
	22-MAR-1991	CHLOROFORM (EPA 8010)	M-B032291-001
			M-B032291-002
			M-B032291-003
			M-B032291-004
			M-B032291-005
			M-B032291-006
			M-B032291-007
			M-B032291-008
	22-MAR-1991	BROMODICHLOROMETHANE (EPA 8010)	M-B032291-001
			M-B032291-002
			M-B032291-003
			M-B032291-004
			M-B032291-005
			M-B032291-006
			M-B032291-007
			M-B032291-008
	22-MAR-1991	TRICHLOROETHENE (EPA 8010)	M-B032291-001
			M-B032291-002
			M-B032291-003
			M-B032291-004
			M-B032291-005
			M-B032291-006
			M-B032291-007
			M-B032291-008
	22-MAR-1991	CHLOROBENZENE (EPA 8010)	M-B032291-001
			M-B032291-002
			M-B032291-003
			M-B032291-004
			M-B032291-005
			M-B032291-006
			M-B032291-007
			M-B032291-008
	22-MAR-1991	BENZENE (EPA 8020)	M-B032291-001
			M-B032291-002
			M-B032291-003
			M-B032291-004
			M-B032291-005
			M-B032291-006
			M-B032291-007
			M-B032291-008
	22-MAR-1991	TOLUENE (EPA 8020)	M-B032291-001
			M-B032291-002
			M-B032291-003

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
			M-B032291-004
			M-B032291-005
			M-B032291-006
			M-B032291-007
			M-B032291-008
	22-MAR-1991	ETHYLBENZENE (EPA 8020)	M-B032291-001
			M-B032291-002
			M-B032291-003
			M-B032291-004
			M-B032291-005
			M-B032291-006
			M-B032291-007
			M-B032291-008
	22-MAR-1991	XYLENES, TOTAL (EPA 8020)	M-B032291-001
			M-B032291-002
			M-B032291-003
			M-B032291-004
			M-B032291-005
			M-B032291-006
			M-B032291-007
			M-B032291-008

Enseco
A CORNING Company

☐ 7440 Lincoln Way, Garden Grove, CA 92641, (714) 898-6370
☐ 2810 Bunsen Ave., Unit A Ventura, CA 93003, (805) 650-0546
☐ 2325 Skyway Dr., Unit K, Santa Maria, CA 93455, (805) 922-2776
☐ 9537 Telstar Ave., Unit 118, El Monte, CA 91731, (818) 442-8400
☒ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTODY RECORD

Date 3/22/91 Page 1 of 1

Lab Number 2

CLIENT MEREDITH BOLI ASSOCIATES

ADDRESS LOS ANGELES, CA

PROJECT NAME OSCO AZUSA

CONTRACT / PURCHASE ORDER / QUOTE # 90-211

PROJECT MANAGER R. CAVAGROTTI

PHONE NUMBER

SITE CONTACT F. HAGNER TODD GILMER

ANALYSES

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	8010	8020						Sample Condition/ REMARKS
B-4-51	3/22	10:00	B032291-1			X	1	✓	✓						Good Quality Low Recovery
B-4-54	↓	12:00	-2			X	1	✓	✓						
B-4-53		15:20	-3			X	1	✓	✓						
B-4-56		↓	-4			X	1	✓	✓						
B-4-60			-5			X	1	✓	✓						
B-4-62		16:35	-6			X	1	✓	✓						
B-4-68		↓	-7			X	1	✓	✓						
B-4-72	↓	17:00	-8			X	1	✓	✓						

SAMPLERS: (Signature) Todd Gilmer

Relinquished by: (Signature) Todd Gilmer 3/22/91 1700

Relinquished by: (Signature) Date Time

Received by: (Signature) Date Time

Received by: (Signature) Date Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Received for Laboratory by: [illegible signature]

Date	RECEIVED Time	Date	ACCEPTED Time
3/22/91	17:00		

Method of Shipment:

Special Instructions:

SAMPLE DISPOSITION:
1. Storage time requested: _____ days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as appropriate according to local requirements.)

B4

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

27-MAR-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: B531
ANALYSES: M8010/8020

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B032591-001/002.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

Phillip L Ty
REVIEWED AND APPROVED

3-30-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Project: 90-211

Analysis No.: M-B032591-001/002
Date Sampled: 25-MAR-1992
Date Sample Rec'd: 25-MAR-1991
Date Analyzed: 25-MAR-1991
Sample Type: SOLID

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
B-4-74	6	18	6	20
B-4-79	ND(5)	24	7	25
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B032591-001
Date Sampled: 25-MAR-1992
Date Sample Rec'd: 25-MAR-1991
Sample Type: SOLID
Date Analyzed: 25-MAR-1991 By: PN

Project: 90-211
Sample ID: B-4-74

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	8	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	53	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B032591-002
Date Sampled: 25-MAR-1992
Date Sample Rec'd: 25-MAR-1991
Sample Type: SOLID
Date Analyzed: 25-MAR-1991 By: PN

Project: 90-211
Sample ID: B-4-79

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	6	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	8	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	48	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B032591-001/002
Date Sampled: 25-MAR-1992
Date Sample Rec'd: 25-MAR-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B032591-001	1,1-DICHLOROETHENE (EPA 8010)	ug/kg	ND	114	113	100	114	113	114	1
B032591-001	CHLOROFORM (EPA 8010)	ug/kg	ND	93.7	92.6	100	94	93	93	1
B032591-001	BROMODICHLOROMETHANE (EPA 8010)	ug/kg	ND	115	114	100	115	114	115	1
B032591-001	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	94.3	94.5	100	94	95	94	0
B032591-001	CHLOROBENZENE (EPA 8010)	ug/kg	ND	77.1	76.4	100	77	76	77	1
B032591-001	BENZENE (EPA 8020)	ug/kg	ND	98.3	97.5	100	98	98	98	1
B032591-001	TOLUENE (EPA 8020)	ug/kg	ND	104	105	100	104	105	105	1
B032591-001	ETHYLBENZENE (EPA 8020)	ug/kg	ND	101	100	100	101	100	101	1
B032591-001	XYLENES, TOTAL (EPA 8020)	ug/kg	ND	93.1	92.2	100	93	92	92	1

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B032591-001	25-MAR-1991	1,1-DICHLOROETHENE (EPA 8010)	M-B032591-001
			M-B032591-002
	25-MAR-1991	CHLOROFORM (EPA 8010)	M-B032591-001
			M-B032591-002
	25-MAR-1991	BROMODICHLOROMETHANE (EPA 8010)	M-B032591-001
			M-B032591-002
	25-MAR-1991	TRICHLOROETHENE (EPA 8010)	M-B032591-001
			M-B032591-002
	25-MAR-1991	CHLOROBENZENE (EPA 8010)	M-B032591-001
			M-B032591-002
	25-MAR-1991	BENZENE (EPA 8020)	M-B032591-001
			M-B032591-002
	25-MAR-1991	TOLUENE (EPA 8020)	M-B032591-001
			M-B032591-002
	25-MAR-1991	ETHYLBENZENE (EPA 8020)	M-B032591-001
			M-B032591-002
	25-MAR-1991	XYLENES, TOTAL (EPA 8020)	M-B032591-001
			M-B032591-002

Enseco
A CORNING Company

☐ 7440 Lincoln Way, Garden Grove, CA 92641, (714) 898-63[illegible]
☐ 2810 Bunsen Ave., Unit A Ventura, CA 93003, (805) 650-0546
☐ 2325 Skyway Dr., Unit K, Santa Maria, CA 93455, (805) 922-2776
☐ 9537 Telstar Ave., Unit 118, El Monte, CA 91731, (818) 442-8400
☒ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTODY RECORD

Date 3/25/91 Page 1 of 1

Lab Number 2

CLIENT: MEREDITH/BOLL & ASSOC.

ADDRESS: OSCO PHASE II

PROJECT NAME:

CONTRACT / PURCHASE ORDER / QUOTE #:

PROJECT MANAGER: RON CAVAGNOTTI

PHONE NUMBER:

SITE CONTACT: TODD GILMER

ANALYSES

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	8010 (FULL)	8020 (BTEX)						Sample Condition/ REMARKS
B-4-74	3/25/91	11:25	8022591-1			X	1	X	X						50% FULL
B-4-79	3/25/91	11:25	-2			X	1	X	X						70% FULL

SAMPLERS: (Signature) [signature]

Relinquished by: (Signature) [signature] 3/25/91 1128

Relinquished by: (Signature)

Received by: (Signature) — Date — Time

Received by: (Signature) — Date — Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Received for Laboratory by: [signature]

Date RECEIVED	Time	Date ACCEPTED	Time
3/25/91	11:25		

Method of Shipment:

Special Instructions:

SAMPLE DISPOSITION:
1. Storage time requested: _____ days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as appropriate, according to legal requirements.)

DISTRIBUTION: White with report, Yellow to Enseco, Pink to Courier, Gold to Sample Control

BY

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

8-APR-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: B533
ANALYSES: 8010,8020,601,602

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B040391-001/008.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

Pat Kammerer
REVIEWED AND APPROVED

4-8-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Project: 90-211

Analysis No.: M-B040391-001/008
Date Sampled: 3-APR-1991
Date Sample Rec'd: 3-APR-1991
Date Analyzed: 3-APR-1991
Sample Type: LIQUID

Sample ID	Benzene ug/L EPA 602	Toluene ug/L EPA 602	Ethylbenzene ug/L EPA 602	Xylenes, Total ug/L EPA 602
RINSEATE	ND(0.7)	1	ND(1.)	ND(1.)
RINSEATE 1	ND(0.7)	2	ND(1.)	4
RINSEATE 2	ND(0.7)	ND(1.)	ND(1.)	ND(1.)
Blank	ND(0.7)	ND(1.)	ND(1.)	ND(1.)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B040391-001
Date Sampled: 3-APR-1991
Date Sample Rec'd: 3-APR-1991
Sample Type: LIQUID
Date Analyzed: 3-APR-1991 By: PN

Project: 90-211
Sample ID: RINSEATE

Halogenated Volatile Organics, EPA 601

Units: ug/l

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	1	ND	1
Bromomethane	ND	1	ND	1
Vinyl Chloride	ND	1	ND	1
Chloroethane	ND	1	ND	1
Methylene Chloride	3	1	ND	1
Trichlorofluoromethane	ND	1	ND	1
1,1-Dichloroethene	ND	1	ND	1
1,1-Dichloroethane	ND	1	ND	1
trans-1,2-Dichloroethene	ND	1	ND	1
Chloroform	ND	1	ND	1
1,2-Dichloroethane	ND	1	ND	1
1,1,1-Trichloroethane	1	1	ND	1
Carbon Tetrachloride	ND	1	ND	1
Bromodichloromethane	ND	1	ND	1
1,2-Dichloropropane	ND	1	ND	1
cis-1,3-Dichloropropene	ND	1	ND	1
Trichloroethene	ND	1	ND	1
Dibromochloromethane	ND	1	ND	1
1,1,2-Trichloroethane	ND	1	ND	1
trans-1,3-Dichloropropene	ND	1	ND	1
2-Chloroethylvinyl ether	ND	1	ND	1
Bromoform	ND	1	ND	1
Tetrachloroethene	ND	1	ND	1
1,1,2,2-Tetrachloroethane	ND	1	ND	1
Chlorobenzene	ND	1	ND	1
1,3-Dichlorobenzene	ND	1	ND	1
1,2-Dichlorobenzene	ND	1	ND	1
1,4-Dichlorobenzene	ND	1	ND	1
Diisopropylether	ND	1	ND	1
Ethylene Dibromide	ND	1	ND	1

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B040391-007
Date Sampled: 3-APR-1991
Date Sample Rec'd: 3-APR-1991
Sample Type: LIQUID
Date Analyzed: 3-APR-1991 By: PN

Project: 90-211
Sample ID: RINSEATE 1

Halogenated Volatile Organics, EPA 601

Units: ug/l

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	1	ND	1
Bromomethane	ND	1	ND	1
Vinyl Chloride	ND	1	ND	1
Chloroethane	ND	1	ND	1
Methylene Chloride	8	1	ND	1
Trichlorofluoromethane	ND	1	ND	1
1,1-Dichloroethene	ND	1	ND	1
1,1-Dichloroethane	ND	1	ND	1
trans-1,2-Dichloroethene	ND	1	ND	1
Chloroform	ND	1	ND	1
1,2-Dichloroethane	ND	1	ND	1
1,1,1-Trichloroethane	ND	1	ND	1
Carbon Tetrachloride	ND	1	ND	1
Bromodichloromethane	ND	1	ND	1
1,2-Dichloropropane	ND	1	ND	1
cis-1,3-Dichloropropene	ND	1	ND	1
Trichloroethene	ND	1	ND	1
Dibromochloromethane	ND	1	ND	1
1,1,2-Trichloroethane	ND	1	ND	1
trans-1,3-Dichloropropene	ND	1	ND	1
2-Chloroethylvinyl ether	ND	1	ND	1
Bromoform	ND	1	ND	1
Tetrachloroethene	3	1	ND	1
1,1,2,2-Tetrachloroethane	ND	1	ND	1
Chlorobenzene	ND	1	ND	1
1,3-Dichlorobenzene	ND	1	ND	1
1,2-Dichlorobenzene	ND	1	ND	1
1,4-Dichlorobenzene	ND	1	ND	1
Diisopropylether	ND	1	ND	1
Ethylene Dibromide	ND	1	ND	1

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B040391-008
Date Sampled: 3-APR-1991
Date Sample Rec'd: 3-APR-1991
Sample Type: LIQUID
Date Analyzed: 3-APR-1991 By: PN

Project: 90-211
Sample ID: RINSEATE 2

Halogenated Volatile Organics, EPA 601

Units: ug/l

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	1	ND	1
Bromomethane	ND	1	ND	1
Vinyl Chloride	ND	1	ND	1
Chloroethane	ND	1	ND	1
Methylene Chloride	ND	1	ND	1
Trichlorofluoromethane	ND	1	ND	1
1,1-Dichloroethene	ND	1	ND	1
1,1-Dichloroethane	ND	1	ND	1
trans-1,2-Dichloroethene	ND	1	ND	1
Chloroform	ND	1	ND	1
1,2-Dichloroethane	ND	1	ND	1
1,1,1-Trichloroethane	ND	1	ND	1
Carbon Tetrachloride	ND	1	ND	1
Bromodichloromethane	ND	1	ND	1
1,2-Dichloropropane	ND	1	ND	1
cis-1,3-Dichloropropene	ND	1	ND	1
Trichloroethene	ND	1	ND	1
Dibromochloromethane	ND		ND	1
1,1,2-Trichloroethane	ND	1	ND	1
trans-1,3-Dichloropropene	ND	1	ND	1
2-Chloroethylvinyl ether	ND	1	ND	1
Bromoform	ND	1	ND	1
Tetrachloroethene	ND	1	ND	1
1,1,2,2-Tetrachloroethane	ND	1	ND	1
Chlorobenzene	ND	1	ND	1
1,3-Dichlorobenzene	ND	1	ND	1
1,2-Dichlorobenzene	ND	1	ND	1
1,4-Dichlorobenzene	ND	1	ND	1
Diisopropylether	ND	1	ND	1
Ethylene Dibromide	ND	1	ND	1

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B040391-001/003
Date Sampled: 3-APR-1991
Date Sample Rec'd: 3-APR-1991
Sample Type: LIQUID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B040391-001	1,1-DICHLOROETHENE (EPA 601)	ug/L	ND	49.9	49.4	40	125	124	124	1
B040391-001	CHLOROFORM (EPA 601)	ug/L	ND	46.6	40.8	40	117	102	109	13
B040391-001	CARBON TETRACHLORIDE (EPA 601)	ug/L	ND	44.2	39.0	40	111	98	104	13
B040391-001	TRICHLOROETHENE (EPA 601)	ug/L	ND	52.1	52.4	40	130	131	131	1
B040391-001	CHLOROBENZENE (EPA 601)	ug/L	ND	51.1	49.8	40	128	125	126	3
B040391-001	BENZENE (EPA 602)	ug/L	ND	36.5	35.8	40	91	90	90	2
B040391-001	TOLUENE (EPA 602)	ug/L	ND	35.0	34.2	40	88	86	87	2
B040391-001	ETHYLBENZENE (EPA 602)	ug/L	ND	35.4	34.8	40	89	87	88	2
B040391-001	XYLENES, TOTAL (EPA 602)	ug/L	ND	34.8	34.1	40	87	85	86	2

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B040391-001	3-APR-1991	1,1-DICHLOROETHENE (EPA 601)	M-B040391-001
			M-B040391-007
			M-B040391-008
	3-APR-1991	CHLOROFORM (EPA 601)	M-B040391-001
			M-B040391-007
			M-B040391-008
	3-APR-1991	CARBON TETRACHLORIDE (EPA 601)	M-B040391-001
			M-B040391-007
			M-B040391-008
	3-APR-1991	TRICHLOROETHENE (EPA 601)	M-B040391-001
			M-B040391-007
			M-B040391-008
	3-APR-1991	CHLOROBENZENE (EPA 601)	M-B040391-001
			M-B040391-007
			M-B040391-008
	3-APR-1991	BENZENE (EPA 602)	M-B040391-001
			M-B040391-007
			M-B040391-008
	3-APR-1991	TOLUENE (EPA 602)	M-B040391-001
			M-B040391-007
			M-B040391-008
	3-APR-1991	ETHYLBENZENE (EPA 602)	M-B040391-001
			M-B040391-007
			M-B040391-008
	3-APR-1991	XYLENES, TOTAL (EPA 602)	M-B040391-001
			M-B040391-007
			M-B040391-008

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Project: 90-211

Analysis No.: M-B040391-002/006
Date Sampled: 3-APR-1991
Date Sample Rec'd: 3-APR-1991
Date Analyzed: 3-APR-1991
Sample Type: SOLID

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
TSP	ND(5)	ND(5)	ND(5)	ND(15)
SAND BLANK	ND(5)	ND(5)	ND(5)	ND(15)
B-4-138	ND(5)	ND(5)	ND(5)	ND(15)
B-4-146	ND(5)	ND(5)	ND(5)	ND(15)
B-4-155	ND(5)	ND(5)	ND(5)	ND(15)
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B040391-002
Date Sampled: 3-APR-1991
Date Sample Rec'd: 3-APR-1991
Sample Type: SOLID
Date Analyzed: 3-APR-1991 By: PN

Project: 90-211
Sample ID: TSP

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	6	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B040391-003
Date Sampled: 3-APR-1991
Date Sample Rec'd: 3-APR-1991
Sample Type: SOLID
Date Analyzed: 3-APR-1991 By: PN

Project: 90-211
Sample ID: SAND BLANK

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B040391-004
Date Sampled: 3-APR-1991
Date Sample Rec'd: 3-APR-1991
Sample Type: SOLID
Date Analyzed: 3-APR-1991 By: PN

Project: 90-211
Sample ID: B-4-138

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B040391-005
Date Sampled: 3-APR-1991
Date Sample Rec'd: 3-APR-1991
Sample Type: SOLID
Date Analyzed: 3-APR-1991 By: PN

Project: 90-211
Sample ID: B-4-146

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B040391-006
Date Sampled: 3-APR-1991
Date Sample Rec'd: 3-APR-1991
Sample Type: SOLID
Date Analyzed: 3-APR-1991 By: PN

Project: 90-211
Sample ID: B-4-155

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	13	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B040391-002/006
Date Sampled: 3-APR-1991
Date Sample Rec'd: 3-APR-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B040391-004	1,1-DICHLOROETHENE (EPA 8010)	ug/kg	ND	124	116	100	124	116	120	7
B040391-004	CHLOROFORM (EPA 8010)	ug/kg	ND	110	110	100	110	110	110	0
B040391-004	CARBON TETRACHLORIDE (EPA 8010)	ug/kg	ND	102	103	100	102	103	103	1
B040391-004	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	143	134	100	143	134	139	7
B040391-004	CHLOROBENZENE (EPA 8010)	ug/kg	ND	119	112	100	119	112	116	6
B040391-004	BENZENE (EPA 8020)	ug/kg	ND	87.8	84.9	100	88	85	86	3
B040391-004	TOLUENE (EPA 8020)	ug/kg	ND	86.3	83.4	100	86	83	85	3
B040391-004	ETHYLBENZENE (EPA 8020)	ug/kg	ND	84.8	81.3	100	85	81	83	4
B040391-004	XYLENES, TOTAL (EPA 8020)	ug/kg	ND	83.5	79.8	100	84	80	82	5

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B040391-004	3-APR-1991	1,1-DICHLOROETHENE (EPA 8010)	M-B040391-002
			M-B040391-003
			M-B040391-004
			M-B040391-005
			M-B040391-006
	3-APR-1991	CHLOROFORM (EPA 8010)	M-B040391-002
			M-B040391-003
			M-B040391-004
			M-B040391-005
			M-B040391-006
	3-APR-1991	CARBON TETRACHLORIDE (EPA 8010)	M-B040391-002
			M-B040391-003
			M-B040391-004
			M-B040391-005
			M-B040391-006
	3-APR-1991	TRICHLOROETHENE (EPA 8010)	M-B040391-002
			M-B040391-003
			M-B040391-004
			M-B040391-005
			M-B040391-006
	3-APR-1991	CHLOROBENZENE (EPA 8010)	M-B040391-002
			M-B040391-003
			M-B040391-004
			M-B040391-005
			M-B040391-006
	3-APR-1991	BENZENE (EPA 8020)	M-B040391-002
			M-B040391-003
			M-B040391-004
			M-B040391-005
			M-B040391-006
	3-APR-1991	TOLUENE (EPA 8020)	M-B040391-002
			M-B040391-003
			M-B040391-004
			M-B040391-005
			M-B040391-006
	3-APR-1991	ETHYLBENZENE (EPA 8020)	M-B040391-002
			M-B040391-003
			M-B040391-004
			M-B040391-005
			M-B040391-006
	3-APR-1991	XYLENES, TOTAL (EPA 8020)	M-B040391-002
			M-B040391-003
			M-B040391-004
			M-B040391-005
			M-B040391-006

Enseco

☐ 7440 Lincoln Way, Garden Grove, CA 92641, (714) [illegible] 370
☐ 2810 Bunsen Ave., Unit A Ventura, CA 93003, (805) 650-0546
☐ 2325 Skyway Dr., Unit K, Santa Maria, CA 93455, (805) 922-2776
☐ 9537 Telstar Ave., Unit 118, El Monte, CA 91731, (818) 442-8400
☒ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTODY RECORD

Date 4/3/91 Page 1 of 1

Lab Number 2

CLIENT: MEREDITH BOLI

ADDRESS:

PROJECT NAME: 1704 W. 1ST ST, AZUSA
OSCO - CHEMICAL WASTE MGMT.

CONTRACT / PURCHASE ORDER / QUOTE #:

PROJECT MANAGER:

PHONE NUMBER:

SITE CONTACT:

ANALYSES

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	8010 (FULL)	8020 (BTEX)						Sample Condition/ REMARKS
RINSEATE	4/3/91	9:00	B040391-1	X			1	X	X						
TSP		↓	-2			X	1	X	X						
SAND BLANK		10:10	-3			X	1	X	X						
B-4-138		11:00	-4			X	2	X	X						90% FULL
B-4-146		12:10	-5			X	1	X	X						25% FULL
B-4-155		15:20	-6			X	1	X	X						90% FULL
RINSEATE 1		16:15	-7	X			1	X	X						
RINSEATE 2	↓	16:15	-8	X			1	X	X						

SAMPLERS: (Signature) [signature]

Relinquished by: (Signature) [signature] 4/3/91 1615

Relinquished by: (Signature)

Received by: (Signature) Date Time

Received by: (Signature) Date Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Date Time

Received for Laboratory by: [signature]

Date RECEIVED	Time	Date ACCEPTED	Time
4/3/91	AS SAMPLED		

Method of Shipment:

Special Instructions:

SAMPLE DISPOSITION:
1. Storage time requested: _____ days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as appropriate, according to legal requirements.)

DISTRIBUTION: White with report, Yellow to Enseco, Pink to Courier, Gold to Sample Control

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

8-APR-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: B532
ANALYSES: 8010,8020

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B040291-001/007.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

REVIEWED AND APPROVED

4-8-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Project: 90-211

Analysis No.: M-B040291-001/007
Date Sampled: 2-APR-1991
Date Sample Rec'd: 2-APR-1991
Date Analyzed: 2-APR-1991
Sample Type: SOLID

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
B-4-89	ND(5)	9	6	ND(15)
B-4-98	ND(5)	7	ND(5)	ND(15)
B-4-98D	ND(5)	8	ND(5)	ND(15)
B-4-99	ND(5)	7	ND(5)	ND(15)
B-4-106	ND(5)	ND(5)	ND(5)	ND(15)
B-4-108	ND(5)	7	ND(5)	ND(15)
B-4-128	ND(5)	ND(5)	ND(5)	ND(15)
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B040291-001
Date Sampled: 2-APR-1991
Date Sample Rec'd: 2-APR-1991
Sample Type: SOLID
Date Analyzed: 2-APR-1991 By: PN

Project: 90-211
Sample ID: B-4-89

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	5	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B040291-002
Date Sampled: 2-APR-1991
Date Sample Rec'd: 2-APR-1991
Sample Type: SOLID
Date Analyzed: 2-APR-1991 By: PN

Project: 90-211
Sample ID: B-4-98

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B040291-003
Date Sampled: 2-APR-1991
Date Sample Rec'd: 2-APR-1991
Sample Type: SOLID
Date Analyzed: 2-APR-1991 By: PN

Project: 90-211
Sample ID: B-4-98D

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B040291-004
Date Sampled: 2-APR-1991
Date Sample Rec'd: 2-APR-1991
Sample Type: SOLID
Date Analyzed: 2-APR-1991 By: PN

Project: 90-211
Sample ID: B-4-99

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B040291-005
Date Sampled: 2-APR-1991
Date Sample Rec'd: 2-APR-1991
Sample Type: SOLID
Date Analyzed: 2-APR-1991 By: PN

Project: 90-211
Sample ID: B-4-106

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B040291-006
Date Sampled: 2-APR-1991
Date Sample Rec'd: 2-APR-1991
Sample Type: SOLID
Date Analyzed: 2-APR-1991 By: PN

Project: 90-211
Sample ID: B-4-108

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B040291-007
Date Sampled: 2-APR-1991
Date Sample Rec'd: 2-APR-1991
Sample Type: SOLID
Date Analyzed: 2-APR-1991 By: PN

Project: 90-211
Sample ID: B-4-128

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B040291-001/007
Date Sampled: 2-APR-1991
Date Sample Rec'd: 2-APR-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B040291-007	1,1-DICHLOROETHENE (EPA 8010)	ug/kg	ND	108	107	100	108	107	108	1
B040291-007	CHLOROFORM (EPA 8010)	ug/kg	ND	106	106	100	106	106	106	0
B040291-007	BROMODICHLOROMETHANE (EPA 8010)	ug/kg	ND	115	115	100	115	115	115	0
B040291-007	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	116	117	100	116	117	117	1
B040291-007	CHLOROBENZENE (EPA 8010)	ug/kg	ND	101	102	100	101	102	102	1
B040291-007	BENZENE (EPA 8020)	ug/kg	ND	88.4	87.6	100	88	88	88	1
B040291-007	TOLUENE (EPA 8020)	ug/kg	ND	91.0	91.7	100	91	92	91	1
B040291-007	ETHYLBENZENE (EPA 8020)	ug/kg	ND	86.0	85.6	100	86	86	86	1
B040291-007	XYLENES, TOTAL (EPA 8020)	ug/kg	ND	85.2	85.4	100	85	85	85	0

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B040291-007	2-APR-1991	1,1-DICHLOROETHENE (EPA 8010)	M-B040291-001
			M-B040291-002
			M-B040291-003
			M-B040291-004
			M-B040291-005
			M-B040291-006
			M-B040291-007
	2-APR-1991	CHLOROFORM (EPA 8010)	M-B040291-001
			M-B040291-002
			M-B040291-003
			M-B040291-004
			M-B040291-005
			M-B040291-006
			M-B040291-007
	2-APR-1991	BROMODICHLOROMETHANE (EPA 8010)	M-B040291-001
			M-B040291-002
			M-B040291-003
			M-B040291-004
			M-B040291-005
			M-B040291-006
			M-B040291-007
	2-APR-1991	TRICHLOROETHENE (EPA 8010)	M-B040291-001
			M-B040291-002
			M-B040291-003
			M-B040291-004
			M-B040291-005
			M-B040291-006
			M-B040291-007
	2-APR-1991	CHLOROBENZENE (EPA 8010)	M-B040291-001
			M-B040291-002
			M-B040291-003
			M-B040291-004
			M-B040291-005
			M-B040291-006
			M-B040291-007
	2-APR-1991	BENZENE (EPA 8020)	M-B040291-001
			M-B040291-002
			M-B040291-003
			M-B040291-004
			M-B040291-005
			M-B040291-006
			M-B040291-007
	2-APR-1991	TOLUENE (EPA 8020)	M-B040291-001
			M-B040291-002
			M-B040291-003
			M-B040291-004
			M-B040291-005
			M-B040291-006
			M-B040291-007
	2-APR-1991	ETHYLBENZENE (EPA 8020)	M-B040291-001
			M-B040291-002

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
			M-B040291-003
			M-B040291-004
			M-B040291-005
			M-B040291-006
			M-B040291-007
	2-APR-1991	XYLENES, TOTAL (EPA 8020)	M-B040291-001
			M-B040291-002
			M-B040291-003
			M-B040291-004
			M-B040291-005
			M-B040291-006
			M-B040291-007

Enseco
A CORNING Company

☐ 7440 Lincoln Way, Garden Grove, CA 92641, (714) 898-6370
☐ 2810 Bunsen Ave., Unit A Ventura, CA 93003, (805) 650-0546
☐ 2325 Skyway Dr., Unit K, Santa Maria, CA 93455, (805) 922-2776
☐ 9537 Telstar Ave., Unit 118, El Monte, CA 91731, (818) 442-8400
☒ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTODY RECORD

Date 4/2/91 Page 1 of 1
Lab Number 2

CLIENT MEREDITH BOLI
ADDRESS
PROJECT NAME 1704 W. 1st ST., AZ USA
OSCO - CHEMICAL WASTE MGMT.
CONTRACT / PURCHASE ORDER / QUOTE #

PROJECT MANAGER
RON CAVAGROTTI
PHONE NUMBER
SITE CONTACT
FRANK HAGAR / KNIGHT PIESOLD

ANALYSES

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	8010 FULL	8020 BTEX						Sample Condition/ REMARKS
B-4-89	4/2/91	8:05	8040291-1			X	2	X	X						90% FULL
B-4-98		↓	-2			X	1	X	X						90% FULL
B-4-98		↓	-3			X	1	X	X						RUN AS DUPLICATE
B-4-99		9:00	-4			X	2	X	X						90% FULL
B-4-106		9:30	-5			X	2	X	X						90% FULL
B-108 (B-4-108) AH		10:10	-6			X	1	X	X						90% FULL
B-4-128		14:10	-7			X	2	X	X						80% FULL

SAMPLERS: (Signature) [signature] 4/2/91 1630

Relinquished by: (Signature)

Received by: (Signature) Date Time

Received by: (Signature) Date Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Relinquished by: (Signature) Date Time

Received for Laboratory by: [signature]

Date	RECEIVED	Time	Date	ACCEPTED	Time
4/2/91	AS SAMPLED				

Method of Shipment:

Special Instructions:

SAMPLE DISPOSITION:
1. Storage time requested: _____ days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as

Analytical Report

RECEIVED
APR 08 1991
M/B & A

LOG NO: G91-03-532

Received: 27 MAR 91

Mailed: APR 5 1991

Mr. Ron Cavagrotti
Meredith Boli & Associates, Inc.
6701 Center Drive West, Suite 900
Los Angeles,CA 90045-1535

Project: OSCO Azusa PHII

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-532-1	B-4-31D	21 MAR 91
03-532-2	B-4-62D	21 MAR 91
03-532-3	B-4-56D	21 MAR 91
03-532-4	B-4-60D	21 MAR 91

PARAMETER	03-532-1	03-532-2	03-532-3	03-532-4
EPA Method 8010				
Date Analyzed	04/02/91	04/02/91	04/02/91	04/02/91
Date Extracted	04/02/91	04/02/91	04/02/91	04/02/91
Date Confirmed	04/02/91	04/02/91	04/02/91	04/02/91
Dilution Factor, Times 1	1	1	1	1
1,1,1-Trichloroethane, ug/kg	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane, ug/kg	<5	<5	<5	<5
1,1,2-Trichloroethane, ug/kg	<5	<5	<5	<5
1,1-Dichloroethane, ug/kg	<5	<5	<5	<5
1,1-Dichloroethene, ug/kg	<5	<5	<5	<5
1,2-Dichloroethane, ug/kg	<5	<5	<5	<5
1,2-Dichlorobenzene, ug/kg	<5	<5	<5	<5
1,2-Dichloropropane, ug/kg	<5	<5	<5	<5
1,3-Dichlorobenzene, ug/kg	<5	<5	<5	<5
1,4-Dichlorobenzene, ug/kg	<5	<5	<5	<5
2-Chloroethylvinylether, ug/kg	<5	<5	<5	<5
Bromodichloromethane, ug/kg	<5	<5	<5	<5
Bromomethane, ug/kg	<5	<5	<5	<5
Bromoform, ug/kg	<5	<5	<5	<5
Chlorobenzene, ug/kg	<5	<5	<5	<5
Carbon Tetrachloride, ug/kg	<5	<5	<5	<5
Chloroethane, ug/kg	<5	<5	<5	<5
Chloroform, ug/kg	<5	<5	<5	<5
Chloromethane, ug/kg	<5	<5	<5	<5
Dibromochloromethane, ug/kg	<5	<5	<5	<5

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Analytical Report

LOG NO: G91-03-532

Received: 27 MAR 91

Mr. Ron Cavagrotti
Meredith Boli & Associates, Inc.
6701 Center Drive West, Suite 900
Los Angeles,CA 90045-1535

Project: OSCO Azusa PHII

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-532-1	B-4-31D	21 MAR 91
03-532-2	B-4-62D	21 MAR 91
03-532-3	B-4-56D	21 MAR 91
03-532-4	B-4-60D	21 MAR 91

PARAMETER	03-532-1	03-532-2	03-532-3	03-532-4
Dichlorodifluoromethane, ug/kg	<5	<5	<5	<5
Freon 113, ug/kg	<5	<5	<5	<5
Methylene chloride, ug/kg	<5	<5	<5	<5
Trichloroethene, ug/kg	<5	<5	<5	<5
Trichlorofluoromethane, ug/kg	<5	<5	<5	<5
Tetrachloroethene, ug/kg	<5	20	<5	<5
Vinyl chloride, ug/kg	<5	<5	<5	<5
cis-1,2-Dichloroethene, ug/kg	<5	<5	<5	<5
cis-1,3-Dichloropropene, ug/kg	<5	<5	<5	<5
trans-1,2-Dichloroethene, ug/kg	<5	<5	<5	<5
trans-1,3-Dichloropropene, ug/kg	<5	<5	<5	<5

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Analytical Report

LOG NO: G91-03-532

Received: 27 MAR 91

Mr. Ron Cavagrotti
Meredith Boli & Associates, Inc.
6701 Center Drive West, Suite 900
Los Angeles,CA 90045-1535

Project: OSCO Azusa PHII

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
03-532-1	B-4-31D	21 MAR 91
03-532-2	B-4-62D	21 MAR 91
03-532-3	B-4-56D	21 MAR 91
03-532-4	B-4-60D	21 MAR 91

PARAMETER	03-532-1	03-532-2	03-532-3	03-532-4
EPA Method 8020				
Date Analyzed	04/02/91	04/02/91	04/02/91	04/02/91
Date Extracted	04/02/91	04/02/91	04/02/91	04/02/91
Date Confirmed	04/02/91	04/02/91	04/02/91	04/02/91
Dilution Factor, Times 1	1	1	1	1
1,2-Dichlorobenzene, ug/kg	<5	<5	<5	<5
1,3-Dichlorobenzene, ug/kg	<5	<5	<5	<5
1,4-Dichlorobenzene, ug/kg	<5	<5	<5	<5
Benzene, ug/kg	<5	<5	<5	<5
Chlorobenzene, ug/kg	<5	<5	<5	<5
Ethylbenzene, ug/kg	<5	<5	<5	<5
Toluene, ug/kg	<5	<5	<5	<5
Total Xylene Isomers, ug/kg	<20	<20	<20	<20

Jeffrey A. Erion, Laboratory Manager

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

10-APR-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: N1128
ANALYSES: 8240

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B032291-003,008.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

CROSS REFERENCE

Mobile Lab ID	Garden Grove ID	Client ID
B032291-003	G-9108620-001	B-4-53
B032291-008	G-9108620-002	B-4-72

Pat Kemmer
REVIEWED AND APPROVED

4-12-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco – CRL
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL
FAX: (714) 891-5917

Enseco
A Corning Company

April 10, 1991

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. BOB SUNDBERG

Analysis No.: G-9108620-001/002
Date Sampled: 22-MAR-1991
Date Sample Rec'd: 27-MAR-1991
Project: (B032291) MEREDITH BOLI
OSCO, AZUSA

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-9108620-001/002 shown above.

The samples were received by CRL in a chilled state, intact and with the chain-of-custody record attached.

Note that ND means not detected at the reporting limit expressed. The reporting limit is raised to reflect the dilution factor of the sample.

Solid samples are reported on "as received" basis.

Denise McDonald
Reviewed

Approved

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. BOB SUNDBERG

Analysis No.: G-9108620-001
Date Sampled: 22-MAR-1991
Date Sample Rec'd: 27-MAR-1991
Sample Type: SOLID
Date Prepared: 1-APR-1991
Prep Method: EPA 5030 By: LR
Date Analyzed: 1-APR-1991 By: LR

Project: (B032291) MEREDITH BOLI OSCO, AZUSA
Sample ID: B032291-3

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	10	ND	10
Bromomethane	ND	10	ND	10
Vinyl Chloride	ND	10	ND	10
Chloroethane	ND	10	ND	10
Methylene Chloride	ND	5	ND	5
Acetone	370	10	ND	10
Carbon Disulfide	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
Total 1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
2-Butanone	70	10	ND	10
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Vinyl Acetate	ND	10	ND	10
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
Benzene	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	10	ND	10
Bromoform	ND	5	ND	5
4-Methyl-2-pentanone	ND	10	ND	10
2-Hexanone	ND	10	ND	10
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Toluene	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
Ethylbenzene	ND	5	ND	5
Styrene	ND	5	ND	5
Xylenes, Total	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. BOB SUNDBERG

Analysis No.: G-9108620-001
Date Sampled: 22-MAR-1991
Date Sample Rec'd: 27-MAR-1991
Sample Type: SOLID

Project: (B032291) MEREDITH BOLI OSCO, AZUSA

Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
1-APR-1991	1,2 DICHLOROETHANE-D4 (EPA 8240)	104	70-135
1-APR-1991	TOLUENE-D8 (EPA 8240)	100	69-138
1-APR-1991	BROMOFLUOROBENZENE (EPA 8240)	92	60-137

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. BOB SUNDBERG

Analysis No.: G-9108620-002
Date Sampled: 22-MAR-1991
Date Sample Rec'd: 27-MAR-1991
Sample Type: SOLID
Date Prepared: 1-APR-1991
Prep Method: EPA 5030 By: LR
Date Analyzed: 1-APR-1991 By: LR

Project: (B032291) MEREDITH BOLI OSCO, AZUSA
Sample ID: B032291-8

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	50	ND	10
Bromomethane	ND	50	ND	10
Vinyl Chloride	ND	50	ND	10
Chloroethane	ND	50	ND	10
Methylene Chloride	ND	25	ND	5
Acetone	600	50	ND	10
Carbon Disulfide	ND	25	ND	5
Trichlorofluoromethane	ND	25	ND	5
1,1-Dichloroethene	ND	25	ND	5
1,1-Dichloroethane	ND	25	ND	5
Total 1,2-Dichloroethene	ND	25	ND	5
Chloroform	ND	25	ND	5
1,2-Dichloroethane	ND	25	ND	5
2-Butanone	350	50	ND	10
1,1,1-Trichloroethane	ND	25	ND	5
Carbon Tetrachloride	ND	25	ND	5
Vinyl Acetate	ND	50	ND	10
Bromodichloromethane	ND	25	ND	5
1,2-Dichloropropane	ND	25	ND	5
cis-1,3-Dichloropropene	ND	25	ND	5
Trichloroethene	ND	25	ND	5
Dibromochloromethane	ND	25	ND	5
1,1,2-Trichloroethane	ND	25	ND	5
Benzene	ND	25	ND	5
trans-1,3-Dichloropropene	ND	25	ND	5
2-Chloroethylvinyl ether	ND	50	ND	10
Bromoform	ND	25	ND	5
4-Methyl-2-pentanone	ND	50	ND	10
2-Hexanone	ND	50	ND	10
Tetrachloroethene	ND	25	ND	5
1,1,2,2-Tetrachloroethane	ND	25	ND	5
Toluene	ND	25	ND	5
Chlorobenzene	ND	25	ND	5
Ethylbenzene	ND	25	ND	5
Styrene	ND	25	ND	5
Xylenes, Total	ND	25	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. BOB SUNDBERG

Analysis No.: G-9108620-002
Date Sampled: 22-MAR-1991
Date Sample Rec'd: 27-MAR-1991
Sample Type: SOLID

Project: (B032291) MEREDITH BOLI OSCO, AZUSA

Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
1-APR-1991	1,2 DICHLOROETHANE-D4 (EPA 8240)	100	70-135
1-APR-1991	TOLUENE-D8 (EPA 8240)	102	69-138
1-APR-1991	BROMOFLUOROBENZENE (EPA 8240)	97	60-137

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. BOB SUNDBERG

Analysis No.: G-9108620-001/002
Date Sampled: 22-MAR-1991
Date Sample Rec'd: 27-MAR-1991
Sample Type: SOLID

Project: (B032291) MEREDITH BOLI OSCO, AZUSA

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
9108112-011	1,1-DICHLOROETHENE (EPA 8240)	ug/kg	ND	42.9	40.3	50.0	86	81	83	6
9108112-011	TRICHLOROETHENE (EPA 8240)	ug/kg	ND	41.7	40.8	50.0	83	82	83	2
9108112-011	BENZENE (EPA 8240)	ug/kg	ND	40.0	39.2	50.0	80	78	79	2
9108112-011	TOLUENE (EPA 8240)	ug/kg	ND	40.7	39.0	50.0	81	78	80	4
9108112-011	CHLOROBENZENE (EPA 8240)	ug/kg	ND	44.2	42.1	50.0	88	84	86	5

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
9108112-011	29-MAR-1991	1,1-DICHLOROETHENE (EPA 8240)	G-9108620-001
			G-9108620-002
	29-MAR-1991	TRICHLOROETHENE (EPA 8240)	G-9108620-001
			G-9108620-002
	29-MAR-1991	BENZENE (EPA 8240)	G-9108620-001
			G-9108620-002
	29-MAR-1991	TOLUENE (EPA 8240)	G-9108620-001
			G-9108620-002
	29-MAR-1991	CHLOROBENZENE (EPA 8240)	G-9108620-001
			G-9108620-002

Enseco
A Corning Comp.

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. BOB SUNDBERG

Analysis No.: G-9108620-001/002
Date Sampled: 22-MAR-1991
Date Sample Rec'd: 27-MAR-1991
Sample Type: SOLID

Project: (B032291) MEREDITH BOLI OSCO, AZUSA

Laboratory Control Sample Report

QC Batch	Parameter (Method)	Amt. Spiked	Units	Avg. Spike Recov.	Acceptable Range	Rel. Pct. Diff.	Acceptable Range
L91086021	1,1-DICHLOROETHENE (EPA 8240)	50.0	ug/kg	82.	30-151	11.	36
L91086021	TRICHLOROETHENE (EPA 8240)	50.0	ug/kg	81.	36-150	3.	33
L91086021	BENZENE (EPA 8240)	50.0	ug/kg	97.	32-150	8.	35
L91086021	TOLUENE (EPA 8240)	50.0	ug/kg	86.	34-151	4.	34
L91086021	CHLOROBENZENE (EPA 8240)	50.0	ug/kg	92.	33-151	8.	35

Enseco
A Corning Company

Laboratory Control Sample Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
L91086021	25-MAR-1991	1,1-DICHLOROETHENE (EPA 8240)	G-9108620-001
			G-9108620-002
		TRICHLOROETHENE (EPA 8240)	G-9108620-001
			G-9108620-002
		BENZENE (EPA 8240)	G-9108620-001
			G-9108620-002
		TOLUENE (EPA 8240)	G-9108620-001
			G-9108620-002
		CHLOROBENZENE (EPA 8240)	G-9108620-001
			G-9108620-002

Enseco
A CORNING Company

☐ 7440 Lincoln Way, Garden Grove, CA 92641, (714) 89[illegible]
☐ 2810 Bunsen Ave., Unit A Ventura, CA 93003, (805) [illegible],6
☐ 2325 Skyway Dr., Unit K, Santa Maria, CA 93455, (805) 922-2776
☐ 9537 Telstar Ave., Unit 118, El Monte, CA 91731, (818) 442-8400
☑ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTODY RECORD

Date 3-27-91 Page 1 of 1

Lab Number G-9108620

CLIENT ENSECO-CRL Mobile Lab

ADDRESS

PROJECT NAME MEREDITH BOLI
OSCO, AZUSA

CONTRACT / PURCHASE ORDER / QUOTE #
M0118

PROJECT MANAGER
D-KAMMERER

PHONE NUMBER

SITE CONTACT

ANALYSES: 8240

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	8240							Sample Condition/ REMARKS
B032291-3	3/22					X	1-40ml VOA	X							
B032291-8	↓					X	↓	X							

SAMPLERS: (Signature)

Received by: (Signature) | Date | Time

Relinquished by: (Signature) | Received by: (Signature) | Date | Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Relinquished by: (Signature)	Date	Time	Received for Laboratory by:	Date	RECEIVED Time	Date	ACCEPTED Time
Annie Almaguer	3-27-91	3:00pm	H. Luna	3/27/91	3:00 PM		

Method of Shipment:

Special Instructions: Due date: 4-9-91 Normal T.A.T.

SAMPLE DISPOSITION:
1. Storage time requested: _____ days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as appropriate, according to legal requirements.)

DISTRIBUTION: White with report, Yellow to Enseco, Pink to Courier, Gold to Sample Control

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

15-APR-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: N1131
ANALYSES: 8010,8020

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B040591-001/003.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

CROSS REFERENCE

Mobile Lab ID	Garden Grove ID	Client ID
B040591-001	G-9109512-001	B-4-179
B040591-002	G-9109512-002	B-4-184
B040591-003	G-9109512-003	B-4-175

REVIEWED AND APPROVED

4-16-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Enseco - CRL
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL
FAX: (714) 891-5917

April 11, 1991

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9109512-001/003
Date Sampled: 5-APR-1991
Date Sample Rec'd: 5-APR-1991
Project: (B040591) MEREDITH BOLI OSCO, AZUSA

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-9109512-001/003 shown above.

The samples were received by CRL in a chilled state, intact and with the chain-of-custody record attached.

Note that ND means not detected at the reporting limit expressed. The reporting limit is raised to reflect the dilution factor of the sample.

Solid samples are reported on "as received" basis.

Reviewed

Approved

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9109512-001/003
Date Sampled: 5-APR-1991
Date Sample Rec'd: 5-APR-1991
Date Analyzed: 6-APR-1991
Sample Type: SOLID

Project: (B040591) MEREDITH BOLI OSCO, AZUSA

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
B040591-1	ND(5)	ND(5)	ND(5)	ND(15)
B040591-2	ND(5)	ND(5)	ND(5)	ND(15)
B040591-3	ND(5)	ND(5)	ND(5)	ND(15)
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9109512-001
Date Sampled: 5-APR-1991
Date Sample Rec'd: 5-APR-1991
Sample Type: SOLID
Date Prepared: 6-APR-1991
Prep Method: EPA 5030 By: LY
Date Analyzed: 6-APR-1991 By: LY

Project: (B040591) MEREDITH BOLI OSCO, AZUSA
Sample ID: B040591-1

Halogenated Volatile Organics EPA 8010

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9109512-001
Date Sampled: 5-APR-1991
Date Sample Rec'd: 5-APR-1991
Sample Type: SOLID

Project: (B040591) MEREDITH BOLI OSCO, AZUSA

Halogenated Volatile Organics EPA 8010 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
6-APR-1991	BROMOFLUOROBENZENE (EPA 8010)	35	30-130

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9109512-002
Date Sampled: 5-APR-1991
Date Sample Rec'd: 5-APR-1991
Sample Type: SOLID
Date Prepared: 6-APR-1991
Prep Method: EPA 5030 By: LY
Date Analyzed: 6-APR-1991 By: LY

Project: (B040591) MEREDITH BOLI OSCO, AZUSA
Sample ID: B040591-2

Halogenated Volatile Organics EPA 8010

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9109512-002
Date Sampled: 5-APR-1991
Date Sample Rec'd: 5-APR-1991
Sample Type: SOLID

Project: (B040591) MEREDITH BOLI OSCO, AZUSA

Halogenated Volatile Organics EPA 8010 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
6-APR-1991	BROMOFLUOROBENZENE (EPA 8010)	42	30-130

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9109512-003
Date Sampled: 5-APR-1991
Date Sample Rec'd: 5-APR-1991
Sample Type: SOLID
Date Prepared: 6-APR-1991
Prep Method: EPA 5030 By: LY
Date Analyzed: 6-APR-1991 By: LY

Project: (B040591) MEREDITH BOLI OSCO, AZUSA
Sample ID: B040591-3

Halogenated Volatile Organics EPA 8010

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9109512-003
Date Sampled: 5-APR-1991
Date Sample Rec'd: 5-APR-1991
Sample Type: SOLID

Project: (B040591) MEREDITH BOLI OSCO, AZUSA

Halogenated Volatile Organics EPA 8010 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
6-APR-1991	BROMOFLUOROBENZENE (EPA 8010)	35	30-130

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9109512-001/003
Date Sampled: 5-APR-1991
Date Sample Rec'd: 5-APR-1991
Sample Type: SOLID

Project: (B040591) MEREDITH BOLI OSCO, AZUSA

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
9108609-001	1,1-DICHLOROETHANE (EPA 8010)	ug/kg	ND	5.50	5.00	5.0	110	100	105	10
9108609-001	CHLOROFORM (EPA 8010)	ug/kg	ND	6.14	5.57	5.0	123	111	117	10
9108609-001	BROMODICHLOROMETHANE (EPA 8010)	ug/kg	ND	4.81	4.19	5.0	96	84	90	14
9108609-001	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	6.06	5.87	5.0	121	117	119	3
9108609-001	CHLOROBENZENE (EPA 8010)	ug/kg	ND	4.15	4.11	5.0	83	82	83	1
9108609-001	BENZENE (EPA 8020)	ug/kg	ND	6.71	6.37	5.0	134	127	131	5
9108609-001	TOLUENE (EPA 8020)	ug/kg	ND	5.94	5.88	5.0	119	118	118	1
9108609-001	ETHYLBENZENE (EPA 8020)	ug/kg	ND	5.41	5.45	5.0	108	109	109	1
9108609-001	XYLENES, TOTAL (EPA 8020)	ug/kg	ND	5.0	4.87	5.0	100	97	99	3

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
9108609-001	30-MAR-1991	1,1-DICHLOROETHANE (EPA 8010)	G-9109512-001
			G-9109512-002
			G-9109512-003
	30-MAR-1991	CHLOROFORM (EPA 8010)	G-9109512-001
			G-9109512-002
			G-9109512-003
	30-MAR-1991	BROMODICHLOROMETHANE (EPA 8010)	G-9109512-001
			G-9109512-002
			G-9109512-003
	30-MAR-1991	TRICHLOROETHENE (EPA 8010)	G-9109512-001
			G-9109512-002
			G-9109512-003
	30-MAR-1991	CHLOROBENZENE (EPA 8010)	G-9109512-001
			G-9109512-002
			G-9109512-003
	30-MAR-1991	BENZENE (EPA 8020)	G-9109512-001
			G-9109512-002
			G-9109512-003
	30-MAR-1991	TOLUENE (EPA 8020)	G-9109512-001
			G-9109512-002
			G-9109512-003
	30-MAR-1991	ETHYLBENZENE (EPA 8020)	G-9109512-001
			G-9109512-002
			G-9109512-003
	30-MAR-1991	XYLENES, TOTAL (EPA 8020)	G-9109512-001
			G-9109512-002
			G-9109512-003

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9109512-001/003
Date Sampled: 5-APR-1991
Date Sample Rec'd: 5-APR-1991
Sample Type: SOLID

Project: (B040591) MEREDITH BOLI OSCO, AZUSA

Laboratory Control Sample Report

QC Batch	Parameter (Method)	Amt. Spiked	Units	Avg. Spike Recov.	Acceptable Range	Rel. Pct. Diff.	Acceptable Range
L91099004	1,1-DICHLOROETHANE (EPA 8010)	10.0	ug/kg	70.	44-118	1.	40
L91099004	CHLOROFORM (EPA 8010)	10.0	ug/kg	90.	53-136	2.	27
L91099004	BROMODICHLOROMETHANE (EPA 8010)	10.0	ug/kg	80.	45-125	4.	31
L91099004	TRICHLOROETHENE (EPA 8010)	10.0	ug/kg	92.	55-137	2.	41
L91099004	CHLOROBENZENE (EPA 8010)	10.0	ug/kg	75.	50-130	7.	36
L91099003	BENZENE (EPA 8020)	10.0	ug/kg	96.	41-119	2.	40
L91099003	TOLUENE (EPA 8020)	10.0	ug/kg	95.	48-121	3.	36
L91099003	ETHYLBENZENE (EPA 8020)	10.0	ug/kg	92.	48-124	3.	37
L91099003	XYLENES, TOTAL (EPA 8020)	10.0	ug/kg	85.	46-120	3.	37

Enseco
A Corning Company

Laboratory Control Sample Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
L91099003	6-APR-1991	BENZENE (EPA 8020)	G-9109512-001
			G-9109512-002
			G-9109512-003
		TOLUENE (EPA 8020)	G-9109512-001
			G-9109512-002
			G-9109512-003
		ETHYLBENZENE (EPA 8020)	G-9109512-001
			G-9109512-002
			G-9109512-003
		XYLENES, TOTAL (EPA 8020)	G-9109512-001
			G-9109512-002
			G-9109512-003
L91099004	6-APR-1991	1,1-DICHLOROETHANE (EPA 8010)	G-9109512-001
			G-9109512-002
			G-9109512-003
		CHLOROFORM (EPA 8010)	G-9109512-001
			G-9109512-002
			G-9109512-003
		BROMODICHLOROMETHANE (EPA 8010)	G-9109512-001
			G-9109512-002
			G-9109512-003
		TRICHLOROETHENE (EPA 8010)	G-9109512-001
			G-9109512-002
			G-9109512-003
		CHLOROBENZENE (EPA 8010)	G-9109512-001
			G-9109512-002
			G-9109512-003

Enseco
A Corning Company

☐ 7440 Lincoln Way, Garden Grove, CA 92641, (714) 898-6370
☐ 2810 Bunsen Ave., Unit A Ventura, CA 93003, (805) 650-0546
☐ 2325 Skyway Dr., Unit K, Santa Maria, CA 93455, (805) 922-2776
☐ 9537 Telstar Ave., Unit 118, El Monte, CA 91731, (818) 442-8400
☑ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTODY RECORD

Date 4-5-91 Page 1 of 1

Lab Number 6-9109512

CLIENT ENSECO-CRL Mobile Lab

ADDRESS

PROJECT NAME MEREDITH BOLI
OSCO, AZUSA, LA

CONTRACT / PURCHASE ORDER / QUOTE #

PROJECT MANAGER D. KAMMERER

PHONE NUMBER

SITE CONTACT

ANALYSES

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	8010	8020						Sample Condition/ REMARKS
B040591-1	4-5-91					X	2-VOA vial 40 ml	X	X						
-2	↓					X	↓	X	X						
-3	↓					X	1-VOA vial	X	X						
-4															

SAMPLERS: (Signature)

Relinquished by: (Signature)

Relinquished by: (Signature) Arnie Almagro

Received by: (Signature) Date Time

Received by: (Signature) Date Time

Date 4-5-91 Time 4:00 pm

Received for Laboratory by: Nils J. Cornejo

Date RECEIVED Time 4/5/91 4:00 pm

Date ACCEPTED Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Method of Shipment:

Special Instructions: Due date: 4-8-91 Rush 24 hr. T.A.T.

SAMPLE DISPOSITION:
1. Storage time requested:_____days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as appropriate, according to legal requirements.)

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

17-APR-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: N1130
ANALYSES: 8240

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B040291-001/002,004/007.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

CROSS REFERENCE

Mobile Lab ID	Garden Grove ID	Client ID
B040291-001	G-9109401-001	B-4-89
B040291-002	G-9109401-002	B-4-98
B040291-004	G-9109401-003	B-4-99
B040291-005	G-9109401-004	B-4-106
B040291-006	G-9109401-005	B-4-108
B040291-007	G-9109401-006	B-4-128

REVIEWED AND APPROVED

4-17-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Enseco - CRL
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL
FAX: (714) 891-5917

April 17, 1991

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9109401-001/006
Date Sampled: 1/2-APR-1991
Date Sample Rec'd: 4-APR-1991
Project: MEREDITH BOLI - 1704 W. 1ST STREET
AZUSA, LA

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-9109401-001/006 shown above.

The samples were received by CRL in a chilled state, intact and with the chain-of-custody record attached.

Note that ND means not detected at the reporting limit expressed. The reporting limit is raised to reflect the dilution factor of the sample.

Solid samples are reported on "as received" basis.

Reviewed

Approved

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9109401-001
Date Sampled: 1-APR-1991
Date Sample Rec'd: 4-APR-1991
Sample Type: SOLID
Date Prepared: 10-APR-1991
Prep Method: EPA 5030 By: LR
Date Analyzed: 10-APR-1991 By: LR

Project: MEREDITH BOLI - 1704 W. 1ST STREET, AZUSA, LA
Sample ID: B040291-1

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	50	ND	10
Bromomethane	ND	50	ND	10
Vinyl Chloride	ND	50	ND	10
Chloroethane	ND	50	ND	10
Methylene Chloride MeCl2 <5	ND	25	ND	5
Acetone	300	50	ND	10
Carbon Disulfide	ND	25	ND	5
Trichlorofluoromethane	ND	25	ND	5
1,1-Dichloroethene DCE11	ND	25	ND	5
1,1-Dichloroethane	ND	25	ND	5
Total 1,2-Dichloroethene	ND	25	ND	5
Chloroform	ND	25	ND	5
1,2-Dichloroethane	ND	25	ND	5
2-Butanone MEK	390	50	ND	10
1,1,1-Trichloroethane TCA111	ND	25	ND	5
Carbon Tetrachloride	ND	25	ND	5
Vinyl Acetate	ND	50	ND	10
Bromodichloromethane	ND	25	ND	5
1,2-Dichloropropane	ND	25	ND	5
cis-1,3-Dichloropropene	ND	25	ND	5
Trichloroethene TCE	ND	25	ND	5
Dibromochloromethane	ND	25	ND	5
1,1,2-Trichloroethane TCA112	ND	25	ND	5
Benzene BEN	ND	25	ND	5
trans-1,3-Dichloropropene	ND	25	ND	5
2-Chloroethylvinyl ether	ND	50	ND	10
Bromoform	ND	25	ND	5
4-Methyl-2-pentanone MIBK	150	50	ND	10
2-Hexanone	ND	50	ND	10
Tetrachloroethene PCE	ND	25	ND	5
1,1,2,2-Tetrachloroethane	ND	25	ND	5
Toluene TOL	ND	25	ND	5
Chlorobenzene	ND	25	ND	5
Ethylbenzene EBEN	ND	25	ND	5
Styrene	ND	25	ND	5
Xylenes, Total XYL	ND	25	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9109401-001
Date Sampled: 1-APR-1991
Date Sample Rec'd: 4-APR-1991
Sample Type: SOLID

Project: MEREDITH BOLI - 1704 W. 1ST STREET, AZUSA, LA

Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
10-APR-1991	1,2 DICHLOROETHANE-D4 (EPA 8240)	103	70-135
10-APR-1991	TOLUENE-D8 (EPA 8240)	105	69-138
10-APR-1991	BROMOFLUOROBENZENE (EPA 8240)	97	60-137

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9109401-002
Date Sampled: 2-APR-1991
Date Sample Rec'd: 4-APR-1991
Sample Type: SOLID
Date Prepared: 9-APR-1991
Prep Method: EPA 5030 By: JC
Date Analyzed: 9-APR-1991 By: JC

Project: MEREDITH BOLI - 1704 W. 1ST STREET, AZUSA, LA
Sample ID: B040291-2

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL	FN
Chloromethane	ND	50	ND	10	
Bromomethane	ND	50	ND	10	
Vinyl Chloride	ND	50	ND	10	
Chloroethane	ND	50	ND	10	
Methylene Chloride	ND	25	ND	5	
Acetone	1600	50	5.1	10	#
Carbon Disulfide	ND	25	ND	5	
Trichlorofluoromethane	ND	25	ND	5	
1,1-Dichloroethene	ND	25	ND	5	
1,1-Dichloroethane	ND	25	ND	5	
Total 1,2-Dichloroethene	ND	25	ND	5	
Chloroform	ND	25	ND	5	
1,2-Dichloroethane	ND	25	ND	5	
2-Butanone	1700	50	ND	10	
1,1,1-Trichloroethane	ND	25	ND	5	
Carbon Tetrachloride	ND	25	ND	5	
Vinyl Acetate	ND	50	ND	10	
Bromodichloromethane	ND	25	ND	5	
1,2-Dichloropropane	ND	25	ND	5	
cis-1,3-Dichloropropene	ND	25	ND	5	
Trichloroethene	ND	25	ND	5	
Dibromochloromethane	ND	25	ND	5	
1,1,2-Trichloroethane	ND	25	ND	5	
Benzene	ND	25	ND	5	
trans-1,3-Dichloropropene	ND	25	ND	5	
2-Chloroethylvinyl ether	ND	50	ND	10	
Bromoform	ND	25	ND	5	
4-Methyl-2-pentanone	200	50	ND	10	
2-Hexanone	ND	50	ND	10	
Tetrachloroethene	ND	25	ND	5	
1,1,2,2-Tetrachloroethane	ND	25	ND	5	
Toluene	ND	25	ND	5	
Chlorobenzene	ND	25	ND	5	
Ethylbenzene	ND	25	ND	5	

Analyte associated with sample processing and analysis in the lab environment. An acceptable method blank must contain less than five times the reporting limit of this analyte for this method.

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9109401-002
Date Sampled: 2-APR-1991
Date Sample Rec'd: 4-APR-1991
Sample Type: SOLID
Date Prepared: 9-APR-1991
Prep Method: EPA 5030 By: JC
Date Analyzed: 9-APR-1991 By: JC

Project: MEREDITH BOLI - 1704 W. 1ST STREET, AZUSA, LA
Sample ID: B040291-2

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Styrene	ND	25	ND	5
Xylenes, Total	ND	25	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9109401-002
Date Sampled: 2-APR-1991
Date Sample Rec'd: 4-APR-1991
Sample Type: SOLID

Project: MEREDITH BOLI - 1704 W. 1ST STREET, AZUSA, LA

Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
9-APR-1991	1,2 DICHLOROETHANE-D4 (EPA 8240)	88	70-135
9-APR-1991	TOLUENE-D8 (EPA 8240)	88	69-138
9-APR-1991	BROMOFLUOROBENZENE (EPA 8240)	90	60-137

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9109401-003
Date Sampled: 2-APR-1991
Date Sample Rec'd: 4-APR-1991
Sample Type: SOLID
Date Prepared: 6-APR-1991
Prep Method: EPA 5030 By: LR
Date Analyzed: 6-APR-1991 By: LR

Project: MEREDITH BOLI - 1704 W. 1ST STREET, AZUSA, LA
Sample ID: B040291-4

Medium-Level Purgeable Organics, EPA 8240

Units: mg/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	0.50	ND	.50
Bromomethane	ND	0.50	ND	.50
Vinyl Chloride	ND	0.50	ND	.50
Chloroethane	ND	0.50	ND	.50
Methylene Chloride	ND	0.25	ND	.25
Acetone	6.6	0.50	ND	.50
Carbon Disulfide	ND	0.25	ND	.25
Trichlorofluoromethane	ND	0.25	ND	.25
1,1-Dichloroethene	ND	0.25	ND	.25
1,1-Dichloroethane	ND	0.25	ND	.25
Total 1,2-Dichloroethene	ND	0.25	ND	.25
Chloroform	ND	0.25	ND	.25
1,2-Dichloroethane	ND	0.25	ND	.25
2-Butanone	5.1	0.50	ND	.50
1,1,1-Trichloroethane	ND	0.25	ND	.25
Carbon Tetrachloride	ND	0.25	ND	.25
Vinyl Acetate	ND	0.50	ND	.50
Bromodichloromethane	ND	0.25	ND	.25
1,2-Dichloropropane	ND	0.25	ND	.25
cis-1,3-Dichloropropene	ND	0.25	ND	.25
Trichloroethene	ND	0.25	ND	.25
Dibromochloromethane	ND	0.25	ND	.25
1,1,2-Trichloroethane	ND	0.25	ND	.25
Benzene	ND	0.25	ND	.25
2-Chloroethylvinyl ether	ND	0.50	ND	.50
2-Chloroethylvinyl ether	ND	0.25	ND	.25
Bromoform	ND	0.25	ND	.25
4-Methyl-2-pentanone	ND	0.50	ND	.50
2-Hexanone	ND	0.50	ND	.50
Tetrachloroethene	ND	0.25	ND	.25
1,1,2,2-Tetrachloroethane	ND	0.25	ND	.25
Toluene	ND	0.25	ND	.25
Chlorobenzene	ND	0.25	ND	.25
Ethylbenzene	ND	0.25	ND	.25
Styrene	ND	0.25	ND	.25
Xylenes, Total	ND	0.25	ND	.25

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9109401-003
Date Sampled: 2-APR-1991
Date Sample Rec'd: 4-APR-1991
Sample Type: SOLID

Project: MEREDITH BOLI - 1704 W. 1ST STREET, AZUSA, LA

Medium-Level Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
6-APR-1991	1,2-DICHLOROETHANE-D4 (EPA 8240-M)	108	40-142
6-APR-1991	TOLUENE-D8 (EPA 8240-M)	106	22-145
6-APR-1991	BROMOFLUOROBENZENE (EPA 8240-M)	106	36-155

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9109401-004
Date Sampled: 2-APR-1991
Date Sample Rec'd: 4-APR-1991
Sample Type: SOLID
Date Prepared: 6-APR-1991
Prep Method: EPA 5030 By: LR
Date Analyzed: 6-APR-1991 By: LR

Project: MEREDITH BOLI - 1704 W. 1ST STREET, AZUSA, LA
Sample ID: B040291-5

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	50	ND	10
Bromomethane	ND	50	ND	10
Vinyl Chloride	ND	50	ND	10
Chloroethane	ND	50	ND	10
Methylene Chloride	ND	25	ND	5
Acetone	1600	50	ND	10
Carbon Disulfide	ND	25	ND	5
Trichlorofluoromethane	ND	25	ND	5
1,1-Dichloroethene	ND	25	ND	5
1,1-Dichloroethane	ND	25	ND	5
Total 1,2-Dichloroethene	ND	25	ND	5
Chloroform	ND	25	ND	5
1,2-Dichloroethane	ND	25	ND	5
2-Butanone	880	50	ND	10
1,1,1-Trichloroethane	ND	25	ND	5
Carbon Tetrachloride	ND	25	ND	5
Vinyl Acetate	ND	50	ND	10
Bromodichloromethane	ND	25	ND	5
1,2-Dichloropropane	ND	25	ND	5
cis-1,3-Dichloropropene	ND	25	ND	5
Trichloroethene	ND	25	ND	5
Dibromochloromethane	ND	25	ND	5
1,1,2-Trichloroethane	ND	25	ND	5
Benzene	ND	25	ND	5
trans-1,3-Dichloropropene	ND	25	ND	5
2-Chloroethylvinyl ether	ND	50	ND	10
Bromoform	ND	25	ND	5
4-Methyl-2-pentanone	80	50	ND	10
2-Hexanone	ND	50	ND	10
Tetrachloroethene	ND	25	ND	5
1,1,2,2-Tetrachloroethane	ND	25	ND	5
Toluene	ND	25	ND	5
Chlorobenzene	ND	25	ND	5
Ethylbenzene	ND	25	ND	5
Styrene	ND	25	ND	5
Xylenes, Total	ND	25	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9109401-004
Date Sampled: 2-APR-1991
Date Sample Rec'd: 4-APR-1991
Sample Type: SOLID

Project: MEREDITH BOLI - 1704 W. 1ST STREET, AZUSA, LA

Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
6-APR-1991	1,2 DICHLOROETHANE-D4 (EPA 8240)	95	70-135
6-APR-1991	TOLUENE-D8 (EPA 8240)	105	69-138
6-APR-1991	BROMOFLUOROBENZENE (EPA 8240)	96	60-137

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9109401-005
Date Sampled: 2-APR-1991
Date Sample Rec'd: 4-APR-1991
Sample Type: SOLID
Date Prepared: 6-APR-1991
Prep Method: EPA 5030 By: LR
Date Analyzed: 6-APR-1991 By: LR

Project: MEREDITH BOLI - 1704 W. 1ST STREET, AZUSA, LA
Sample ID: B040291-6

Medium-Level Purgeable Organics, EPA 8240

Units: mg/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	0.50	ND	.50
Bromomethane	ND	0.50	ND	.50
Vinyl Chloride	ND	0.50	ND	.50
Chloroethane	ND	0.50	ND	.50
Methylene Chloride	ND	0.25	ND	.25
Acetone	4.6	0.50	ND	.50
Carbon Disulfide	ND	0.25	ND	.25
Trichlorofluoromethane	ND	0.25	ND	.25
1,1-Dichloroethene	ND	0.25	ND	.25
1,1-Dichloroethane	ND	0.25	ND	.25
Total 1,2-Dichloroethene	ND	0.25	ND	.25
Chloroform	ND	0.25	ND	.25
1,2-Dichloroethane	ND	0.25	ND	.25
2-Butanone	2.9	0.50	ND	.50
1,1,1-Trichloroethane	ND	0.25	ND	.25
Carbon Tetrachloride	ND	0.25	ND	.25
Vinyl Acetate	ND	0.50	ND	.50
Bromodichloromethane	ND	0.25	ND	.25
1,2-Dichloropropane	ND	0.25	ND	.25
cis-1,3-Dichloropropene	ND	0.25	ND	.25
Trichloroethene	ND	0.25	ND	.25
Dibromochloromethane	ND	0.25	ND	.25
1,1,2-Trichloroethane	ND	0.25	ND	.25
Benzene	ND	0.25	ND	.25
2-Chloroethylvinyl ether	ND	0.50	ND	.50
2-Chloroethylvinyl ether	ND	0.25	ND	.25
Bromoform	ND	0.25	ND	.25
4-Methyl-2-pentanone	ND	0.50	ND	.50
2-Hexanone	ND	0.50	ND	.50
Tetrachloroethene	ND	0.25	ND	.25
1,1,2,2-Tetrachloroethane	ND	0.25	ND	.25
Toluene	ND	0.25	ND	.25
Chlorobenzene	ND	0.25	ND	.25
Ethylbenzene	ND	0.25	ND	.25
Styrene	ND	0.25	ND	.25
Xylenes, Total	ND	0.25	ND	.25

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9109401-005
Date Sampled: 2-APR-1991
Date Sample Rec'd: 4-APR-1991
Sample Type: SOLID

Project: MEREDITH BOLI - 1704 W. 1ST STREET, AZUSA, LA

Medium-Level Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
6-APR-1991	1,2-DICHLOROETHANE-D4 (EPA 8240-M)	104	40-142
6-APR-1991	TOLUENE-D8 (EPA 8240-M)	107	22-145
6-APR-1991	BROMOFLUOROBENZENE (EPA 8240-M)	106	36-155

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9109401-006
Date Sampled: 2-APR-1991
Date Sample Rec'd: 4-APR-1991
Sample Type: SOLID
Date Prepared: 6-APR-1991
Prep Method: EPA 5030 By: LR
Date Analyzed: 6-APR-1991 By: LR

Project: MEREDITH BOLI - 1704 W. 1ST STREET, AZUSA, LA
Sample ID: B040291-7

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	50	ND	10
Bromomethane	ND	50	ND	10
Vinyl Chloride	ND	50	ND	10
Chloroethane	ND	50	ND	10
Methylene Chloride	ND	25	ND	5
Acetone	1400	50	ND	10
Carbon Disulfide	ND	25	ND	5
Trichlorofluoromethane	ND	25	ND	5
1,1-Dichloroethene	ND	25	ND	5
1,1-Dichloroethane	ND	25	ND	5
Total 1,2-Dichloroethene	ND	25	ND	5
Chloroform	ND	25	ND	5
1,2-Dichloroethane	ND	25	ND	5
2-Butanone	1200	50	ND	10
1,1,1-Trichloroethane	ND	25	ND	5
Carbon Tetrachloride	ND	25	ND	5
Vinyl Acetate	ND	50	ND	10
Bromodichloromethane	ND	25	ND	5
1,2-Dichloropropane	ND	25	ND	5
cis-1,3-Dichloropropene	ND	25	ND	5
Trichloroethene	ND	25	ND	5
Dibromochloromethane	ND	25	ND	5
1,1,2-Trichloroethane	ND	25	ND	5
Benzene	ND	25	ND	5
trans-1,3-Dichloropropene	ND	25	ND	5
2-Chloroethylvinyl ether	ND	50	ND	10
Bromoform	ND	25	ND	5
4-Methyl-2-pentanone	76	50	ND	10
2-Hexanone	ND	50	ND	10
Tetrachloroethene	ND	25	ND	5
1,1,2,2-Tetrachloroethane	ND	25	ND	5
Toluene	ND	25	ND	5
Chlorobenzene	ND	25	ND	5
Ethylbenzene	ND	25	ND	5
Styrene	ND	25	ND	5
Xylenes, Total	ND	25	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9109401-006
Date Sampled: 2-APR-1991
Date Sample Rec'd: 4-APR-1991
Sample Type: SOLID

Project: MEREDITH BOLI - 1704 W. 1ST STREET, AZUSA, LA

Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
6-APR-1991	1,2 DICHLOROETHANE-D4 (EPA 8240)	90	70-135
6-APR-1991	TOLUENE-D8 (EPA 8240)	102	69-138
6-APR-1991	BROMOFLUOROBENZENE (EPA 8240)	96	60-137

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9109401-001/006
Date Sampled: 1-APR-1991
2-APR-1991
Date Sample Rec'd: 4-APR-1991
Sample Type: SOLID

Project: MEREDITH BOLI - 1704 W. 1ST STREET, AZUSA, LA

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
9109423-007	1,1-DICHLOROETHENE (EPA 8240)	ug/kg	ND	49.1	45.9	50.0	98	92	95	7
9107819-013	1,1-DICHLOROETHENE (EPA 8240)	ug/kg	ND	39.4	48.2	50.0	79	96	88	20
9109423-007	TRICHLOROETHENE (EPA 8240)	ug/kg	ND	51.4	47.0	50.0	103	94	98	9
9107819-013	TRICHLOROETHENE (EPA 8240)	ug/kg	ND	41.6	48.7	50.0	83	97	90	16
9109423-007	BENZENE (EPA 8240)	ug/kg	ND	47.9	43.5	50.0	96	87	91	10
9107819-013	BENZENE (EPA 8240)	ug/kg	ND	48.9	54.0	50.0	98	108	103	10
9109423-007	TOLUENE (EPA 8240)	ug/kg	ND	49.0	44.6	50.0	98	89	94	9
9107819-013	TOLUENE (EPA 8240)	ug/kg	ND	54.4	60.0	50.0	109	120	114	10
9109423-007	CHLOROBENZENE (EPA 8240)	ug/kg	ND	52.1	46.9	50.0	104	94	99	11
7819-013	CHLOROBENZENE (EPA 8240)	ug/kg	ND	53.1	60.7	50.0	106	121	114	13
9108012-009	1,1-DICHLOROETHENE (EPA 8240-M)	mg/kg	ND	1.64	1.64	2.50	66	66	66	0
9108012-009	TRICHLOROETHENE (EPA 8240-M)	mg/kg	ND	2.15	1.95	2.50	86	78	82	10
9108012-009	BENZENE (EPA 8240-M)	mg/kg	ND	2.40	2.29	2.50	96	92	94	5
9108012-009	TOLUENE (EPA 8240-M)	mg/kg	ND	2.44	2.42	2.50	98	97	97	1
9108012-009	CHLOROBENZENE (EPA 8240-M)	mg/kg	ND	2.56	2.49	2.50	102	100	101	3

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
9107819-013	3-APR-1991	1,1-DICHLOROETHENE (EPA 8240)	G-9109401-004
			G-9109401-006
	3-APR-1991	TRICHLOROETHENE (EPA 8240)	G-9109401-004
			G-9109401-006
	3-APR-1991	BENZENE (EPA 8240)	G-9109401-004
			G-9109401-006
	3-APR-1991	TOLUENE (EPA 8240)	G-9109401-004
			G-9109401-006
	3-APR-1991	CHLOROBENZENE (EPA 8240)	G-9109401-004
			G-9109401-006
9108012-009	26-MAR-1991	1,1-DICHLOROETHENE (EPA 8240-M)	G-9109401-003
			G-9109401-005
	26-MAR-1991	TRICHLOROETHENE (EPA 8240-M)	G-9109401-003
			G-9109401-005
	26-MAR-1991	BENZENE (EPA 8240-M)	G-9109401-003
			G-9109401-005
	26-MAR-1991	TOLUENE (EPA 8240-M)	G-9109401-003
			G-9109401-005
	26-MAR-1991	CHLOROBENZENE (EPA 8240-M)	G-9109401-003
			G-9109401-005
9109423-007	6-APR-1991	1,1-DICHLOROETHENE (EPA 8240)	G-9109401-001
			G-9109401-002
	6-APR-1991	TRICHLOROETHENE (EPA 8240)	G-9109401-001
			G-9109401-002
	6-APR-1991	BENZENE (EPA 8240)	G-9109401-001
			G-9109401-002
	6-APR-1991	TOLUENE (EPA 8240)	G-9109401-001
			G-9109401-002
	6-APR-1991	CHLOROBENZENE (EPA 8240)	G-9109401-001
			G-9109401-002

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9109401-001/006
Date Sampled: 1-APR-1991
2-APR-1991
Date Sample Rec'd: 4-APR-1991
Sample Type: SOLID

Project: MEREDITH BOLI - 1704 W. 1ST STREET, AZUSA, LA

Laboratory Control Sample Report

QC Batch	Parameter (Method)	Amt. Spiked	Units	Avg. Spike Recov.	Acceptable Range	Rel. Pct. Diff.	Acceptable Range
L91095024	1,1-DICHLOROETHENE (EPA 8240)	50.0	ug/kg	87.	30-151	14.	36
L91098024	1,1-DICHLOROETHENE (EPA 8240)	50.0	ug/kg	91.	30-151	1.	36
L91095024	TRICHLOROETHENE (EPA 8240)	50.0	ug/kg	81.	36-150	4.	33
L91098024	TRICHLOROETHENE (EPA 8240)	50.0	ug/kg	95.	36-150	2.	33
L91095024	BENZENE (EPA 8240)	50.0	ug/kg	92.	32-150	1.	35
L91098024	BENZENE (EPA 8240)	50.0	ug/kg	88.	32-150	2.	35
L91095024	TOLUENE (EPA 8240)	50.0	ug/kg	92.	34-151	6.	34
L91098024	TOLUENE (EPA 8240)	50.0	ug/kg	90.	34-151	5.	34
L91095024	CHLOROBENZENE (EPA 8240)	50.0	ug/kg	98.	33-151	4.	35
L91098024	CHLOROBENZENE (EPA 8240)	50.0	ug/kg	98.	33-151	1.	35
91086036	1,1-DICHLOROETHENE (EPA 8240-M)	2.50	mg/kg	69.	54-134	2.	25
L91086036	TRICHLOROETHENE (EPA 8240-M)	2.50	mg/kg	83.	67-124	3.	21
L91086036	BENZENE (EPA 8240-M)	2.50	mg/kg	95.	62-126	5.	24
L91086036	TOLUENE (EPA 8240-M)	2.50	mg/kg	98.	66-126	2.	22
L91086036	CHLOROBENZENE (EPA 8240-M)	2.50	mg/kg	102.	67-124	4.	22

Enseco
A Corning Company

Laboratory Control Sample Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
L91086036	26-MAR-1991	1,1-DICHLOROETHENE (EPA 8240-M)	G-9109401-003
			G-9109401-005
		TRICHLOROETHENE (EPA 8240-M)	G-9109401-003
			G-9109401-005
		BENZENE (EPA 8240-M)	G-9109401-003
			G-9109401-005
		TOLUENE (EPA 8240-M)	G-9109401-003
			G-9109401-005
		CHLOROBENZENE (EPA 8240-M)	G-9109401-003
			G-9109401-005
L91095024	4-APR-1991	1,1-DICHLOROETHENE (EPA 8240)	G-9109401-001
		TRICHLOROETHENE (EPA 8240)	G-9109401-001
		BENZENE (EPA 8240)	G-9109401-001
		TOLUENE (EPA 8240)	G-9109401-001
		CHLOROBENZENE (EPA 8240)	G-9109401-001
L91098024	6-APR-1991	1,1-DICHLOROETHENE (EPA 8240)	G-9109401-002
			G-9109401-006
		TRICHLOROETHENE (EPA 8240)	G-9109401-002
			G-9109401-006
		BENZENE (EPA 8240)	G-9109401-002
			G-9109401-006
		TOLUENE (EPA 8240)	G-9109401-002
			G-9109401-006
		CHLOROBENZENE (EPA 8240)	G-9109401-002
			G-9109401-006

Enseco
A CORNING Company

☐ 7440 Lincoln Way, Garden Grove, CA 92641, (714) 898-
☐ 2810 Bunsen Ave., Unit A Ventura, CA 93003, (805) 65
☐ 2325 Skyway Dr., Unit K, Santa Maria, CA 93455, (805) 922-2776
☐ 9537 Telstar Ave., Unit 118, El Monte, CA 91731, (818) 442-8400
☑ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTODY RECORD

Date 4-4-91 Page 1 of 1

Lab Number 9109401

CLIENT ENSECO-CRL MOBILE LAB

ADDRESS

PROJECT NAME MEREDITH BOLI
1704 W. 1ST ST. AZUSA, LA

CONTRACT / PURCHASE ORDER / QUOTE #

PROJECT MANAGER
D. KAMMERER

PHONE NUMBER

SITE CONTACT

ANALYSES

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	8240							Sample Condition/ REMARKS
B040291-1	4-1-91					X	1-40ml VOA	X							
-2	4-2-91					X									
-4						X									
-5						X									
-6						X									
-7						X									

SAMPLERS: (Signature)

Received by: (Signature) | Date | Time

Relinquished by: (Signature) | Received by: (Signature) | Date | Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Relinquished by: (Signature)	Date	Time	Received for Laboratory by:	Date RECEIVED	Time	Date ACCEPTED	Time
Arnie Almaguer	4-4-91	8:35	[signature]	4-4-91	8:35		

Method of Shipment:

Special Instructions:
Due date: 4-17-91 Normal T.A.T.

SAMPLE DISPOSITION:
1. Storage time requested: _____ days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as appropriate, according to legal requirements.)

DISTRIBUTION: White with report, Yellow to Enseco, Pink to Courier, Gold to Sample Control

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

25-APR-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: N1132
ANALYSES: 8240

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B040391-004/006.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

CROSS REFERENCE

Mobile Lab ID	Garden Grove ID	Client ID
B040391-004	G-9110503-001	B-4-138
B040391-005	G-9110503-002	B-4-146
B040391-006	G-9110503-003	B-4-155

REVIEWED AND APPROVED

4-25-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Enseco - CRL
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL
FAX: (714) 891-5917

April 23, 1991

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9110503-001/003
Date Sampled: 3-APR-1991
Date Sample Rec'd: 15-APR-1991
Project: (B040391) MEREDITH BOLI/OSCO - AZUSA

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-9110503-001/003 shown above.

The samples were received by CRL in a chilled state, intact and with the chain-of-custody record attached.

Note that ND means not detected at the reporting limit expressed. The reporting limit is raised to reflect the dilution factor of the sample.

Solid sample are reported on "as received" basis.

Reviewed

Approved

The Report Cover Letter is an integral part of this report.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9110503-001
Date Sampled: 3-APR-1991
Date Sample Rec'd: 15-APR-1991
Sample Type: SOLID
Date Prepared: 17-APR-1991
Prep Method: EPA 5030 By: LR
Date Analyzed: 17-APR-1991 By: LR

Project: (B040391) MEREDITH BOLI/OSCO - AZUSA
Sample ID: B040391-4

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	10	ND	10
Bromomethane	ND	10	ND	10
Vinyl Chloride	ND	10	ND	10
Chloroethane	ND	10	ND	10
Methylene Chloride	ND	5	ND	5
Acetone	13	10	ND	10
Carbon Disulfide	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
Total 1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
2-Butanone	18	10	ND	10
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Vinyl Acetate	ND	10	ND	10
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
Benzene	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	10	ND	10
Bromoform	ND	5	ND	5
4-Methyl-2-pentanone	41	10	ND	10
2-Hexanone	ND	10	ND	10
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Toluene	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
Ethylbenzene	ND	5	ND	5
Styrene	ND	5	ND	5
Xylenes, Total	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9110503-001
Date Sampled: 3-APR-1991
Date Sample Rec'd: 15-APR-1991
Sample Type: SOLID

Project: (B040391) MEREDITH BOLI/OSCO - AZUSA

Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
17-APR-1991	1,2 DICHLOROETHANE-D4 (EPA 8240)	91	70-135
17-APR-1991	TOLUENE-D8 (EPA 8240)	91	69-138
17-APR-1991	BROMOFLUOROBENZENE (EPA 8240)	91	60-137

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9110503-002
Date Sampled: 3-APR-1991
Date Sample Rec'd: 15-APR-1991
Sample Type: SOLID
Date Prepared: 15-APR-1991
Prep Method: EPA 5030 By: LR
Date Analyzed: 15-APR-1991 By: LR

Project: (B040391) MEREDITH BOLI/OSCO - AZUSA
Sample ID: B040391-5

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	10	ND	10
Bromomethane	ND	10	ND	10
Vinyl Chloride	ND	10	ND	10
Chloroethane	ND	10	ND	10
Methylene Chloride	ND	5	ND	5
Acetone	ND	10	ND	10
Carbon Disulfide	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
Total 1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
2-Butanone	ND	10	ND	10
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Vinyl Acetate	ND	10	ND	10
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
Benzene	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	10	ND	10
Bromoform	ND	5	ND	5
4-Methyl-2-pentanone	ND	10	ND	10
2-Hexanone	ND	10	ND	10
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Toluene	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
Ethylbenzene	ND	5	ND	5
Styrene	ND	5	ND	5
Xylenes, Total	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9110503-002
Date Sampled: 3-APR-1991
Date Sample Rec'd: 15-APR-1991
Sample Type: SOLID

Project: (B040391) MEREDITH BOLI/OSCO - AZUSA

Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
15-APR-1991	1,2 DICHLOROETHANE-D4 (EPA 8240)	102	70-135
15-APR-1991	TOLUENE-D8 (EPA 8240)	99	69-138
15-APR-1991	BROMOFLUOROBENZENE (EPA 8240)	93	60-137

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9110503-003
Date Sampled: 3-APR-1991
Date Sample Rec'd: 15-APR-1991
Sample Type: SOLID
Date Prepared: 17-APR-1991
Prep Method: EPA 5030 By: LR
Date Analyzed: 17-APR-1991 By: LR

Project: (B040391) MEREDITH BOLI/OSCO - AZUSA
Sample ID: B040391-6

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	10	ND	10
Bromomethane	ND	10	ND	10
Vinyl Chloride	ND	10	ND	10
Chloroethane	ND	10	ND	10
Methylene Chloride	ND	5	ND	5
Acetone	ND	10	ND	10
Carbon Disulfide	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
Total 1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
2-Butanone	ND	10	ND	10
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Vinyl Acetate	ND	10	ND	10
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
Benzene	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	10	ND	10
Bromoform	ND	5	ND	5
4-Methyl-2-pentanone	ND	10	ND	10
2-Hexanone	ND	10	ND	10
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Toluene	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
Ethylbenzene	ND	5	ND	5
Styrene	ND	5	ND	5
Xylenes, Total	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9110503-003
Date Sampled: 3-APR-1991
Date Sample Rec'd: 15-APR-1991
Sample Type: SOLID

Project: (B040391) MEREDITH BOLI/OSCO - AZUSA

Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
17-APR-1991	1,2 DICHLOROETHANE-D4 (EPA 8240)	83	70-135
17-APR-1991	TOLUENE-D8 (EPA 8240)	83	69-138
17-APR-1991	BROMOFLUOROBENZENE (EPA 8240)	80	60-137

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9110503-001/003
Date Sampled: 3-APR-1991
Date Sample Rec'd: 15-APR-1991
Sample Type: SOLID

Project: (B040391) MEREDITH BOLI/OSCO - AZUSA

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
9110024-012	1,1-DICHLOROETHENE (EPA 8240)	ug/kg	ND	42.7	47.4	50.0	85	94	89	10
9110024-012	TRICHLOROETHENE (EPA 8240)	ug/kg	ND	49.1	49.8	50.0	98	99	98	1
9110024-012	BENZENE (EPA 8240)	ug/kg	ND	48.6	49.2	50.0	97	98	97	1
9110024-012	TOLUENE (EPA 8240)	ug/kg	ND	48.6	48.9	50.0	97	97	97	0
9110024-012	CHLOROBENZENE (EPA 8240)	ug/kg	ND	47.9	47.2	50.0	95	94	94	1

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
9110024-012	11-APR-1991	1,1-DICHLOROETHENE (EPA 8240)	G-9110503-001
			G-9110503-002
			G-9110503-003
	11-APR-1991	TRICHLOROETHENE (EPA 8240)	G-9110503-001
			G-9110503-002
			G-9110503-003
	11-APR-1991	BENZENE (EPA 8240)	G-9110503-001
			G-9110503-002
			G-9110503-003
	11-APR-1991	TOLUENE (EPA 8240)	G-9110503-001
			G-9110503-002
			G-9110503-003
	11-APR-1991	CHLOROBENZENE (EPA 8240)	G-9110503-001
			G-9110503-002
			G-9110503-003

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9110503-001/003
Date Sampled: 3-APR-1991
Date Sample Rec'd: 15-APR-1991
Sample Type: SOLID

Project: (B040391) MEREDITH BOLI/OSCO - AZUSA

Laboratory Control Sample Report

QC Batch	Parameter (Method)	Amt. Spiked	Units	Avg. Spike Recov.	Acceptable Range	Rel. Pct. Diff.	Acceptable Range
L91107012	1,1-DICHLOROETHENE (EPA 8240)	50.0	ug/kg	83	30-151	2.	36
L91101024	1,1-DICHLOROETHENE (EPA 8240)	50.0	ug/kg	88	30-151	4.	36
L91107012	TRICHLOROETHENE (EPA 8240)	50.0	ug/kg	81	36-150	15.	33
L91101024	TRICHLOROETHENE (EPA 8240)	50.0	ug/kg	99	36-150	5.	33
L91107012	BENZENE (EPA 8240)	50.0	ug/kg	97	32-150	12.	35
L91101024	BENZENE (EPA 8240)	50.0	ug/kg	96	32-150	6.	35
L91107012	TOLUENE (EPA 8240)	50.0	ug/kg	99	34-151	12.	34
L91101024	TOLUENE (EPA 8240)	50.0	ug/kg	97	34-151	6.	34
L91107012	CHLOROBENZENE (EPA 8240)	50.0	ug/kg	90	33-151	11.	35
L91101024	CHLOROBENZENE (EPA 8240)	50.0	ug/kg	95	33-151	1.	35

Enseco
A Corning Company

Laboratory Control Sample Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
L91101024	11-APR-1991	1,1-DICHLOROETHENE (EPA 8240)	G-9110503-002
		TRICHLOROETHENE (EPA 8240)	G-9110503-002
		BENZENE (EPA 8240)	G-9110503-002
		TOLUENE (EPA 8240)	G-9110503-002
		CHLOROBENZENE (EPA 8240)	G-9110503-002
L91107012	16-APR-1991	1,1-DICHLOROETHENE (EPA 8240)	G-9110503-001
			G-9110503-003
		TRICHLOROETHENE (EPA 8240)	G-9110503-001
			G-9110503-003
		BENZENE (EPA 8240)	G-9110503-001
			G-9110503-003
		TOLUENE (EPA 8240)	G-9110503-001
			G-9110503-003
		CHLOROBENZENE (EPA 8240)	G-9110503-001
			G-9110503-003

Enseco
A CORNING Company

☐ 7440 Lincoln Way, Garden Grove, CA 92641, (714) 898-
☐ 2810 Bunsen Ave., Unit A Ventura, CA 93003, (805) 65
☐ 2325 Skyway Dr., Unit K, Santa Maria, CA 93455, (805) 922-2776
☐ 9537 Telstar Ave., Unit 118, El Monte, CA 91731, (818) 442-8400
☐ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTODY RECORD

Date 4-15-91 Page 1 of 1

Lab Number

G-9110503

CLIENT ENSECO-MOBILE LAB

ADDRESS

PROJECT NAME MEREDITH BOLI
OSCO - AZUSA

CONTRACT / PURCHASE ORDER / QUOTE #

PROJECT MANAGER
D. KAMMERER

PHONE NUMBER

SITE CONTACT

ANALYSES

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	8240							Sample Condition/ REMARKS
B040391-4	4-3-91	10:30				X	1-VOA VIAL	X							
↓ -5	↓	11:55				X	↓	X							
-6	↓	1500				X	↓	X							

SAMPLERS: (Signature)	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Received by: (Signature)	Date	Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Relinquished by: (Signature)	Date	Time	Received for Laboratory by:	Date	RECEIVED	Time	Date	ACCEPTED	Time
Arnie Almegro	4-15-91		Nils J. Cornejo	4/15/91	9:00am				

Method of Shipment:

Special Instructions:

SAMPLE DISPOSITION:
1. Storage time requested:_____days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as appropriate, according to legal requirements.)

DISTRIBUTION: White with report, Yellow to Enseco, Pink to Courier, Gold to Sample Control

BORING B-5

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

30-MAY-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: B550
ANALYSES: 8010,8020

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B052191-001/005.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

Phillip Tay
REVIEWED AND APPROVED

5-30-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Project: 90-211

Analysis No.: M-B052191-001/005
Date Sampled: 21-MAY-1991
Date Sample Rec'd: 21-MAY-1991
Date Analyzed: 22-MAY-1991
Sample Type: SOLID

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
B-5-17	ND(5)	ND(5)	ND(5)	ND(15)
B-5-21	ND(5)	ND(5)	ND(5)	ND(15)
B-5-24	ND(5)	ND(5)	ND(5)	ND(15)
B-5-28	ND(5)	ND(5)	ND(5)	ND(15)
B-5-32	ND(5)	ND(5)	ND(5)	ND(15)
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B052191-001
Date Sampled: 21-MAY-1991
Date Sample Rec'd: 21-MAY-1991
Sample Type: SOLID
Date Analyzed: 22-MAY-1991 By: PN

Project: 90-211
Sample ID: B-5-17

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B052191-002
Date Sampled: 21-MAY-1991
Date Sample Rec'd: 21-MAY-1991
Sample Type: SOLID
Date Analyzed: 22-MAY-1991 By: PN

Project: 90-211
Sample ID: B-5-21

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B052191-003
Date Sampled: 21-MAY-1991
Date Sample Rec'd: 21-MAY-1991
Sample Type: SOLID
Date Analyzed: 22-MAY-1991 By: PN

Project: 90-211
Sample ID: B-5-24

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B052191-004
Date Sampled: 21-MAY-1991
Date Sample Rec'd: 21-MAY-1991
Sample Type: SOLID
Date Analyzed: 22-MAY-1991 By: PN

Project: 90-211
Sample ID: B-5-28

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B052191-005
Date Sampled: 21-MAY-1991
Date Sample Rec'd: 21-MAY-1991
Sample Type: SOLID
Date Analyzed: 22-MAY-1991 By: PN

Project: 90-211
Sample ID: B-5-32

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B052191-001/005
Date Sampled: 21-MAY-1991
Date Sample Rec'd: 21-MAY-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B052191-004	1,1-DICHLOROETHENE (EPA 8010)	ug/kg	ND	93.1	97.9	100	93	97	95	5
B052191-004	CHLOROFORM (EPA 8010)	ug/kg	ND	102	112	100	102	112	107	9
B052191-004	BROMODICHLOROMETHANE (EPA 8010)	ug/kg	ND	94.3	103	100	94	103	98	8
B052191-004	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	97.0	112	100	97	112	104	14
B052191-004	CHLOROBENZENE (EPA 8010)	ug/kg	ND	85.3	95.5	100	85	95	90	11
B052191-004	BENZENE (EPA 8020)	ug/kg	ND	91.2	99.8	100	91	99	95	8
B052191-004	TOLUENE (EPA 8020)	ug/kg	ND	88.2	95.4	100	88	95	91	7
B052191-004	ETHYLBENZENE (EPA 8020)	ug/kg	ND	89.8	97.4	100	89	97	93	8
B052191-004	XYLENES, TOTAL (EPA 8020)	ug/kg	ND	92.9	101	100	92	101	96	8

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B052191-004	22-MAY-1991	1,1-DICHLOROETHENE (EPA 8010)	M-B052191-001
			M-B052191-002
			M-B052191-003
			M-B052191-004
			M-B052191-005
	22-MAY-1991	CHLOROFORM (EPA 8010)	M-B052191-001
			M-B052191-002
			M-B052191-003
			M-B052191-004
			M-B052191-005
	22-MAY-1991	BROMODICHLOROMETHANE (EPA 8010)	M-B052191-001
			M-B052191-002
			M-B052191-003
			M-B052191-004
			M-B052191-005
	22-MAY-1991	TRICHLOROETHENE (EPA 8010)	M-B052191-001
			M-B052191-002
			M-B052191-003
			M-B052191-004
			M-B052191-005
	22-MAY-1991	CHLOROBENZENE (EPA 8010)	M-B052191-001
			M-B052191-002
			M-B052191-003
			M-B052191-004
			M-B052191-005
	22-MAY-1991	BENZENE (EPA 8020)	M-B052191-001
			M-B052191-002
			M-B052191-003
			M-B052191-004
			M-B052191-005
	22-MAY-1991	TOLUENE (EPA 8020)	M-B052191-001
			M-B052191-002
			M-B052191-003
			M-B052191-004
			M-B052191-005
	22-MAY-1991	ETHYLBENZENE (EPA 8020)	M-B052191-001
			M-B052191-002
			M-B052191-003
			M-B052191-004
			M-B052191-005
	22-MAY-1991	XYLENES, TOTAL (EPA 8020)	M-B052191-001
			M-B052191-002
			M-B052191-003
			M-B052191-004
			M-B052191-005

Enseco
A CORNING Company

☐ 7440 Lincoln Way, Garden Grove, CA 92641, (714) 8[illegible]
☐ 2810 Bunsen Ave., Unit A Ventura, CA 93003, (805) [illegible]46
☐ 2325 Skyway Dr., Unit K, Santa Maria, CA 93455, (805) 922-2776
☐ 9537 Telstar Ave., Unit 118, El Monte, CA 91731, (818) 442-8400
☒ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTODY RECORD

Date 5/21/91 Page 1 of 1

Lab Number 2

CLIENT MEREDITH BOLI

ADDRESS

PROJECT NAME 1704 W. 1st ST, AZUSA
OSCO - CHEMICAL WASTE MGMT.

CONTRACT / PURCHASE ORDER / QUOTE #

PROJECT MANAGER
RON CAVAGROTTI

PHONE NUMBER

SITE CONTACT
TODD GILMER/
KNIGHT PIGOLD

ANALYSES

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	8010 FULL	8020 BTEX						Sample Condition/ REMARKS
~~B-19~~ B-5-17 PN 5/30/91	5/21/91	9:05	B052191-1			X	1	X	X						80% FULL
~~B-21~~ B-5-21		↓	-2			X	1	X	X						90% FULL
B-5-24		↓	-3			X	1	X	X						90% FULL
B-5-28		9:40	-4			X	1	X	X						90% FULL
B-5-32		↓	-5			X	1	X	X						90% FULL

SAMPLERS: (Signature)

Relinquished by: (Signature)

Relinquished by: (Signature)

Received by: (Signature) — Date — Time

Received by: (Signature) — Date — Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Relinquished by: (Signature) — Date — Time

Received for Laboratory by: — Date RECEIVED 5/22/91 — Time 12:00 — Date ACCEPTED — Time

Method of Shipment:

Special Instructions:

SAMPLE DISPOSITION:
1. Storage time requested:_____days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as appropriate, according to legal requirements.)

DISTRIBUTION: White with report, Yellow to Enseco, Pink to Courier, Gold to Sample Control

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

30-MAY-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: B551
ANALYSES: 8010,8020

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B052291-001/004.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

Phillip Toy
REVIEWED AND APPROVED

5-30-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Project: 90-211

Analysis No.: M-B052291-001/004
Date Sampled: 22-MAY-1991
Date Sample Rec'd: 22-MAY-1991
Date Analyzed: 22-MAY-1991
Sample Type: SOLID

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
B-5-54	ND(5)	ND(5)	ND(5)	ND(15)
B-5-77	ND(5)	ND(5)	ND(5)	ND(15)
B-5-82	ND(5)	ND(5)	ND(5)	ND(15)
B-5-90	ND(5)	ND(5)	ND(5)	ND(15)
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B052291-001
Date Sampled: 22-MAY-1991
Date Sample Rec'd: 22-MAY-1991
Sample Type: SOLID
Date Analyzed: 22-MAY-1991 By: PN

Project: 90-211
Sample ID: B-5-54

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B052291-002
Date Sampled: 22-MAY-1991
Date Sample Rec'd: 22-MAY-1991
Sample Type: SOLID
Date Analyzed: 22-MAY-1991 By: PN

Project: 90-211
Sample ID: B-5-77

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B052291-003
Date Sampled: 22-MAY-1991
Date Sample Rec'd: 22-MAY-1991
Sample Type: SOLID
Date Analyzed: 22-MAY-1991 By: PN

Project: 90-211
Sample ID: B-5-82

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B052291-004
Date Sampled: 22-MAY-1991
Date Sample Rec'd: 22-MAY-1991
Sample Type: SOLID
Date Analyzed: 22-MAY-1991 By: PN

Project: 90-211
Sample ID: B-5-90

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	6	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B052291-001/004
Date Sampled: 22-MAY-1991
Date Sample Rec'd: 22-MAY-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B052191-004	1,1-DICHLOROETHENE (EPA 8010)	ug/kg	ND	93.1	97.9	100	93	97	95	5
B052191-004	CHLOROFORM (EPA 8010)	ug/kg	ND	102	112	100	102	112	107	9
B052191-004	BROMODICHLOROMETHANE (EPA 8010)	ug/kg	ND	94.3	103	100	94	103	98	8
B052191-004	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	97.0	112	100	97	112	104	14
B052191-004	CHLOROBENZENE (EPA 8010)	ug/kg	ND	85.3	95.5	100	85	95	90	11
B052191-004	BENZENE (EPA 8020)	ug/kg	ND	91.2	99.3	100	91	99	95	8
B052191-004	TOLUENE (EPA 8020)	ug/kg	ND	88.2	95.4	100	88	95	91	7
B052191-004	ETHYLBENZENE (EPA 8020)	ug/kg	ND	89.8	97.4	100	89	97	93	8
B052191-004	XYLENES, TOTAL (EPA 8020)	ug/kg	ND	92.9	101	100	92	101	96	8

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B052191-004	22-MAY-1991	1,1-DICHLOROETHENE (EPA 8010)	M-B052291-001
			M-B052291-002
			M-B052291-003
			M-B052291-004
	22-MAY-1991	CHLOROFORM (EPA 8010)	M-B052291-001
			M-B052291-002
			M-B052291-003
			M-B052291-004
	22-MAY-1991	BROMODICHLOROMETHANE (EPA 8010)	M-B052291-001
			M-B052291-002
			M-B052291-003
			M-B052291-004
	22-MAY-1991	TRICHLOROETHENE (EPA 8010)	M-B052291-001
			M-B052291-002
			M-B052291-003
			M-B052291-004
	22-MAY-1991	CHLOROBENZENE (EPA 8010)	M-B052291-001
			M-B052291-002
			M-B052291-003
			M-B052291-004
	22-MAY-1991	BENZENE (EPA 8020)	M-B052291-001
			M-B052291-002
			M-B052291-003
			M-B052291-004
	22-MAY-1991	TOLUENE (EPA 8020)	M-B052291-001
			M-B052291-002
			M-B052291-003
			M-B052291-004
	22-MAY-1991	ETHYLBENZENE (EPA 8020)	M-B052291-001
			M-B052291-002
			M-B052291-003
			M-B052291-004
	22-MAY-1991	XYLENES, TOTAL (EPA 8020)	M-B052291-001
			M-B052291-002
			M-B052291-003
			M-B052291-004

Enseco
A CORNING Company

☐ 7440 Lincoln Way, Garden Grove, CA 92641, (714) 898-[illegible]
☐ 2810 Bunsen Ave., Unit A Ventura, CA 93003, (805) 65[illegible]-[illegible]6
☐ 2325 Skyway Dr., Unit K, Santa Maria, CA 93455, (805) 922-2776
☐ 9537 Telstar Ave., Unit 118, El Monte, CA 91731, (818) 442-8400
☒ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTODY RECORD

Date 5/22/91 Page 1 of 1
Lab Number 2

CLIENT MERIDITH BOLI
ADDRESS
PROJECT NAME 1704 W. 1st ST., AZUSA
OSCO - CHEMICAL WASTE MGMT.
CONTRACT / PURCHASE ORDER / QUOTE #

PROJECT MANAGER RON CAVAGNOTTI
PHONE NUMBER
SITE CONTACT TODD GICMER/ KNIGHT PIESOLD

ANALYSES

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	8010 FULL	8020 BTEX						Sample Condition/ REMARKS
B-5-54	5/22/91	15:00	B052291-1			X	1	X	X						85% FULL
B-5-77		16:15	-2			X	1	X	X						90% FULL
B-5-82		16:37	-3			X	1	X	X						40% FULL
B-5-90		17:39	-4			X	1	X	X						15% FULL

SAMPLERS: (Signature) Todd Colman
Relinquished by: (Signature) Todd Colman
Relinquished by: (Signature)

Received by: (Signature) Date Time
Received by: (Signature) Date Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Date Time
Received for Laboratory by: John E Schell

Date RECEIVED	Time	Date ACCEPTED	Time
5/22/91	16:30		

Method of Shipment:
Special Instructions:

SAMPLE DISPOSITION:
1. Storage time requested:_____days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as appropriate, according to legal requirements.)

DISTRIBUTION: White with report, Yellow to Enseco, Pink to Courier, Gold to Sample Control

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

30-MAY-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: B553
ANALYSES: 8010,8020
601,602

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B052491-001/003.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

Phillip Toy
REVIEWED AND APPROVED

5-30-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Project: 90-211

Analysis No.: M-B052491-001/001
Date Sampled: 24-MAY-1991
Date Sample Rec'd: 24-MAY-1991
Date Analyzed: 24-MAY-1991
Sample Type: LIQUID

Sample ID	Benzene ug/L EPA 602	Toluene ug/L EPA 602	Ethylbenzene ug/L EPA 602	Xylenes, Total ug/L EPA 602
DECON RINSATE	ND(0.3)	ND(0.3)	ND(0.3)	ND(0.9)
Blank	ND(0.3)	ND(0.3)	ND(0.3)	ND(0.3)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B052491-001
Date Sampled: 24-MAY-1991
Date Sample Rec'd: 24-MAY-1991
Sample Type: LIQUID
Date Analyzed: 24-MAY-1991 By: PN

Project: 90-211
Sample ID: DECON RINSATE

Halogenated Volatile Organics, EPA 601

Units: ug/l

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	1	ND	1
Bromomethane	ND	1	ND	1
Vinyl Chloride	ND	1	ND	1
Chloroethane	ND	1	ND	1
Methylene Chloride	ND	1	ND	1
Trichlorofluoromethane	ND	1	ND	1
1,1-Dichloroethene	ND	1	ND	1
1,1-Dichloroethane	ND	1	ND	1
trans-1,2-Dichloroethene	ND	1	ND	1
Chloroform	ND	1	ND	1
1,2-Dichloroethane	ND	1	ND	1
1,1,1-Trichloroethane	ND	1	ND	1
Carbon Tetrachloride	ND	1	ND	1
Bromodichloromethane	ND	1	ND	1
1,2-Dichloropropane	ND	1	ND	1
cis-1,3-Dichloropropene	ND	1	ND	1
Trichloroethene	ND	1	ND	1
Dibromochloromethane	ND	1	ND	1
1,1,2-Trichloroethane	ND	1	ND	1
trans-1,3-Dichloropropene	ND	1	ND	1
2-Chloroethylvinyl ether	ND	1	ND	1
Bromoform	ND	1	ND	1
Tetrachloroethene	ND	1	ND	1
1,1,2,2-Tetrachloroethane	ND	1	ND	1
Chlorobenzene	ND	1	ND	1
1,3-Dichlorobenzene	ND	1	ND	1
1,2-Dichlorobenzene	ND	1	ND	1
1,4-Dichlorobenzene	ND	1	ND	1
Diisopropylether	ND	1	ND	1
Ethylene Dibromide	ND	1	ND	1

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B052491-001
Date Sampled: 24-MAY-1991
Date Sample Rec'd: 24-MAY-1991
Sample Type: LIQUID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B052491-001	1,1-DICHLOROETHENE (EPA 601)	ug/L	ND	36.6	34.2	40	91	85	88	6
B052491-001	CHLOROFORM (EPA 601)	ug/L	ND	47.4	42.5	40	118	106	112	10
B052491-001	TRICHLOROETHENE (EPA 601)	ug/L	ND	40.7	37.8	40	101	94	97	7
B052491-001	CHLOROBENZENE (EPA 601)	ug/L	ND	40.1	37.1	40	100	92	96	7
B052491-001	BENZENE (EPA 602)	ug/L	ND	40.5	37.0	40	101	92	96	9
B052491-001	TOLUENE (EPA 602)	ug/L	ND	38.1	35.1	40	95	87	91	8
B052491-001	ETHYLBENZENE (EPA 602)	ug/L	ND	39.4	36.2	40	98	90	94	8
B052491-001	XYLENES, TOTAL (EPA 602)	ug/L	ND	39.8	36.8	40	99	92	95	7

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B052491-001	24-MAY-1991	1,1-DICHLOROETHENE (EPA 601)	M-B052491-001
	24-MAY-1991	CHLOROFORM (EPA 601)	M-B052491-001
	24-MAY-1991	TRICHLOROETHENE (EPA 601)	M-B052491-001
	24-MAY-1991	CHLOROBENZENE (EPA 601)	M-B052491-001
	24-MAY-1991	BENZENE (EPA 602)	M-B052491-001
	24-MAY-1991	TOLUENE (EPA 602)	M-B052491-001
	24-MAY-1991	ETHYLBENZENE (EPA 602)	M-B052491-001
	24-MAY-1991	XYLENES, TOTAL (EPA 602)	M-B052491-001

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Project: 90-211

Analysis No.: M-B052491-002/003
Date Sampled: 24-MAY-1991
Date Sample Rec'd: 24-MAY-1991
Date Analyzed: 24-MAY-1991
Sample Type: SOLID

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
B-5-159	ND(5)	ND(5)	ND(5)	ND(15)
B-5-162	ND(5)	ND(5)	ND(5)	ND(15)
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B052491-002
Date Sampled: 24-MAY-1991
Date Sample Rec'd: 24-MAY-1991
Sample Type: SOLID
Date Analyzed: 24-MAY-1991 By: PN

Project: 90-211
Sample ID: B-5-159

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B052491-003
Date Sampled: 24-MAY-1991
Date Sample Rec'd: 24-MAY-1991
Sample Type: SOLID
Date Analyzed: 24-MAY-1991 By: PN

Project: 90-211
Sample ID: B-5-162

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B052491-002/003
Date Sampled: 24-MAY-1991
Date Sample Rec'd: 24-MAY-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B052491-003	1,1-DICHLOROETHENE (EPA 8010)	ug/kg	ND	92.3	94.1	100	92	94	93	1
B052491-003	CHLOROFORM (EPA 8010)	ug/kg	ND	108	111	100	108	111	109	2
B052491-003	BROMODICHLOROMETHANE (EPA 8010)	ug/kg	ND	97.0	109	100	97	109	103	11
B052491-003	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	99.8	105	100	99	105	102	5
B052491-003	CHLOROBENZENE (EPA 8010)	ug/kg	ND	89.8	101	100	89	101	95	11
B052491-003	BENZENE (EPA 8020)	mg/kg	ND	99.0	98.1	100	99	98	98	0
B052491-003	TOLUENE (EPA 8020)	mg/kg	ND	93.9	93.2	100	93	93	93	0
B052491-003	ETHYLBENZENE (EPA 8020)	mg/kg	ND	95.4	95.8	100	95	95	95	0
B052491-003	XYLENES, TOTAL (EPA 8020)	mg/kg	ND	97.3	97.2	100	97	97	97	0

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B052491-003	24-MAY-1991	1,1-DICHLOROETHENE (EPA 8010)	M-B052491-002
			M-B052491-003
	24-MAY-1991	CHLOROFORM (EPA 8010)	M-B052491-002
			M-B052491-003
	24-MAY-1991	BROMODICHLOROMETHANE (EPA 8010)	M-B052491-002
			M-B052491-003
	24-MAY-1991	TRICHLOROETHENE (EPA 8010)	M-B052491-002
			M-B052491-003
	24-MAY-1991	CHLOROBENZENE (EPA 8010)	M-B052491-002
			M-B052491-003
	24-MAY-1991	BENZENE (EPA 8020)	M-B052491-002
			M-B052491-003
	24-MAY-1991	TOLUENE (EPA 8020)	M-B052491-002
			M-B052491-003
	24-MAY-1991	ETHYLBENZENE (EPA 8020)	M-B052491-002
			M-B052491-003
	24-MAY-1991	XYLENES, TOTAL (EPA 8020)	M-B052491-002
			M-B052491-003

Enseco
A CORNING Company

☐ 7440 Lincoln Way, Garden Grove, CA 92641, (714) 898-6370
☐ 2810 Bunsen Ave., Unit A Ventura, CA 93003, (805) 650-0546
☐ 2325 Skyway Dr., Unit K, Santa Maria, CA 93455, (805) 922-2776
☐ 9537 Telstar Ave., Unit 118, El Monte, CA 91731, (818) 442-8400
☒ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTODY RECORD

Date 5/24/91 Page 1 of 1

Lab Number 2

CLIENT MEREDITH BOLI

ADDRESS

PROJECT NAME 1704 W. 1st ST, AZUSA
OSCO - CHEM. WASTE MGMT.

CONTRACT / PURCHASE ORDER / QUOTE #

PROJECT MANAGER
RON CALAGROTTI

PHONE NUMBER

SITE CONTACT TODD GICMERI
KNIGHT DIESOLD

ANALYSES

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	8010 FULL	8020 BTEX						Sample Condition/ REMARKS
DECON RINSATE	5/24/91	9:37	052491-1	X			1	X	X						
B-5-159		14:55	-2			X	1	X	X						90% FULL
B-5-162		17:14	-3			X	1	X	X						40% FULL

SAMPLERS: (Signature)

Relinquished by: (Signature)

Relinquished by: (Signature)

Received by: (Signature) Date Time

Received by: (Signature) Date Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Date Time

Received for Laboratory by:

Date	RECEIVED	Time	Date	ACCEPTED	Time
5/24/91	AS SAMPLED				

Method of Shipment:

Special Instructions:

SAMPLE DISPOSITION:
1. Storage time requested: _____ days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise ...

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

30-MAY-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: B552
ANALYSES: 8010,8020

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B052391-001/005.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

Phillip Toy
REVIEWED AND APPROVED

5-30-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Project: 90-211

Analysis No.: M-B052391-001/005
Date Sampled: 23-MAY-1991
Date Sample Rec'd: 23-MAY-1991
Date Analyzed: 23-MAY-1991
Sample Type: SOLID

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
B-5-103	ND(5)	6	7	38
B-5-110	ND(5)	ND(5)	ND(5)	ND(15)
B-5-115A	ND(5)	ND(5)	ND(5)	ND(15)
B-5-129	ND(5)	ND(5)	ND(5)	ND(15)
B-5-144	ND(5)	ND(5)	ND(5)	ND(15)
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B052391-001
Date Sampled: 23-MAY-1991
Date Sample Rec'd: 23-MAY-1991
Sample Type: SOLID
Date Analyzed: 23-MAY-1991 By: JS

Project: 90-211
Sample ID: B-5-103

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B052391-002
Date Sampled: 23-MAY-1991
Date Sample Rec'd: 23-MAY-1991
Sample Type: SOLID
Date Analyzed: 23-MAY-1991 By: JS

Project: 90-211
Sample ID: B-5-110

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B052391-003
Date Sampled: 23-MAY-1991
Date Sample Rec'd: 23-MAY-1991
Sample Type: SOLID
Date Analyzed: 23-MAY-1991 By: JS

Project: 90-211
Sample ID: B-5-115A

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B052391-004
Date Sampled: 23-MAY-1991
Date Sample Rec'd: 23-MAY-1991
Sample Type: SOLID
Date Analyzed: 23-MAY-1991 By: JS

Project: 90-211
Sample ID: B-5-129

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B052391-005
Date Sampled: 23-MAY-1991
Date Sample Rec'd: 23-MAY-1991
Sample Type: SOLID
Date Analyzed: 23-MAY-1991 By: JS

Project: 90-211
Sample ID: B-5-144

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B052391-001/005
Date Sampled: 23-MAY-1991
Date Sample Rec'd: 23-MAY-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B052391-004	1,1-DICHLOROETHENE (EPA 8010)	ug/kg	ND	97.5	90.8	100	97	90	93	7
B052391-004	CHLOROFORM (EPA 8010)	ug/kg	ND	110	99.7	100	110	99	104	9
B052391-004	BROMODICHLOROMETHANE (EPA 8010)	ug/kg	ND	101	93.9	100	101	93	97	7
B052391-004	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	96.6	98.2	100	96	98	97	1
B052391-004	CHLOROBENZENE (EPA 8010)	ug/kg	ND	91.3	93.0	100	91	93	92	1
B052391-004	BENZENE (EPA 8020)	ug/kg	ND	97.8	95.3	100	97	95	96	2
B052391-004	TOLUENE (EPA 8020)	ug/kg	ND	97.9	88.4	100	97	88	92	10
B052391-004	ETHYLBENZENE (EPA 8020)	ug/kg	ND	99.9	89.5	100	99	89	94	11
B052391-004	XYLENES, TOTAL (EPA 8020)	ug/kg	ND	106	92.1	100	106	92	99	14

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B052391-004	23-MAY-1991	1,1-DICHLOROETHENE (EPA 8010)	M-B052391-001
			M-B052391-002
			M-B052391-003
			M-B052391-004
			M-B052391-005
	23-MAY-1991	CHLOROFORM (EPA 8010)	M-B052391-001
			M-B052391-002
			M-B052391-003
			M-B052391-004
			M-B052391-005
	23-MAY-1991	BROMODICHLOROMETHANE (EPA 8010)	M-B052391-001
			M-B052391-002
			M-B052391-003
			M-B052391-004
			M-B052391-005
	23-MAY-1991	TRICHLOROETHENE (EPA 8010)	M-B052391-001
			M-B052391-002
			M-B052391-003
			M-B052391-004
			M-B052391-005
	23-MAY-1991	CHLOROBENZENE (EPA 8010)	M-B052391-001
			M-B052391-002
			M-B052391-003
			M-B052391-004
			M-B052391-005
	23-MAY-1991	BENZENE (EPA 8020)	M-B052391-001
			M-B052391-002
			M-B052391-003
			M-B052391-004
			M-B052391-005
	23-MAY-1991	TOLUENE (EPA 8020)	M-B052391-001
			M-B052391-002
			M-B052391-003
			M-B052391-004
			M-B052391-005
	23-MAY-1991	ETHYLBENZENE (EPA 8020)	M-B052391-001
			M-B052391-002
			M-B052391-003
			M-B052391-004
			M-B052391-005
	23-MAY-1991	XYLENES, TOTAL (EPA 8020)	M-B052391-001
			M-B052391-002
			M-B052391-003
			M-B052391-004
			M-B052391-005

Enseco
A CORNING Company

☐ 7440 Lincoln Way, Garden Grove, CA 92641, (714) 89[illegible]
☐ 2810 Bunsen Ave., Unit A Ventura, CA 93003, (805) 65[illegible]
☐ 2325 Skyway Dr., Unit K, Santa Maria, CA 93455, (805) 922-2776
☐ 9537 Telstar Ave., Unit 118, El Monte, CA 91731, (818) 442-8400
☒ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTODY RECORD

Date 5/23/91 Page 1 of

Lab Number Mel2

CLIENT Meredith Bolt

ADDRESS

PROJECT NAME
OSCO - Chemical Waste Mgmt

CONTRACT / PURCHASE ORDER / QUOTE #

PROJECT MANAGER
Ron Cavagrotti

PHONE NUMBER

SITE CONTACT

ANALYSES

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	8010	8020						Sample Condition/ REMARKS
B-5-103	5/23/91	8:40	B052391-1			X	1-VOA vial	X	X						80% full
B-5-110		9:30	-2			X		X	X						90% full
B-5-115A		10:45	-3			X		X	X						100% full
B-5-129		15:32	-4			X		X	X						50% full
B-5-144		18:30	-5			X		X	X						15% full

SAMPLERS: (Signature)

Relinquished by: (Signature)

Received by: (Signature) Date Time

Relinquished by: (Signature)

Received by: (Signature) Date Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Relinquished by: (Signature) Date Time

Received for Laboratory by: John E Schell

Date RECEIVED	Time	Date ACCEPTED	Time
5/23/91	16:30		

Method of Shipment:

Special Instructions:

SAMPLE DISPOSITION:
1. Storage time requested:_____days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as appropriate, according to legal requirements.)

DISTRIBUTION: White with report, Yellow to Enseco, Pink to Courier, Gold to Sample Control

Analytical Report

LOG NO: G91-05-535

Received: 24 MAY 91

Mailed: JUN 7 1991

Meredith Boli & Associates
6701 Center Drive West
Los Angeles, CA 90045-1535

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
05-535-1	B5 115B	23 MAY 91
05-535-2	B5 159B	23 MAY 91

PARAMETER	05-535-1	05-535-2
EPA Method 8010		
Date Analyzed	06/03/91	06/03/91
Date Extracted	06/03/91	06/03/91
Date Confirmed	06/03/91	06/03/91
Dilution Factor, Times 1	1	1
1,1,1-Trichloroethane, ug/kg	<5	<5
1,1,2,2-Tetrachloroethane, ug/kg	<5	<5
1,1,2-Trichloroethane, ug/kg	<5	<5
1,1-Dichloroethane, ug/kg	<5	<5
1,1-Dichloroethene, ug/kg	<5	<5
1,2-Dichloroethane, ug/kg	<5	<5
1,2-Dichlorobenzene, ug/kg	<5	<5
1,2-Dichloropropane, ug/kg	<5	<5
1,3-Dichlorobenzene, ug/kg	<5	<5
1,4-Dichlorobenzene, ug/kg	<5	<5
2-Chloroethylvinylether, ug/kg	<5	<5
Bromodichloromethane, ug/kg	<5	<5
Bromomethane, ug/kg	<5	<5
Bromoform, ug/kg	<5	<5
Chlorobenzene, ug/kg	<5	<5
Carbon Tetrachloride, ug/kg	<5	<5
Chloroethane, ug/kg	<5	<5
Chloroform, ug/kg	<5	<5
Chloromethane, ug/kg	<5	<5
Dibromochloromethane, ug/kg	<5	<5
Dichlorodifluoromethane, ug/kg	<5	<5
Freon 113, ug/kg	<5	<5

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Analytical Report

LOG NO: G91-05-535

Received: 24 MAY 91

Mr. Carl Lotzgesell
Meredith Boli & Associates
6701 Center Drive West
Los Angeles, CA 90045-1535

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
05-535-1	B5 115B	23 MAY 91
05-535-2	B5 159B	23 MAY 91

PARAMETER	05-535-1	05-535-2
Methylene chloride, ug/kg	<5	<5
Trichloroethene, ug/kg	<5	<5
Trichlorofluoromethane, ug/kg	<5	<5
Tetrachloroethene, ug/kg	<5	<5
Vinyl chloride, ug/kg	<5	<5
cis-1,2-Dichloroethene, ug/kg	<5	<5
cis-1,3-Dichloropropene, ug/kg	<5	<5
trans-1,2-Dichloroethene, ug/kg	<5	<5
trans-1,3-Dichloropropene, ug/kg	<5	<5

Jeffrey A. Erion, Laboratory Manager

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

12-JUN-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: N1145
ANALYSES: 8240

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B052291-001,M-B052391-001, and M-B052491-002.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

CROSS REFERENCE

MOBILE LAD ID	GARDEN GROVE ID	CLIENT ID
B052201-001	G-9114903-001	B-5-54
B052391-001	G-9114903-002	B-5-103
B052491-002	G-9114903-003	B-5-159

REVIEWED AND APPROVED

6-12-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Enseco - CRL
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL
FAX: (714) 891-5917

June 10, 1991

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9114903-001/003
Date Sampled: 22/23/24-MAY-1991
Date Sample Rec'd: 29-MAY-1991
Project: MEREDITH BOLI - 1704 W. 1ST ST. AZUSA

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-9114903-001/003 shown above.

The samples were received by CRL in a chilled state, intact and with the chain-of-custody record attached.

Note that ND means not detected at the reporting limit expressed. The reporting limit is raised to reflect the dilution factor of the sample.

Solid samples are reported on "as received" basis.

Reviewed

Approved

The Report Cover Letter is an integral part of this report.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9114903-001
Date Sampled: 22-MAY-1991
Date Sample Rec'd: 29-MAY-1991
Sample Type: SOLID
Date Prepared: 1-JUN-1991
Prep Method: EPA 5030 By: LR
Date Analyzed: 1-JUN-1991 By: LR

Project: MEREDITH BOLI - 1704 W. 1ST ST. - AZUSA
Sample ID: B052291-1 (B-5-54)

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	10	ND	10
Bromomethane	ND	10	ND	10
Vinyl Chloride	ND	10	ND	10
Chloroethane	ND	10	ND	10
Methylene Chloride	6.7	5	ND	5
Acetone	ND	10	ND	10
Carbon Disulfide	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
Total 1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
2-Butanone	ND	10	ND	10
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Vinyl Acetate	ND	10	ND	10
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
Benzene	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	10	ND	10
Bromoform	ND	5	ND	5
4-Methyl-2-pentanone	ND	10	ND	10
2-Hexanone	ND	10	ND	10
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Toluene	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
Ethylbenzene	ND	5	ND	5
Styrene	ND	5	ND	5
Xylenes, Total	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9114903-001
Date Sampled: 22-MAY-1991
Date Sample Rec'd: 29-MAY-1991
Sample Type: SOLID

Project: MEREDITH BOLI - 1704 W. 1ST ST. - AZUSA

Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
1-JUN-1991	1,2 DICHLOROETHANE-D4 (EPA 8240)	102	70-135
1-JUN-1991	TOLUENE-D8 (EPA 8240)	102	69-138
1-JUN-1991	BROMOFLUOROBENZENE (EPA 8240)	94	60-137

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9114903-002
Date Sampled: 23-MAY-1991
Date Sample Rec'd: 29-MAY-1991
Sample Type: SOLID
Date Prepared: 1-JUN-1991
Prep Method: EPA 5030 By: LR
Date Analyzed: 1-JUN-1991 By: LR

Project: MEREDITH BOLI - 1704 W. 1ST ST. - AZUSA
Sample ID: B052391-1 (B-5-103)

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	10	ND	10
Bromomethane	ND	10	ND	10
Vinyl Chloride	ND	10	ND	10
Chloroethane	ND	10	ND	10
Methylene Chloride	5.3	5	ND	5
Acetone	ND	10	ND	10
Carbon Disulfide	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
Total 1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
2-Butanone	ND	10	ND	10
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Vinyl Acetate	ND	10	ND	10
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
Benzene	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	10	ND	10
Bromoform	ND	5	ND	5
4-Methyl-2-pentanone	ND	10	ND	10
2-Hexanone	ND	10	ND	10
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Toluene	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
Ethylbenzene	ND	5	ND	5
Styrene	ND	5	ND	5
Xylenes, Total	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9114903-002
Date Sampled: 23-MAY-1991
Date Sample Rec'd: 29-MAY-1991
Sample Type: SOLID

Project: MEREDITH BOLI - 1704 W. 1ST ST. - AZUSA

Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
1-JUN-1991	1,2 DICHLOROETHANE-D4 (EPA 8240)	101	70-135
1-JUN-1991	TOLUENE-D8 (EPA 8240)	109	69-138
1-JUN-1991	BROMOFLUOROBENZENE (EPA 8240)	98	60-137

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9114903-003
Date Sampled: 24-MAY-1991
Date Sample Rec'd: 29-MAY-1991
Sample Type: SOLID
Date Prepared: 5-JUN-1991
Prep Method: EPA 5030 By: LR
Date Analyzed: 5-JUN-1991 By: LR

Project: MEREDITH BOLI - 1704 W. 1ST ST. - AZUSA
Sample ID: B052491-2 (B-5-159)

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	10	ND	10
Bromomethane	ND	10	ND	10
Vinyl Chloride	ND	10	ND	10
Chloroethane	ND	10	ND	10
Methylene Chloride	ND	5	ND	5
Acetone	ND	10	ND	10
Carbon Disulfide	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
Total 1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
2-Butanone	ND	10	ND	10
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Vinyl Acetate	ND	10	ND	10
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
Benzene	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	10	ND	10
Bromoform	ND	5	ND	5
4-Methyl-2-pentanone	ND	10	ND	10
2-Hexanone	ND	10	ND	10
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Toluene	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
Ethylbenzene	ND	5	ND	5
Styrene	ND	5	ND	5
Xylenes, Total	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9114903-003
Date Sampled: 24-MAY-1991
Date Sample Rec'd: 29-MAY-1991
Sample Type: SOLID

Project: MEREDITH BOLI - 1704 W. 1ST ST. - AZUSA

Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
5-JUN-1991	1,2 DICHLOROETHANE-D4 (EPA 8240)	92	70-135
5-JUN-1991	TOLUENE-D8 (EPA 8240)	94	69-138
5-JUN-1991	BROMOFLUOROBENZENE (EPA 8240)	91	60-137

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9114903-001/003
Date Sampled: 22-MAY-1991
23-MAY-1991
24-MAY-1991
Date Sample Rec'd: 29-MAY-1991
Sample Type: SOLID

Project: MEREDITH BOLI - 1704 W. 1ST ST. - AZUSA

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
9115015-001	1,1-DICHLOROETHENE (EPA 8240)	ug/kg	ND	47.0	34.3	50.0	94	69	82	31
9115015-001	TRICHLOROETHENE (EPA 8240)	ug/kg	ND	55.4	44.1	50.0	111	88	100	23
9115015-001	BENZENE (EPA 8240)	ug/kg	ND	58.5	48.3	50.0	117	97	107	19
9115015-001	TOLUENE (EPA 8240)	ug/kg	ND	65.2	57.3	50.0	130	115	122	13
9115015-001	CHLOROBENZENE (EPA 8240)	ug/kg	ND	62.2	50.3	50.0	124	101	112	21

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
9115015-001	3-JUN-1991	1,1-DICHLOROETHENE (EPA 8240)	G-9114903-001
			G-9114903-002
			G-9114903-003
	3-JUN-1991	TRICHLOROETHENE (EPA 8240)	G-9114903-001
			G-9114903-002
			G-9114903-003
	3-JUN-1991	BENZENE (EPA 8240)	G-9114903-001
			G-9114903-002
			G-9114903-003
	3-JUN-1991	TOLUENE (EPA 8240)	G-9114903-001
			G-9114903-002
			G-9114903-003
	3-JUN-1991	CHLOROBENZENE (EPA 8240)	G-9114903-001
			G-9114903-002
			G-9114903-003

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9114903-001/003
Date Sampled: 22-MAY-1991
23-MAY-1991
24-MAY-1991
Date Sample Rec'd: 29-MAY-1991
Sample Type: SOLID

Project: MEREDITH BOLI - 1704 W. 1ST ST. - AZUSA

Laboratory Control Sample Report

QC Batch	Parameter (Method)	Amt. Spiked	Units	Avg. Spike Recov.	Acceptable Range	Rel. Pct. Diff.	Acceptable Range
L91148027	1,1-DICHLOROETHENE (EPA 8240)	50.0	ug/kg	83	49-133	8.	15
L91156040	1,1-DICHLOROETHENE (EPA 8240)	50.0	ug/kg	76	49-133	2.	15
L91148027	TRICHLOROETHENE (EPA 8240)	50.0	ug/kg	85	76-128	11.	15
L91156040	TRICHLOROETHENE (EPA 8240)	50.0	ug/kg	84	76-128	3.	15
L91148027	BENZENE (EPA 8240)	50.0	ug/kg	90	79-118	9.	14
L91156040	BENZENE (EPA 8240)	50.0	ug/kg	88	79-118	3.	14
L91148027	TOLUENE (EPA 8240)	50.0	ug/kg	87	75-118	7.	14
L91156040	TOLUENE (EPA 8240)	50.0	ug/kg	89	75-118	1.	14
L91148027	CHLOROBENZENE (EPA 8240)	50.0	ug/kg	87	74-129	10.	14
L91156040	CHLOROBENZENE (EPA 8240)	50.0	ug/kg	85	74-129	2.	14

Enseco
A Corning Company

Laboratory Control Sample Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
L91148027	24-MAY-1991	1,1-DICHLOROETHENE (EPA 8240)	G-9114903-001
			G-9114903-002
		TRICHLOROETHENE (EPA 8240)	G-9114903-001
			G-9114903-002
		BENZENE (EPA 8240)	G-9114903-001
			G-9114903-002
		TOLUENE (EPA 8240)	G-9114903-001
			G-9114903-002
		CHLOROBENZENE (EPA 8240)	G-9114903-001
			G-9114903-002
L91156040	4-JUN-1991	1,1-DICHLOROETHENE (EPA 8240)	G-9114903-003
		TRICHLOROETHENE (EPA 8240)	G-9114903-003
		BENZENE (EPA 8240)	G-9114903-003
		TOLUENE (EPA 8240)	G-9114903-003
		CHLOROBENZENE (EPA 8240)	G-9114903-003

Enseco
A CORNING Company

☐ 7440 Lincoln Way, Garden Grove, CA 92641, (714) 89[illegible]
☐ 2810 Bunsen Ave., Unit A Ventura, CA 93003, (805) [illegible]6
☐ 2325 Skyway Dr., Unit K, Santa Maria, CA 93455, (805) 922-2776
☐ 9587 Telstar Ave., Unit 118, El Monte, CA 91731, (818) 442-8400
☑ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTODY RECORD

Date 5-29-91 Page 1 of 1

Lab Number 9114903

CLIENT ENSECO-CRL MOBILE LAB

ADDRESS

PROJECT NAME MEREDITH BOLI
1704 W. 1ST ST. AZUSA

CONTRACT / PURCHASE ORDER / QUOTE #

PROJECT MANAGER D. KAMMERER

PHONE NUMBER

SITE CONTACT

ANALYSES: 8240

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	8240							Sample Condition/ REMARKS
B052291-1 (B-5-54)	522					X	1-vial	X							
B052391-1 (B-5-103)	523					X	↓	X							
B052491-2 (B-5-159)	524					X	↓	X							

SAMPLERS: (Signature)

Received by: (Signature) Date Time

Relinquished by: (Signature) Received by: (Signature) Date Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Relinquished by: (Signature)	Date	Time	Received for Laboratory by:	Date	RECEIVED	Time	Date	ACCEPTED	Time
Arnie Almagro	5-29-91	4:00 pm	[illegible]	5/29/91		1600			

Method of Shipment:

Special Instructions: Due date: 6-11-91 Normal T.A.T.

SAMPLE DISPOSITION:
1. Storage time requested:_____days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as appropriate, according to legal requirements.)

DISTRIBUTION: White with report, Yellow to Enseco, Pink to Courier, Gold to Sample Control

BORING B-6

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

19-APR-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: B536
ANALYSES: 8010, 8020

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B041291-001/001

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

REVIEWED AND APPROVED

4-22-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Project: 90-211

Analysis No.: M-B041291-001/001
Date Sampled: 12-APR-1991
Date Sample Rec'd: 12-APR-1991
Date Analyzed: 15-APR-1991
Sample Type: SOLID

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
B-6-19	ND(5)	ND(5)	ND(5)	ND(15)
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B041291-001
Date Sampled: 12-APR-1991
Date Sample Rec'd: 12-APR-1991
Sample Type: SOLID
Date Analyzed: 15-APR-1991 By: PN

Project: 90-211
Sample ID: B-6-19

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B041291-001
Date Sampled: 12-APR-1991
Date Sample Rec'd: 12-APR-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B041291-001	1,1-DICHLOROETHENE (EPA 8010)	ug/kg	ND	104	103	100	104	103	104	1
B041291-001	CHLOROFORM (EPA 8010)	ug/kg	ND	111	109	100	111	109	110	2
B041291-001	BROMODICHLOROMETHANE (EPA 8010)	ug/kg	ND	103	107	100	103	107	105	4
B041291-001	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	117	120	100	117	120	119	3
B041291-001	CHLOROBENZENE (EPA 8010)	ug/kg	ND	114	115	100	114	115	115	1
B041291-001	BENZENE (EPA 8020)	ug/kg	ND	92.6	93.2	100	93	93	93	1
B041291-001	TOLUENE (EPA 8020)	ug/kg	ND	100	101	100	100	101	101	1
B041291-001	ETHYLBENZENE (EPA 8020)	ug/kg	ND	97.0	97.1	100	97	97	97	0
B041291-001	XYLENES, TOTAL (EPA 8020)	ug/kg	ND	97.8	97.0	100	98	97	97	1

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B041291-001	15-APR-1991	1,1-DICHLOROETHENE (EPA 8010)	M-B041291-001
	15-APR-1991	CHLOROFORM (EPA 8010)	M-B041291-001
	15-APR-1991	BROMODICHLOROMETHANE (EPA 8010)	M-B041291-001
	15-APR-1991	TRICHLOROETHENE (EPA 8010)	M-B041291-001
	15-APR-1991	CHLOROBENZENE (EPA 8010)	M-B041291-001
	15-APR-1991	BENZENE (EPA 8020)	M-B041291-001
	15-APR-1991	TOLUENE (EPA 8020)	M-B041291-001
	15-APR-1991	ETHYLBENZENE (EPA 8020)	M-B041291-001
	15-APR-1991	XYLENES, TOTAL (EPA 8020)	M-B041291-001

Enseco
A CORNING Company

☐ 7440 Lincoln Way, Garden Grove, CA 92641, (714) [illegible] 70
☐ 2810 Bunsen Ave., Unit A Ventura, CA 93003, (805) [illegible] 546
☐ 2325 Skyway Dr., Unit K, Santa Maria, CA 93455, (805) 922-2776
☐ 9537 Telstar Ave., Unit 118, El Monte, CA 91731, (818) 442-8400
☒ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTO[illegible] RECORD

Date 4/12/91 Page 1 of 1

Lab Number 2

CLIENT MEREDITH BOLI

ADDRESS

PROJECT NAME 1704 W. 1st ST
AZUSA - OSCO - CHEMICAL WASTE MGMT

CONTRACT / PURCHASE ORDER / QUOTE #

PROJECT MANAGER
RON CAVAGROTTI

PHONE NUMBER

SITE CONTACT
TODO GIEMER / KNIGHT FIELDS

ANALYSES

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	8010 (FULL)	8020 (BTEX)						Sample Condition/ REMARKS
B-6-19	4/12/91	16:30	B041291-1			X	1	X	X						80% FULL

SAMPLERS: (Signature) [signature]

Relinquished by: (Signature) [signature] 4/12/91 1659

Received by: (Signature) Date Time

Received by: (Signature) Date Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Relinquished by: (Signature) Date Time

Received for Laboratory by: [signature]

Date RECEIVED	Time	Date ACCEPTED	Time
4/12/91	16:58		

Method of Shipment:

Special Instructions:

SAMPLE DISPOSITION:
1. Storage time requested: _____ days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as appropriate, according to legal requirements.)

DISTRIBUTION: White with report, Yellow to Enseco, Pink to Courier, Gold to Sample Control

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

19-APR-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: B538
ANALYSES: 8010, 8020

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B041691-001/001

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

REVIEWED AND APPROVED

4-22-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Project: 90-211

Analysis No.: M-B041691-001/001
Date Sampled: 16-APR-1991
Date Sample Rec'd: 16-APR-1991
Date Analyzed: 16-APR-1991
Sample Type: SOLID

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
B-6-86	ND(5)	ND(5)	ND(5)	ND(15)
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B041691-001
Date Sampled: 16-APR-1991
Date Sample Rec'd: 16-APR-1991
Sample Type: SOLID
Date Analyzed: 16-APR-1991 By: PN

Project: 90-211
Sample ID: B-6-86

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	6	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B041691-001
Date Sampled: 16-APR-1991
Date Sample Rec'd: 16-APR-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B041691-001	1,1-DICHLOROETHENE (EPA 8010)	ug/kg	ND	98.5	98.7	100	98	98	98	0
B041691-001	CHLOROFORM (EPA 8010)	ug/kg	ND	95.7	96.7	100	95	96	95	1
B041691-001	BROMODICHLOROMETHANE (EPA 8010)	ug/kg	ND	96.5	92.1	100	96	92	94	4
B041691-001	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	99.6	93.4	100	99	93	96	6
B041691-001	CHLOROBENZENE (EPA 8010)	ug/kg	ND	97.2	98.9	100	97	98	97	1
B041691-001	BENZENE (EPA 8020)	ug/kg	ND	90.8	90.9	100	90	90	90	0
B041691-001	TOLUENE (EPA 8020)	ug/kg	ND	89.0	89.7	100	89	89	89	0
B041691-001	ETHYLBENZENE (EPA 8020)	ug/kg	ND	95.0	94.7	100	95	94	94	0
B041691-001	XYLENES, TOTAL (EPA 8020)	ug/kg	ND	96.2	96.2	100	96	96	96	0

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B041691-001	16-APR-1991	1,1-DICHLOROETHENE (EPA 8010)	M-B041691-001
	16-APR-1991	CHLOROFORM (EPA 8010)	M-B041691-001
	16-APR-1991	BROMODICHLOROMETHANE (EPA 8010)	M-B041691-001
	16-APR-1991	TRICHLOROETHENE (EPA 8010)	M-B041691-001
	16-APR-1991	CHLOROBENZENE (EPA 8010)	M-B041691-001
	16-APR-1991	BENZENE (EPA 8020)	M-B041691-001
	16-APR-1991	TOLUENE (EPA 8020)	M-B041691-001
	16-APR-1991	ETHYLBENZENE (EPA 8020)	M-B041691-001
	16-APR-1991	XYLENES, TOTAL (EPA 8020)	M-B041691-001

Enseco
A CORNING Company

☐ 7440 Lincoln Way, Garden Grove, CA 92641, (714) 898-6370
☐ 2810 Bunsen Ave., Unit A Ventura, CA 93003, (805) 650-0546
☐ 2325 Skyway Dr., Unit K, Santa Maria, CA 93455, (805) 922-2776
☐ 9537 Telstar Ave., Unit 118, El Monte, CA 91731, (818) 442-8400
☒ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTODY RECORD

Date 4/16/91 Page 1 of ____

Lab Number 2

CLIENT MEREDITH BOLI

ADDRESS

PROJECT NAME 1704 W. 1st ST, AZUSA OSCO - CHEM. WASTE MGMT.

CONTRACT / PURCHASE ORDER / QUOTE #

PROJECT MANAGER RON CAVAGROTTI

PHONE NUMBER

SITE CONTACT TODD GILMER / KNIGHT PIESOLD

ANALYSES

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	~~4/16~~ PN ~~800~~ 8010 (FULL)	8020 BTEX						Sample Condition/ REMARKS
B-6-86	4/16/91	16:10	B041691-1			X	1	X	X						50% FULL

SAMPLERS: (Signature) [signature]

Relinquished by: (Signature) [signature] 4/16/91 1705

Relinquished by: (Signature)

Received by: (Signature) Date Time

Received by: (Signature) Date Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Date Time

Received for Laboratory by: [signature]

Date	RECEIVED	Time	Date	ACCEPTED	Time
4/16/91		17:05			

Method of Shipment:

Special Instructions:

SAMPLE DISPOSITION:
1. Storage time requested:_____days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as appropriate, according to legal requirements.

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

19-APR-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: B537
ANALYSES: 8010, 8020
601, 602

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B041591-001/007.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

REVIEWED AND APPROVED

4-22-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Project: 90-211

Analysis No.: M-B041591-001/006
Date Sampled: 15-APR-1991
Date Sample Rec'd: 15-APR-1991
Date Analyzed: 15-APR-1991
Sample Type: SOLID

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
B-6-29	ND(5)	ND(5)	ND(5)	ND(15)
B-6-42	ND(5)	ND(5)	ND(5)	ND(15)
B-6-51	ND(5)	ND(5)	ND(5)	ND(15)
B-6-67A	ND(5)	ND(5)	ND(5)	ND(15)
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B041591-001
Date Sampled: 15-APR-1991
Date Sample Rec'd: 15-APR-1991
Sample Type: SOLID
Date Analyzed: 15-APR-1991 By: PN

Project: 90-211
Sample ID: B-6-29

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B041591-002
Date Sampled: 15-APR-1991
Date Sample Rec'd: 15-APR-1991
Sample Type: SOLID
Date Analyzed: 15-APR-1991 By: PN

Project: 90-211
Sample ID: B-6-42

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	11	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B041591-003
Date Sampled: 15-APR-1991
Date Sample Rec'd: 15-APR-1991
Sample Type: SOLID
Date Analyzed: 15-APR-1991 By: PN

Project: 90-211
Sample ID: B-6-51

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	11	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B041591-006
Date Sampled: 15-APR-1991
Date Sample Rec'd: 15-APR-1991
Sample Type: SOLID
Date Analyzed: 15-APR-1991 By: PN

Project: 90-211
Sample ID: B-6-67A

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	32	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B041591-001/004
Date Sampled: 15-APR-1991
Date Sample Rec'd: 15-APR-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B041591-001	1,1-DICHLOROETHENE (EPA 8010)	ug/kg	ND	80.5	75.8	100	81	76	78	6
B041591-001	CHLOROFORM (EPA 8010)	ug/kg	ND	86.2	81.8	100	86	82	84	5
B041591-001	BROMODICHLOROMETHANE (EPA 8010)	ug/kg	ND	87.1	79.6	100	87	80	83	9
B041591-001	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	88.5	86.6	100	89	87	88	2
B041591-001	CHLOROBENZENE (EPA 8010)	ug/kg	ND	88.3	84.9	100	88	85	87	4
B041591-001	BENZENE (EPA 8020)	ug/kg	ND	91.4	87.7	100	91	88	90	4
B041591-001	TOLUENE (EPA 8020)	ug/kg	ND	99.6	96.8	100	100	97	98	3
B041591-001	ETHYLBENZENE (EPA 8020)	ug/kg	ND	99.7	91.3	100	100	91	96	9
B041591-001	XYLENES, TOTAL (EPA 8020)	ug/kg	ND	96.6	92.5	100	97	93	95	4

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B041591-001	15-APR-1991	1,1-DICHLOROETHENE (EPA 8010)	M-B041591-001
			M-B041591-002
			M-B041591-003
			M-B041591-006
	15-APR-1991	CHLOROFORM (EPA 8010)	M-B041591-001
			M-B041591-002
			M-B041591-003
			M-B041591-006
	15-APR-1991	BROMODICHLOROMETHANE (EPA 8010)	M-B041591-001
			M-B041591-002
			M-B041591-003
			M-B041591-006
	15-APR-1991	TRICHLOROETHENE (EPA 8010)	M-B041591-001
			M-B041591-002
			M-B041591-003
			M-B041591-006
	15-APR-1991	CHLOROBENZENE (EPA 8010)	M-B041591-001
			M-B041591-002
			M-B041591-003
			M-B041591-006
	15-APR-1991	BENZENE (EPA 8020)	M-B041591-001
			M-B041591-002
			M-B041591-003
			M-B041591-006
	15-APR-1991	TOLUENE (EPA 8020)	M-B041591-001
			M-B041591-002
			M-B041591-003
			M-B041591-006
	15-APR-1991	ETHYLBENZENE (EPA 8020)	M-B041591-001
			M-B041591-002
			M-B041591-003
			M-B041591-006
	15-APR-1991	XYLENES, TOTAL (EPA 8020)	M-B041591-001
			M-B041591-002
			M-B041591-003
			M-B041591-006

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Project: 90-211

Analysis No.: M-B041591-004/005
Date Sampled: 15-APR-1991
Date Sample Rec'd: 15-APR-1991
Date Analyzed: 15-APR-1991
Sample Type: LIQUID

Sample ID	Benzene ug/L EPA 602	Toluene ug/L EPA 602	Ethylbenzene ug/L EPA 602	Xylenes, Total ug/L EPA 602
B-6 RINSATE	ND(0.3)	0.4	ND(0.3)	ND(0.6)
B-6 RINSATE1	ND(0.3)	0.5	ND(0.3)	ND(0.6)
Blank	ND(0.3)	ND(0.3)	ND(0.3)	ND(0.6)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B041591-004
Date Sampled: 15-APR-1991
Date Sample Rec'd: 15-APR-1991
Sample Type: LIQUID
Date Analyzed: 15-APR-1991 By: PN

Project: 90-211
Sample ID: B-6 RINSATE

Halogenated Volatile Organics, EPA 601

Units: ug/l

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	1	ND	1
Bromomethane	ND	1	ND	1
Vinyl Chloride	ND	1	ND	1
Chloroethane	ND	1	ND	1
Methylene Chloride	ND	1	ND	1
Trichlorofluoromethane	ND	1	ND	1
1,1-Dichloroethene	ND	1	ND	1
1,1-Dichloroethane	ND	1	ND	1
trans-1,2-Dichloroethene	ND	1	ND	1
Chloroform	ND	1	ND	1
1,2-Dichloroethane	ND	1	ND	1
1,1,1-Trichloroethane	ND	1	ND	1
Carbon Tetrachloride	ND	1	ND	1
Bromodichloromethane	ND	1	ND	1
1,2-Dichloropropane	ND	1	ND	1
cis-1,3-Dichloropropene	ND	1	ND	1
Trichloroethene	ND	1	ND	1
Dibromochloromethane	ND	1	ND	1
1,1,2-Trichloroethane	ND	1	ND	1
trans-1,3-Dichloropropene	ND	1	ND	1
2-Chloroethylvinyl ether	ND	1	ND	1
Bromoform	ND	1	ND	1
Tetrachloroethene	ND	1	ND	1
1,1,2,2-Tetrachloroethane	ND	1	ND	1
Chlorobenzene	ND	1	ND	1
1,3-Dichlorobenzene	ND	1	ND	1
1,2-Dichlorobenzene	ND	1	ND	1
1,4-Dichlorobenzene	ND	1	ND	1
Diisopropylether	ND	1	ND	1
Ethylene Dibromide	ND	1	ND	1

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B041591-005
Date Sampled: 15-APR-1991
Date Sample Rec'd: 15-APR-1991
Sample Type: LIQUID
Date Analyzed: 15-APR-1991 By: PN

Project: 90-211
Sample ID: B-6 RINSATE1

Halogenated Volatile Organics, EPA 601

Units: ug/l

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	1	ND	1
Bromomethane	ND	1	ND	1
Vinyl Chloride	ND	1	ND	1
Chloroethane	ND	1	ND	1
Methylene Chloride	2	1	ND	1
Trichlorofluoromethane	ND	1	ND	1
1,1-Dichloroethene	ND	1	ND	1
1,1-Dichloroethane	ND	1	ND	1
trans-1,2-Dichloroethene	ND	1	ND	1
Chloroform	ND	1	ND	1
1,2-Dichloroethane	ND	1	ND	1
1,1,1-Trichloroethane	ND	1	ND	1
Carbon Tetrachloride	ND	1	ND	1
Bromodichloromethane	ND	1	ND	1
1,2-Dichloropropane	ND	1	ND	1
cis-1,3-Dichloropropene	ND	1	ND	1
Trichloroethene	ND	1	ND	1
Dibromochloromethane	ND	1	ND	1
1,1,2-Trichloroethane	ND	1	ND	1
trans-1,3-Dichloropropene	ND	1	ND	1
2-Chloroethylvinyl ether	ND	1	ND	1
Bromoform	ND	1	ND	1
Tetrachloroethene	ND	1	ND	1
1,1,2,2-Tetrachloroethane	ND	1	ND	1
Chlorobenzene	ND	1	ND	1
1,3-Dichlorobenzene	ND	1	ND	1
1,2-Dichlorobenzene	ND	1	ND	1
1,4-Dichlorobenzene	ND	1	ND	1
Diisopropylether	ND	1	ND	1
Ethylene Dibromide	ND	1	ND	1

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B042491-001/004
Date Sampled: 24-APR-1991
Date Sample Rec'd: 24-APR-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B042491-001	1,1-DICHLOROETHENE (EPA 8010)	ug/kg	ND	88.8	89.5	100	88	89	88	0
B042491-001	CHLOROFORM (EPA 8010)	ug/kg	ND	87.0	85.5	100	87	85	86	1
B042491-001	BROMODICHLOROMETHANE (EPA 8010)	ug/kg	ND	91.8	92.9	100	87	85	86	1
B042491-001	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	85.4	89.2	100	85	89	87	4
B042491-001	CHLOROBENZENE (EPA 8010)	ug/kg	ND	88.8	93.4	100	88	93	90	5
B042491-001	BENZENE (EPA 8020)	ug/kg	ND	88.0	89.9	100	88	89	88	2
B042491-001	TOLUENE (EPA 8020)	ug/kg	ND	80.9	84.0	100	80	84	82	3
B042491-001	ETHYLBENZENE (EPA 8020)	ug/kg	ND	85.2	84.6	100	85	84	84	0
B042491-001	XYLENES, TOTAL (EPA 8020)	ug/kg	ND	81.2	82.2	100	81	82	81	1

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B041591-004/005
Date Sampled: 15-APR-1991
Date Sample Rec'd: 15-APR-1991
Sample Type: LIQUID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B041591-004	1,1-DICHLOROETHENE (EPA 601)	ug/L	ND	30.9	34.9	40	77	87	82	12
B041591-004	CHLOROFORM (EPA 601)	ug/L	ND	33.2	36.5	40	83	91	87	10
B041591-004	TRICHLOROETHENE (EPA 601)	ug/L	ND	34.2	36.2	40	86	91	88	6
B041591-004	CHLOROBENZENE (EPA 601)	ug/L	ND	39.4	38.3	40	99	96	97	3
B041591-004	CARBON TETRACHLORIDE	ug/L	ND	27.5	30.0	40	69	75	72	8
B041591-004	BENZENE (EPA 602)	mg/L	ND	35.8	37.9	40	90	95	92	6
B041591-004	TOLUENE (EPA 602)	mg/L	ND	38.7	41.4	40	97	104	100	7
B041591-004	ETHYLBENZENE (EPA 602)	mg/L	ND	36.6	39.4	40	92	99	95	7
B041591-004	XYLENES, TOTAL (EPA 602)	mg/L	ND	39.3	40.5	40	98	101	100	3

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B041591-004	15-APR-1991	1,1-DICHLOROETHENE (EPA 601)	M-B041591-004
			M-B041591-005
	15-APR-1991	CHLOROFORM (EPA 601)	M-B041591-004
			M-B041591-005
	15-APR-1991	TRICHLOROETHENE (EPA 601)	M-B041591-004
			M-B041591-005
	15-APR-1991	CHLOROBENZENE (EPA 601)	M-B041591-004
			M-B041591-005
	15-APR-1991	BENZENE (EPA 602)	M-B041591-004
			M-B041591-005
	15-APR-1991	TOLUENE (EPA 602)	M-B041591-004
			M-B041591-005
	15-APR-1991	ETHYLBENZENE (EPA 602)	M-B041591-004
			M-B041591-005
	15-APR-1991	XYLENES, TOTAL (EPA 602)	M-B041591-004
			M-B041591-005

Enseco
A CORNING Company

☐ 7440 Lincoln Way, Garden Grove, CA 92641, (71[illegible] 6370
☐ 2810 Bunsen Ave., Unit A Ventura, CA 93003, (8[illegible] 50-0546
☐ 2325 Skyway Dr., Unit K, Santa Maria, CA 93455, (805) 922-2776
☐ 9537 Telstar Ave., Unit 118, El Monte, CA 91731, (818) 442-8400
☒ Mobile Labs, (800) ENSECO-8

CHAIN OF CUST[illegible] RECORD

Date 4/15/91 Page 1 of ____

Lab Number 2

CLIENT: MEREDITH BOLI

ADDRESS:

PROJECT NAME: 1704 W. 1ST ST, AZUSA
OSCO - CHEMICAL WASTE MGMT

CONTRACT / PURCHASE ORDER / QUOTE #:

PROJECT MANAGER: RON CAVAGROTTI

PHONE NUMBER:

SITE CONTACT: TODD GILMER / KNIGHT DIESOLD

ANALYSES

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	8010 (FULL)	8020 BTEX	8240					Sample Condition/ REMARKS
B-6-29	4/15/91	12:10	B041591-1			X	1	X	X						90% FULL
B-6-42	↓	↓	-2			X	1	X	X						↓
B-6-51	↓	↓	-3			X	1	X	X						↓
B-6 RINSATE	↓	15:15	-4	X			1	X	X						FULL
B-6 RINSATE 1	↓	↓	-5	X			1	X	X						↓
B-6-67A	↓	17:00	-6			X	1	X	X						80% FULL
B-6-67B	↓	↓	-7			X	1			X					90% FULL

SAMPLERS: (Signature) [signature] 4/15/91

Relinquished by: (Signature) [signature] 4/15/91 1702

Received by: (Signature) Date Time

Received by: (Signature) Date Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Relinquished by: (Signature) Date Time

Received for Laboratory by: [signature] Date 4/15/91 RECEIVED Time AS SAMPLED Date ACCEPTED Time

Method of Shipment:

Special Instructions:

SAMPLE DISPOSITION:
1. Storage time requested: ____ days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as appropriate, according to legal requirements.)

DISTRIBUTION: White with report, Yellow to Enseco, Pink to Courier, Gold to Sample Control

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

RECEIVED
APR 25 1991
M/B & A

23-APR-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: B540
ANALYSES: 8010,8020

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B041891-001/003.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

Dart Kammerer
REVIEWED AND APPROVED

4-24-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Project: 90-211

Analysis No.: M-B041891-001/003
Date Sampled: 18-APR-1991
Date Sample Rec'd: 18-APR-1991
Date Analyzed: 18-APR-1991
Sample Type: SOLID

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
B-6-133A	ND(5)	ND(5)	ND(5)	ND(15)
B-6-145	ND(5)	ND(5)	ND(5)	ND(15)
B-6-150A	ND(5)	ND(5)	ND(5)	ND(15)
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B041891-001
Date Sampled: 18-APR-1991
Date Sample Rec'd: 18-APR-1991
Sample Type: SOLID
Date Analyzed: 18-APR-1991 By: PN

Project: 90-211
Sample ID: B-6-133A

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	9	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B041891-002
Date Sampled: 18-APR-1991
Date Sample Rec'd: 18-APR-1991
Sample Type: SOLID
Date Analyzed: 18-APR-1991 By: PN

Project: 90-211
Sample ID: B-6-145

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B041891-003
Date Sampled: 18-APR-1991
Date Sample Rec'd: 18-APR-1991
Sample Type: SOLID
Date Analyzed: 18-APR-1991 By: PN

Project: 90-211
Sample ID: B-6-150A

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	6	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B041891-001/003
Date Sampled: 18-APR-1991
Date Sample Rec'd: 18-APR-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B041891-001	1,1-DICHLOROETHENE (EPA 8010)	ug/kg	ND	84.2	94.8	100	84	95	90	11
B041891-001	CHLOROFORM (EPA 8010)	ug/kg	ND	85.5	97.0	100	86	97	92	12
B041891-001	BROMODICHLOROMETHANE (EPA 8010)	ug/kg	ND	81.5	97.7	100	82	97	90	17
B041891-001	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	84.2	96.5	100	84	96	90	13
B041891-001	CHLOROBENZENE (EPA 8010)	ug/kg	ND	92.0	88.8	100	92	89	90	3
B041891-001	BENZENE (EPA 8020)	ug/kg	ND	70.3	75.6	100	70	76	73	8
B041891-001	TOLUENE (EPA 8020)	ug/kg	ND	84.7	91.5	100	85	92	88	8
B041891-001	ETHYLBENZENE (EPA 8020)	ug/kg	ND	90.0	95.2	100	90	95	92	5
B041891-001	XYLENES, TOTAL (EPA 8020)	ug/kg	ND	89.8	94.4	100	90	94	92	4

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B041891-001	18-APR-1991	1,1-DICHLOROETHENE (EPA 8010)	M-B041891-001
			M-B041891-002
			M-B041891-003
	18-APR-1991	CHLOROFORM (EPA 8010)	M-B041891-001
			M-B041891-002
			M-B041891-003
	18-APR-1991	BROMODICHLOROMETHANE (EPA 8010)	M-B041891-001
			M-B041891-002
			M-B041891-003
	18-APR-1991	TRICHLOROETHENE (EPA 8010)	M-B041891-001
			M-B041891-002
			M-B041891-003
	18-APR-1991	CHLOROBENZENE (EPA 8010)	M-B041891-001
			M-B041891-002
			M-B041891-003
	18-APR-1991	BENZENE (EPA 8020)	M-B041891-001
			M-B041891-002
			M-B041891-003
	18-APR-1991	TOLUENE (EPA 8020)	M-B041891-001
			M-B041891-002
			M-B041891-003
	18-APR-1991	ETHYLBENZENE (EPA 8020)	M-B041891-001
			M-B041891-002
			M-B041891-003
	18-APR-1991	XYLENES, TOTAL (EPA 8020)	M-B041891-001
			M-B041891-002
			M-B041891-003

Enseco
A CORNING Company

☐ 7440 Lincoln Way, Garden Grove, CA 92641, (714) [illegible] 370
☐ 2810 Bunsen Ave., Unit A Ventura, CA 93003, (80[illegible] 0546
☐ 2325 Skyway Dr., Unit K, Santa Maria, CA 93455, (805) 922-2776
☐ 9537 Telstar Ave., Unit 118, El Monte, CA 91731, (818) 442-8400
☒ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTO[illegible] RECORD

Date 4/18/91 Page 1 of 1

Lab Number 2

CLIENT MEREDITH BOLI

ADDRESS

PROJECT NAME 1704 W. 1ST ST., AZUSA
OSCO - CHEMICAL WASTE MGMT.

CONTRACT / PURCHASE ORDER / QUOTE #

PROJECT MANAGER
RON CAVAGROTTI

PHONE NUMBER

SITE CONTACT TODD GICMEER - KNIGHT FIELD

ANALYSES

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	8010 (FULL)	8020 BTEX						Sample Condition/ REMARKS
B-6-133A	4/18/91	9:15	B041891-1			X	1	X	X						95% FULL
B-6-145	↓	14:57	-2			X	1	X	X						40% FULL
B-6-150A		15:15	-3			X	1	X	X						95% FULL

SAMPLERS: (Signature) [signature]

Relinquished by: (Signature) [signature] 4/18/91 1535

Received by: (Signature) Date Time

Received by: (Signature) Date Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Relinquished by: (Signature) Date Time

Received for Laboratory by: [signature] Date RECEIVED 4/18/91 Time AS SAMPLED

Date ACCEPTED Time

Method of Shipment:

Special Instructions:

SAMPLE DISPOSITION:
1. Storage time requested: _____ days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as appropriate, according to legal requirements.)

DISTRIBUTION: White with report, Yellow to Enseco, Pink to Courier, Gold to Sample Control

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

24-APR-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: B539
ANALYSES: 8010,8020

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B041791-001/003.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

REVIEWED AND APPROVED

4-24-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B041791-001/003
Date Sampled: 17-APR-1991
Date Sample Rec'd: 17-APR-1991
Date Analyzed: 17-APR-1991
18-APR-1991
Sample Type: SOLID

Project: 90-211

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
B-6-97A	ND(5)	ND(5)	ND(5)	ND(15)
B-6-107A	ND(5)	ND(5)	ND(5)	ND(15)
B-6-127A	ND(5)	ND(5)	ND(5)	ND(15)
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B041791-001
Date Sampled: 17-APR-1991
Date Sample Rec'd: 17-APR-1991
Sample Type: SOLID
Date Analyzed: 17-APR-1991 By: PN

Project: 90-211
Sample ID: B-6-97A

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B041791-002
Date Sampled: 17-APR-1991
Date Sample Rec'd: 17-APR-1991
Sample Type: SOLID
Date Analyzed: 17-APR-1991 By: PN

Project: 90-211
Sample ID: B-6-107A

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	6	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B041791-003
Date Sampled: 17-APR-1991
Date Sample Rec'd: 17-APR-1991
Sample Type: SOLID
Date Analyzed: 18-APR-1991 By: PN

Project: 90-211
Sample ID: B-6-127A

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B041791-001/003
Date Sampled: 17-APR-1991
Date Sample Rec'd: 17-APR-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B041791-001	1,1-DICHLOROETHENE (EPA 8010)	ug/kg	ND	98.7	95.6	100	98	95	96	3
B041891-001	1,1-DICHLOROETHENE (EPA 8010)	ug/kg	ND	84.2	94.8	100	84	94	89	11
B041791-001	CHLOROFORM (EPA 8010)	ug/kg	ND	97.0	93.7	100	97	93	95	3
B041891-001	CHLOROFORM (EPA 8010)	ug/kg	ND	85.5	97.0	100	85	97	91	12
B041791-001	BROMODICHLOROMETHANE (EPA 8010)	ug/kg	ND	95.4	97.0	100	95	97	96	1
B041891-001	BROMODICHLOROMETHANE (EPA 8010)	ug/kg	ND	81.5	97.7	100	81	97	89	18
B041791-001	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	94.7	94.2	100	94	94	94	0
B041891-001	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	84.2	96.5	100	84	96	90	13
B041791-001	CHLOROBENZENE (EPA 8010)	ug/kg	ND	102	98.5	100	102	98	100	3
B041891-001	CHLOROBENZENE (EPA 8010)	ug/kg	ND	92.0	88.8	100	92	88	90	3
B041891-001	BENZENE (EPA 8020)	mg/kg	ND	70.3	75.6	100	70	75	72	7
B041791-001	BENZENE (EPA 8020)	mg/kg	ND	90.5	85.5	100	90	85	87	5
B041891-001	TOLUENE (EPA 8020)	mg/kg	ND	84.7	91.5	100	84	91	87	7
B041791-001	TOLUENE (EPA 8020)	mg/kg	ND	89.5	84.5	100	89	84	86	5
B041891-001	ETHYLBENZENE (EPA 8020)	mg/kg	ND	90.0	95.2	100	90	95	92	5
B041791-001	ETHYLBENZENE (EPA 8020)	mg/kg	ND	97.2	89.6	100	97	89	93	8
B041891-001	XYLENES, TOTAL (EPA 8020)	mg/kg	ND	89.8	94.4	100	89	94	91	5
B041791-001	XYLENES, TOTAL (EPA 8020)	mg/kg	ND	97.1	90.6	100	97	90	93	6

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B041791-001	17-APR-1991	1,1-DICHLOROETHENE (EPA 8010)	M-B041791-001
			M-B041791-002
	17-APR-1991	CHLOROFORM (EPA 8010)	M-B041791-001
			M-B041791-002
	17-APR-1991	BROMODICHLOROMETHANE (EPA 8010)	M-B041791-001
			M-B041791-002
	17-APR-1991	TRICHLOROETHENE (EPA 8010)	M-B041791-001
			M-B041791-002
	17-APR-1991	CHLOROBENZENE (EPA 8010)	M-B041791-001
			M-B041791-002
	17-APR-1991	BENZENE (EPA 8020)	M-B041791-001
			M-B041791-002
	17-APR-1991	TOLUENE (EPA 8020)	M-B041791-001
			M-B041791-002
	17-APR-1991	ETHYLBENZENE (EPA 8020)	M-B041791-001
			M-B041791-002
	17-APR-1991	XYLENES, TOTAL (EPA 8020)	M-B041791-001
			M-B041791-002
B041891-001	18-APR-1991	1,1-DICHLOROETHENE (EPA 8010)	M-B041791-003
	18-APR-1991	CHLOROFORM (EPA 8010)	M-B041791-003
	18-APR-1991	BROMODICHLOROMETHANE (EPA 8010)	M-B041791-003
	18-APR-1991	TRICHLOROETHENE (EPA 8010)	M-B041791-003
	18-APR-1991	CHLOROBENZENE (EPA 8010)	M-B041791-003
	18-APR-1991	BENZENE (EPA 8020)	M-B041791-003
	18-APR-1991	TOLUENE (EPA 8020)	M-B041791-003
	18-APR-1991	ETHYLBENZENE (EPA 8020)	M-B041791-003
	18-APR-1991	XYLENES, TOTAL (EPA 8020)	M-B041791-003

Enseco
A CORNING Company

☐ 7440 Lincoln Way, Garden Grove, CA 92641, (714) 89[illegible]
☐ 2810 Bunsen Ave., Unit A Ventura, CA 93003, (805) [illegible]46
☐ 2325 Skyway Dr., Unit K, Santa Maria, CA 93455, (805) 922-2776
☐ 9537 Telstar Ave., Unit 118, El Monte, CA 91731, (818) 442-8400
☒ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTOD[illegible] [illegible]ECORD

Date 4/17/91 Page 1 of ____

Lab Number 2

CLIENT: MERED ITH BOLI

ADDRESS:

PROJECT NAME: 1704 W. 1ST ST, AZUSA
OSCO - CHEMICAL WASTE MGMT.

CONTRACT / PURCHASE ORDER / QUOTE #:

PROJECT MANAGER: RON CAVAGROTTI

PHONE NUMBER:

SITE CONTACT: TODD GILMER / KNIGHT PIESOLD

ANALYSES

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	8010 (FULL)	8020 BTEX						Sample Condition/ REMARKS
B-6-97A	4/17/91	9:40	B041791-1			X	1	X	X						90% FULL
B-6-107A	↓	12:18	-2			X	1	X	X						90% FULL
B-6-127A	↓	17:10	-3			X	1	X	X						90% FULL

SAMPLERS: (Signature)

Relinquished by: (Signature) 4/17/91 1710

Received by: (Signature) Date Time

Received by: (Signature) Date Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Relinquished by: (Signature) Date Time

Received for Laboratory by: Date 4/17/91 RECEIVED Time AS SAMPLED

Date ACCEPTED Time

Method of Shipment:

Special Instructions:

SAMPLE DISPOSITION:
1. Storage time requested: ____ days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as appropriate, according to legal requirements.)

DISTRIBUTION: White with report, Yellow to Enseco, Pink to Courier, Gold to Sample Control

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

RECEIVED
1991
M B & A

26-APR-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: B543
ANALYSES: 8010, 8020

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B042391-001,003,004.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

REVIEWED AND APPROVED

4-26-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Project: 90-211

Analysis No.: M-B042391-001,003,004
Date Sampled: 23-APR-1991
Date Sample Rec'd: 23-APR-1991
Date Analyzed: 23-APR-1991
Sample Type: SOLID

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
B-6-156	ND(5)	ND(5)	ND(5)	ND(15)
B-6-168	ND(5)	ND(5)	ND(5)	ND(15)
B-6-175	ND(5)	ND(5)	ND(5)	ND(15)
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B042391-001
Date Sampled: 23-APR-1991
Date Sample Rec'd: 23-APR-1991
Sample Type: SOLID
Date Analyzed: 23-APR-1991 By: PN

Project: 90-211
Sample ID: B-6-156

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B042391-003
Date Sampled: 23-APR-1991
Date Sample Rec'd: 23-APR-1991
Sample Type: SOLID
Date Analyzed: 23-APR-1991 By: PN

Project: 90-211
Sample ID: B-6-168

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	5	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B042391-004
Date Sampled: 23-APR-1991
Date Sample Rec'd: 23-APR-1991
Sample Type: SOLID
Date Analyzed: 23-APR-1991 By: PN

Project: 90-211
Sample ID: B-6-175

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	24	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B042391-001/003
Date Sampled: 23-APR-1991
Date Sample Rec'd: 23-APR-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B042391-003	1,1-DICHLOROETHENE (EPA 8010)	ug/kg	ND	88.1	87.7	100	88	87	87	0
B042391-003	CHLOROFORM (EPA 8010)	ug/kg	ND	79.9	82.3	100	79	82	80	3
B042391-003	BROMODICHLOROMETHANE (EPA 8010)	ug/kg	ND	86.2	82.6	100	86	82	84	4
B042391-003	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	80.3	81.3	100	80	81	80	1
B042391-003	CHLOROBENZENE (EPA 8010)	ug/kg	ND	92.1	92.8	100	92	92	92	0
B042391-003	BENZENE (EPA 8020)	ug/kg	ND	100	102	100	100	102	101	2
B042391-003	TOLUENE (EPA 8020)	ug/kg	ND	92.5	93.6	100	92	93	92	1
B042391-003	ETHYLBENZENE (EPA 8020)	ug/kg	ND	94.6	95.7	100	94	95	94	1
B042391-003	XYLENES, TOTAL (EPA 8020)	ug/kg	ND	91.3	92.2	100	91	92	91	1

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B042391-003	23-APR-1991	1,1-DICHLOROETHENE (EPA 8010)	M-B042391-001
			M-B042391-002
			M-B042391-003
	23-APR-1991	CHLOROFORM (EPA 8010)	M-B042391-001
			M-B042391-002
			M-B042391-003
	23-APR-1991	BROMODICHLOROMETHANE (EPA 8010)	M-B042391-001
			M-B042391-002
			M-B042391-003
	23-APR-1991	TRICHLOROETHENE (EPA 8010)	M-B042391-001
			M-B042391-002
			M-B042391-003
	23-APR-1991	CHLOROBENZENE (EPA 8010)	M-B042391-001
			M-B042391-002
			M-B042391-003
	23-APR-1991	BENZENE (EPA 8020)	M-B042391-001
			M-B042391-002
			M-B042391-003
	23-APR-1991	TOLUENE (EPA 8020)	M-B042391-001
			M-B042391-002
			M-B042391-003
	23-APR-1991	ETHYLBENZENE (EPA 8020)	M-B042391-001
			M-B042391-002
			M-B042391-003
	23-APR-1991	XYLENES, TOTAL (EPA 8020)	M-B042391-001
			M-B042391-002
			M-B042391-003

Enseco
A CORNING Company

☐ 7440 Lincoln Way, Garden Grove, CA 92641, (714) 89[illegible]
☐ 2810 Bunsen Ave., Unit A Ventura, CA 93003, (805) [illegible]6
☐ 2325 Skyway Dr., Unit K, Santa Maria, CA 93455, (805) 922-2776
☐ 9537 Telstar Ave., Unit 118, El Monte, CA 91731, (818) 442-8400
☐ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTODY RECORD

Date 4/23/91 Page 1 of 1

Lab Number Hel 2

CLIENT Meredith Boll

ADDRESS

PROJECT NAME

CONTRACT / PURCHASE ORDER / QUOTE #

PROJECT MANAGER

PHONE NUMBER

SITE CONTACT

ANALYSES

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	8010	8020						Sample Condition/ REMARKS
B-6-156	4/23/91	7:30	B0412391-1			x	1-40mL Vial	x	x						25% full
B-6-168		1543	-3			x	↓	x	x						60% full
B-6-175		1655	-4			x	↓	x	x						80% full

SAMPLERS: (Signature) Frank J Hagen

Relinquished by: (Signature) Frank J Hagen

Relinquished by: (Signature)

Received by: (Signature) | Date | Time

Received by: (Signature) | Date | Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Date	Time	Received for Laboratory by:	Date RECEIVED	Time	Date ACCEPTED	Time
		John Eckell	4/22/91	1700		

Method of Shipment:

Special Instructions:

SAMPLE DISPOSITION:
1. Storage time requested:_____days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as appropriate, according to legal requirements.)

DISTRIBUTION: White with report, Yellow to Enseco, Pink to Courier, Gold to Sample Control

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

26-APR-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: B544
ANALYSES: 8010, 8020

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B042491-001/004.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

REVIEWED AND APPROVED

4-26-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Project: 90-211

Analysis No.: M-B042491-001/004
Date Sampled: 24-APR-1991
Date Sample Rec'd: 24-APR-1991
Date Analyzed: 24-APR-1991
Sample Type: SOLID

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
B-6-175A	ND(5)	ND(5)	ND(5)	ND(15)
B-6-180	ND(5)	ND(5)	ND(5)	ND(15)
B-6-183	ND(5)	ND(5)	ND(5)	ND(15)
B-6-191	ND(5)	ND(5)	ND(5)	ND(15)
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B042491-001
Date Sampled: 24-APR-1991
Date Sample Rec'd: 24-APR-1991
Sample Type: SOLID
Date Analyzed: 24-APR-1991 By: PN

Project: 90-211
Sample ID: B-6-175A

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B042491-002
Date Sampled: 24-APR-1991
Date Sample Rec'd: 24-APR-1991
Sample Type: SOLID
Date Analyzed: 24-APR-1991 By: PN

Project: 90-211
Sample ID: B-6-180

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	7	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B042491-003
Date Sampled: 24-APR-1991
Date Sample Rec'd: 24-APR-1991
Sample Type: SOLID
Date Analyzed: 24-APR-1991 By: PN

Project: 90-211
Sample ID: B-6-183

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B042491-004
Date Sampled: 24-APR-1991
Date Sample Rec'd: 24-APR-1991
Sample Type: SOLID
Date Analyzed: 24-APR-1991 By: PN

Project: 90-211
Sample ID: B-6-191

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	6	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B042491-001	24-APR-1991	1,1-DICHLOROETHENE (EPA 8010)	M-B042491-001
			M-B042491-002
			M-B042491-003
			M-B042491-004
	24-APR-1991	CHLOROFORM (EPA 8010)	M-B042491-001
			M-B042491-002
			M-B042491-003
			M-B042491-004
	24-APR-1991	BROMODICHLOROMETHANE (EPA 8010)	M-B042491-001
			M-B042491-002
			M-B042491-003
			M-B042491-004
	24-APR-1991	TRICHLOROETHENE (EPA 8010)	M-B042491-001
			M-B042491-002
			M-B042491-003
			M-B042491-004
	24-APR-1991	CHLOROBENZENE (EPA 8010)	M-B042491-001
			M-B042491-002
			M-B042491-003
			M-B042491-004
	24-APR-1991	BENZENE (EPA 8020)	M-B042491-001
			M-B042491-002
			M-B042491-003
			M-B042491-004
	24-APR-1991	TOLUENE (EPA 8020)	M-B042491-001
			M-B042491-002
			M-B042491-003
			M-B042491-004
	24-APR-1991	ETHYLBENZENE (EPA 8020)	M-B042491-001
			M-B042491-002
			M-B042491-003
			M-B042491-004
	24-APR-1991	XYLENES, TOTAL (EPA 8020)	M-B042491-001
			M-B042491-002
			M-B042491-003
			M-B042491-004

Enseco
A CORNING Company

☐ 7440 Lincoln Way, Garden Grove, CA 92641, (714) 89[illegible]
☐ 2810 Bunsen Ave., Unit A Ventura, CA 93003, (805) 6[illegible] 46
☐ 2325 Skyway Dr., Unit K, Santa Maria, CA 93455, (805) 922-2776
☐ 9537 Telstar Ave., Unit 118, El Monte, CA 91731, (818) 442-8400
☒ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTOD[illegible] CORD

Date 4/24/91 Page 1 of 1

Lab Number 2

CLIENT MERIDITH BOLI

ADDRESS

PROJECT NAME 1704 W. 1ST ST, AZUSA
OSCO - CHEMICAL WASTE MGMT.

CONTRACT / PURCHASE ORDER / QUOTE #

PROJECT MANAGER
RON CAVAGROTTI

PHONE NUMBER

SITE CONTACT FRANK HAGAR
KNIGHT PIEROLD

ANALYSES

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	8010 (FULL)	8020 BTEX						Sample Condition/ REMARKS
B-6-175A	4/24/91	8:35	B042491-1			X	1	X	X						90% FULL
B-6-180	↓	11:00	-2			X	1	X	X						85% FULL
B-6-183	↓	↓	-3			X	1	X	X						85% FULL
B-6-191		12:15	-4			X	1	X	X						85% FULL

SAMPLERS: (Signature) Frank Hagar

Relinquished by: (Signature) Frank Hagar

Received by: (Signature) | Date | Time

Received by: (Signature) | Date | Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Relinquished by: (Signature) | Date | Time

Received for Laboratory by: [illegible] | Date RECEIVED 4/24/91 | Time AS SAMPLED | Date ACCEPTED | Time

Method of Shipment:

Special Instructions:

SAMPLE DISPOSITION:
1. Storage time requested:_____days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as appropriate, according to legal requirements.)

DISTRIBUTION: White with report, Yellow to Enseco, Pink to Courier, Gold to Sample Control

Analytical Report

RECEIVED

LOG NO: G91-04-310

Received: 15 APR 91

Mailed: APR 24 1991

Mr. Ron Cavagrotti
Meredith Boli & Associates, Inc.
6701 Center Drive West, Suite 900
Los Angeles,CA 90045-1535

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
04-310-1	B6-51D	15 APR 91

PARAMETER	04-310-1
EPA Method 8010	
Date Analyzed	04/18/91
Date Extracted	04/18/91
Date Confirmed	04/18/91
Dilution Factor, Times 1	1
1,1,1-Trichloroethane, ug/kg	<5
1,1,2,2-Tetrachloroethane, ug/kg	<5
1,1,2-Trichloroethane, ug/kg	<5
1,1-Dichloroethane, ug/kg	<5
1,1-Dichloroethene, ug/kg	<5
1,2-Dichloroethane, ug/kg	<5
1,2-Dichlorobenzene, ug/kg	<5
1,2-Dichloropropane, ug/kg	<5
1,3-Dichlorobenzene, ug/kg	<5
1,4-Dichlorobenzene, ug/kg	<5
2-Chloroethylvinylether, ug/kg	<5
Bromodichloromethane, ug/kg	<5
Bromomethane, ug/kg	<5
Bromoform, ug/kg	<5
Chlorobenzene, ug/kg	<5
Carbon Tetrachloride, ug/kg	<5
Chloroethane, ug/kg	<5
Chloroform, ug/kg	<5
Chloromethane, ug/kg	<5
Dibromochloromethane, ug/kg	<5
Dichlorodifluoromethane, ug/kg	<5
Freon 113, ug/kg	<5
Methylene chloride, ug/kg	<5

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Analytical Report

LOG NO: G91-04-310

Received: 15 APR 91

Mr. Ron Cavagrotti
Meredith Boli & Associates, Inc.
6701 Center Drive West, Suite 900
Los Angeles,CA 90045-1535

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
04-310-1	B6-51D	15 APR 91

PARAMETER	04-310-1
Trichloroethene, ug/kg	<5
Trichlorofluoromethane, ug/kg	<5
Tetrachloroethene, ug/kg	<5
Vinyl chloride, ug/kg	<5
cis-1,2-Dichloroethene, ug/kg	<5
cis-1,3-Dichloropropene, ug/kg	<5
trans-1,2-Dichloroethene, ug/kg	<5
trans-1,3-Dichloropropene, ug/kg	<5
EPA Method 8020	
Date Analyzed	04/18/91
Date Extracted	04/18/91
Date Confirmed	04/18/91
Dilution Factor, Times 1	1
1,2-Dichlorobenzene, ug/kg	<5
1,3-Dichlorobenzene, ug/kg	<5
1,4-Dichlorobenzene, ug/kg	<5
Benzene, ug/kg	<5
Chlorobenzene, ug/kg	<5
Ethylbenzene, ug/kg	<5
Toluene, ug/kg	<5
Total Xylene Isomers, ug/kg	<20

Jeffrey A. Erion, Laboratory Manager

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

RECEIVED
APR 24 1991
M/B & A

22-APR-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: N1135
ANALYSES: 8240

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B041791-002/002.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

CROSS REFERENCE

Mobile Lab	Garden Grove	Client
B041791-002	G-9110808-001	B-6-107A

REVIEWED AND APPROVED

4-22-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Enseco - CRL
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL
FAX: (714) 891-5917

April 22, 1991

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9110808-001/001
Date Sampled: 17-APR-1991
Date Sample Rec'd: 18-APR-1991
Project: MEREDITH BOLI - OSCO, AZUSA

Enclosed with this letter is the report on the chemical and physical analyses on the sample from ANALYSIS NO: G-9110808-001/001 shown above.

The sample was received by CRL in a chilled state, intact and with the chain-of-custody record attached.

Note that ND means not detected at the reporting limit expressed. The reporting limit is raised to reflect the dilution factor of the sample.

Solid sample is reported on "as received" basis.

Reviewed

Approved

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9110808-001
Date Sampled: 17-APR-1991
Date Sample Rec'd: 18-APR-1991
Sample Type: SOLID
Date Prepared: 18-APR-1991
Prep Method: EPA 5030 By: JC
Date Analyzed: 18-APR-1991 By: JC

Project: MEREDITH BOLI - OSCO, AZUSA
Sample ID: (B041791-2) B-6-107A

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	10	ND	10
Bromomethane	ND	10	ND	10
Vinyl Chloride	ND	10	ND	10
Chloroethane	ND	10	ND	10
Methylene Chloride	ND	5	ND	5
Acetone	ND	10	ND	10
Carbon Disulfide	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
Total 1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
2-Butanone	ND	10	ND	10
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Vinyl Acetate	ND	10	ND	10
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
Benzene	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	10	ND	10
Bromoform	ND	5	ND	5
4-Methyl-2-pentanone	ND	10	ND	10
2-Hexanone	ND	10	ND	10
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Toluene	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
Ethylbenzene	ND	5	ND	5
Styrene	ND	5	ND	5
Xylenes, Total	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9110808-001
Date Sampled: 17-APR-1991
Date Sample Rec'd: 18-APR-1991
Sample Type: SOLID

Project: MEREDITH BOLI - OSCO, AZUSA

Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
18-APR-1991	1,2 DICHLOROETHANE-D4 (EPA 8240)	96	70-135
18-APR-1991	TOLUENE-D8 (EPA 8240)	97	69-138
18-APR-1991	BROMOFLUOROBENZENE (EPA 8240)	97	60-137

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER
Project: MEREDITH BOLI - OSCO, AZUSA

Analysis No.: G-9110808-001
Date Sampled: 17-APR-1991
Date Sample Rec'd: 18-APR-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
9109916-003	1,1-DICHLOROETHENE (EPA 8240)	ug/kg	ND	41.4	42.8	50.0	82	85	83	3
9109916-003	TRICHLOROETHENE (EPA 8240)	ug/kg	ND	40.0	39.7	50.0	80	79	79	0
9109916-003	BENZENE (EPA 8240)	ug/kg	ND	47.9	47.5	50.0	95	95	95	0
9109916-003	TOLUENE (EPA 8240)	ug/kg	ND	49.2	50.3	50.0	98	100	99	2
9109916-003	CHLOROBENZENE (EPA 8240)	ug/kg	ND	45.7	45.1	50.0	91	90	90	1

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
9109916-003	15-APR-1991	1,1-DICHLOROETHENE (EPA 8240)	G-9110808-001
	15-APR-1991	TRICHLOROETHENE (EPA 8240)	G-9110808-001
	15-APR-1991	BENZENE (EPA 8240)	G-9110808-001
	15-APR-1991	TOLUENE (EPA 8240)	G-9110808-001
	15-APR-1991	CHLOROBENZENE (EPA 8240)	G-9110808-001

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER
Project: MEREDITH BOLI - OSCO, AZUSA

Analysis No.: G-9110808-001
Date Sampled: 17-APR-1991
Date Sample Rec'd: 18-APR-1991
Sample Type: SOLID

Laboratory Control Sample Report

QC Batch	Parameter (Method)	Amt. Spiked	Units	Avg. Spike Recov.	Acceptable Range	Rel. Pct. Diff.	Acceptable Range
L91109002	1,1-DICHLOROETHENE (EPA 8240)	50.0	ug/kg	86	30-151	4.	36
L91109002	TRICHLOROETHENE (EPA 8240)	50.0	ug/kg	92	36-150	11.	33
L91109002	BENZENE (EPA 8240)	50.0	ug/kg	89	32-150	16.	35
L91109002	TOLUENE (EPA 8240)	50.0	ug/kg	94	34-151	15.	34
L91109002	CHLOROBENZENE (EPA 8240)	50.0	ug/kg	88	33-151	17.	35

Enseco
A Corning Company

Laboratory Control Sample Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
L91109002	17-APR-1991	1,1-DICHLOROETHENE (EPA 8240)	G-9110808-001
		TRICHLOROETHENE (EPA 8240)	G-9110808-001
		BENZENE (EPA 8240)	G-9110808-001
		TOLUENE (EPA 8240)	G-9110808-001
		CHLOROBENZENE (EPA 8240)	G-9110808-001

Enseco
A CORNING Company

☐ 7440 Lincoln Way, Garden Grove, CA 92641, (714) 8[illegible]
☐ 2810 Bunsen Ave., Unit A Ventura, CA 93003, (805) [illegible]46
☐ 2325 Skyway Dr., Unit K, Santa Maria, CA 93455, (805) 922-2776
☐ 9537 Telstar Ave., Unit 118, El Monte, CA 91731, (818) 442-8400
☒ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTOD[illegible] ECORD

Date 4/18/91 Page 1 of 1

Lab Number 9110808

CLIENT Enseco Mobile

ADDRESS

PROJECT NAME Meredith/Boli

CONTRACT / PURCHASE ORDER / QUOTE #

PROJECT MANAGER Dave Kammerer

PHONE NUMBER

SITE CONTACT

ANALYSES: 8240

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	8240							Sample Condition/ REMARKS
B041791-2 (B-6-107A)	4/17					X		1							

SAMPLERS: (Signature)

Relinquished by: (Signature)

Relinquished by: (Signature) [signature] Date 4/18/91 Time 4:55

Received by: (Signature) Date Time

Received by: (Signature) Date Time

Received for Laboratory by: [signature] Date RECEIVED 4-18-91 Time 1655 Date ACCEPTED Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Method of Shipment:

Special Instructions:
24 TAT RUSH! prelims due 4-19-91 pm

SAMPLE DISPOSITION:
1. Storage time requested:_____days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as appropriate, according to legal requirements.)

DISTRIBUTION: White with report, Yellow to Enseco, Pink to Courier, Gold to Sample Control

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

25-APR-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: N1134
ANALYSES: 8240

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B041591-006/007.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

CROSS REFERENCE

Mobile Lab ID	Garden Grove ID	Client ID
B041591-006	G-9110702-001	B-6-67A
B041591-007	G-9110702-002	B-6-67B

REVIEWED AND APPROVED

4-25-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco - CRL
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (213) 598-0458 • (800) LAB-1-CRL
FAX: (714) 891-5917

Enseco
A Corning Company

April 25, 1991

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9110702-001/002
Date Sampled: 15-APR-1991
Date Sample Rec'd: 17-APR-1991
Project: MEREDITH BOLI OSCO - AZUSA

Enclosed with this letter is the report on the chemical and physical analyses on the samples from ANALYSIS NO: G-9110702-001/002 shown above.

The samples were received by CRL in a chilled state, intact and with the chain-of-custody record attached.

Note that ND means not detected at the reporting limit expressed. The reporting limit is raised to reflect the dilution factor of the sample.

Solid samples are reported on "as received" basis.

Terol Kimble
Reviewed

James M Caffey
Approved

The Report Cover Letter is an integral part of this report.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9110702-001
Date Sampled: 15-APR-1991
Date Sample Rec'd: 17-APR-1991
Sample Type: SOLID
Date Prepared: 20-APR-1991
Prep Method: EPA 5030 By: GB
Date Analyzed: 20-APR-1991 By: GB

Project: MEREDITH BOLI OSCO - AZUSA
Sample ID: B041591-6

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	10	ND	10
Bromomethane	ND	10	ND	10
Vinyl Chloride	ND	10	ND	10
Chloroethane	ND	10	ND	10
Methylene Chloride	ND	5	ND	5
Acetone	ND	10	ND	10
Carbon Disulfide	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
Total 1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
2-Butanone	ND	10	ND	10
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Vinyl Acetate	ND	10	ND	10
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
Benzene	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	10	ND	10
Bromoform	ND	5	ND	5
4-Methyl-2-pentanone	ND	10	ND	10
2-Hexanone	ND	10	ND	10
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Toluene	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
Ethylbenzene	ND	5	ND	5
Styrene	ND	5	ND	5
Xylenes, Total	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9110702-001
Date Sampled: 15-APR-1991
Date Sample Rec'd: 17-APR-1991
Sample Type: SOLID

Project: MEREDITH BOLI OSCO - AZUSA

Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
20-APR-1991	1,2 DICHLOROETHANE-D4 (EPA 8240)	90	70-135
20-APR-1991	TOLUENE-D8 (EPA 8240)	93	69-138
20-APR-1991	BROMOFLUOROBENZENE (EPA 8240)	83	60-137

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9110702-002
Date Sampled: 15-APR-1991
Date Sample Rec'd: 17-APR-1991
Sample Type: SOLID
Date Prepared: 20-APR-1991
Prep Method: EPA 5030 By: GB
Date Analyzed: 20-APR-1991 By: GB

Project: MEREDITH BOLI OSCO - AZUSA
Sample ID: B041591-7

Purgeable Organics, EPA 8240

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	10	ND	10
Bromomethane	ND	10	ND	10
Vinyl Chloride	ND	10	ND	10
Chloroethane	ND	10	ND	10
Methylene Chloride	ND	5	ND	5
Acetone	ND	10	ND	10
Carbon Disulfide	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
Total 1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
2-Butanone	ND	10	ND	10
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Vinyl Acetate	ND	10	ND	10
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
Benzene	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	10	ND	10
Bromoform	ND	5	ND	5
4-Methyl-2-pentanone	ND	10	ND	10
2-Hexanone	ND	10	ND	10
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Toluene	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
Ethylbenzene	ND	5	ND	5
Styrene	ND	5	ND	5
Xylenes, Total	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER

Analysis No.: G-9110702-002
Date Sampled: 15-APR-1991
Date Sample Rec'd: 17-APR-1991
Sample Type: SOLID

Project: MEREDITH BOLI OSCO - AZUSA

Purgeable Organics, EPA 8240 Surrogate Summary

Date	Parameter (Method)	Percent Recovery	Acceptable Range
20-APR-1991	1,2 DICHLOROETHANE-D4 (EPA 8240)	93	70-135
20-APR-1991	TOLUENE-D8 (EPA 8240)	103	69-138
20-APR-1991	BROMOFLUOROBENZENE (EPA 8240)	100	60-137

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER
Project: MEREDITH BOLI OSCO - AZUSA

Analysis No.: G-9110702-001/002
Date Sampled: 15-APR-1991
Date Sample Rec'd: 17-APR-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
9109916-003	1,1-DICHLOROETHENE (EPA 8240)	ug/kg	ND	41.4	42.8	50.0	82	85	83	3
9110616-002	1,1-DICHLOROETHENE (EPA 8240)	ug/kg	ND	40.2	44.2	50.0	80	88	84	9
9109916-003	TRICHLOROETHENE (EPA 8240)	ug/kg	ND	40.0	39.7	50.0	80	79	79	0
9110616-002	TRICHLOROETHENE (EPA 8240)	ug/kg	ND	46.5	47.2	50.0	93	94	93	1
9109916-003	BENZENE (EPA 8240)	ug/kg	ND	47.9	47.5	50.0	95	95	95	0
9110616-002	BENZENE (EPA 8240)	ug/kg	ND	44.3	46.4	50.0	88	92	90	4
9109916-003	TOLUENE (EPA 8240)	ug/kg	ND	49.2	50.3	50.0	98	100	99	2
9110616-002	TOLUENE (EPA 8240)	ug/kg	ND	47.1	47.6	50.0	94	95	94	1
9109916-003	CHLOROBENZENE (EPA 8240)	ug/kg	ND	45.7	45.1	50.0	91	90	90	1
9110616-002	CHLOROBENZENE (EPA 8240)	ug/kg	ND	45.3	46.4	50.0	90	92	91	2

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
9109916-003	15-APR-1991	1,1-DICHLOROETHENE (EPA 8240)	G-9110702-001
	15-APR-1991	TRICHLOROETHENE (EPA 8240)	G-9110702-001
	15-APR-1991	BENZENE (EPA 8240)	G-9110702-001
	15-APR-1991	TOLUENE (EPA 8240)	G-9110702-001
	15-APR-1991	CHLOROBENZENE (EPA 8240)	G-9110702-001
9110616-002	19-APR-1991	1,1-DICHLOROETHENE (EPA 8240)	G-9110702-002
	19-APR-1991	TRICHLOROETHENE (EPA 8240)	G-9110702-002
	19-APR-1991	BENZENE (EPA 8240)	G-9110702-002
	19-APR-1991	TOLUENE (EPA 8240)	G-9110702-002
	19-APR-1991	CHLOROBENZENE (EPA 8240)	G-9110702-002

Enseco
A Corning Company

Laboratory Report

ENSECO MOBILE LAB
7440 LINCOLN WAY
GARDEN GROVE, CA 92641
ATTN: MR. DAVE KAMMERER
Project: MEREDITH BOLI OSCO - AZUSA

Analysis No.: G-9110702-001/002
Date Sampled: 15-APR-1991
Date Sample Rec'd: 17-APR-1991
Sample Type: SOLID

Laboratory Control Sample Report

QC Batch	Parameter (Method)	Amt. Spiked	Units	Avg. Spike Recov.	Acceptable Range	Rel. Pct. Diff.	Acceptable Range
L91112024	1,1-DICHLOROETHENE (EPA 8240)	50.0	ug/kg	75	30-151	7.	36
L91112024	TRICHLOROETHENE (EPA 8240)	50.0	ug/kg	79	36-150	5.	33
L91112024	BENZENE (EPA 8240)	50.0	ug/kg	77	32-150	2.	35
L91112024	TOLUENE (EPA 8240)	50.0	ug/kg	80	34-151	5.	34
L91112024	CHLOROBENZENE (EPA 8240)	50.0	ug/kg	77	33-151	3.	35

Enseco
A Corning Company

Laboratory Control Sample Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
L91112024	19-APR-1991	1,1-DICHLOROETHENE (EPA 8240)	G-9110702-001
			G-9110702-002
		TRICHLOROETHENE (EPA 8240)	G-9110702-001
			G-9110702-002
		BENZENE (EPA 8240)	G-9110702-001
			G-9110702-002
		TOLUENE (EPA 8240)	G-9110702-001
			G-9110702-002
		CHLOROBENZENE (EPA 8240)	G-9110702-001
			G-9110702-002

Enseco
A CORNING Company

☐ 7440 Lincoln Way, Garden Grove, CA 92641, (714) 8[illegible]
☐ 2810 Bunsen Ave., Unit A Ventura, CA 93003, (805) [illegible].46
☐ 2325 Skyway Dr., Unit K, Santa Maria, CA 93455, (805) 922-2776
☐ 9537 Telstar Ave., Unit 118, El Monte, CA 91731, (818) 442-8400
☑ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTODY RECORD

Date 4-17 Page 1 of 1

Lab Number 9110702

CLIENT ENSECO - MOBILE LAB

ADDRESS

PROJECT NAME MEREDITH BOLI OSCO, AZUSA

CONTRACT / PURCHASE ORDER / QUOTE #

PROJECT MANAGER D. KAMMERER

PHONE NUMBER

SITE CONTACT

ANALYSES

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	8240							Sample Condition/ REMARKS
B041591-6	4-15-91	1650				X	1-VOA vial	X							
-7	↓	↓				X	1-VOA vial	X							

SAMPLERS: (Signature)	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Received by: (Signature)	Date	Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Relinquished by: (Signature)	Date	Time	Received for Laboratory by:	Date RECEIVED	Time	Date ACCEPTED	Time
Arnie Almeguer	4-17-91	2:00pm	[illegible]	4-17-91	1400		

Method of Shipment:

Special Instructions: Due date: 4-30-91 Normal T.A.T.

SAMPLE DISPOSITION:
1. Storage time requested: _____ days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as appropriate, according to legal requirements.)

DISTRIBUTION: White with report, Yellow to Enseco, Pink to Courier, Gold to Sample Control

Analytical Report

LOG NO: G91-04-568

Received: 25 APR 91

Mailed: MAY 3 1991

Mr. Ron Cavagrotti
Meredith Boli & Associates, Inc.
6701 Center Drive West, Suite 900
Los Angeles,CA 90045-1535

Project: 90-211

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
04-568-1	B-6-168	24 APR 91
04-568-2	B-6-191	24 APR 91

PARAMETER	04-568-1	04-568-2
Vol.Pri.Poll. (EPA-8240)		
Date Analyzed	05/01/91	05/01/91
Dilution Factor, Times 1	1	1
1,1,1-Trichloroethane, ug/kg	<5	<5
1,1,2,2-Tetrachloroethane, ug/kg	<5	<5
1,1,2-Trichloroethane, ug/kg	<5	<5
1,1-Dichloroethane, ug/kg	<5	<5
1,1-Dichloroethene, ug/kg	<5	<5
1,2-Dichloroethane, ug/kg	<5	<5
1,2-Dichlorobenzene, ug/kg	<5	<5
1,2-Dichloropropane, ug/kg	<5	<5
1,3-Dichlorobenzene, ug/kg	<5	<5
1,4-Dichlorobenzene, ug/kg	<5	<5
2-Chloroethylvinylether, ug/kg	<5	<5
2-Hexanone, ug/kg	<30	<30
Acetone, ug/kg	<50	<50
Acrolein, ug/kg	<300	<300
Acrylonitrile, ug/kg	<300	<300
Bromodichloromethane, ug/kg	<5	<5
Bromomethane, ug/kg	<5	<5
Benzene, ug/kg	<5	<5
Bromoform, ug/kg	<5	<5
Chlorobenzene, ug/kg	<5	<5
Carbon Tetrachloride, ug/kg	<5	<5
Chloroethane, ug/kg	<5	<5
Chloroform, ug/kg	<5	<5
Chloromethane, ug/kg	<5	<5

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Analytical Report

LOG NO: G91-04-568

Received: 25 APR 91

Mr. Ron Cavagrotti
Meredith Boli & Associates, Inc.
6701 Center Drive West, Suite 900
Los Angeles,CA 90045-1535

Project: 90-211

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
04-568-1	B-6-168	24 APR 91
04-568-2	B-6-191	24 APR 91

PARAMETER	04-568-1	04-568-2
Carbon Disulfide, ug/kg	<5	<5
Dibromochloromethane, ug/kg	<5	<5
Ethylbenzene, ug/kg	<5	<5
Freon 113, ug/kg	<5	<5
Methyl ethyl ketone, ug/kg	<30	<30
Methyl isobutyl ketone, ug/kg	<30	<30
Methylene chloride, ug/kg	<5	<5
Styrene, ug/kg	<5	<5
Trichloroethene, ug/kg	<5	<5
Trichlorofluoromethane, ug/kg	<5	<5
Toluene, ug/kg	<5	<5
Tetrachloroethene, ug/kg	<5	<5
Vinyl acetate, ug/kg	<50	<50
Vinyl chloride, ug/kg	<5	<5
Total Xylene Isomers, ug/kg	<5	<5
cis-1,2-Dichloroethene, ug/kg	<5	<5
cis-1,3-Dichloropropene, ug/kg	<5	<5
trans-1,2-Dichloroethene, ug/kg	<5	<5
trans-1,3-Dichloropropene, ug/kg	<5	<5
Other Vol.Pri.Poll. (EPA-8240)	---	---

Jeffrey A. Erion, Laboratory Manager

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Analytical Report

LOG NO: G91-04-633

Received: 29 APR 91

Mailed: MAY 3 1991

Mr. R. Cavagrotti
Meredith Boli & Associates
6701 Center Drive West
Los Angeles, CA 90045-1535

Project: OSCO Chem Waste Mgmt.

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
04-633-1	B-6-191	25 APR 91

PARAMETER	04-633-1
Vol.Pri.Poll. (EPA-8240)	
Date Analyzed	05/01/91
Dilution Factor, Times 1	1
1,1,1-Trichloroethane, ug/kg	<5
1,1,2,2-Tetrachloroethane, ug/kg	<5
1,1,2-Trichloroethane, ug/kg	<5
1,1-Dichloroethane, ug/kg	<5
1,1-Dichloroethene, ug/kg	<5
1,2-Dichloroethane, ug/kg	<5
1,2-Dichlorobenzene, ug/kg	<5
1,2-Dichloropropane, ug/kg	<5
1,3-Dichlorobenzene, ug/kg	<5
1,4-Dichlorobenzene, ug/kg	<5
2-Chloroethylvinylether, ug/kg	<5
2-Hexanone, ug/kg	<30
Acetone, ug/kg	<50
Acrolein, ug/kg	<300
Acrylonitrile, ug/kg	<300
Bromodichloromethane, ug/kg	<5
Bromomethane, ug/kg	<5
Benzene, ug/kg	<5
Bromoform, ug/kg	<5
Chlorobenzene, ug/kg	<5
Carbon Tetrachloride, ug/kg	<5
Chloroethane, ug/kg	<5
Chloroform, ug/kg	<5
Chloromethane, ug/kg	<5
Carbon Disulfide, ug/kg	<5

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Analytical Report

LOG NO: G91-04-633

Received: 29 APR 91

Mr. R. Cavagrotti
Meredith Boli & Associates
6701 Center Drive West
Los Angeles, CA 90045-1535

Project: OSCO Chem Waste Mgmt.

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
04-633-1	B-6-191	25 APR 91

PARAMETER	04-633-1
Dibromochloromethane, ug/kg	<5
Ethylbenzene, ug/kg	<5
Freon 113, ug/kg	<5
Methyl ethyl ketone, ug/kg	<30
Methyl isobutyl ketone, ug/kg	<30
Methylene chloride, ug/kg	<5
Styrene, ug/kg	<5
Trichloroethene, ug/kg	<5
Trichlorofluoromethane, ug/kg	<5
Toluene, ug/kg	<5
Tetrachloroethene, ug/kg	<5
Vinyl acetate, ug/kg	<50
Vinyl chloride, ug/kg	<5
Total Xylene Isomers, ug/kg	<5
cis-1,2-Dichloroethene, ug/kg	<5
cis-1,3-Dichloropropene, ug/kg	<5
trans-1,2-Dichloroethene, ug/kg	<5
trans-1,3-Dichloropropene, ug/kg	<5
Other Vol.Pri.Poll. (EPA-8240)	---

Jeffrey A. Erion, Laboratory Manager

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

BORING B-8

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

13-FEB-91

MEREDITH/BOLI
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RON CAVAGROTTI

BATCH: B502
ANALYSES: 8010,8020

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B021191-001/008.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

David Kammerer
REVIEWED AND APPROVED

2-14-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RON CAVAGROTTI

Project: 90-211

Analysis No.: M-B021191-001/008
Date Sampled: 11-FEB-1991
Date Sample Rec'd: 11-FEB-1991
Date Analyzed: 11-FEB-1991
Sample Type: SOLID

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
B-8-1 4'	ND(5)	ND(5)	ND(5)	ND(15)
B-8-2 9'	ND(5)	ND(5)	ND(5)	ND(15)
B-8-3 14'	ND(5)	ND(5)	ND(5)	ND(15)
B-8-4 19'	ND(5)	ND(5)	ND(5)	ND(15)
B-8-5 30'	ND(5)	ND(5)	ND(5)	ND(15)
B-8-6 40'	ND(5)	ND(5)	ND(5)	ND(15)
B-8-7 50'	ND(5)	ND(5)	ND(5)	ND(15)
B-8-8 55'	ND(5)	ND(5)	ND(5)	ND(15)
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RON CAVAGROTTI

Analysis No.: M-B021191-001
Date Sampled: 11-FEB-1991
Date Sample Rec'd: 11-FEB-1991
Sample Type: SOLID
Date Prepared: 11-FEB-1991
Prep Method: EPA 8010 By: PT
Date Analyzed: 11-FEB-1991 By: PT

Project: 90-211
Sample ID: B-8-1 4'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RON CAVAGROTTI

Analysis No.: M-B021191-002
Date Sampled: 11-FEB-1991
Date Sample Rec'd: 11-FEB-1991
Sample Type: SOLID
Date Prepared: 11-FEB-1991
Prep Method: EPA 8010 By: PT
Date Analyzed: 11-FEB-1991 By: PT

Project: 90-211
Sample ID: B-8-2 9'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RON CAVAGROTTI

Analysis No.: M-B021191-003
Date Sampled: 11-FEB-1991
Date Sample Rec'd: 11-FEB-1991
Sample Type: SOLID
Date Prepared: 11-FEB-1991
Prep Method: EPA 8010 By: PT
Date Analyzed: 11-FEB-1991 By: PT

Project: 90-211
Sample ID: B-8-3 14'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RON CAVAGROTTI

Analysis No.: M-B021191-004
Date Sampled: 11-FEB-1991
Date Sample Rec'd: 11-FEB-1991
Sample Type: SOLID
Date Prepared: 11-FEB-1991
Prep Method: EPA 8010 By: PT
Date Analyzed: 11-FEB-1991 By: PT

Project: 90-211
Sample ID: B-8-4 19'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RON CAVAGROTTI

Analysis No.: M-B021191-005
Date Sampled: 11-FEB-1991
Date Sample Rec'd: 11-FEB-1991
Sample Type: SOLID
Date Prepared: 11-FEB-1991
Prep Method: EPA 8010 By: PT
Date Analyzed: 11-FEB-1991 By: PT

Project: 90-211
Sample ID: B-8-5 30'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RON CAVAGROTTI

Analysis No.: M-B021191-006
Date Sampled: 11-FEB-1991
Date Sample Rec'd: 11-FEB-1991
Sample Type: SOLID
Date Prepared: 11-FEB-1991
Prep Method: EPA 8010 By: PT
Date Analyzed: 11-FEB-1991 By: PT

Project: 90-211
Sample ID: B-8-6 40'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	24	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RON CAVAGROTTI

Analysis No.: M-B021191-007
Date Sampled: 11-FEB-1991
Date Sample Rec'd: 11-FEB-1991
Sample Type: SOLID
Date Prepared: 11-FEB-1991
Prep Method: EPA 8010 By: PT
Date Analyzed: 11-FEB-1991 By: PT

Project: 90-211
Sample ID: B-8-7 50'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	6	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RON CAVAGROTTI

Analysis No.: M-B021191-008
Date Sampled: 11-FEB-1991
Date Sample Rec'd: 11-FEB-1991
Sample Type: SOLID
Date Prepared: 11-FEB-1991
Prep Method: EPA 8010 By: PT
Date Analyzed: 11-FEB-1991 By: PT

Project: 90-211
Sample ID: B-8-8 55'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RON CAVAGROTTI
Project: 90-211

Analysis No.: M-B021191-001/008
Date Sampled: 11-FEB-1991
Date Sample Rec'd: 11-FEB-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B021191-006	1,1-DICHLOROETHENE (EPA 8010)	ug/kg	24	87.5	86.4	100	64	62	63	2
B021191-006	CHLOROFORM (EPA 8010)	ug/kg	ND	114	93.0	100	114	93	104	20
B021191-006	BROMODICHLOROMETHANE (EPA 8010)	ug/kg	ND	110	105	100	110	105	108	5
B021191-006	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	107	110	100	107	110	109	3
B021191-006	CHLOROBENZENE (EPA 8010)	ug/kg	ND	102	103	100	102	103	103	1
B021191-006	BENZENE (EPA 8020)	ug/kg	ND	85.9	87.9	100	86	88	87	2
B021191-006	TOLUENE (EPA 8020)	ug/kg	ND	79.1	80.7	100	79	81	80	2
B021191-006	ETHYLBENZENE (EPA 8020)	ug/kg	ND	83.6	84.6	100	84	85	84	1
B021191-006	XYLENES, TOTAL (EPA 8020)	ug/kg	ND	84.3	85.5	100	84	86	85	1

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B021191-006	11-FEB-1991	1,1-DICHLOROETHENE (EPA 8010)	M-B021191-001
			M-B021191-002
			M-B021191-003
			M-B021191-004
			M-B021191-005
			M-B021191-006
			M-B021191-007
			M-B021191-008
		CHLOROFORM (EPA 8010)	M-B021191-001
			M-B021191-002
			M-B021191-003
			M-B021191-004
			M-B021191-005
			M-B021191-006
			M-B021191-007
			M-B021191-008
		BROMODICHLOROMETHANE (EPA 8010)	M-B021191-001
			M-B021191-002
			M-B021191-003
			M-B021191-004
			M-B021191-005
			M-B021191-006
			M-B021191-007
			M-B021191-008
		TRICHLOROETHENE (EPA 8010)	M-B021191-001
			M-B021191-002
			M-B021191-003
			M-B021191-004
			M-B021191-005
			M-B021191-006
			M-B021191-007
			M-B021191-008
		CHLOROBENZENE (EPA 8010)	M-B021191-001
			M-B021191-002
			M-B021191-003
			M-B021191-004
			M-B021191-005
			M-B021191-006
			M-B021191-007
			M-B021191-008
		BENZENE (EPA 8020)	M-B021191-001
			M-B021191-002
			M-B021191-003

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
		TOLUENE (EPA 8020)	M-B021191-004
			M-B021191-005
			M-B021191-006
			M-B021191-007
			M-B021191-008
			M-B021191-001
			M-B021191-002
			M-B021191-003
			M-B021191-004
			M-B021191-005
			M-B021191-006
			M-B021191-007
			M-B021191-008
		ETHYLBENZENE (EPA 8020)	M-B021191-001
			M-B021191-002
			M-B021191-003
			M-B021191-004
			M-B021191-005
			M-B021191-006
			M-B021191-007
			M-B021191-008
		XYLENES, TOTAL (EPA 8020)	M-B021191-001
			M-B021191-002
			M-B021191-003
			M-B021191-004
			M-B021191-005
			M-B021191-006
			M-B021191-007
			M-B021191-008

CHAIN OF CUSTODY RECORD

BCA Log Number _____

Client name: Meredith Boli / Associates Inc
Project or PO#: 90-211
Address: 6701 Center Drive West, Suite 900
Phone #: (213) 670-9221
City, State, Zip: Los Angeles, CA 90045-1535
Report attention: RON CAVAGROTTI

Analyses required

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sampled by / Sample description	Number of containers	8010	8020							Hazardous sample Special handling required	Remarks
B-8-1	2/11/91	1005	SO	4' (Boring 8)	1	1	1								B021091-1
B-8-2	2/11/91	1020	SO	9' "	1	1	1								-2
B-8-3	2/11/91	1030	SO	14' "	1	1	1								-3
B-8-4	2/11/91	1045	SO	19' "	1	1	1								-4
B-8-5	2/11/91	1106	SO	30' "	1	1	1								-5
B-8-6	2/11/91	1122	SO	40' "	1	1	1								-6
B-8-7	2/11/91	1322	SO	50' "	1	1	1								-7
B-8-8	2/11/91	1345	SO	55' "	1	1	1								-8

	Signature	Print Name	Company	Date	Time
Relinquished by	Mark T. Noonan	MARK T. NOONAN	Knight Resold and Co	2/11/91	1414
Received by					
Relinquished by					
Received by					
Relinquished by					
Received by Laboratory	Phillip Toy	PHILLIP TOY	ENSECO - CRL	2-11-91	14:14

B C ANALYTICAL

- ☐ 1255 Powell Street, Emeryville, CA 94608 (415) 428-2300
- ☐ 801 Western Avenue, Glendale, CA 91201 (818) 247-5737
- ☐ 1200 Pacifico Avenue, Anaheim, CA 92805 (714) 978-0113

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.

Disposal arrangements: _____

*KEY: AQ—Aqueous NA—Nonaqueous SL—Sludge GW—Groundwater SO—Soil OT—Other PE—Petroleum

BORING B-8R

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

RECEIVED Enseco
FEB 19 1991
M/B & A

15-FEB-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: B503
ANALYSES: 8010,8020

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B021291-001/010.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

Phillip Tay
REVIEWED AND APPROVED

2-15-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RON CAVAGROTTI

Project: 90-211

Analysis No.: M-B021291-001/010
Date Sampled: 12-FEB-1991
Date Sample Rec'd: 12-FEB-1991
Date Analyzed: 12-FEB-1991
Sample Type: SOLID

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
4' BORING 8R	ND(5)	ND(5)	ND(5)	ND(15)
9' BORING 8R	ND(5)	ND(5)	ND(5)	ND(15)
19' BORING 8R	ND(5)	ND(5)	ND(5)	ND(15)
35' BORING 8R	ND(5)	ND(5)	ND(5)	ND(15)
37' BORING 8R	ND(5)	ND(5)	ND(5)	ND(15)
51' BORING 8R	ND(5)	ND(5)	ND(5)	ND(15)
45' BORING 8R	ND(5)	ND(5)	ND(5)	ND(15)
53' BORING 8R	ND(5)	ND(5)	ND(5)	ND(15)
B-8R-13 @ 64'	ND(5)	ND(5)	ND(5)	ND(15)
B-8R-14 @ 70'	ND(5)	ND(5)	ND(5)	ND(15)
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RON CAVAGROTTI

Analysis No.: M-B021291-001
Date Sampled: 12-FEB-1991
Date Sample Rec'd: 12-FEB-1991
Sample Type: SOLID
Date Prepared: 12-FEB-1991
Prep Method: EPA 8010 By: PN
Date Analyzed: 12-FEB-1991 By: PN

Project: 90-211
Sample ID: 4' BORING 8R

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RON CAVAGROTTI

Analysis No.: M-B021291-002
Date Sampled: 12-FEB-1991
Date Sample Rec'd: 12-FEB-1991
Sample Type: SOLID
Date Prepared: 12-FEB-1991
Prep Method: EPA 8010 By: PN
Date Analyzed: 12-FEB-1991 By: PN

Project: 90-211
Sample ID: 9' BORING 8R

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RON CAVAGROTTI

Analysis No.: M-B021291-003
Date Sampled: 12-FEB-1991
Date Sample Rec'd: 12-FEB-1991
Sample Type: SOLID
Date Prepared: 12-FEB-1991
Prep Method: EPA 8010 By: PN
Date Analyzed: 12-FEB-1991 By: PN

Project: 90-211
Sample ID: 19' BORING 8R

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RON CAVAGROTTI

Analysis No.: M-B021291-004
Date Sampled: 12-FEB-1991
Date Sample Rec'd: 12-FEB-1991
Sample Type: SOLID
Date Prepared: 12-FEB-1991
Prep Method: EPA 8010 By: PN
Date Analyzed: 12-FEB-1991 By: PN

Project: 90-211
Sample ID: 35' BORING 8R

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RON CAVAGROTTI

Analysis No.: M-B021291-005
Date Sampled: 12-FEB-1991
Date Sample Rec'd: 12-FEB-1991
Sample Type: SOLID
Date Prepared: 12-FEB-1991
Prep Method: EPA 8010 By: PN
Date Analyzed: 12-FEB-1991 By: PN

Project: 90-211
Sample ID: 37' BORING 8R

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RON CAVAGROTTI

Analysis No.: M-B021291-006
Date Sampled: 12-FEB-1991
Date Sample Rec'd: 12-FEB-1991
Sample Type: SOLID
Date Prepared: 12-FEB-1991
Prep Method: EPA 8010 By: PN
Date Analyzed: 12-FEB-1991 By: PN

Project: 90-211
Sample ID: 51' BORING 8R

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RON CAVAGROTTI

Analysis No.: M-B021291-007
Date Sampled: 12-FEB-1991
Date Sample Rec'd: 12-FEB-1991
Sample Type: SOLID
Date Prepared: 12-FEB-1991
Prep Method: EPA 8010 By: PN
Date Analyzed: 12-FEB-1991 By: PN

Project: 90-211
Sample ID: 45' BORING 8R

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RON CAVAGROTTI

Analysis No.: M-B021291-008
Date Sampled: 12-FEB-1991
Date Sample Rec'd: 12-FEB-1991
Sample Type: SOLID
Date Prepared: 12-FEB-1991
Prep Method: EPA 8010 By: PN
Date Analyzed: 12-FEB-1991 By: PN

Project: 90-211
Sample ID: 53' BORING 8R

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

G91-02-315 2/19 ES

CHAIN OF CUSTODY RECORD

BCA Log Number ~~A91-097~~

Client name: Meredith Boli / Associates Inc	Project or PO#: 90-211
Address: 6701 Center Drive West, Suite 900	Phone #: (213) 670-9221
City, State, Zip: Los Angeles, CA 90045	Report attention: Ron Cavagrotti
Sampled by: Mark Noonan	

Analyses required

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sample description	Number of containers	8010	8020						Hazardous sample Special handling required	Remarks
B-8R-19	2-13-91	1017	SO	Boring 8R @ 90'	1	1	1							
B-8R-21	2-13-91	1442	SO	Boring 8R @ 102'	1	1	1				Rush			By Wed !
B-8R-15	2-13-91	0820	SO	Boring 8R @ 70'	1	1	1							
B-2R-11	2-15-91		SO	Boring 2R @ 77.5'	1	1	1							send directly to glendale lab. Please call Ron Cavagrotti to confirm rush request. ES 2/19

	Signature	Print Name	Company	Date	Time
Relinquished by	Mark T. Noonan	Mark T. Noonan	Knight Piesold	2-15-91	1941
Received by	Michael Bettencourt	Michael Bettencourt	BCA	2-15-91	1941
Relinquished by	Eric Strahan	E. Strahan	BCAL - Anaheim	2/19/91	10:30 am
Received by	[illegible]	[illegible]	BCA	2/19/91	1:18
Relinquished by	[illegible]		BCA	2/19/91	3:00
Received by Laboratory	[illegible]	Lee Ingvaldson	BCA	2-19-91	3:40 pm

B C ANALYTICAL

☐ 1255 Powell Street, Emeryville, CA 94608 (415) 428-2300

☐ 801 Western Avenue, Glendale, CA 91201 (818) 247-5737

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.

Disposal arrangements: _____

*KEY: AQ—Aqueous NA—Nonaqueous SL—Sludge GW—Groundwater SO—Soil OT—Other PE—Petroleum

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RON CAVAGROTTI

Analysis No.: M-B021291-009
Date Sampled: 12-FEB-1991
Date Sample Rec'd: 12-FEB-1991
Sample Type: SOLID
Date Prepared: 12-FEB-1991
Prep Method: EPA 8010 By: PN
Date Analyzed: 12-FEB-1991 By: PN

Project: 90-211
Sample ID: B-8R-13 @ 64'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	11	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RON CAVAGROTTI

Analysis No.: M-B021291-010
Date Sampled: 12-FEB-1991
Date Sample Rec'd: 12-FEB-1991
Sample Type: SOLID
Date Prepared: 12-FEB-1991
Prep Method: EPA 8010 By: PN
Date Analyzed: 12-FEB-1991 By: PN

Project: 90-211
Sample ID: B-8R-14 @ 70'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	7	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RON CAVAGROTTI
Project: 90-211

Analysis No.: M-B021291-001/010
Date Sampled: 12-FEB-1991
Date Sample Rec'd: 12-FEB-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B021291-003	1,1-DICHLOROETHENE (EPA 8010)	ug/kg	ND	120.	101.0	100	120	101	111	17
B021291-003	CHLOROFORM (EPA 8010)	ug/kg	ND	96.4	104.	100	96	104	100	8
B021291-003	BROMODICHLOROMETHANE (EPA 8010)	ug/kg	ND	113.	119.	100	113	119	116	13
B021291-003	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	95.6	103.	100	96	103	99	7
B021291-003	CHLOROBENZENE (EPA 8010)	ug/kg	ND	86.4	100.0	100	86	100	93	15
B021291-003	BENZENE (EPA 8020)	ug/kg	ND	86.6	92.4	100	87	92	90	7
B021291-003	TOLUENE (EPA 8020)	ug/kg	ND	87.8	97.3	100	88	97	93	10
B021291-003	ETHYLBENZENE (EPA 8020)	ug/kg	ND	84.3	90.9	100	84	91	88	8
B021291-003	XYLENES, TOTAL (EPA 8020)	ug/kg	ND	86.3	90.7	100	86	91	89	5

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B021291-003	12-FEB-1991	1,1-DICHLOROETHENE (EPA 8010)	M-B021291-001
			M-B021291-002
			M-B021291-003
			M-B021291-004
			M-B021291-005
			M-B021291-006
			M-B021291-007
			M-B021291-008
			M-B021291-009
			M-B021291-010
		CHLOROFORM (EPA 8010)	M-B021291-001
			M-B021291-002
			M-B021291-003
			M-B021291-004
			M-B021291-005
			M-B021291-006
			M-B021291-007
			M-B021291-008
			M-B021291-009
			M-B021291-010
		BROMODICHLOROMETHANE (EPA 8010)	M-B021291-001
			M-B021291-002
			M-B021291-003
			M-B021291-004
			M-B021291-005
			M-B021291-006
			M-B021291-007
			M-B021291-008
			M-B021291-009
			M-B021291-010
		TRICHLOROETHENE (EPA 8010)	M-B021291-001
			M-B021291-002
			M-B021291-003
			M-B021291-004
			M-B021291-005
			M-B021291-006
			M-B021291-007
			M-B021291-008
			M-B021291-009
			M-B021291-010
		CHLOROBENZENE (EPA 8010)	M-B021291-001
			M-B021291-002
			M-B021291-003
			M-B021291-004
			M-B021291-005
			M-B021291-006
			M-B021291-007
			M-B021291-008
			M-B021291-009
			M-B021291-010

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
		BENZENE (EPA 8020)	M-B021291-001
			M-B021291-002
			M-B021291-003
			M-B021291-004
			M-B021291-005
			M-B021291-006
			M-B021291-007
			M-B021291-008
			M-B021291-009
			M-B021291-010
		TOLUENE (EPA 8020)	M-B021291-001
			M-B021291-002
			M-B021291-003
			M-B021291-004
			M-B021291-005
			M-B021291-006
			M-B021291-007
			M-B021291-008
			M-B021291-009
			M-B021291-010
		ETHYLBENZENE (EPA 8020)	M-B021291-001
			M-B021291-002
			M-B021291-003
			M-B021291-004
			M-B021291-005
			M-B021291-006
			M-B021291-007
			M-B021291-008
			M-B021291-009
			M-B021291-010
		XYLENES, TOTAL (EPA 8020)	M-B021291-001
			M-B021291-002
			M-B021291-003
			M-B021291-004
			M-B021291-005
			M-B021291-006
			M-B021291-007
			M-B021291-008
			M-B021291-009
			M-B021291-010

CHAIN OF CUSTODY RECORD

BCA Log Number _____

Client name: Meredith/Boli Associates, Inc
Project or PO#: 90-211
Address: 6701 Center Drive West, Suite 900
Phone #: (213) 670-9221
City, State, Zip: Los Angeles, CA 90045-1535
Report attention: Ron Caragrotti
Sampled by: Mark Noonan

Analyses required: 8010, 8020, Hazardous sample Special handling required

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sample description	Number of containers	8010	8020							Remarks
B-BR-1	2-12-91		SO	4' Boring 8R	1	1	1							B021291-1
B-BR-2	2-12-91		SO	9' "	1	1	1							-2
B-BR-4	2-12-91	0900	SO	19' "	1	1	1							-3
B-BR-7	2-12-91	1050	SO	35' "	1	1	1							-4
B-BR-8	2-12-91	1106	SO	37'										-5

	Signature	Print Name	Company	Date	Time
Relinquished by	Mark T. Noonan	Mark T. Noonan	Knight Piesold and CO	2-12-91	11:45
Received by					
Relinquished by					
Received by					
Relinquished by					
Received by Laboratory	Phillip Toy	PHILLIP TOY	ENSECO - CRL	2-12-95	11:45

B C ANALYTICAL
1255 Powell Street, Emeryville, CA 94608 (415) 428-2300

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.

*KEY: AQ—Aqueous NA—Nonaqueous SL—Sludge GW—Groundwater SO—Soil OT—Other PE—Petroleum

CHAIN OF CUSTODY RECORD

BCA Log Number _____

Client name: Meredith/Boli and Associates, Inc	Project or PO#: 90-211
Address: 6701 Center Drive West, Suite 900	Phone #: (213) 670-9221
City, State, Zip: Los Angeles, CA 90045-1535	Report attention: Ron Cavagrotti

Analyses required: 8010, 4020

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sampled by / Sample description	Number of containers	8010	4020						Hazardous sample Special handling required	Remarks
B-8R-9	2-12-91	1126	SO	45' Boring B-8R	1	1	1							B021291-6
B8R-10 MTN	2-12-91	1340	SO	51' "	1	1	1							-7
B-8R-12	2-12-91	1354	SO	53' "	2	1	1							-8

	Signature	Print Name	Company	Date	Time
Relinquished by	Mark T. Noonan	MARK T. NOONAN	Knight Piesold + CO	2-12-91	1506
Received by					
Relinquished by					
Received by					
Relinquished by					
Received by Laboratory	Phillip Toy	PHILLIP TOY	ENSECO-CRL	2-12-91	15:10

B C ANALYTICAL

- ☐ 1255 Powell Street, Emeryville, CA 94608 (415) 428-2300
- ☐ 801 Western Avenue, Glendale, CA 91201 (818) 247-5737
- ☐ 1200 Pacifico Avenue, Anaheim, CA 92805 (714) 978-0113

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.

Disposal arrangements: _____

*KEY: AQ—Aqueous NA—Nonaqueous SL—Sludge GW—Groundwater SO—Soil OT—Other PE—Petroleum

Enseco
A CORNING Company

☐ 7440 Lincoln Way, Garden Grove, CA 92641, (714) 89[illegible]
☐ 2810 Bunsen Ave., Unit A Ventura, CA 93003, (805) 650-[illegible]46
☐ 2325 Skyway Dr., Unit K, Santa Maria, CA 93455, (805) 922-2776
☐ 9537 Telstar Ave., Unit 118, El Monte, CA 91731, (818) 442-8400
☒ Mobile Labs, (800) ENSECO-8

CHAIN OF CUSTODY CORD

Date 2-12-91 Page 1 of 1

Lab Number 2

CLIENT Meredith/Boll Associates, Inc
ADDRESS 6701 Center Drive West, Suite 900
Los Angeles, CA 90045-1535
PROJECT NAME Oscolchem Waste, Azusa
CONTRACT / PURCHASE ORDER / QUOTE # 90-211

PROJECT MANAGER Ron Cavagrotti
PHONE NUMBER (213) 670-9221
SITE CONTACT Mike Clad

ANALYSES

Sample No. / Identification	Date	Time	Lab Sample Number	SAMPLE TYPE LIQ.	AIR	SOLID	No. of Containers	8010	8020						Sample Condition/ REMARKS
B-8R-13 @ 64'	2-12	16:30	B021291-9			X	1	1	1						
B-8R-14 @ 70'	2-12	↓	-10			X	1	1	1						

SAMPLERS: (Signature) [illegible] T. [illegible]

Received by: (Signature) | Date | Time

Relinquished by: (Signature) | Received by: (Signature) | Date | Time

The delivery of samples and the signature on this chain of custody form constitutes authorization to perform the analyses specified above under the Enseco Terms and Conditions, unless a contract or purchase order has been executed and is cited above.

Relinquished by: (Signature) | Date | Time | Received for Laboratory by: Phillip 2 Zg | Date RECEIVED 2-12-91 | Time 16:35 | Date ACCEPTED | Time

Method of Shipment:

Special Instructions:

SAMPLE DISPOSITION:
1. Storage time requested: _____ days
(Samples will be stored for 30 days without additional charges; thereafter storage charges will be billed at the published rates.)
2. Sample to be returned to client: Y N
(Enseco will dispose of unreturned samples at no extra charge. Disposal will be by incineration wherever possible; otherwise, as appropriate, according to legal requirements.)

DISTRIBUTION: White with report, Yellow to Enseco, Pink to Courier, Gold to Sample Control

8 R

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

RECEIVED
FEB 23 1991
M/B & A

20-FEB-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: B504
ANALYSES: 8010,8020

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B021391-001/008.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

REVIEWED AND APPROVED

2/22/91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Project: 90-211

Analysis No.: M-B021391-001/008
Date Sampled: 13-FEB-1991
Date Sample Rec'd: 13-FEB-1991
Date Analyzed: 13-FEB-1991
Sample Type: SOLID

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
B-8R-15 70'	ND(5)	ND(5)	ND(5)	ND(15)
B-8R-16 75.5'	ND(5)	ND(5)	ND(5)	ND(15)
B-8R-17 80'	ND(5)	ND(5)	ND(5)	ND(15)
B-8R-17D 80'	ND(5)	ND(5)	ND(5)	ND(15)
B-8R-18 85'	ND(5)	ND(5)	ND(5)	ND(15)
B-8R-19 90'	ND(5)	ND(5)	ND(5)	ND(15)
B-8R-20 96'	ND(5)	ND(5)	ND(5)	ND(15)
B-8R-21 102'	ND(5)	ND(5)	ND(5)	ND(15)
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B021391-001
Date Sampled: 13-FEB-1991
Date Sample Rec'd: 13-FEB-1991
Sample Type: SOLID
Date Prepared: 13-FEB-1991
Prep Method: EPA 8010 By: PT
Date Analyzed: 13-FEB-1991 By: PT

Project: 90-211
Sample ID: B-8R-15 70'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B021391-002
Date Sampled: 13-FEB-1991
Date Sample Rec'd: 13-FEB-1991
Sample Type: SOLID
Date Prepared: 13-FEB-1991
Prep Method: EPA 8010 By: PT
Date Analyzed: 13-FEB-1991 By: PT

Project: 90-211
Sample ID: B-8R-16 75.5'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	8	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	33	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B021391-003
Date Sampled: 13-FEB-1991
Date Sample Rec'd: 13-FEB-1991
Sample Type: SOLID
Date Prepared: 13-FEB-1991
Prep Method: EPA 8010 By: PT
Date Analyzed: 13-FEB-1991 By: PT

Project: 90-211
Sample ID: B-8R-17 80'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B021391-004
Date Sampled: 13-FEB-1991
Date Sample Rec'd: 13-FEB-1991
Sample Type: SOLID
Date Prepared: 13-FEB-1991
Prep Method: EPA 8010 By: PT
Date Analyzed: 13-FEB-1991 By: PT

Project: 90-211
Sample ID: B-8R-17D 80'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B021391-005
Date Sampled: 13-FEB-1991
Date Sample Rec'd: 13-FEB-1991
Sample Type: SOLID
Date Prepared: 13-FEB-1991
Prep Method: EPA 8010 By: PT
Date Analyzed: 13-FEB-1991 By: PT

Project: 90-211
Sample ID: B-8R-18 85'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B021391-006
Date Sampled: 13-FEB-1991
Date Sample Rec'd: 13-FEB-1991
Sample Type: SOLID
Date Prepared: 13-FEB-1991
Prep Method: EPA 8010 By: PT
Date Analyzed: 13-FEB-1991 By: PT

Project: 90-211
Sample ID: B-8R-19 90'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B021391-007
Date Sampled: 13-FEB-1991
Date Sample Rec'd: 13-FEB-1991
Sample Type: SOLID
Date Prepared: 13-FEB-1991
Prep Method: EPA 8010 By: PT
Date Analyzed: 13-FEB-1991 By: PT

Project: 90-211
Sample ID: B-8R-20 96'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B021391-008
Date Sampled: 13-FEB-1991
Date Sample Rec'd: 13-FEB-1991
Sample Type: SOLID
Date Prepared: 13-FEB-1991
Prep Method: EPA 8010 By: PT
Date Analyzed: 13-FEB-1991 By: PT

Project: 90-211
Sample ID: B-8R-21 102'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	16	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B021391-001/008
Date Sampled: 13-FEB-1991
Date Sample Rec'd: 13-FEB-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B021391-006	1,1-DICHLOROETHANE (EPA 8010)	ug/kg	ND	105.1	102.6	100	105	102	103	3
B021391-006	CHLOROFORM (EPA 8010)	ug/kg	ND	108.4	113.8	100	108	114	111	5
B021391-006	1,2-DICHLOROETHANE (EPA 8010)	ug/kg	ND	114.0	117.8	100	114	118	116	3
B021391-006	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	119.3	123.2	100	119	123	121	3
B021391-006	TETRACHLOROETHENE (EPA 8010)	ug/kg	ND	116.4	120.8	100	116	121	119	4
B021391-006	BENZENE (EPA 8020)	mg/kg	ND	98.2	103	100	98	103	101	5
B021391-006	TOLUENE (EPA 8020)	mg/kg	ND	99.6	104	100	100	104	102	4
B021391-006	ETHYLBENZENE (EPA 8020)	mg/kg	ND	95.5	99.6	100	96	100	98	4
B021391-006	XYLENES, TOTAL (EPA 8020)	mg/kg	ND	95.6	98.4	100	96	98	97	3

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B021391-006	13-FEB-1991	1,1-DICHLOROETHENE (EPA 8010)	M-B021391-001
			M-B021391-002
			M-B021391-003
			M-B021391-004
			M-B021391-005
			M-B021391-006
			M-B021391-007
			M-B021391-008
		CHLOROFORM (EPA 8010)	M-B021391-001
			M-B021391-002
			M-B021391-003
			M-B021391-004
			M-B021391-005
			M-B021391-006
			M-B021391-007
			M-B021391-008
		1,2-DICHLOROETHANE (EPA 8010)	M-B021391-001
			M-B021391-002
			M-B021391-003
			M-B021391-004
			M-B021391-005
			M-B021391-006
			M-B021391-007
			M-B021391-008
		TRICHLOROETHENE (EPA 8010)	M-B021391-001
			M-B021391-002
			M-B021391-003
			M-B021391-004
			M-B021391-005
			M-B021391-006
			M-B021391-007
			M-B021391-008
		TETRACHLOROETHENE (EPA 8010)	M-B021391-001
			M-B021391-002
			M-B021391-003
			M-B021391-004
			M-B021391-005
			M-B021391-006
			M-B021391-007
			M-B021391-008
		BENZENE (EPA 8020)	M-B021391-001
			M-B021391-002
			M-B021391-003
			M-B021391-004
			M-B021391-005
			M-B021391-006
			M-B021391-007
			M-B021391-008
		TOLUENE (EPA 8020)	M-B021391-001
			M-B021391-002
			M-B021391-003

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
			M-B021391-004
			M-B021391-005
			M-B021391-006
			M-B021391-007
			M-B021391-008
		ETHYLBENZENE (EPA 8020)	M-B021391-001
			M-B021391-002
			M-B021391-003
			M-B021391-004
			M-B021391-005
			M-B021391-006
			M-B021391-007
			M-B021391-008
		XYLENES, TOTAL (EPA 8020)	M-B021391-001
			M-B021391-002
			M-B021391-003
			M-B021391-004
			M-B021391-005
			M-B021391-006
			M-B021391-007
			M-B021391-008

CHAIN OF CUSTODY RECORD

BCA Log Number _____

Client name: Meredith Boli/Associates, Inc.	Project or PO#: 90-211
Address: 6701 Center Drive West, Suite 900	Phone #: (213) 670-9221
City, State, Zip: Los Angeles, CA 90045-1335	Report attention: Ron Cavagrotti

Sampled by: Mark Noonan

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sample description	Number of containers	8010	8020						Hazardous sample Special handling required	Remarks
B-8R-15	2-13-91	0820	SO	B-8R @ 70'	2	1	1							B021391-1
B-8R-16	2-13-91	0840	SO	B-8R @ 75.5'	1	1	1							-2
B-8R-17	2-13-91	0915	SO	B-8R @ 80'	1	1	1							-3
B-8R-17Dup	2-13-91	0915	SO	B-8R@ 80'	1	1	1							-4
B-8R-18	2-13-91	0957	SO	B-8R@ 85'	1	1	1							-5
B-8R-19	2-13-91	1017	SO	B-8R@ 90'	3	1	1							-6
B-8R-20	2-13-91	1156	SO	B-8R@ 96'	1	1	1							-7

	Signature	Print Name	Company	Date	Time
Relinquished by	Mark T. Noonan	Mark T. Noonan	Knight Piesold and Co	2-13-91	1251
Received by					
Relinquished by					
Received by					
Relinquished by					
Received by Laboratory	Phillip L. Toy	PHILLIP L. TOY	ENSECO-CRL	2-13-91	12:55

B C ANALYTICAL

- ☐ 1255 Powell Street, Emeryville, CA 94608 (415) 428-2300
- ☐ 801 Western Avenue, Glendale, CA 91201 (818) 247-5737
- ☐ 1200 Pacifico Avenue, Anaheim, CA 92805 (714) 978-0113

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.

Disposal arrangements: _____

*KEY: AQ—Aqueous NA—Nonaqueous SL—Sludge GW—Groundwater SO—Soil OT—Other PE—Petroleum

CHAIN OF CUSTODY RECORD

BCA Log Number _____

Client name: Meredith Boli/Associates, Inc.

Project or PO#: 90-211

Address: 6701 Center Drive West, Suite 900

Phone #: (213) 670-9221

City, State, Zip: Los Angeles, CA 90045

Report attention: Ron Cavagrotti

Sampled by: Mark T. Noonan

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sample description	Number of containers	8010	8020						Hazardous sample Special handling required	Remarks
B-8R-2	2-13-91	1442	So	B-8R @ 102'	2	1	1							B021391-8

Analyses required

	Signature	Print Name	Company	Date	Time
Relinquished by	Mark T. Noonan	Mark T. Noonan	Knight Piesold and Co	2-13-91	1457
Received by					
Relinquished by					
Received by					
Relinquished by					

8r

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

27-FEB-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: B510
ANALYSES: 8010,8020

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B022291-001/001.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

Pat Kummer
REVIEWED AND APPROVED

2-27-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Project: 90-211

Analysis No.: M-B022291-001/001
Date Sampled: 22-FEB-1991
Date Sample Rec'd: 22-FEB-1991
Date Analyzed: 22-FEB-1991
Sample Type: SOLID

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
B-8R-24 122.5'	ND(5)	ND(5)	ND(5)	ND(15)
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B022291-001
Date Sampled: 22-FEB-1991
Date Sample Rec'd: 22-FEB-1991
Sample Type: SOLID
Date Prepared: 22-FEB-1991
Prep Method: EPA 8010 By: PN
Date Analyzed: 22-FEB-1991 By: PN

Project: 90-211
Sample ID: B-8R-24 122.5'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B022291-001
Date Sampled: 22-FEB-1991
Date Sample Rec'd: 22-FEB-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B022291-001	CHLOROFORM (EPA 8010)	ug/kg	ND	112	98.9	100	112	99	105	12
B022291-001	1,1,1-TRICHLOROETHANE (EPA 8010)	ug/kg	ND	96.5	93.6	100	97	94	95	3
B022291-001	BROMODICHLOROMETHANE (EPA 8010)	ug/kg	ND	104	107	100	104	107	106	3
B022291-001	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	104	106	100	104	106	105	2
B022291-001	CHLOROBENZENE (EPA 8010)	ug/kg	ND	106	103	100	106	103	105	3
B022291-001	BENZENE (EPA 8020)	ug/kg	ND	99.1	98.3	100	99	98	99	1
B022291-001	TOLUENE (EPA 8020)	ug/kg	ND	97.9	95.5	100	98	96	97	3
B022291-001	ETHYLBENZENE (EPA 8020)	ug/kg	ND	91.9	89.3	100	92	89	91	3
B022291-001	XYLENES, TOTAL (EPA 8020)	ug/kg	ND	96.2	96.7	100	96	97	96	1

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B022291-001	22-FEB-1991	CHLOROFORM (EPA 8010)	M-B022291-001
		1,1,1-TRICHLOROETHANE (EPA 8010)	M-B022291-001
		BROMODICHLOROMETHANE (EPA 8010)	M-B022291-001
		TRICHLOROETHENE (EPA 8010)	M-B022291-001
		CHLOROBENZENE (EPA 8010)	M-B022291-001
		BENZENE (EPA 8020)	M-B022291-001
		TOLUENE (EPA 8020)	M-B022291-001
		ETHYLBENZENE (EPA 8020)	M-B022291-001
		XYLENES, TOTAL (EPA 8020)	M-B022291-001

CHAIN OF CUSTODY RECORD

BCA Log Number _____

Client name: Meredith Boli/Associates, Inc
Project or PO#: 90-211
Address: 6701 Center Drive West, Suite 900
Phone #: (213) 670-9221
City, State, Zip: Los Angeles, CA 90045
Report attention: Ron Cavagrotti

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sampled by / Sample description	Number of containers	4010	4020						Hazardous sample Special handling required	Remarks
B-BR-24	2-22-91	0900	So	Boring 8R @ 122.5'	2	1	1							B022291-1

	Signature	Print Name	Company	Date	Time
Relinquished by	Mark T. Noonan	MARK T. NOONAN	Knight Piesold and Co	2-22-91	0930
Received by					
Relinquished by					
Received by					
Relinquished by					
Received by Laboratory	Philip Norton	PHILIP NORTON	ENSECO - CRL	2/22/91	9:30

B C ANALYTICAL

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.

*KEY: AQ—Aqueous NA—Nonaqueous SL—Sludge

8K

Enseco

Enseco - Mobile Laboratories
7440 Lincoln Way • Garden Grove, CA 92641
(714) 898-6370 • (800) ENSECO-8
FAX: (714) 893-6709

27-FEB-91

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE.900
LOS ANGELES, CA 90045-1535
ATTN: MR. RONALD CAVAGROTTI

BATCH: B509
ANALYSES: 8010,8020

PROJECT: 90-211

Enclosed with this letter is the report on the analyses performed on samples M-B022191-001/002.

The samples were received by Enseco intact and with the chain-of-custody record attached.

Please note that ND means not detected at the detection limit stated.

Pat Kammeres
REVIEWED AND APPROVED

2-27-91
DATE

The Report Cover Letter is an integral part of this report.
This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purposes without authorization is prohibited.

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Project: 90-211

Analysis No.: M-B022191-001/002
Date Sampled: 21-FEB-1991
Date Sample Rec'd: 21-FEB-1991
Date Analyzed: 21-FEB-1991
Sample Type: SOLID

Sample ID	Benzene ug/kg EPA 8020	Toluene ug/kg EPA 8020	Ethylbenzene ug/kg EPA 8020	Xylenes, Total ug/kg EPA 8020
B-8R-22 106'	ND(5)	ND(5)	ND(5)	ND(15)
B-8R-23 118'	ND(5)	ND(5)	ND(5)	ND(15)
Blank	ND(5)	ND(5)	ND(5)	ND(15)

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B022191-001
Date Sampled: 21-FEB-1991
Date Sample Rec'd: 21-FEB-1991
Sample Type: SOLID
Date Prepared: 21-FEB-1991
Prep Method: EPA 8010 By: PN
Date Analyzed: 21-FEB-1991 By: PN

Project: 90-211
Sample ID: B-8R-22 106'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI

Analysis No.: M-B022191-002
Date Sampled: 21-FEB-1991
Date Sample Rec'd: 21-FEB-1991
Sample Type: SOLID
Date Prepared: 21-FEB-1991
Prep Method: EPA 8010 By: PN
Date Analyzed: 21-FEB-1991 By: PN

Project: 90-211
Sample ID: B-8R-23 118'

Halogenated Volatile Organics (EPA 8010)

Units: ug/kg

Parameter	Sample Result	Sample RL	Blank Result	Blank RL
Chloromethane	ND	5	ND	5
Bromomethane	ND	5	ND	5
Vinyl Chloride	ND	5	ND	5
Chloroethane	ND	5	ND	5
Methylene Chloride	ND	5	ND	5
Trichlorofluoromethane	ND	5	ND	5
1,1-Dichloroethene	ND	5	ND	5
1,1-Dichloroethane	ND	5	ND	5
trans-1,2-Dichloroethene	ND	5	ND	5
Chloroform	ND	5	ND	5
1,2-Dichloroethane	ND	5	ND	5
1,1,1-Trichloroethane	ND	5	ND	5
Carbon Tetrachloride	ND	5	ND	5
Bromodichloromethane	ND	5	ND	5
1,2-Dichloropropane	ND	5	ND	5
cis-1,3-Dichloropropene	ND	5	ND	5
Trichloroethene	ND	5	ND	5
Dibromochloromethane	ND	5	ND	5
1,1,2-Trichloroethane	ND	5	ND	5
trans-1,3-Dichloropropene	ND	5	ND	5
2-Chloroethylvinyl ether	ND	5	ND	5
Bromoform	ND	5	ND	5
Tetrachloroethene	ND	5	ND	5
1,1,2,2-Tetrachloroethane	ND	5	ND	5
Chlorobenzene	ND	5	ND	5
1,3-Dichlorobenzene	ND	5	ND	5
1,2-Dichlorobenzene	ND	5	ND	5
1,4-Dichlorobenzene	ND	5	ND	5

Enseco
A Corning Company

Laboratory Report

MEREDITH/BOLI & ASSOCIATES, INC.
6701 CENTER DRIVE WEST, STE. 900
LOS ANGELES, CA 90045
ATTN: MR. RONALD CAVAGROTTI
Project: 90-211

Analysis No.: M-B022191-001/002
Date Sampled: 21-FEB-1991
Date Sample Rec'd: 21-FEB-1991
Sample Type: SOLID

Matrix Spike/Matrix Spike Duplicate Report

Sample Number	Parameter (Method)	Units	Observed Concentration Sample	MS	MSD	Amt. Spiked	% Recovery MS	MSD	Avg.	% RPD
B022191-001	CHLOROFORM (EPA 8010)	ug/kg	ND	103	91.4	100	103	91	97	12
B022191-001	1,2-DICHLOROETHANE (EPA 8010)	ug/kg	ND	93.6	87.6	100	94	88	91	7
B022191-001	BROMODICHLOROMETHANE (EPA 8010)	ug/kg	ND	98.3	87.7	100	98	88	93	11
B022191-001	TRICHLOROETHENE (EPA 8010)	ug/kg	ND	89.7	85.4	100	90	85	88	5
B022191-001	CHLOROBENZENE (EPA 8010)	ug/kg	ND	98.1	88.3	100	98	88	93	11
B022191-001	BENZENE (EPA 8020)	ug/kg	ND	92.8	89.9	100	93	90	91	3
B022191-001	TOLUENE (EPA 8020)	ug/kg	ND	92.5	88.5	100	93	89	91	4
B022191-001	ETHYLBENZENE (EPA 8020)	ug/kg	ND	91.0	86.6	100	91	87	89	5
B022191-001	XYLENES, TOTAL (EPA 8020)	ug/kg	ND	93.8	89.6	100	94	90	92	5

Enseco
A Corning Company

Matrix Spike/Matrix Spike Duplicate Report Cross-Reference

QC Batch	Date	Parameter (Method)	Sample Nos.
B022191-001	21-FEB-1991	CHLOROFORM (EPA 8010)	M-B022191-001
			M-B022191-002
		1,2-DICHLOROETHANE (EPA 8010)	M-B022191-001
			M-B022191-002
		BROMODICHLOROMETHANE (EPA 8010)	M-B022191-001
			M-B022191-002
		TRICHLOROETHENE (EPA 8010)	M-B022191-001
			M-B022191-002
		CHLOROBENZENE (EPA 8010)	M-B022191-001
			M-B022191-002
		BENZENE (EPA 8020)	M-B022191-001
			M-B022191-002
		TOLUENE (EPA 8020)	M-B022191-001
			M-B022191-002
		ETHYLBENZENE (EPA 8020)	M-B022191-001
			M-B022191-002
		XYLENES, TOTAL (EPA 8020)	M-B022191-001
			M-B022191-002

CHAIN OF CUSTODY RECORD

BCA Log Number _____

Client name: Meredith Boli / Associates, Inc	Project or PO#: 90-211
Address: 6701 Center Drive West, Suite 900	Phone #: (213) 670-9221
City, State, Zip: Los Angeles, CA 90045	Report attention: Ron Cavagrotti

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sampled by / Sample description	Number of containers	8010	8020					Hazardous sample Special handling required	Remarks
B-8R-2	2-21-91	1500	SO	B-8R @ 106'	3	1	1						B022191-1
B-8R-3	2-21-91	1630	SO	B-8R @ 118.0'	1	1	1						B022191-2

Analyses required

	Signature	Print Name	Company	Date	Time
Relinquished by	Mark T. Noonan	MARK T. NOONAN	Knight Piesold and Co	2-21-91	1645
Received by					
Relinquished by					
Received by					
Relinquished by					
Received by Laboratory	Philip Norton	PHILIP NORTON	ENSECO - CRL	2/21/91	16:45

B C ANALYTICAL

☐ 1255 Powell Street, Emeryville, CA 94608 (415) 428-2300

☐ 801 Western Avenue, Glendale, CA 91201 (818) 247-5737

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.

Disposal arrangements: _____

*KEY: AQ—Aqueous NA—Nonaqueous SL—Sludge GW—Groundwater SO—Soil OT—Other PE—Petroleum

Analytical Report

LOG NO: G91-02-315

Received: 19 FEB 91

Mailed: 3/6/91

Mr. Ron Cavagrotti
Meredith Boli & Associates
6701 Center Drive West
Los Angeles, CA 90045-1535

Project: 90-211

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
02-315-1	B-8R-21	13 FEB 91

PARAMETER	02-315-1
Lead, mg/kg	<10
Nitric Acid Digestion with HCl, Date	03/01/91

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Analytical Report

LOG NO: G91-02-315

Received: 19 FEB 91

Mr. Ron Cavagrotti
Meredith Boli & Associates
6701 Center Drive West
Los Angeles, CA 90045-1535

Project: 90-211

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
02-315-1	B-8R-21	13 FEB 91

PARAMETER	02-315-1
EPA Method 8010	
Date Analyzed	02/22/91
Date Confirmed	02/22/91
Dilution Factor, Times 1	1
1,1,1-Trichloroethane, ug/kg	<5
1,1,2,2-Tetrachloroethane, ug/kg	<5
1,1,2-Trichloroethane, ug/kg	<5
1,1-Dichloroethane, ug/kg	<5
1,1-Dichloroethene, ug/kg	<5
1,2-Dichloroethane, ug/kg	<5
1,2-Dichlorobenzene, ug/kg	<5
1,2-Dichloropropane, ug/kg	<5
1,3-Dichlorobenzene, ug/kg	<5
1,4-Dichlorobenzene, ug/kg	<5
2-Chloroethylvinylether, ug/kg	<5
Bromodichloromethane, ug/kg	<5
Bromomethane, ug/kg	<5
Bromoform, ug/kg	<5
Chlorobenzene, ug/kg	<5
Carbon Tetrachloride, ug/kg	<5
Chloroethane, ug/kg	<5
Chloroform, ug/kg	<5
Chloromethane, ug/kg	<5
Dibromochloromethane, ug/kg	<5
Dichlorodifluoromethane, ug/kg	<5
Freon 113, ug/kg	<5
Methylene chloride, ug/kg	<5
Trichloroethene, ug/kg	<5

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Analytical Report

LOG NO: G91-02-315

Received: 19 FEB 91

Mr. Ron Cavagrotti
Meredith Boli & Associates
6701 Center Drive West
Los Angeles, CA 90045-1535

Project: 90-211

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
02-315-1	B-8R-21	13 FEB 91

PARAMETER	02-315-1
Trichlorofluoromethane, ug/kg	<5
Tetrachloroethene, ug/kg	<5
Vinyl chloride, ug/kg	<5
cis-1,2-Dichloroethene, ug/kg	<5
cis-1,3-Dichloropropene, ug/kg	<5
trans-1,2-Dichloroethene, ug/kg	<5
trans-1,3-Dichloropropene, ug/kg	<5
Other EPA Method 8010	---
EPA Method 8020	
Date Analyzed	02/22/91
Date Confirmed	02/22/91
Dilution Factor, Times 1	1
1,2-Dichlorobenzene, ug/kg	<5
1,3-Dichlorobenzene, ug/kg	<5
1,4-Dichlorobenzene, ug/kg	<5
Benzene, ug/kg	<5
Chlorobenzene, ug/kg	<5
Ethylbenzene, ug/kg	<5
Toluene, ug/kg	<5
Total Xylene Isomers, ug/kg	<20
Other EPA Method 8020	---

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Analytical Report

LOG NO: G91-02-315

Received: 19 FEB 91

Mr. Ron Cavagrotti
Meredith Boli & Associates
6701 Center Drive West
Los Angeles, CA 90045-1535

Project: 90-211

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
02-315-2	B-8R-19	13 FEB 91
02-315-3	B-8R-15	13 FEB 91

PARAMETER	02-315-2	02-315-3
Lead, mg/kg	<10	<10
Nitric Acid Digestion with HCl, Date	03/01/91	03/01/91

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Analytical Report

LOG NO: G91-02-315

Received: 19 FEB 91

Mr. Ron Cavagrotti
Meredith Boli & Associates
6701 Center Drive West
Los Angeles, CA 90045-1535

Project: 90-211

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
02-315-2	B-8R-19	13 FEB 91
02-315-3	B-8R-15	13 FEB 91

PARAMETER	02-315-2	02-315-3
EPA Method 8010		
Date Analyzed	02/22/91	02/22/91
Date Confirmed	02/22/91	02/22/91
Dilution Factor, Times 1	1	1
1,1,1-Trichloroethane, ug/kg	<5	<5
1,1,2,2-Tetrachloroethane, ug/kg	<5	<5
1,1,2-Trichloroethane, ug/kg	<5	<5
1,1-Dichloroethane, ug/kg	<5	<5
1,1-Dichloroethene, ug/kg	<5	<5
1,2-Dichloroethane, ug/kg	<5	<5
1,2-Dichlorobenzene, ug/kg	<5	<5
1,2-Dichloropropane, ug/kg	<5	<5
1,3-Dichlorobenzene, ug/kg	<5	<5
1,4-Dichlorobenzene, ug/kg	<5	<5
2-Chloroethylvinylether, ug/kg	<5	<5
Bromodichloromethane, ug/kg	<5	<5
Bromomethane, ug/kg	<5	<5
Bromoform, ug/kg	<5	<5
Chlorobenzene, ug/kg	<5	<5
Carbon Tetrachloride, ug/kg	<5	<5
Chloroethane, ug/kg	<5	<5
Chloroform, ug/kg	<5	<5
Chloromethane, ug/kg	<5	<5
Dibromochloromethane, ug/kg	<5	<5
Dichlorodifluoromethane, ug/kg	<5	<5
Freon 113, ug/kg	<5	<5
Methylene chloride, ug/kg	<5	<5

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical

Analytical Report

LOG NO: G91-02-315

Received: 19 FEB 91

Mr. Ron Cavagrotti
Meredith Boli & Associates
6701 Center Drive West
Los Angeles, CA 90045-1535

Project: 90-211

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
02-315-2	B-8R-19	13 FEB 91
02-315-3	B-8R-15	13 FEB 91

PARAMETER	02-315-2	02-315-3
Trichloroethene, ug/kg	<5	<5
Trichlorofluoromethane, ug/kg	<5	<5
Tetrachloroethene, ug/kg	<5	<5
Vinyl chloride, ug/kg	<5	<5
cis-1,2-Dichloroethene, ug/kg	<5	<5
cis-1,3-Dichloropropene, ug/kg	<5	<5
trans-1,2-Dichloroethene, ug/kg	<5	<5
trans-1,3-Dichloropropene, ug/kg	<5	<5
Other EPA Method 8010	---	---
EPA Method 8020		
Date Analyzed	02/22/91	02/22/91
Date Confirmed	02/22/91	02/22/91
Dilution Factor, Times 1	1	1
1,2-Dichlorobenzene, ug/kg	<5	<5
1,3-Dichlorobenzene, ug/kg	<5	<5
1,4-Dichlorobenzene, ug/kg	<5	<5
Benzene, ug/kg	<5	<5
Chlorobenzene, ug/kg	<5	<5
Ethylbenzene, ug/kg	<5	<5
Toluene, ug/kg	<5	<5
Total Xylene Isomers, ug/kg	<20	<20
Other EPA Method 8020	---	---

801 Western Avenue
Glendale, CA 91201

818/247-5737
Fax: 818/247-9797

BCA B C Analytical