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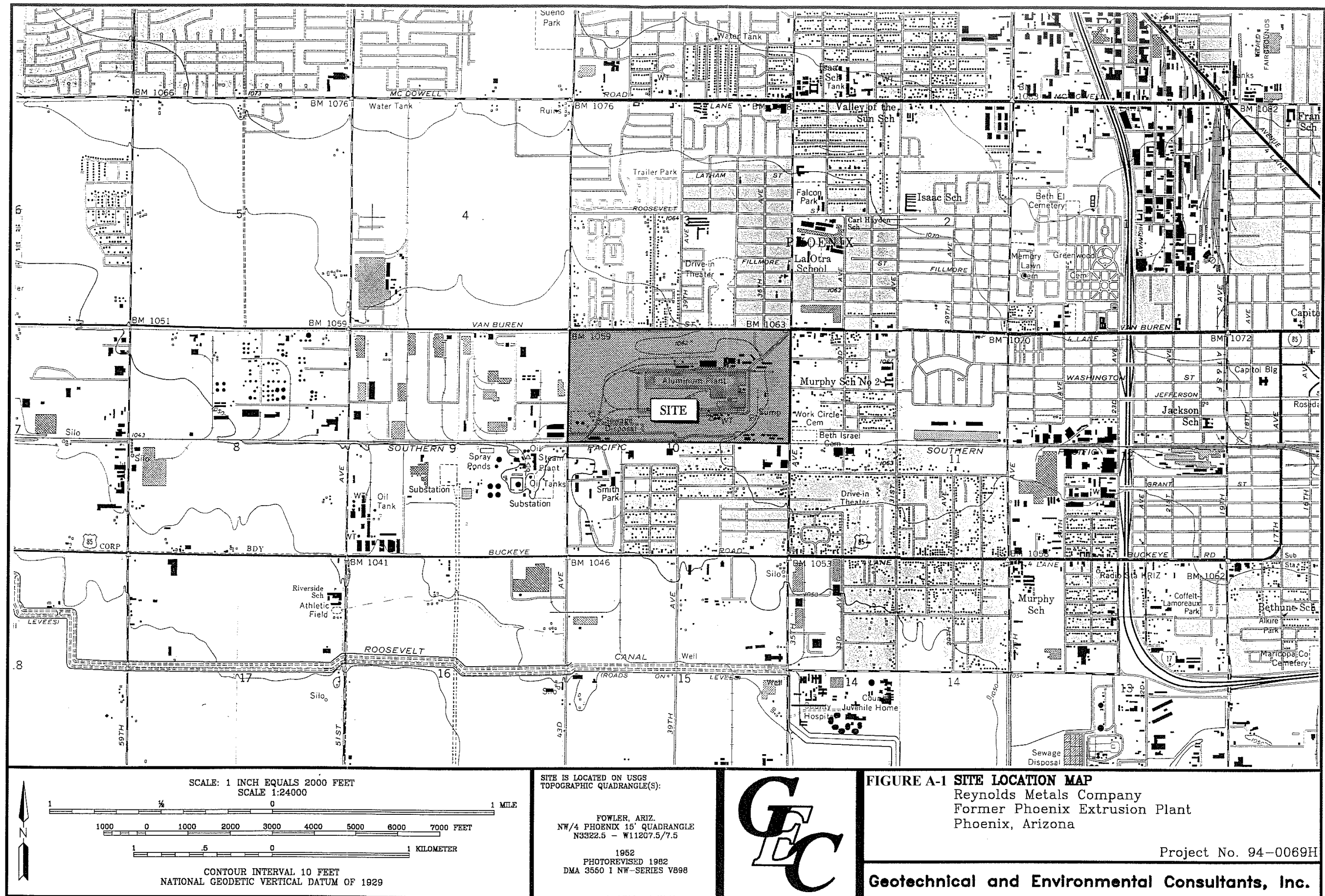
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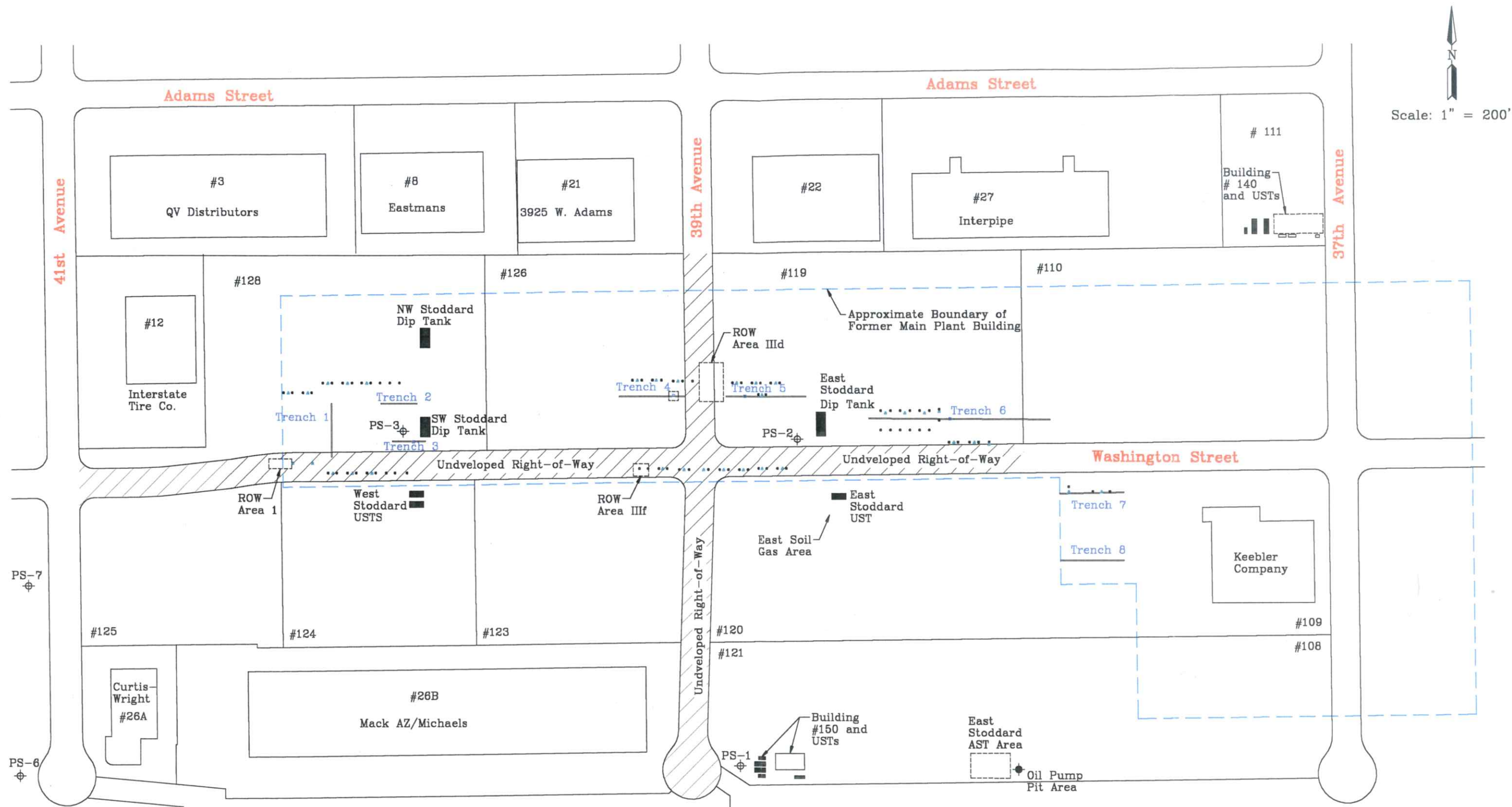
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LABORATORY REPORTS

Tracer Research Corporation Soil Gas Analyses
Terra Tech Labs Soil Gas Analyses
Metron Inc. Soil Gas Analyses
Geotechnical and Environmental Consultants, Inc. Pilot Test Data Soil Gas Analyses Tables
Analytical Technologies Inc. Soil Sample Analyses
Transwest Geochem, Inc. Soil Sample Analyses





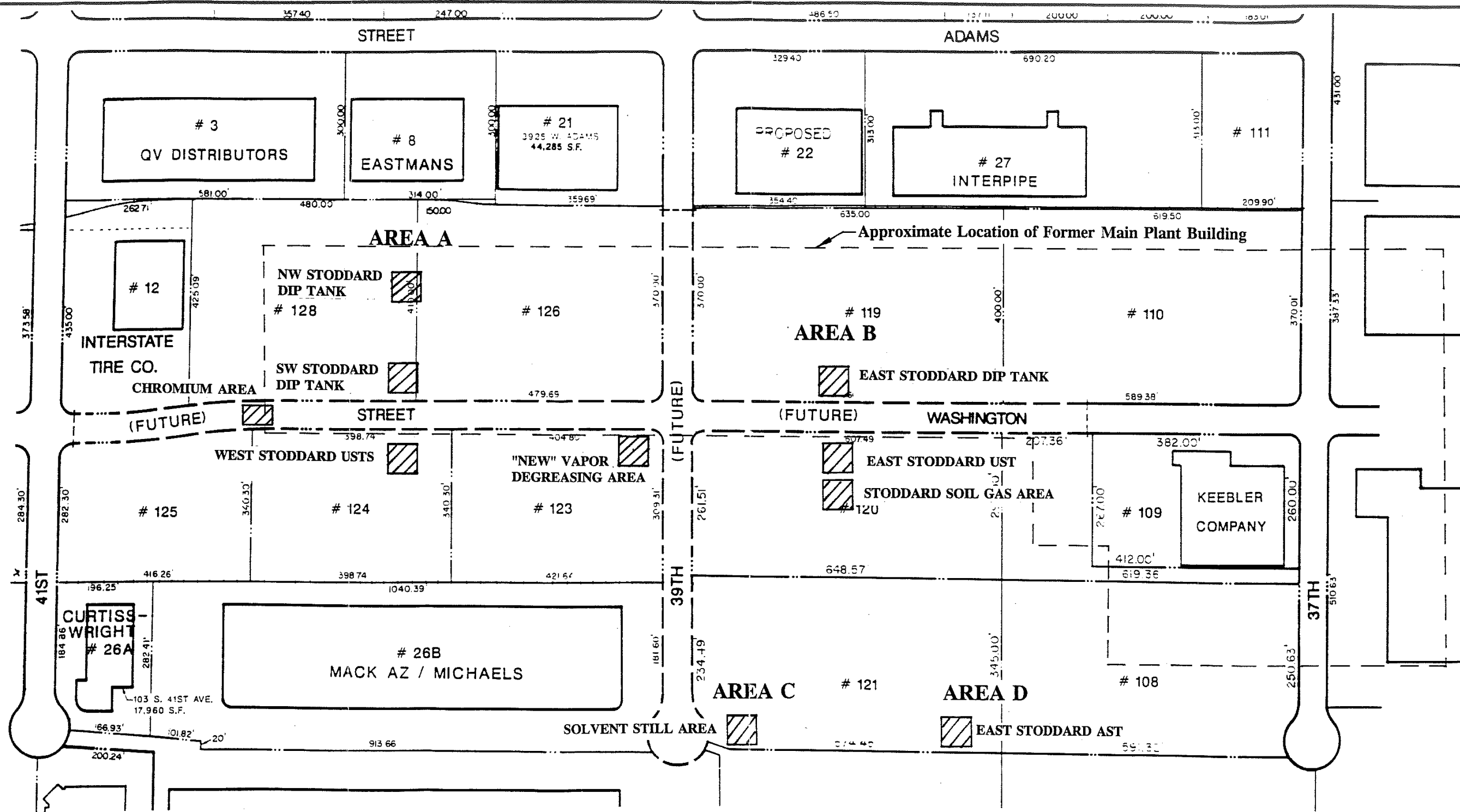
Scale: 1" = 200'

- Legend**
- Extent of Excavation
 - Equipment Foundation
 - Exploratory Trench Location
 - UST/Dip Tank Location
 - Groundwater Monitoring Wells
 - Equipment Foundation Soil Sample Location
 - Equipment Foundation Soil Gas Sample Location



SITE MAP FIGURE A-2
 Reynolds Metals Facility
 Former Phoenix Extrusion Plant
 Phoenix, Arizona

REYNOLDS METALS COMPANY



Scale: 1" = 200 feet



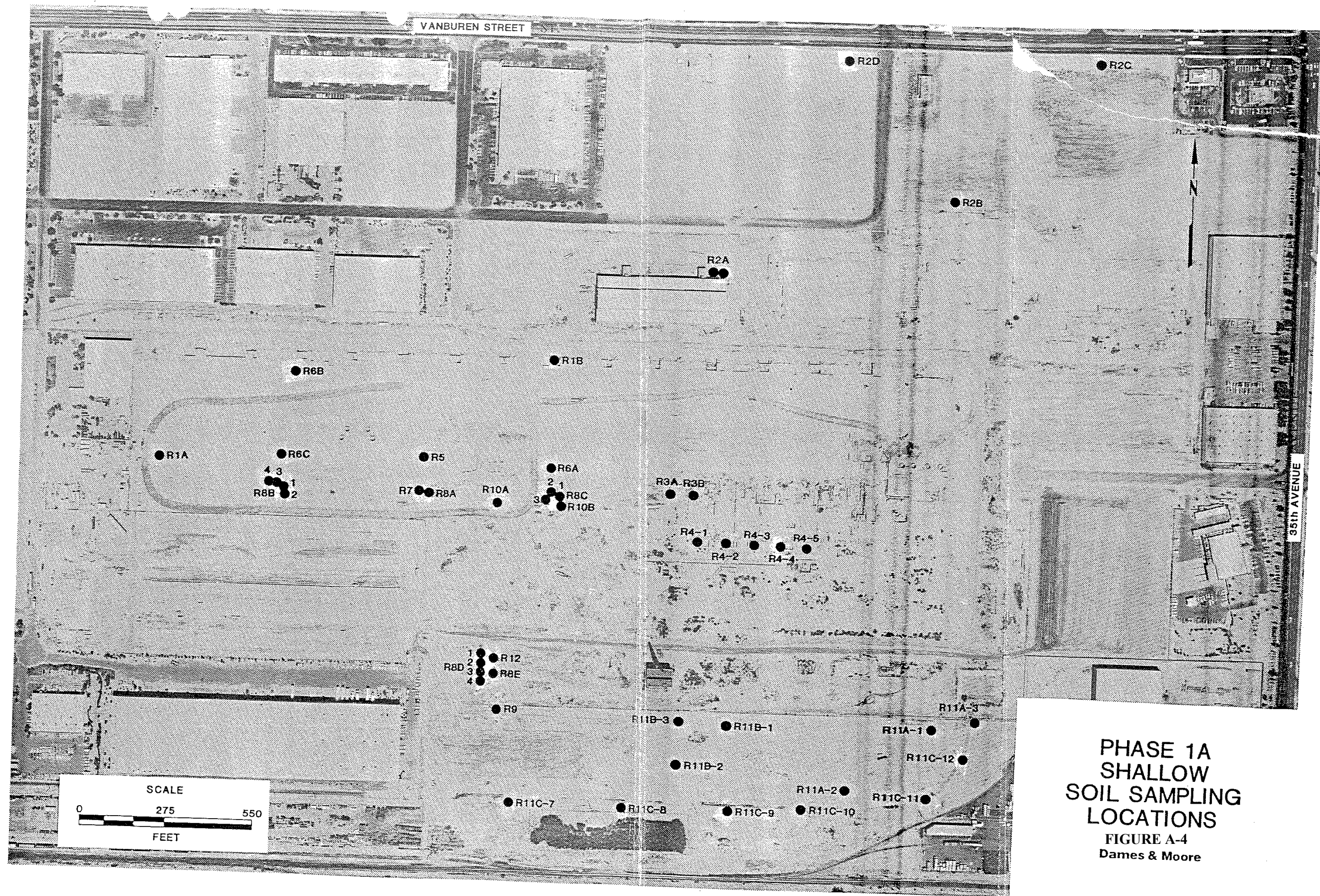
FIGURE A-3

LOCATION OF AREAS A, B, C, D AND CHROMIUM AREA

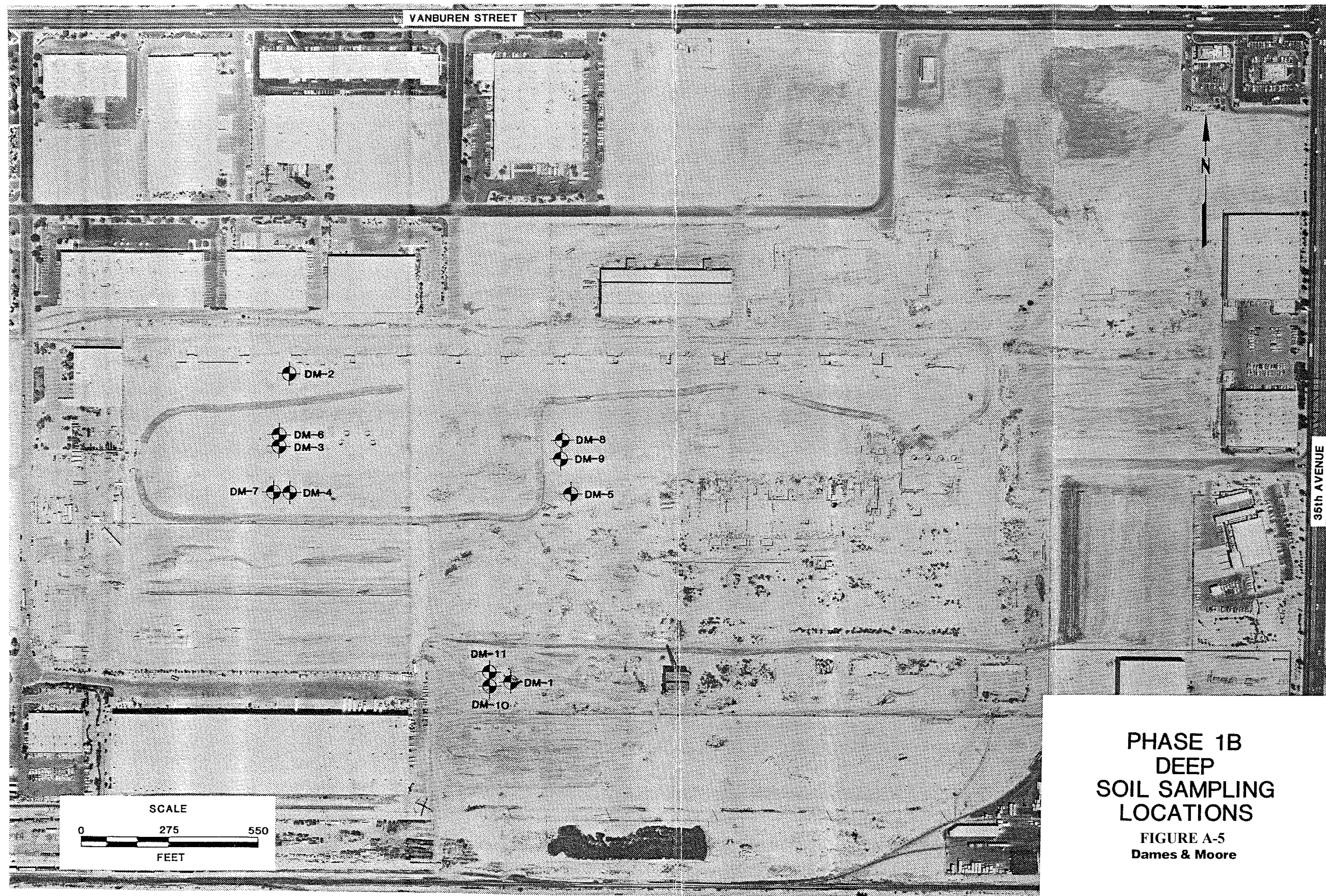
Reynolds Metals Company
Former Phoenix Extrusion Plant
Phoenix, Arizona

Project No. 94-0069

Geotechnical and Environmental Consultants, Inc.

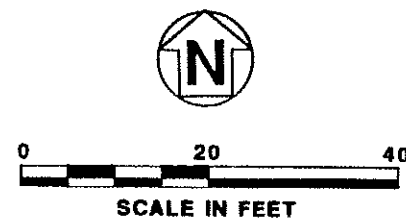


PHASE 1A
 SHALLOW
 SOIL SAMPLING
 LOCATIONS
 FIGURE A-4
 Dames & Moore



PHASE 1B
DEEP
SOIL SAMPLING
LOCATIONS

FIGURE A-5
Dames & Moore



LOT 1

TR7
(NOT SAMPLED)

TR4
23.1

TR5
15.8

TR6
17.1

YS-6
2'=17.0
4'=16.2
6'=20.7
10'=20.7
15'=19.4

YS-5
2'=15.1
4'=17.0
6'=18.0
10'=22.1
15'=12.4

YS-4
2'=24.3
4'=24.6
6'=29.9
10'=32.4
15'=43.5

YS-1
2'=24.2
4'=14.1
6'=20.1
10'=23.0
15'=29.0

YS-2
2'=21.7
4'=17.7
6'=17.4
10'=22.0
15'=18.1

YS-3
2'=25.3
4'=16.8
6'=24.1
10'=19.9
15'=14.7

TR1
11.3

TR2
12.7

TR3
11.6

LEGEND:

YS-1
● 2'=24.2 D&M SOIL BORING LOCATION, SHOWING SAMPLE DEPTH (FT) AND TOTAL CHROMIUM CONCENTRATION (MG/KG)

814
938 ● D&M STORM DRAIN TRENCH SAMPLE LOCATION, SHOWING TOTAL CHROMIUM CONCENTRATIONS (MG/KG)

TRI
▨ 11.3 D&M BACKHOE TRENCH SAMPLE LOCATION, SHOWING TOTAL CHROMIUM CONCENTRATION (MG/KG)

180 ▲ GEC STORM DRAIN TRENCH SAMPLE LOCATION (APPROXIMATE), SHOWING TOTAL CHROMIUM CONCENTRATION (MG/KG)

156 ■ SHB STORM DRAIN TRENCH SAMPLE LOCATION (APPROXIMATE), SHOWING TOTAL CHROMIUM CONCENTRATION (MG/KG)

— APPROXIMATE DISTRIBUTION OF YELLOW SOIL OBSERVED IN OPEN STORM DRAIN TRENCH

**SOIL SAMPLING
LOCATIONS AND
ANALYTICAL RESULTS
AREA I**

FIGURE A-6

REFERENCE: O'NEIL ENGINEERING, INC.

TCH LINE STA. 5+00 SEE SHT. NO. 3

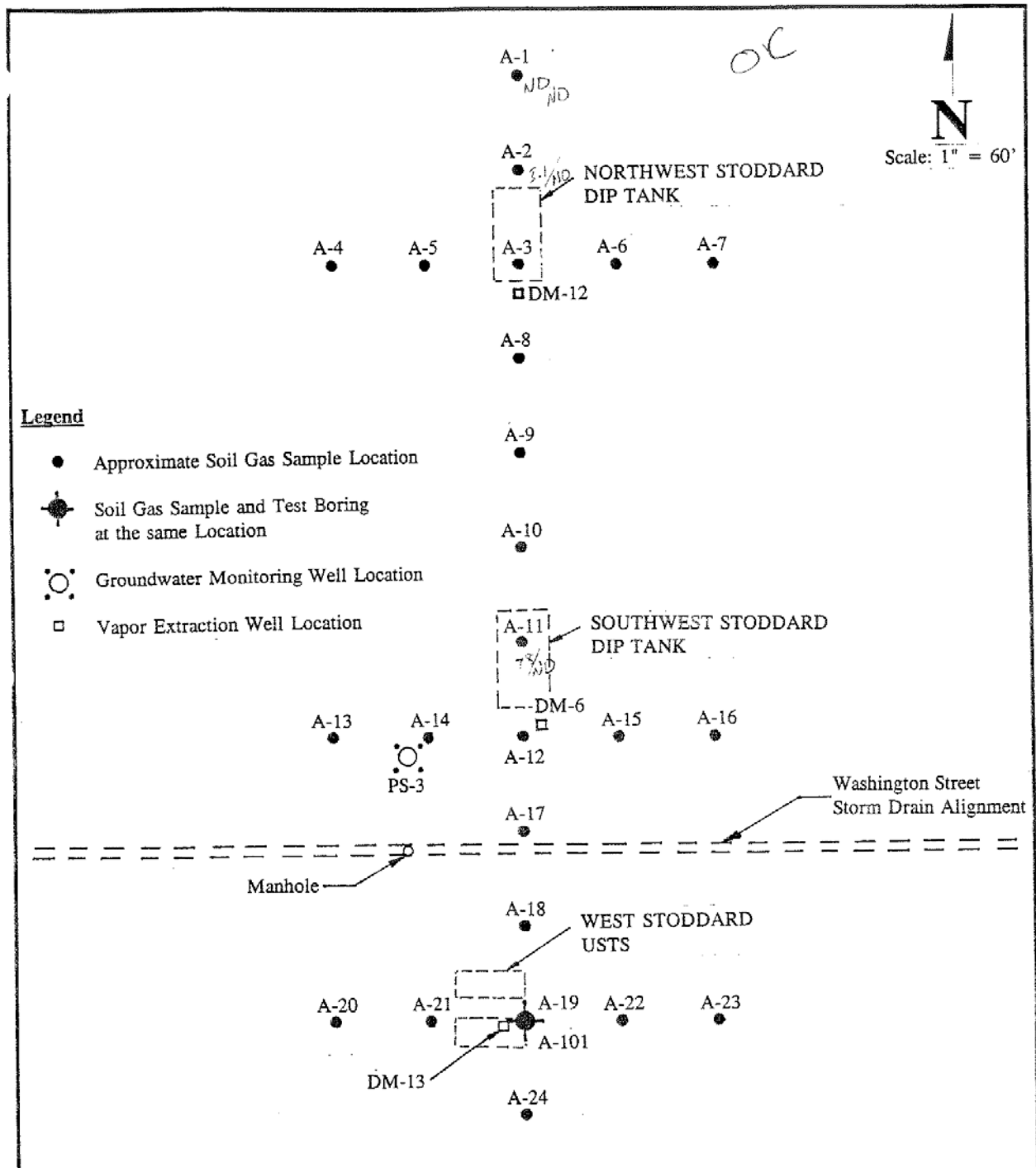
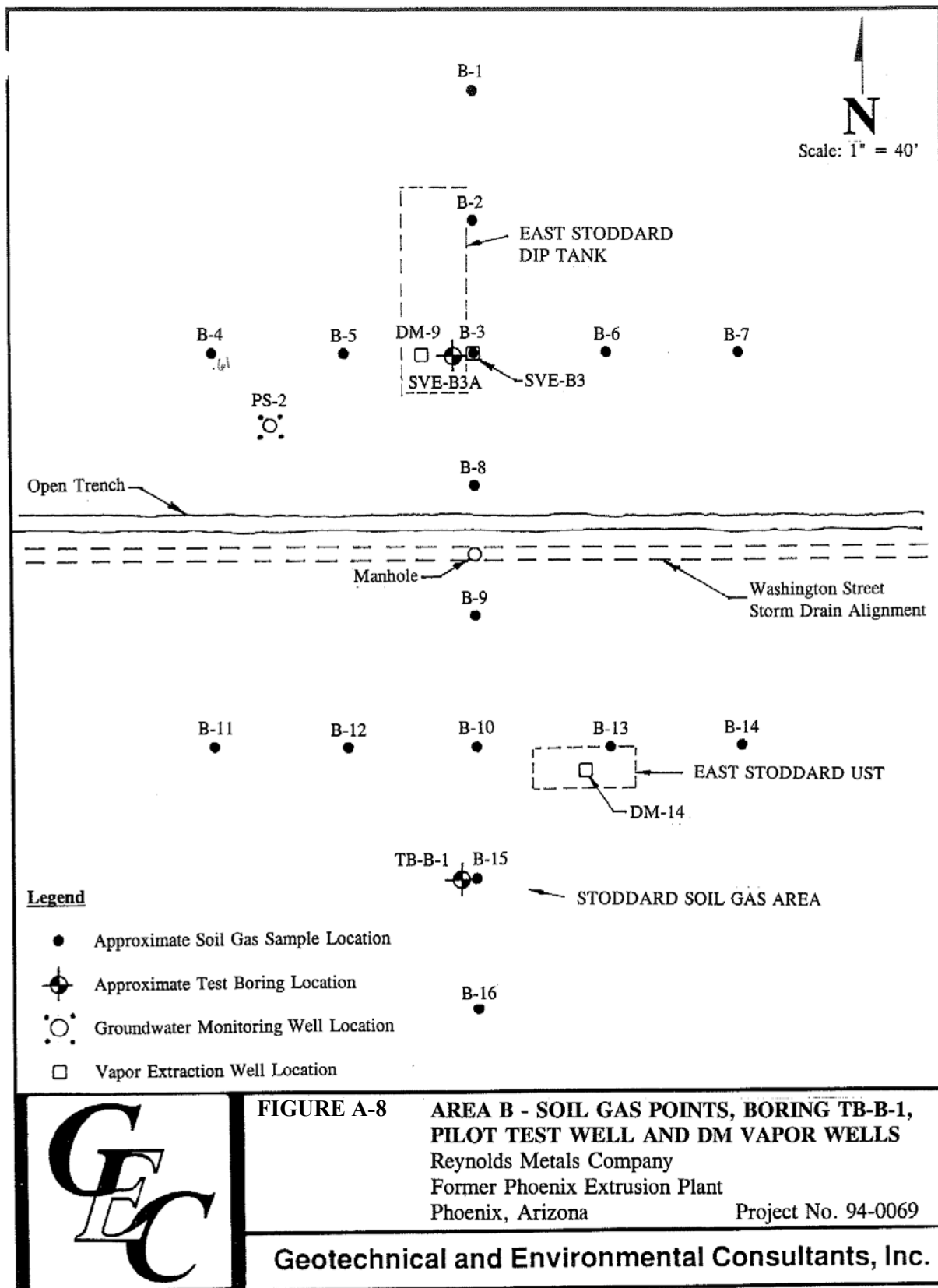


FIGURE A-7 AREA A - SOIL GAS POINTS, BORING A-101 AND DM VAPOR WELLS
 Reynolds Metals Company
 Former Phoenix Extrusion Plant
 Phoenix, Arizona

Project No. 94-0069

Geotechnical and Environmental Consultants, Inc.



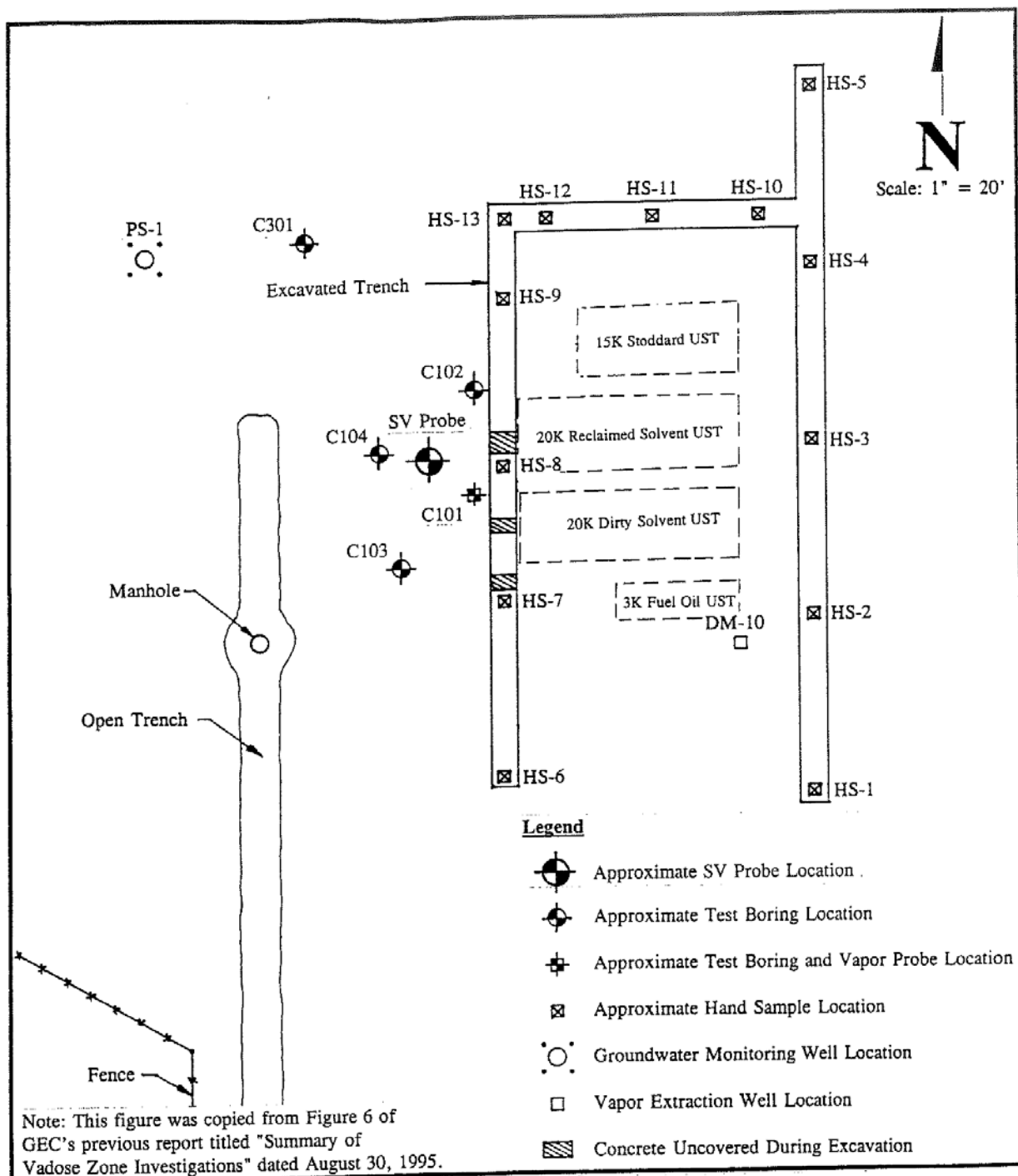
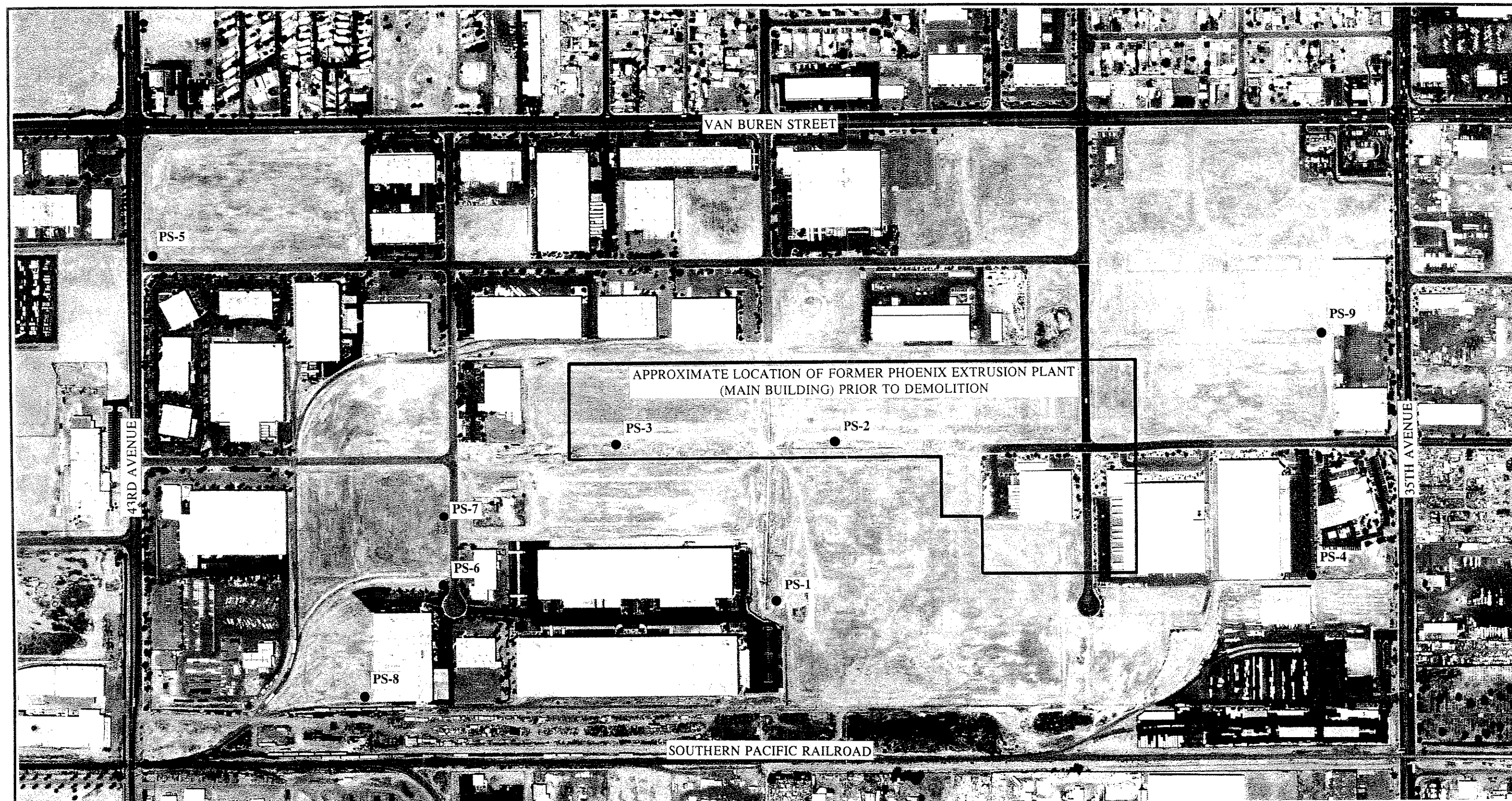


FIGURE A-9 LOCATION OF SV PROBE, BORING C-101, AND BORING C-301

Reynolds Metals Company
Former Phoenix Extrusion Plant
Phoenix, Arizona

Project No. 94-0069

Geotechnical and Environmental Consultants, Inc.



N

SCALE
1" = 400'
(Approximate)



FIGURE A-11 Groundwater Monitor Well Locations
Phoenix Extrusion Plant
Phoenix, Arizona

Geotechnical and Environmental Consultants, Inc.

**Table A-1 Reynolds Metals Co. Well Information
West Van Buren WQARF Site**

WVBA WELL ID	OWNER/FACILITY NAME	FACILITY WELL ID	ADWR #	TOTAL DEPTH (FT BTOC)	CASING DIAMETER (INCHES)	PERFORATED INTERVAL (FT BGS)	MEASURING POINT ELEVATION (FT AMSL)
PS-1	REYNOLDS	PS-1	55-526493	120	4	70-120	1,055.51
PS-2	REYNOLDS	PS-2	55-526492	120	4	70-120	1,059.62
PS-3	REYNOLDS	PS-3	55-526491	120	4	70-120	1,058.15
PS-4	REYNOLDS	PS-4	55-526490	110	4	60-110	1,058.96
PS-5	REYNOLDS	PS-5	55-526489	120	4	70-120	1,055.79
PS-6	REYNOLDS	PS-6	55-532037	140	4	90-140	1,054.73
PS-7	REYNOLDS	PS-7	55-545676	140	4	90-140	1,054.77
PS-8	REYNOLDS	PS-8	55-545677	140	4	90-140	1,055.18
PS-9	REYNOLDS	PS-9	55-545678	140	4	90-140	1,060.01

Notes: FT BTOC - Feet Below Top Of Casing
 FT BGS - Feet Below Ground Surface
 FT AMSL - Feet Above Mean Sea Level

Table A-2

Reynolds Metals
Job # : 01151-120-033
Date : 12/06/90
By RHA

SUMMARY OF AIR EMISSION DATA AND RATES

Well #	Date	Lab	Compounds (ug/l)										Total Hydrocarbons C1-C7	Total Hydrocarbons C8-C14	Total Hydrocarbons	Total ** Emissions (lbs/day)
			1,1,1-TCA	TCE	PCE	Benzene	Toluene	Ethylbenzene	Xylenes	Stoddard Solvent	Monane	Trimethyl- benzenes				
DM-13	08/28/89	H	5	7	NA	NA	5	5	5	440	6	23	NA	NA	495	4.45
DM-14	08/28/89	H	170	5	NA	NA	5	5	5	16000	488	1600	NA	NA	18278	164.29
DM-6	09/29/89	T	4	3	1	5	5	50	5	NA	NA	NA	50	100	158	1.42
DM-6	09/29/89	T	4	4	2	5	5	50	5	NA	NA	NA	50	100	160	1.44
DM-9	09/29/89	T	4000	I	I	500	2	40	2	NA	NA	NA	600	400	5001	44.95
DM-10	09/29/89	T	500	ND	0	50	2	100	2	NA	NA	NA	300	500	1300	11.69
DM-12	09/29/89	T	1	1	1	2	2	20	2	NA	NA	NA	20	100	122	1.10
DM-13	09/29/89	T	2	4	2	2	2	2	2	NA	NA	NA	10	8	26	0.23
DM-14	09/29/89	T	200	1	5	30	5	200	5	NA	NA	NA	300	800	1306	11.74
DM-12	12/07/89	H	1	1	NA	ND	1	7	15	NA	NA	NA	NA	NA	1000	8.99
DM-13	12/07/89	H	3	6	NA	ND	1	2	3	NA	NA	NA	NA	NA	210	1.89
DM-15 *	12/07/89	H	981	3	NA	1	1	30	90	NA	NA	NA	NA	NA	4000	35.95
DM-13	03/08/90	H	2	3	NA	ND	1	3	5	NA	NA	NA	NA	NA	154	1.38
DM-13	05/04/90	H	5	5	NA	ND	1	1	5	NA	NA	NA	NA	NA	117	1.05
DM-13	05/04/90	H	5	5	NA	ND	1	1	5	NA	NA	NA	NA	NA	117	1.05

100 - fm

I - Interference with other peak
NA - Not analyzed
ND - Not detected
* - All six wells running together
** - Assuming 24-hour operation
H - Mager Laboratories Inc.
T - Tracer Research Corporation

Note: DM-13 has been operating at <2 lbs./day.



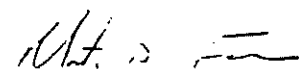
PREPARED FOR:

**Dames & Moore
Pointe Corporate Centre
7500 North Dreamy Draw Drive, Suite 145
Phoenix, Arizona 85020**

**ON-SITE ANALYTICAL SERVICES
FORMER REYNOLDS PLANT
PHOENIX, ARIZONA**

OCTOBER 1989

SUBMITTED BY:


Tracer Research Corporation

**DMFRP.OSA
I-197-89-SG**



TABLE OF CONTENTS

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INTRODUCTION

Tracer Research Corporation (TRC) provided on-site analytical services in support of activities conducted by Dames & Moore at the Former Reynolds Plant in Phoenix, Arizona. Services were performed on September 29, 1989 under contract to Dames & Moore. On-site GC services were provided for the analyses of soil gas samples collected from vadose monitoring wells on-site.

Soil gas samples were collected from several vadose monitor wells. Soil gas samples were collected and analyzed immediately in the field by TRC. Samples were analyzed for the following compounds;

- 1,1,1-trichloroethane (TCA)
- trichloroethene (TCE)
- tetrachloroethene (PCE)
- benzene
- toluene
- ethylbenzene
- xylene
- C₁-C₇ total hydrocarbons
- C₈-C₁₄ total hydrocarbons

The compounds in this suite were chosen as target compounds based on chemicals suspected of being present in the subsurface. Xylenes are reported as the total of the three xylene isomers and total hydrocarbons are classified as gasoline range compounds (C₁-C₇) and C₈-C₁₄ compounds, consisting of aliphatic, alicyclic and aromatic compounds. Soil gas samples were screened on the electron capture detector (ECD) and flame ionization detector (FID). Analytical results are condensed in Appendix A and reported in milligrams per liter (mg/L).



EQUIPMENT

To perform on-site analytical work, TRC employed a mobile laboratory trailer to the site. The lab was equipped with a Varian 3300 gas chromatograph and two Spectra Physics SP4270 computing integrators. Analytical equipment was set-up to perform analyses on soil gas samples. Electrical power provided by one built-in gasoline powered generator was provided (110 volts AC) to operate all of the gas chromatographic instruments and field equipment.

SAMPLING PROCEDURES

Soil gas samples were collected from the exhaust vent for several vadose zone monitor wells. During the soil gas evacuation, samples were collected in a glass syringe by inserting a syringe needle into the exit of the exhaust vent. Ten milliliters of gas were collected for immediate analysis in the TRC analytical field trailer. Soil gas was subsampled (duplicate injections) in volumes ranging from 1 μ L to 2 mL.

ANALYTICAL PROCEDURES

A Varian 3300 gas chromatograph, equipped with an electron capture detector (ECD) and a flame ionization detector (FID), was used for the soil gas analyses. The ECD was used for the analyses TCA, TCE and PCE, while the FID was used to analyze for benzene, toluene, ethylbenzene, xylenes and total hydrocarbons (THC). Xylenes are reported as the total of the three xylene isomers and total hydrocarbons are classified as gasoline range compounds (C_1 - C_7) and C_8 - C_{11} , consisting of aliphatic, alicyclic and aromatic compounds. Compounds were separated on a 6' by 1/8" OD packed column with OV-101 as the stationary phase. Nitrogen was used as the carrier gas.

Halocarbon and hydrocarbon compounds detected in soil gas were identified by chromatographic retention time. Quantification of compounds was achieved by comparison of the detector response of the sample with the response measured for calibration standards



(external standardization). Instrument calibration checks were run periodically throughout the day as were system blanks to check for contamination in the soil gas sampling equipment. Air samples were also routinely analyzed to check for background levels in the atmosphere.

Detection limits for the compounds of interest are a function of the injection volume as well as the detector sensitivity for individual compounds. Thus, the detection limit varies with the sample size. Generally, the larger the injection size the greater the sensitivity. However, peaks for compounds of interest must be kept within the linear range of the analytical equipment. If any compound has a high concentration, it is necessary to use small injections, and in some cases to dilute the sample to keep it within linear range. This may cause decreased detection limits for other compounds in the analyses.

The detection limits for the selected compounds were as follows; TCA (<0.0000001 mg/L), TCE (<0.0000004 mg/L) and PCE (<0.00000007 mg/L), and approximately 0.00002 mg/L for the petroleum compounds, depending on the conditions of the measurement, in particular, the sample size. If any component being analyzed is not detected, the detection limit for that compound in that analysis is given as a "less than" value (e.g. <0.005 mg/L). Detection limits obtained from GC analyses are calculated from the current response factor, the sample size, and the estimated minimum peak size (area) that would have been visible under the conditions of the measurement.



QUALITY ASSURANCE/QUALITY CONTROL PROCEDURES

Tracer Research Corporation's normal quality assurance procedures were followed in order to prevent any cross-contamination of soil gas samples.

- . Glass syringes are used for only one sample per day and are washed and baked out at night. If they must be used twice, they are purged with carrier gas (nitrogen) and baked out between probe samplings.
- . Injection port septa through which soil gas samples are injected into the chromatograph are replaced on a daily basis to prevent possible gas leaks from the chromatographic column.
- . Analytical instruments were calibrated each day by analytical standards from Chem Service, Inc. Calibration checks are also run after approximately every five soil gas sampling locations.
- . 2 cc subsampling syringes are checked for contamination prior to sampling each day by injecting nitrogen carrier gas into the gas chromatograph.
- . All sampling and 2 cc subsampling syringes are decontaminated each day and no such equipment is reused before being decontaminated. Microliter size subsampling syringes are reused only after a nitrogen carrier gas blank is run to insure it is not contaminated by the previous sample.



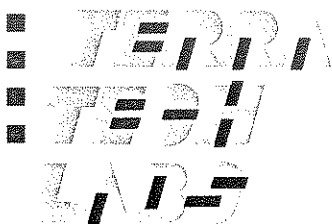
APPENDIX A: CONDENSED DATA

DAMES & MOORE/FORMER REYNOLDS PLANT/PHOENIX, ARIZONA JOB#1-197-89-5G
09/29/89
CONDENSED DATA

Sample	TCA (mg/l)	TCE (mg/l)	PCE (mg/l)	Benzene (mg/l)	Toluene (mg/l)	Ethyl Benzene (mg/l)	Xylenes (mg/l)	Total Hydroc. (C1-C8) (mg/l)	Total Hydroc. (C8-C14) (mg/l)
DM-6A	0.004	0.003	0.001	<0.005	<0.005	0.05	<0.005	0.05	0.1
DM-6B	0.004	0.004	0.002	<0.005	<0.005	0.05	<0.005	0.05	0.1
DM-10A	0.5	<0.0004	0.0004	0.05	0.002	0.1	<0.002	0.3	0.5
DM-14A	0.2	0.001	0.0005	0.03	<0.005	0.2	<0.005	0.3	0.8
DM-9A	4	1	0.0007	0.5	<0.002	0.04	<0.002	0.6	0.4
DM-12A	0.0005	0.0009	0.0005	<0.002	<0.002	0.02	<0.002	0.02	0.1
DM-13A	0.002	0.004	0.002	<0.002	<0.002	<0.002	<0.002	<0.01	0.008
Air	0.000008	0.000008	0.000005	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0005

1 interference with adjacent peaks

Analyzed by: K. Sueß
Checked by: K. Sueß
Proofed by: *[Signature]*



California Office
1920 E. Deere Ave., Suite 130 Santa Ana, California 92705
Tel 714.757.7022 Fax 714.757.7274

Arizona Office
3902 E. University Drive, Suite 4 Phoenix, Arizona 85034
Tel 602.437.9367 Fax 602.437.9362

LABORATORY REPORT

Client: GEC
Client Address: 2447 W. 12th Street, Suite 4
Tempe, AZ 85281

Contact: Roger Brewer

Project Name: Phoenix
Project Address: N/A

Report Date: 10/3/94
Lab P.N.: AZ1405
Client P.N.: 94-0069-01
Lab Cert. #: AZ0470/AZ0026

Date Sampled: 9/26/94
Date Received: 9/26/94
Date Analyzed: 9/27/94
Physical State: Air/Tedlar Bag

Quality Assurance/Quality Control Summary

<u>Parameter (Method)</u>	<u>QC Type</u>	<u>Relative Percent Difference</u>	<u>Acceptable Range</u>
TPH, Volatile (GC-FID)	D	7	0-30
1,1-Dichloroethane (EPA 8010)*	D	0	0-30
1,1,1-Trichloroethane (EPA 8010)*	D	0	0-30
Cis-1,3-Dichloropropene (EPA 8010)*	D	1	0-30
Chlorobenzene (EPA 8010)*	D	1	0-30

*EPA Method 8010 was modified for the analysis of air.

D = Duplicate

Reviewed

Approved

The samples were received by Terra Tech Labs in a chilled state, intact and accompanied by the Chain-of-Custody Record.
Acceptance of samples by Terra Tech Labs is not an indication of condition upon receipt.
Laboratory Results apply only to the sample matrix analyzed and may not apply to an apparently identical or similar sample.
The Laboratory Report is the property of the client to whom it is addressed.
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client: GEC
Client Address: 2447 W. 12th Street, Suite 4
Tempe, AZ 85281

Report Date: 10/3/94
Lab P.N.: AZ1405
Client P.N.: 94-0069-01

Project Name: Phoenix
Project Address: N/A

Date Sampled: 9/26/94
Date Analyzed: 9/27/94
Physical State: Air/Tedlar Bag

<u>Sample ID</u>	TPH Volatile GC/FID <u>mg/m3</u>
EW-5	5,600

Quantitation Limit mg/m3	500
--------------------------	-----

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.



LABORATORY RESULTS

Client: GEC
Client Address: 2447 W. 12th Street, Suite 4
Tempe, AZ 85281

Report Date: 10/3/94
Lab P.N.: AZ1405
Client P.N.: 94-0069-01

Project Name: Phoenix
Project Address: N/A

Date Sampled: 9/26/94
Date Analyzed: 9/27/94
Physical State: Air/Tedlar Bag

	TPH
	Volatile
	GC/FID
<u>Sample ID</u>	<u>ppm(v)</u>
EW-5	1,600
Quantitation Limit ppm(v)	140

ND; Not Detectable
The Laboratory Results are only a portion of the Laboratory Report.

LABORATORY RESULTS

Client: GEC
 Client Address: 2447 W. 12th Street, Suite 4
 Tempe, AZ 85281

Report Date: 10/3/94
 Lab P.N.: AZ1405
 Client P.N.: 94-0069-01

Project Name: Phoenix
 Project Address: N/A

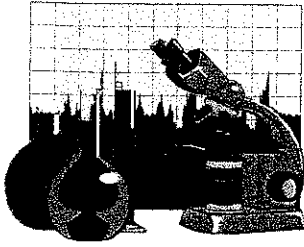
Date Sampled: 9/26/94
 Date Analyzed: 9/27/94
 Physical State: Air/Tedlar Bag

Halogenated Volatile Organics, EPA 8010* (Modified for air analysis)

<u>Sample ID</u>	<u>EW-6</u>	Quantitation
<u>Parameters</u>	<u>Conc.</u> <u>mg/m3</u>	<u>Limits</u> <u>mg/m3</u>
Chloromethane	ND	50
Vinyl chloride	ND	50
Trichlorofluoromethane	ND	50
Bromomethane	ND	50
Chloroethane	ND	50
1,1-Dichloroethene	220	50
Methylene chloride	ND	50
trans-1,2-Dichloroethene	ND	50
1,1-Dichloroethane	ND	50
cis-1,2-Dichloroethene	ND	50
Chloroform	ND	50
1,1,1-Trichloroethane	1,600	50
Carbon tetrachloride	ND	50
1,2-Dichloroethane	ND	50
Trichloroethene	ND	50
1,2-Dichloropropane	ND	50
Bromodichloromethane	ND	50
cis-1,3-Dichloropropene	ND	50
trans-1,3-Dichloropropene	ND	50
1,1,2-Trichloroethane	ND	50
Tetrachloroethene	ND	50
Dibromochloromethane	ND	50
Chlorobenzene	ND	50
Bromoform	ND	50
1,1,2,2-Tetrachloroethane	ND	50
1,3-Dichlorobenzene	ND	50
1,4-Dichlorobenzene	ND	50
1,2-Dichlorobenzene	ND	50

ND: Not Detectable

The Laboratory Results are only a portion of the Laboratory Report.



METRON Inc

3902 E. University Drive
Phoenix AZ 85034
602-437-0979
FAX-437-0826
metronlab@aol.com

ADHS 0536

ANALYTICAL REPORT TRANSMITTAL

14 June 1996
Sample No.(s) **606004**

Geotechnical and Environmental Consultants Inc.
2447 W. 12th Street #4
Tempe, AZ 85281

Attention: Roger Brewer

This is to transmit the attached Analytical Report. The analytical data and information contained therein was generated using specified or selected methods contained in references, such as Standard Methods for the Analysis of Water and Wastewater, 18th. & 19th. Editions and Methods for Determination of Organic Compounds in Drinking Water, EPA-600/4-79-020. The analyses specified were completed on the dates shown on each Analytical Report.

The analysis request for 8015 Modified, sample SV Probe 0830, was cancelled on 6/11/96 by Roger Brewer.

Please contact our Client Services Department if there are any questions concerning this data. They will make certain that your inquiry is handled promptly by the person most qualified to meet your needs. If at any time you are not satisfied with the service you receive at Metron, please contact me.

Robert Woods
Laboratory Director

METRON Inc

3902 E. University Dr. #4

Phoenix AZ 85034

602-437-0979

FAX-437-0826

ADHS Lic. No. AZ 0536

ANALYTICAL REPORT

Client Name: GEC

Received: 6/11/96

Reported: 6/13/96

Project Name:

Metron No. 606004-01

Project Number: 94-0069

Sampled: 6/11/96

Sample ID: SV Probe 0830

Matrix: Air

Parameter	Method	Results	Units	PQL	Analyzed
Bromobenzene	EPA 8260 Mod.	<5	ug/L	5	6/11/96
Bromodichloromethane	EPA 8260 Mod.	<5	ug/L	5	6/11/96
Bromoform	EPA 8260 Mod.	<5	ug/L	5	6/11/96
Bromomethane	EPA 8260 Mod.	<5	ug/L	5	6/11/96
Carbon Tetrachloride	EPA 8260 Mod.	<5	ug/L	5	6/11/96
Chlorobenzene	EPA 8260 Mod.	<5	ug/L	5	6/11/96
Chloroethane	EPA 8260 Mod.	<5	ug/L	5	6/11/96
Chloroform	EPA 8260 Mod.	<5	ug/L	5	6/11/96
Chloromethane	EPA 8260 Mod.	<5	ug/L	5	6/11/96
4-Chlorotoluene (para)	EPA 8260 Mod.	<5	ug/L	5	6/11/96
Dibromochloromethane	EPA 8260 Mod.	<5	ug/L	5	6/11/96
1,2-Dibromo-3-Chloropropane	EPA 8260 Mod.	<5	ug/L	5	6/11/96
Dibromomethane	EPA 8260 Mod.	<5	ug/L	5	6/11/96
1,2-Dichlorobenzene (ortho)	EPA 8260 Mod.	<5	ug/L	5	6/11/96
1,3-Dichlorobenzene (meta)	EPA 8260 Mod.	<5	ug/L	5	6/11/96
1,4-Dichlorobenzene (para)	EPA 8260 Mod.	<5	ug/L	5	6/11/96
Dichlorodifluoromethane	EPA 8260 Mod.	<5	ug/L	5	6/11/96
1,1-Dichloroethane	EPA 8260 Mod.	52	ug/L	5	6/11/96
1,2-Dichloroethane	EPA 8260 Mod.	<5	ug/L	5	6/11/96
1,1-Dichloroethene	EPA 8260 Mod.	28	ug/L	5	6/11/96
trans-1,2-Dichloroethene	EPA 8260 Mod.	<5	ug/L	5	6/11/96
1,2-Dichloropropane	EPA 8260 Mod.	<5	ug/L	5	6/11/96
cis-1,3-Dichloropropene	EPA 8260 Mod.	<5	ug/L	5	6/11/96
trans-1,3-Dichloropropene	EPA 8260 Mod.	<5	ug/L	5	6/11/96
Methylene Chloride	EPA 8260 Mod.	<5	ug/L	5	6/11/96
1,1,1,2-Tetrachloroethane	EPA 8260 Mod.	<5	ug/L	5	6/11/96
1,1,2,2-Tetrachloroethane	EPA 8260 Mod.	<5	ug/L	5	6/11/96
Tetrachloroethene (PCE)	EPA 8260 Mod.	<5	ug/L	5	6/11/96
1,1,1-Trichloroethane	EPA 8260 Mod.	280	ug/L	5	6/11/96
1,1,2-Trichloroethane	EPA 8260 Mod.	<5	ug/L	5	6/11/96
Trichloroethene (TCE)	EPA 8260 Mod.	<5	ug/L	5	6/11/96
Trichlorofluoromethane	EPA 8260 Mod.	<5	ug/L	5	6/11/96
1,2,3-Trichloropropane	EPA 8260 Mod.	<5	ug/L	5	6/11/96
Vinyl Chloride	EPA 8260 Mod.	<5	ug/L	5	6/11/96

Surrogate:

1,4-Difluorobenzene	100%	Recovery
Toluene-d8	102%	Recovery
4-Bromofluorobenzene	111%	Recovery

METRON Inc

ADHS Lic. No. AZ 0536

3902 E. University Dr. #4
Phoenix AZ 85034
602-437-0979
FAX-437-0826

QUALITY CONTROL DATA - AIR ANALYSES

Analysis Method: 8260M
Matrix: Air
Units: ug/L

Sample Duplicate Results					Blank Spike Results					
Sample ID	Compound	Sample Result	Duplicate Result	RPD	Spiked Compound	Spike Amount	Spike Result	Percent Recovery	Date Analyzed	Samples Linked
606004-01	1,1-DCE	28	34	-19%	1,1-DCE	40	44	110%	6/11/96	*
	1,1-DCA	52	58	-11%	TCE	40	26	65%	6/11/96	*
	1,1,1-TCA	260	280	-7%	1,1-DCA	40	40	100%	6/11/96	*
					1,1,1-TCA	40	41	103%	6/11/96	*
					PCE	40	15	38%	6/11/96	*

Reagent Blank Method 8260	
Units Matrix	ug/L Air
Analytes	None Found
Surr %Rec	
1,4-DFB	98%
Toluene-d8	102%
4-BFB	111%
Date Analyzed	6/11/96
Samples Linked	*

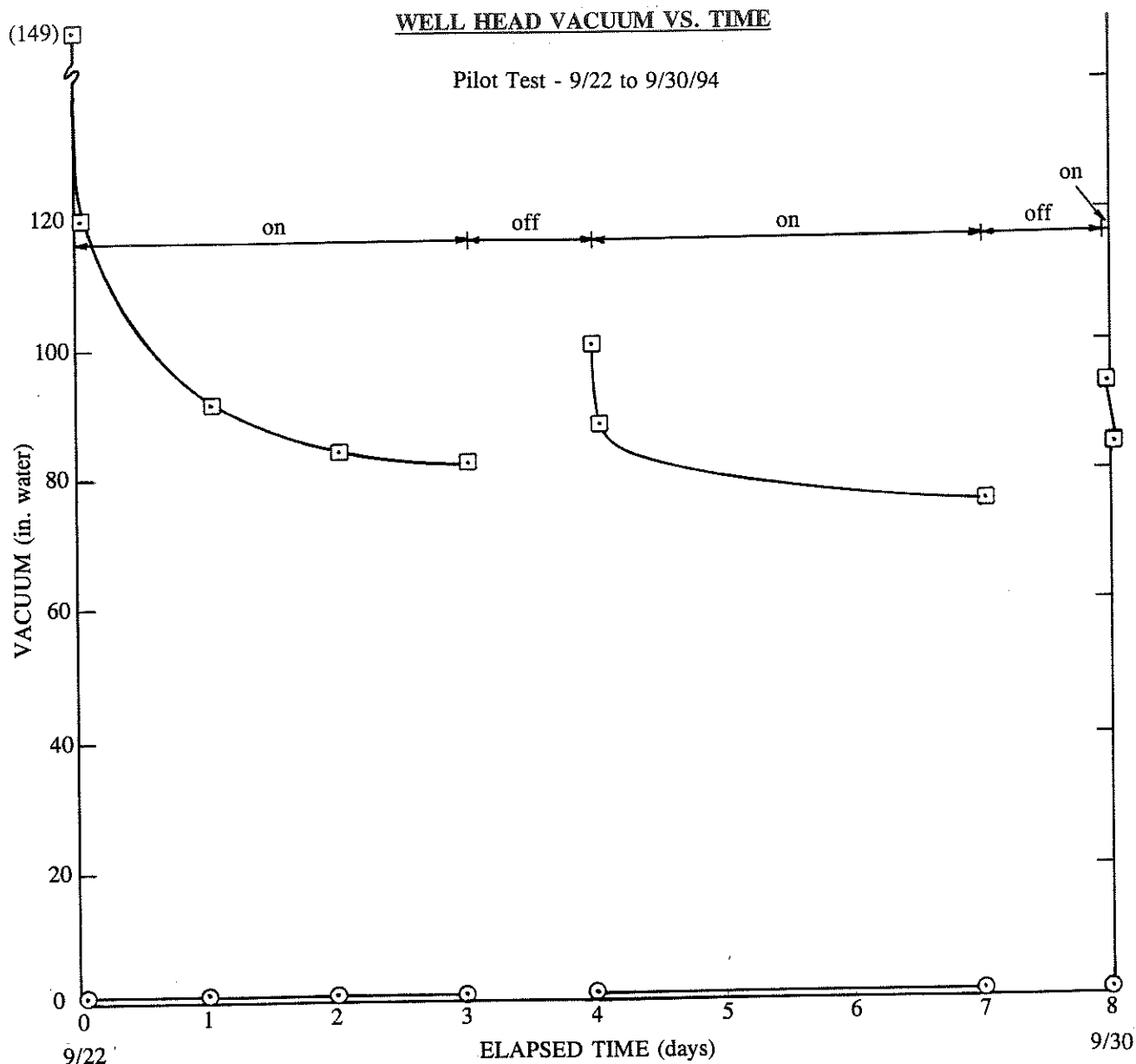
*Samples Linked: 606004-01

Page 1 of 1

606004

Report
Due Date:

c:\excel\forms\chain.xls



Legend

□ Pumped Well
SVE-B3 (4" dia.)

○ Passive Vent Well
DM-9 (2" dia.)

Well Construction

SVE-B3 0 - 12.7 ft. (solid)
12.7-32 ft. (sand/screen)

DM-9 0 - 20 ft. (solid)
20-31 ft. (sand/screen)

Spacing between wells = 17 ft.



FIGURE C-1. WELL HEAD VACUUM VS. TIME

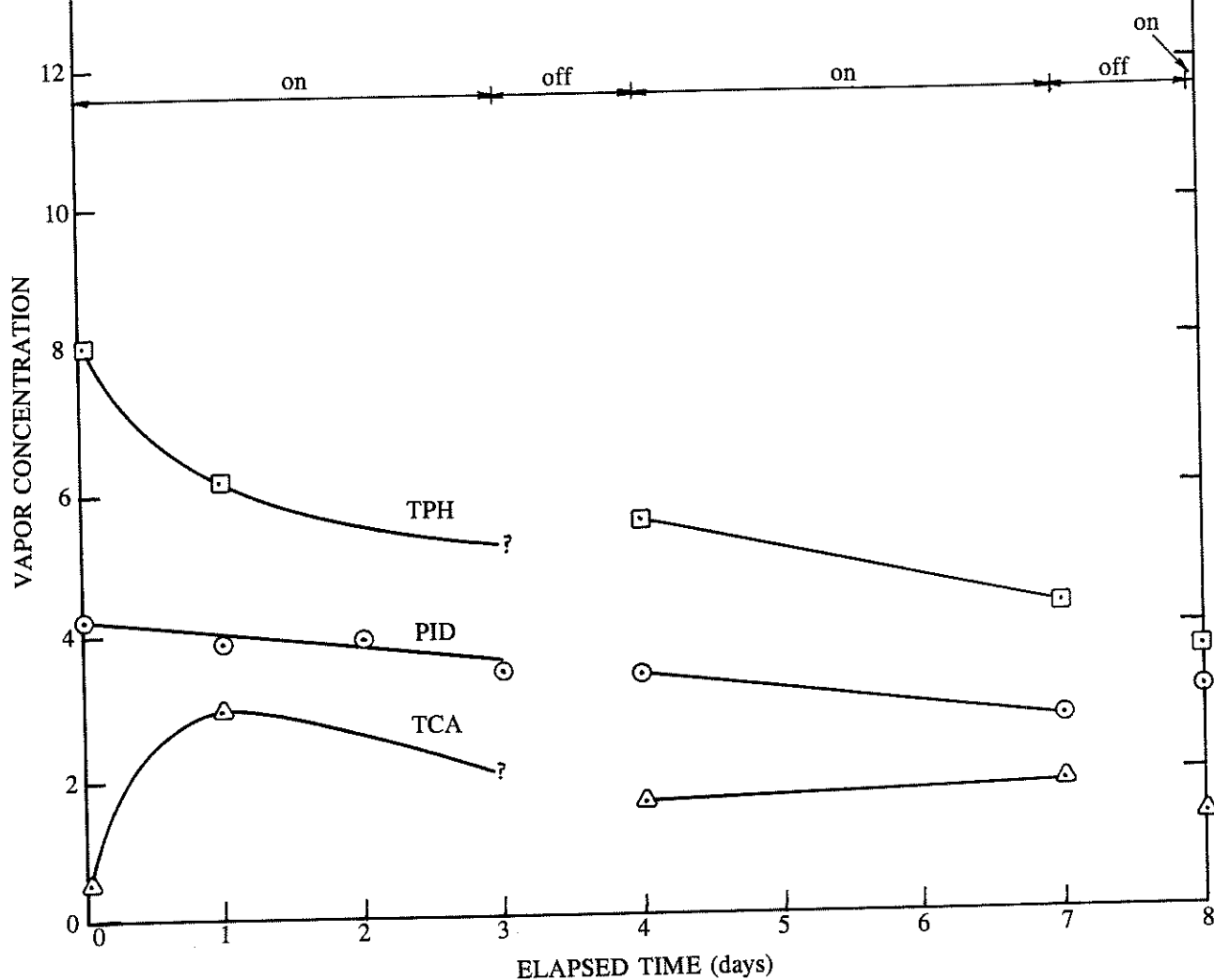
Reynolds Metals Company
Former Phoenix Extrusion Plant
Phoenix, Arizona

Project No. 94-0069

Geotechnical and Environmental Consultants, Inc.

VAPOR CONCENTRATION VS. TIME

Pilot Test - 9/22 to 9/30/94



Legend

- TPH (ug/l ÷ 1000)
- △ 1,1,1 TCA (ug/l ÷ 1000)
- ⊙ PID 580B ("PID units" ÷ 100)



FIGURE C-2. VAPOR CONCENTRATION VS. TIME

Reynolds Metals Company
Former Phoenix Extrusion Plant
Phoenix, Arizona

Project No. 94-0069

Geotechnical and Environmental Consultants, Inc.

APPENDIX B - LABORATORY ANALYSES

This appendix contains the the summarized results of the Phase 1A and 1B laboratory analyses. The laboratory analyses were conducted in accordance with procedures outlined in EPA's Manual SW-846, Test Methods for Evaluating Solid Waste and also ASTM Standard Methods.

ANALYTICAL METHODS

Analytical methods and the identified chemicals of concern are listed in Table B.1. During this investigation the soil samples were analyzed for the chemicals shown on B.1. The only chemicals found included 1,1,1-TCA, TCE, ethylbenzene, toluene, xylenes, and PCBs. Analytical methods approved by EPA and ASTM were used for the analysis. References 1, 2, and 4 contain the EPA methods. Reference 3 contains the ASTM methods. Generally Reference 2 has the same procedures for analyzing water samples as Reference 1. Where duplication exists between Reference 1 and 2, a method from Reference 1 has been quoted, since the method covers both soil and water.

Analyses are discussed by category below:

Volatile Organic Compounds

Volatile organic compounds (VOCs) associated with solvents were analyzed using EPA methods 8010 and 8020.

Polychlorinated Biphenyls

Analysis of soils and transformer oils for polychlorinated biphenyls (PCB's) were conducted using EPA method 8080 (soil), and ASTM Standard Test Procedure D4059 (oils).

REFERENCES

1. United States Environmental Protection Agency, 1986, 3rd Edition. Test Methods for Evaluating Solid Waste, SW-846.
2. United States Environmental Protection Agency, 1983 C. Method for Chemical Analysis of Water and Wastes. EPA-600/4-79-20, NTIS-PB84-128677.
3. American Society of Testing and Materials (ASTM) Standard Method D-4059.
4. Methods of Organochlorine Pesticides and Chlorophenoxy Acid Herbicides in Drinking Water and Raw Source Water U.S. EOA EMSO, Cinn., OH, 1978.

Table B.1

ANALYTICAL METHODS AND CHEMICALS OF CONCERN

	EPA Methods			ASTM D4059
	<u>8010</u>	<u>8020</u>	<u>8080</u>	
1,1,1-trichloroethane (1,1,1-TCA)	X			
trichloroethene (TCE)	X			
tetrachloroethene	X			
1,1-dichloroethene	X			
chloroform	X			
trihalomethanes	X			
methylchloride	X			
1,1-dichloroethane	X			
trans-1,2-dichloroethene	X			
benzene		X		
ethylbenzene		X		
toluene		X		
m-xylene*		X		
o-xylene*		X		
p-xylene*		X		
PCB's in soil			X	
PCB's in oil				X

*Values are reported as total xylene.

Table B.2

KEY TO SAMPLE LOCATIONS

<u>Location Description</u>	<u>Phase 1A Designation</u>	<u>Phase 1B Designation</u>
PCB storage areas	R1A - R1B	-
Power poles	R2A - R2D	-
PCB transformer electrical station	R3A - R3B	-
Chaseway foundation	R4-1 - R4-5	-
Vapor recovery degreasing tank	R5	-
Stoddard solvent degreasing tanks		
East	R6A	DM-08, DM-09
Northwest	R6B	DM-02
Southwest	R6C	DM-03, DM-06
Vapor degreasing still building area	R7	-
Storage tank excavations	R8A	-
	R8B	DM-04, DM-07
	R8C	DM-05
	R8D	DM-10, DM-11
	R8E	DM-1
Building 150 septic tanks	R9	-
Solvent piping system	R10A - R10B	-
Stormwater evaporation pond area	R11A-1 - R11A-3	-
	R11B-1 - R11B-3	-
	R11C-7 - R11C-12	-
Stoddard solvent still building 150	R12	-

Table B.3

LABORATORY ANALYSES FOR POLYCHLORINATED BIPHENYL (PCB's)

<u>Sample Location</u>	<u>Sample Depth (feet)</u>	<u>Sample Media</u>		<u>Concentration</u>
		<u>Oil</u>	<u>Soil</u>	
R1A	0.5		x	ND
R1B	0.5		x	0.24 ppm*
R1B	3.0		x	ND
R2A	0.5		x	ND
R2B	0.5		x	ND
R2C	0.5		x	ND
R2D	0.5		x	ND
R2A-T1	-	x		29.0 ppm
R2A-T2	-	x		ND
R2B-T	-	x		6.7 ppm
R2C-T	-	x		5.0 ppm
R2D-T	-	x		3.4 ppm
R3A	0.5		x	ND
R3B	0.5		x	0.58 ppm*
R3B	3.0		x	ND
R4-1	Surface		x	5.8 ppm
R4-2	Surface		x	3.6 ppm
R4-3	Surface		x	3.4 ppm
R4-4	Surface		x	18.0 ppm
R4-5	Surface		x	3.8 ppm

ND - Not Detected

* - Non Detection at greater depths

Table B.4

PHASE 1A, SHALLOW SOIL SAMPLES

Sample Location	Sample Depth (feet)	Total Xylene (mg/kg)	Ethylbenzene (mg/kg)	Trichloroethene (mg/kg)	1,1,1-Trichloroethane (mg/kg)	Toluene (mg/kg)
R5	3	ND	ND	ND	ND	ND
R6A	3	205.0	9.2	ND	510.0	7.4
R6B	3	78.0	ND	ND	ND	ND
R6C	3	443.0	ND	ND	ND	ND
R7	3	ND	ND	ND	ND	ND
R8A	3	ND	ND	ND	ND	ND
R8B-1	3	74.0	ND	ND	ND	ND
R8B-2	3	78.0	ND	ND	ND	ND
R8B-3	3	ND	ND	ND	ND	ND
R8B-4	3	ND	ND	ND	ND	ND
R8C-1	3	85.0	ND	ND	ND	ND
R8C-2	3	ND	ND	ND	ND	ND
R8C-3	3	ND	ND	ND	ND	ND
R8D-1	3	12.0	ND	ND	ND	ND
R8D-2	3	77.0	ND	ND	ND	ND
R8D-3	3	156.0	ND	ND	ND	ND
R8D-4	3	215.0	ND	ND	ND	ND
R8E	17	10.5	ND	ND	ND	ND
R9	-	NA	NA	NA	NA	NA
R10A	3	ND	ND	ND	ND	ND
R10B	3	ND	ND	ND	ND	ND
R11A-1	3	ND	ND	ND	ND	ND
R11A-2	3	ND	ND	ND	ND	ND
R11A-3	3	ND	ND	ND	ND	ND
R11B-1	3	ND	ND	ND	ND	ND
R11B-2	3	ND	ND	ND	ND	ND
R11B-3	3	ND	ND	ND	ND	ND
R11C-7	3	ND	ND	ND	ND	ND
R11C-8	3	ND	ND	ND	ND	ND
R11C-9	3	ND	ND	ND	ND	ND
R11C-10	3	ND	ND	ND	ND	ND
R11C-11	3	ND	ND	ND	ND	ND
R11C-12	3	ND	ND	ND	ND	ND
R12E	3	ND	ND	ND	ND	ND

NA - Not Analyzed

ND - Not Detected

Samples were analyzed using Methods 8010 and 8020 for chemicals shown on Table B.1.

Chemicals not listed on summary tables were not detected.

Table B.5

PHASE 1B, DEEP SOIL SAMPLES

<u>Sample Depth (feet)</u>	<u>Total Xylene (mg/kg)</u>	<u>Ethylbenzene (mg/kg)</u>	<u>Trichloroethene (mg/kg)</u>	<u>1,1,1-Trichloroethane (mg/kg)</u>	<u>Toluene (mg/kg)</u>
<u>Boring Number - DM-01 (Location R8E)</u>					
5.0	0.80	0.60	ND	ND	ND
10.0	ND	ND	ND	ND	ND
15.0	ND	ND	ND	ND	ND
17.5	1.10	0.80	ND	ND	ND
22.5	ND	ND	ND	ND	ND
32.5	ND	ND	ND	ND	ND
37.5	ND	ND	ND	ND	ND
40.0	ND	ND	ND	ND	ND
45.0	ND	ND	ND	ND	ND
50.0	ND	ND	ND	ND	ND
<u>Boring Number - DM-02 (Location R6B)</u>					
10.0	20.20	14.90	ND	ND	ND
15.0	22.70	ND	ND	ND	ND
22.5	148.00	ND	ND	ND	ND
27.5	75.90	39.80	ND	ND	ND
35.0	27.60	7.20	ND	ND	ND
37.5	ND	ND	ND	ND	ND
40.0	ND	ND	ND	ND	ND
42.5	ND	ND	ND	ND	ND
<u>Boring Number - DM-03 (Location R6C)</u>					
10.0	ND	ND	ND	ND	ND
12.5	46.00	32.00	ND	ND	ND
17.5	84.00	ND	ND	ND	ND
22.5	235.00	ND	ND	ND	ND
25.0	52.50	ND	ND	ND	ND
27.5	69.40	ND	ND	ND	ND
30.0	57.00	ND	ND	ND	ND
32.5	28.10	ND	ND	ND	ND
35.0	30.70	ND	ND	ND	ND
37.5	61.40	ND	ND	ND	ND
40.0	74.00	ND	ND	ND	ND

Table B.5 (Continued)

PHASE 1B, DEEP SOIL BORING

<u>Sample Depth (feet)</u>	<u>Total Xylene (mg/kg)</u>	<u>Ethylbenzene (mg/kg)</u>	<u>Trichloroethene (mg/kg)</u>	<u>1,1,1-Trichloroethane (mg/kg)</u>	<u>Toluene (mg/kg)</u>
<u>Boring Number - DM-04 (Locations R8B-1 & R8B-2)</u>					
15.0	13.80	ND	23.80	ND	ND
20.0	16.20	ND	3.20	ND	ND
22.5	ND	ND	0.07	ND	ND
25.0	3.50	ND	0.40	ND	ND
27.5	20.10	ND	0.30	ND	ND
30.0	7.30	ND	ND	ND	ND
32.5	8.20	ND	25.20	ND	ND
35.0	43.00	ND	ND	ND	1.90
<u>Boring Number - DM-05 (Location R8C)</u>					
15.0	ND	ND	27.90	ND	ND
17.5	ND	ND	24.90	ND	ND
20.0	11.10	ND	7.70	ND	ND
22.5	23.70	14.90	4.10	ND	ND
25.0	21.60	7.60	0.90	ND	ND
27.5	19.40	19.90	0.40	ND	ND
30.0	16.10	12.70	ND	ND	ND
32.5	39.00	64.00	0.30	ND	ND
35.0	10.30	ND	11.20	ND	ND
37.5	23.90	35.90	24.50	ND	ND
<u>Boring Number - DM-06 (Location R6C)</u>					
No samples recovered - drilled as a soil vapor extraction well					
<u>Boring Number - DM-07 (Locations R8B-3 & R8B-4)</u>					
17.5	ND	ND	0.09	ND	ND
25.0	ND	ND	4.90	ND	ND
32.5	ND	ND	8.30	ND	ND
35.0	ND	ND	9.10	ND	ND
37.5	ND	ND	4.10	ND	ND
<u>Boring Number - DM-08 (Location R6A)</u>					
12.5	ND	ND	1.80	ND	ND
17.5	ND	ND	0.50	0.04	ND
22.5	ND	ND	0.30	0.09	ND
27.5	ND	ND	0.16	0.06	ND
35.0	ND	ND	0.09	0.05	ND
37.5	ND	ND	0.05	ND	ND

Table B.5 (Continued)

PHASE 1B, DEEP SOIL BORING

Sample Depth (feet)	Total Xylene (mg/kg)	Ethylbenzene (mg/kg)	Trichloroethene (mg/kg)	1,1,1-Trichloroethane (mg/kg)	Toluene (mg/kg)
<u>Boring Number - DM-09 (Location R6A)</u>					
12.5	2.00	ND	ND	ND	ND
15.0	260.90	37.00	ND	78.40	ND
20.0	94.00	ND	ND	80.80	ND
22.5	186.90	ND	ND	87.00	ND
25.0	240.00	ND	ND	90.00	ND
27.5	80.80	ND	ND	24.00	ND
30.0	120.00	ND	ND	70.00	ND
32.5	52.70	ND	ND	25.80	ND
35.0	0.10	ND	0.07	0.01	ND
37.5	ND	ND	0.14	0.07	ND
<u>Boring Number - DM-10 (Locations R8D-3 & R8D-4)</u>					
12.5	45.00	ND	ND	ND	ND
15.0	19.40	ND	ND	ND	ND
17.5	39.10	ND	ND	ND	ND
20.0	112.10	21.60	ND	0.30	ND
22.5	5.80	ND	0.20	ND	ND
25.0	34.70	ND	0.70	0.90	ND
30.0	42.20	ND	0.60	0.60	ND
32.5	18.30	ND	0.40	ND	ND
35.0	25.70	ND	0.50	ND	ND
37.5	46.80	ND	0.30	ND	ND
<u>Boring Number - DM-11 (Locations R8D-1 & R8D-2)</u>					
12.5	1.50	ND	0.03	ND	ND
15.0	1.80	1.40	ND	ND	ND
17.5	7.40	5.60	ND	ND	ND
20.0	6.60	5.00	ND	ND	ND
22.5	12.40	15.80	0.40	ND	ND
25.0	23.70	ND	0.20	ND	ND
27.5	18.20	ND	0.30	ND	ND
30.0	43.00	ND	0.10	ND	ND
32.5	23.10	ND	ND	ND	ND
35.0	29.70	14.10	ND	ND	ND

ND - Not Detected

Samples were analyzed using Methods 8010 and 8020 for chemicals shown on Table B.1.

Chemicals not listed on summary tables were not detected.

APPENDIX C

QUALITY ASSURANCE/QUALITY CONTROL

The analytical laboratory has an active Quality Assurance/Quality Control (QA/QC) program which was followed during sample analysis. This appendix describes the laboratory QA/QC procedures that were followed.

Laboratory QA/QC

Laboratory QA/QC was completed in accordance with general guidelines set forth in U.S. EPA Handbook for Analytical Quality Control in Water and Wastewater Laboratories. Specific aspects of QA/QC included:

- o Analysis of laboratory duplicates, laboratory spikes, surrogate spikes, and calibration verification on a 10 percent basis;
- o Analysis of an extraction check sample;
- o Analysis of unknown (EPA) check standard or internal laboratory standards; and
- o Evaluation of the validity of the data through laboratory precision and accuracy estimates.

Reports

The laboratory completed an analytical report which documented the results of each analysis and the QA/QC results. Information submitted on each report included:

- o Sample ID
- o Date of receipt of sample
- o Date of analysis of sample
- o Sample matrix (soil, water, sludge)
- o Units of results
- o Analyte name
- o Dilution factors
- o Detection factors
- o Analytical results

A reviewer's signature for the laboratory appeared at the bottom of each page of the analytical report. A similar format was followed for QA/QC

data. Copies of the laboratory's chain-of-custody form were included to cover each sample in the laboratory report.

Sample Custody

The laboratory stored portions of the unused samples after analysis until notified by Dames & Moore. Samples were stored by the laboratory in a refrigerator pending the need for either reanalysis or additional analyses.

LABORATORY

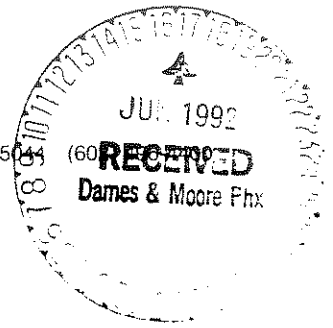
Analytical Technologies, Inc. (ATI) provided laboratory services for analysis of soil and oil samples. ATI has completed numerous projects for Dames & Moore in connection with solvent and petroleum hydrocarbon investigations. ATI is currently approved by the following agencies:

- o Arizona Department of Health Services Certified Drinking Water Laboratory
- o Environmental Protection Agency Section as a Superfund Contract (CPL Laboratory)
- o California Department of Health services Approved Water Laboratory
- o California Department of Health Services Approval for AB 1803
- o California Department of Health Services Hazardous Waste Control Laboratory



Analytical Technologies, Inc.

9830 S. 51st Street Suite B-113 Phoenix, AZ 85044 (602) 496-4400



ATI I.D. 205037

June 16, 1992

Dames & Moore
7500 N. Dreamy Draw Drive
Suite 145
Phoenix, AZ 85020

Project Name/Number: RMC/01151-120-033

Attention: Dave Carr

On 05/07/92, Analytical Technologies, Inc. received a request to analyze soil sample(s). The sample(s) were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

If you have any questions or comments, please do not hesitate to contact us at (602) 496-4400.

Jane M. Foote

Jane M. Foote
Project Manager

Lorraine Davis for

Robert V. Woods
Laboratory Manager

RVW:ehj
Enclosure



Analytical Technologies, Inc.

CLIENT : DAMES & MOORE, PHOENIX
PROJECT # : 01151-120-033
PROJECT NAME : RMC

DATE RECEIVED : 05/07/92

REPORT DATE : 06/09/92

ATI I.D. : 205037

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	R.O.W.-GRAB-2	SOIL	05/07/92

----- TOTALS -----

MATRIX	# SAMPLES
SOIL	1

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



Analytical**Technologies**, Inc.

METALS RESULTS

ATI I.D. : 205037

CLIENT : DAMES & MOORE, PHOENIX
PROJECT # : 01151-120-033
PROJECT NAME : RMC

DATE RECEIVED : 05/07/92

REPORT DATE : 06/09/92

PARAMETER	UNITS	01
CHROMIUM	MG/KG	938



Analytical Technologies, Inc.

METALS - QUALITY CONTROL

CLIENT : DAMES & MOORE, PHOENIX
PROJECT # : 01151-120-033
PROJECT NAME : RMC

ATI I.D. : 205037

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
CHROMIUM	MG/KG	20503701	938	976	4	1430	500	98

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative Percent Difference)} = \frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$$

ANALYSIS REQUEST

[illegible]



Analytical**Technologies**, Inc.

9830 S. 51st Street Suite B-113 Phoenix, AZ 85044 (602) 496-4400

ATI I.D. 408086

September 15, 1994

Geotechnical & Environmental Consultants
2447 W. 12th Street
Suite 4
Tempe, AZ 85281

Project Name/Number: 94-0069

Attention: Roger Brewer

On **08/29/94**, Analytical Technologies, Inc., received a request to analyze **soil** sample(s). The sample(s) were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

All analysis were performed in accordance with Test Methods For Evaluating Solid Waste, Physical/Chemical Methods, (SW 846-3rd Ed.).

The 1,1-DCE in the MS/MSD had recoveries less than acceptance criteria. The problem was found to be a poor spiking solution and a new mix is being used. The blank spike/blank spike duplicate which was analyzed with this group used a different spiking solution and was within all criteria.

If you have any questions or comments, please do not hesitate to contact us at (602) 496-4400.

Tracy L. Dutton
Project Manager

TLD/cew

Enclosure

ADHS License No. AZ0061
Donald F. Weber, Laboratory Manager



Analytical Technologies, Inc.

CLIENT : GEOTECHNICAL & ENVIRONMENTAL CONS.
PROJECT # : 94-0069
PROJECT NAME : (NONE)

DATE RECEIVED : 08/29/94

REPORT DATE : 09/15/94

ATI I.D. : 408086

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	SVE-B3-10	SOIL	08/29/94
02	SVE-B3-20	SOIL	08/29/94
03	SVE-B3-30	SOIL	08/29/94
04	SVE-B3-35	SOIL	08/29/94

----- TOTALS -----

MATRIX	# SAMPLES
SOIL	4

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact sample control department before the scheduled disposal date.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 40808601

TEST : VOLATILE HALOCARBON/AROMATIC (EPA 8010/8020)

CLIENT	: GEOTECHNICAL & ENVIRONMENTAL CONS.	DATE SAMPLED	: 08/29/94
PROJECT #	: 94-0069	DATE RECEIVED	: 08/29/94
PROJECT NAME	: (NONE)	DATE EXTRACTED	: 08/30/94
CLIENT I.D.	: SVE-B3-10	DATE ANALYZED	: 08/31/94
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 10

COMPOUNDS	RESULTS
BENZENE	<0.250
BROMODICHLOROMETHANE	<0.100
BROMOFORM	<0.100
BROMOMETHANE	<0.250
CARBON TETRACHLORIDE	<0.100
CHLOROBENZENE	<0.250
CHLOROETHANE	<0.250
CHLOROFORM	<0.100
CHLOROMETHANE	<0.250
DIBROMOCHLOROMETHANE	<0.100
2-CHLOROETHYL VINYL ETHER	<0.250
1,1-DICHLOROBENZENE	<0.250
1,2 & 1,4-DICHLOROBENZENE	<0.250
DICHLORODIFLUOROMETHANE	<0.250
1,1-DICHLOROETHANE	<0.100
1,2-DICHLOROETHANE	<0.100
1,1-DICHLOROETHENE	1.1
1,2-DICHLOROETHENE (TOTAL)	<0.100
1,2-DICHLOROPROPANE	<0.100
CIS-1,3-DICHLOROPROPENE	<0.100
TRANS-1,3-DICHLOROPROPENE	<0.100
ETHYLBENZENE	1.6
METHYLENE CHLORIDE	1.1
1,1,2,2-TETRACHLOROETHANE	<0.100
TETRACHLOROETHENE	<0.100
TOLUENE	<0.250
1,1,1-TRICHLOROETHANE	4.5
1,1,2-TRICHLOROETHANE	<0.100
TRICHLOROETHENE	<0.100
TRICHLOROTRIFLUOROETHANE	<1.0
VINYL CHLORIDE	<0.250
TOTAL XYLENES	33
TRICHLOROFLUOROMETHANE	<0.1

SURROGATE PERCENT RECOVERIES

DIBROMOCHLOROMETHANE (%)	96
1,1-DICHLOROBENZENE (%)	**

** Due to the necessary dilution of the sample, result was not attainable



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 40808602

TEST : VOLATILE HALOCARBON/AROMATIC (EPA 8010/8020)

CLIENT	: GEOTECHNICAL & ENVIRONMENTAL CONS.	DATE SAMPLED	: 08/29/94
PROJECT #	: 94-0069	DATE RECEIVED	: 08/29/94
PROJECT NAME	: (NONE)	DATE EXTRACTED	: 08/30/94
CLIENT I.D.	: SVE-B3-20	DATE ANALYZED	: 08/31/94
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 2

COMPOUNDS	RESULTS
BENZENE	<0.050
BROMODICHLOROMETHANE	<0.020
BROMOFORM	<0.020
BROMOMETHANE	<0.050
CARBON TETRACHLORIDE	<0.020
CHLOROBENZENE	<0.050
CHLOROETHANE	<0.050
CHLOROFORM	<0.020
CHLOROMETHANE	<0.050
DIBROMOCHLOROMETHANE	<0.020
2-CHLOROETHYL VINYL ETHER	<0.050
3-DICHLOROBENZENE	<0.050
1,2 & 1,4-DICHLOROBENZENE	<0.050
DICHLORODIFLUOROMETHANE	<0.050
1,1-DICHLOROETHANE	<0.020
1,2-DICHLOROETHANE	<0.020
1,1-DICHLOROETHENE	<0.020
1,2-DICHLOROETHENE (TOTAL)	<0.020
1,2-DICHLOROPROPANE	<0.020
CIS-1,3-DICHLOROPROPENE	<0.020
TRANS-1,3-DICHLOROPROPENE	<0.020
ETHYLBENZENE	<0.050
METHYLENE CHLORIDE	<0.200
1,1,2,2-TETRACHLOROETHANE	<0.020
TETRACHLOROETHENE	<0.020
TOLUENE	<0.050
1,1,1-TRICHLOROETHANE	0.04
1,1,2-TRICHLOROETHANE	<0.020
TRICHLOROETHENE	<0.020
TRICHLOROTRIFLUOROETHANE	<0.20
VINYL CHLORIDE	<0.050
TOTAL XYLENES	<0.050
TRICHLOROFLUOROMETHANE	<0.02

SURROGATE PERCENT RECOVERIES

DIBROMOCHLOROMETHANE (%)	107
DICHLORODIFLUOROBENZENE (%)	103

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 40808603

TEST : VOLATILE HALOCARBON/AROMATIC (EPA 8010/8020)

CLIENT	: GEOTECHNICAL & ENVIRONMENTAL CONS.	DATE SAMPLED	: 08/29/94
PROJECT #	: 94-0069	DATE RECEIVED	: 08/29/94
PROJECT NAME	: (NONE)	DATE EXTRACTED	: 08/30/94
CLIENT I.D.	: SVE-B3-30	DATE ANALYZED	: 08/31/94
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	<0.025
BROMODICHLOROMETHANE	<0.010
BROMOFORM	<0.010
BROMOMETHANE	<0.025
CARBON TETRACHLORIDE	<0.010
CHLOROBENZENE	<0.025
CHLOROETHANE	<0.025
CHLOROFORM	<0.010
CHLOROMETHANE	<0.025
DIBROMOCHLOROMETHANE	<0.010
2-CHLOROETHYL VINYL ETHER	<0.025
3-DICHLOROBENZENE	<0.025
1,2 & 1,4-DICHLOROBENZENE	<0.025
DICHLORODIFLUOROMETHANE	<0.025
1,1-DICHLOROETHANE	<0.010
1,2-DICHLOROETHANE	<0.010
1,1-DICHLOROETHENE	<0.010
1,2-DICHLOROETHENE (TOTAL)	<0.010
1,2-DICHLOROPROPANE	<0.010
CIS-1,3-DICHLOROPROPENE	<0.010
TRANS-1,3-DICHLOROPROPENE	<0.010
ETHYLBENZENE	<0.025
METHYLENE CHLORIDE	<0.100
1,1,2,2-TETRACHLOROETHANE	<0.010
TETRACHLOROETHENE	<0.010
TOLUENE	<0.025
1,1,1-TRICHLOROETHANE	<0.010
1,1,2-TRICHLOROETHANE	<0.010
TRICHLOROETHENE	<0.010
TRICHLOROTRIFLUOROETHANE	<0.10
VINYL CHLORIDE	<0.025
TOTAL XYLENES	<0.025
TRICHLOROFLUOROMETHANE	<0.01

SURROGATE PERCENT RECOVERIES

PBROMOCHLOROMETHANE (%)	97
DMOFLUOROBENZENE (%)	82



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 40808604

TEST : VOLATILE HALOCARBON/AROMATIC (EPA 8010/8020)

CLIENT	: GEOTECHNICAL & ENVIRONMENTAL CONS.	DATE SAMPLED	: 08/29/94
PROJECT #	: 94-0069	DATE RECEIVED	: 08/29/94
PROJECT NAME	: (NONE)	DATE EXTRACTED	: 08/30/94
CLIENT I.D.	: SVE-B3-35	DATE ANALYZED	: 08/30/94
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BENZENE	<0.025
BROMODICHLOROMETHANE	<0.010
BROMOFORM	<0.010
BROMOMETHANE	<0.025
CARBON TETRACHLORIDE	<0.010
CHLOROBENZENE	<0.025
CHLOROETHANE	<0.025
CHLOROFORM	<0.010
CHLOROMETHANE	<0.025
DIBROMOCHLOROMETHANE	<0.010
2-CHLOROETHYL VINYL ETHER	<0.025
1,3-DICHLOROBENZENE	<0.025
1,2 & 1,4-DICHLOROBENZENE	<0.025
DICHLORODIFLUOROMETHANE	<0.025
1,1-DICHLOROETHANE	<0.010
1,2-DICHLOROETHANE	<0.010
1,1-DICHLOROETHENE	<0.010
1,2-DICHLOROETHENE (TOTAL)	<0.010
1,2-DICHLOROPROPANE	<0.010
CIS-1,3-DICHLOROPROPENE	<0.010
TRANS-1,3-DICHLOROPROPENE	<0.010
ETHYLBENZENE	<0.025
METHYLENE CHLORIDE	<0.100
1,1,2,2-TETRACHLOROETHANE	<0.010
TETRACHLOROETHENE	<0.010
TOLUENE	<0.025
1,1,1-TRICHLOROETHANE	<0.010
1,1,2-TRICHLOROETHANE	<0.010
TRICHLOROETHENE	<0.010
TRICHLOROTRIFLUOROETHANE	<0.10
VINYL CHLORIDE	<0.025
TOTAL XYLENES	<0.025
TRICHLOROFLUOROMETHANE	<0.01

SURROGATE PERCENT RECOVERIES

DIBROMOCHLOROMETHANE (%)	101
1,4-DIFLUOROBENZENE (%)	80



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

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TEST : VOLATILE HALOCARBON/AROMATIC (EPA 8010/8020)

CLIENT	: GEOTECHNICAL & ENVIRONMENTAL CONS.	ATI I.D.	: 408086
PROJECT #	: 94-0069	DATE EXTRACTED	: 08/30/94
PROJECT NAME	: (NONE)	DATE ANALYZED	: 08/30/94
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/KG
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
BENZENE	<0.025
BROMODICHLOROMETHANE	<0.010
BROMOFORM	<0.010
BROMOMETHANE	<0.025
CARBON TETRACHLORIDE	<0.010
CHLOROBENZENE	<0.025
CHLOROETHANE	<0.025
CHLOROFORM	<0.010
CHLOROMETHANE	<0.025
DIBROMOCHLOROMETHANE	<0.010
2-CHLOROETHYL VINYL ETHER	<0.025
1,3-DICHLOROBENZENE	<0.025
1,2 & 1,4-DICHLOROBENZENE	<0.025
DICHLORODIFLUOROMETHANE	<0.025
1-DICHLOROETHANE	<0.010
1,2-DICHLOROETHANE	<0.010
1,1-DICHLOROETHENE	<0.010
1,2-DICHLOROETHENE (TOTAL)	<0.010
1,2-DICHLOROPROPANE	<0.010
CIS-1,3-DICHLOROPROPENE	<0.010
TRANS-1,3-DICHLOROPROPENE	<0.010
ETHYLBENZENE	<0.025
METHYLENE CHLORIDE	<0.100
1,1,2,2-TETRACHLOROETHANE	<0.010
TETRACHLOROETHENE	<0.010
TOLUENE	<0.025
1,1,1-TRICHLOROETHANE	<0.010
1,1,2-TRICHLOROETHANE	<0.010
TRICHLOROETHENE	<0.010
TRICHLOROTRIFLUOROETHANE	<0.10
VINYL CHLORIDE	<0.025
TOTAL XYLENES	<0.025
TRICHLOROFLUOROMETHANE	<0.01

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	107
BROMOFLUOROBENZENE (%)	86



Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 408086

TEST : VOLATILE HALOCARBON/AROMATIC (EPA 8010/8020)

CLIENT : GEOTECHNICAL & ENVIRONMENTAL CONS.

PROJECT # : 94-0069

DATE ANALYZED : 08/30/94

PROJECT NAME : (NONE)

SAMPLE MATRIX : SOIL

REF I.D. : 40808604

UNITS : MG/KG

COMPOUNDS	SAMPLE CONC.		SPIKED SAMPLE	% REC.	DUP.	DUP.	RPD
	RESULT	SPIKED			SPIKED SAMPLE	% REC.	
1,1-DICHLOROETHENE	<0.01	1.0	0.26	26*	0.26	26*	0
TRICHLOROETHENE	<0.01	1.0	0.86	86	0.85	85	1
TETRACHLOROETHENE	<0.01	1.0	0.81	81	0.84	84	4
BENZENE	<0.025	1.0	0.57	57	0.58	58	2
BROMODICHLOROMETHANE	<0.01	1.0	0.78	78	0.74	74	5
CHLOROFORM	<0.01	1.0	0.67	67	0.67	67	0
1,1,1-TRICHLOROETHANE	<0.01	1.0	0.80	80	0.80	80	0
TOLUENE	<0.025	1.0	0.87	87	0.88	88	1
CHLOROBENZENE	<0.025	1.0	0.83	83	0.88	88	6
M-XYLENE	<0.025	1.0	0.96	96	0.97	97	1

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 40808601

TEST : FUEL HYDROCARBONS (MOD. EPA 8015)

CLIENT	: GEOTECHNICAL & ENVIRONMENTAL CONS.	DATE SAMPLED	: 08/29/94
PROJECT #	: 94-0069	DATE RECEIVED	: 08/29/94
PROJECT NAME	: (NONE)	DATE EXTRACTED	: 08/30/94
CLIENT I.D.	: SVE-B3-10	DATE ANALYZED	: 09/02/94
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 20

COMPOUNDS

RESULTS

FUEL HYDROCARBONS, C6-C10	11000
FUEL HYDROCARBONS, C10-C22 (BLS-191)	3600
FUEL HYDROCARBONS, C22-C36	150
FUEL HYDROCARBONS (CALCULATED SUM)	14750

SURROGATE PERCENT RECOVERIES

O-TERPHENYL (%)

**

** Due to the necessary dilution of the sample, result was not attainable



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 40808602

TEST : FUEL HYDROCARBONS (MOD. EPA 8015)

CLIENT	: GEOTECHNICAL & ENVIRONMENTAL CONS.	DATE SAMPLED	: 08/29/94
PROJECT #	: 94-0069	DATE RECEIVED	: 08/29/94
PROJECT NAME	: (NONE)	DATE EXTRACTED	: 08/30/94
CLIENT I.D.	: SVE-B3-20	DATE ANALYZED	: 09/02/94
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS

RESULTS

FUEL HYDROCARBONS, C6-C10	66
FUEL HYDROCARBONS, C10-C22 (BLS-191)	59
FUEL HYDROCARBONS, C22-C36	<5
FUEL HYDROCARBONS (CALCULATED SUM)	125

SURROGATE PERCENT RECOVERIES

O-TERPHENYL (%)	95
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Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 40808603

TEST : FUEL HYDROCARBONS (MOD. EPA 8015)

CLIENT	: GEOTECHNICAL & ENVIRONMENTAL CONS.	DATE SAMPLED	: 08/29/94
PROJECT #	: 94-0069	DATE RECEIVED	: 08/29/94
PROJECT NAME	: (NONE)	DATE EXTRACTED	: 08/30/94
CLIENT I.D.	: SVE-B3-30	DATE ANALYZED	: 09/02/94
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS

RESULTS

FUEL HYDROCARBONS, C6-C10	<5
FUEL HYDROCARBONS, C10-C22 (BLS-191)	<5
FUEL HYDROCARBONS, C22-C36	<5
FUEL HYDROCARBONS (CALCULATED SUM)	<5

SURROGATE PERCENT RECOVERIES

O-TERPHENYL (%)	82
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Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 40808604

TEST : FUEL HYDROCARBONS (MOD. EPA 8015)

CLIENT	: GEOTECHNICAL & ENVIRONMENTAL CONS.	DATE SAMPLED	: 08/29/94
PROJECT #	: 94-0069	DATE RECEIVED	: 08/29/94
PROJECT NAME	: (NONE)	DATE EXTRACTED	: 08/30/94
CLIENT I.D.	: SVE-B3-35	DATE ANALYZED	: 09/02/94
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS

RESULTS

FUEL HYDROCARBONS, C6-C10	<5
FUEL HYDROCARBONS, C10-C22(BLS-191)	<5
FUEL HYDROCARBONS, C22-C36	<5
FUEL HYDROCARBONS (CALCULATED SUM)	<5

SURROGATE PERCENT RECOVERIES

O-TERPHENYL (%)	86
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Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

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TEST : FUEL HYDROCARBONS (MOD. EPA 8015)

CLIENT	: GEOTECHNICAL & ENVIRONMENTAL CONS.	ATI I.D.	: 408086
PROJECT #	: 94-0069	DATE EXTRACTED	: 08/30/94
PROJECT NAME	: (NONE)	DATE ANALYZED	: 09/01/94
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/KG
		DILUTION FACTOR	: N/A

COMPOUNDS

RESULTS

FUEL HYDROCARBONS, C6-C10	<5
FUEL HYDROCARBONS, C10-C22 (BLS-191)	<5
FUEL HYDROCARBONS, C22-C36	<5
FUEL HYDROCARBONS (CALCULATED SUM)	<5

SURROGATE PERCENT RECOVERIES

O-TERPHENYL (%)	88
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Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 408086

TEST : FUEL HYDROCARBONS (MOD. EPA 8015)

CLIENT : GEOTECHNICAL & ENVIRONMENTAL CONS.

PROJECT # : 94-0069

DATE ANALYZED : 09/01/94

PROJECT NAME : (NONE)

SAMPLE MATRIX : SOIL

REF I.D. : 40807802

UNITS : MG/KG

COMPOUNDS	SAMPLE CONC.		SPIKED SAMPLE	% REC.	DUP.	DUP.	RPD
	RESULT	SPIKED			SPIKED SAMPLE	% REC.	
FUEL HYDROCARBONS (C10-C22)	6	50	51	90	55	98	8

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$



PLEASE FILL THIS FORM IN COMPLETELY. SHADED AREAS ARE FOR LAB USE ONLY.

Ana, cal Technologies, Inc., Phoenix, Arizona
San Diego • Phoenix • Seattle • Pensacola • Ft. Collins • Portland

CHA OF CUSTODY

DATE: 8/29/94 PAGE 1 OF 1

ATI LAB ID.

408086

PROJECT MANAGER: Roger Brewer

COMPANY: GEC

ADDRESS: 2447 W. 12th St. Suite 4
Tempe, AZ 85281

PHONE: 966-3631

FAX: 966-3821

BILL TO: Same

COMPANY:

ADDRESS:

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
SVE-B3-10	8/29/94	0658	Sail	1
SVE-B3-20	"	0715	"	2
SVE-B3-30	"	0742	"	3
SVE-B3-35	"	0809	"	4

ANALYSIS REQUEST										NUMBER OF CONTAINERS	
Petroleum Hydrocarbons (418.1)											
(MOD 8015) Gas/Diesel											
Diesel/Gasoline/BTXE/MTBE (MOD 8015/8020)											
BTXE/MTBE (8020)											
Chlorinated Hydrocarbons (601/8010)											
Aromatic Hydrocarbons (602/8020)											
SDWA Volatiles (502.1/503.1), 502.2 Reg. & Unreg.											
Pesticides/PCB (608/8080)											
Herbicides (615/8150)											
Base/Neutral/Acid Compounds GC/MS (625/8270)											
Volatile Organics GC/MS (624/8240)											
Polynuclear Aromatics (610/8310)											
SDWA Primary Standards - Arizona											
SDWA Secondary Standards - Arizona											
SDWA Primary Standards - Federal											
SDWA Secondary Standards - Federal											
The 13 Priority Pollutant Metals											
RCRA Metals by Total Digestion											
RCRA Metals by TCLP (1311)											

PROJECT INFORMATION

PROJ. NO.: 94-0069

PROJ. NAME:

P.O. NO.:

SHIPPED VIA:

NO. CONTAINERS: 4

CUSTODY SEALS: 8/29/94

RECEIVED INTACT: Y

RECEIVED COLD: Y

PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS

(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK (NORMAL) ☐ 2 WEEK

Comments:

SAMPLED & RELINQUISHED BY: 1. RELINQUISHED BY: 2. RELINQUISHED BY: 3.

Signature: David Foreman Signature: Signature: Signature:

Time: 1525 Time: Time: Time:

Printed Name: David Foreman Printed Name: Printed Name: Printed Name:

Date: 8/29/94 Date: Date: Date:

Company: GEC Company: Company: Company:

RECEIVED BY: 1. RECEIVED BY: 2. RECEIVED BY: 3.

Signature: Signature: Signature: Signature:

Time: Time: Time: Time:

Printed Name: Printed Name: Printed Name: Printed Name:

Date: Date: Date: Date:

Company: Company: Company: Company:



Analytical**Technologies**, Inc.

9830 S. 51st Street Suite B-113 Phoenix, AZ 85044 (602) 496-4400

ATI I.D. 504979

May 12, 1995

Geotechnical & Environmental Consultants
2447 W. 12th Street
Suite 4
Tempe, AZ 85281

Project Name/Number: 94-0069B

Attention: Roger Brewer

On 04/25/95, Analytical Technologies, Inc., received a request to analyze soil sample(s). The sample(s) were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data, which follow each set of analyses, are enclosed.

Total petroleum hydrocarbons were analyzed by EPA Method 418.1 AZ in accordance with Arizona Dept. of Health Services (ADHS), Division of Laboratory Services. Chlorinated hydrocarbons were analyzed by EPA method 8010. Fuel analysis was performed by EPA Method MOD 8015. These tests were performed in accordance with Test Methods For Evaluating Solid Waste, Physical/Chemical Methods, (SW 846-3rd Ed.).

If you have any questions or comments, please do not hesitate to contact us at (602) 496-4400.

Julianne J. Hrubant
Project Manager

JJH/jmf

Enclosure

ADHS License No. AZ0061
Elizabeth Proffitt, Laboratory Manager

Mary Tyer
Project Manager

ATI I.D.



Analytical Technologies, Inc.

CLIENT : GEOTECHNICAL & ENVIRONMENTAL CONS.
PROJECT # : 94-0069B
PROJECT NAME : (NONE)

DATE RECEIVED : 04/25/95

REPORT DATE : 05/10/95

ATI I.D. : 504979

ATI #	CLIENT DESCRIPTION	MATRIX	DATE COLLECTED
01	HS-7	SOIL	04/25/95
02	HS-8	SOIL	04/25/95
03	HS-9	SOIL	04/25/95
04	HS-10	SOIL	04/25/95
05	HS-11	SOIL	04/25/95
06	HS-12	SOIL	04/25/95
07	HS-13	SOIL	04/25/95

----- TOTALS -----

MATRIX	# SAMPLES
SOIL	7

ATI STANDARD DISPOSAL PRACTICE

The samples from this project will be disposed of in thirty (30) days from the date of this report. If an extended storage period is required, please contact our sample control department before the scheduled disposal date.



Analytical Technologies, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 504979

CLIENT : GEOTECHNICAL & ENVIRONMENTAL CONS.

DATE RECEIVED : 04/25/95

PROJECT # : 94-0069B

PROJECT NAME : (NONE)

REPORT DATE : 05/10/95

PARAMETER	UNITS	01	02	03	04	05
PETROLEUM HYDROCARBONS, 418.1	MG/KG	13000	800	5700	<20	<20
418.1 AZ PERCENT MOISTURE		18	8	14	6	3



Analytical Technologies, Inc.

GENERAL CHEMISTRY RESULTS

ATI I.D. : 504979

CLIENT : GEOTECHNICAL & ENVIRONMENTAL CONS.
PROJECT # : 94-0069B
PROJECT NAME : (NONE)

DATE RECEIVED : 04/25/95

REPORT DATE : 05/10/95

PARAMETER	UNITS	06	07
PETROLEUM HYDROCARBONS, 418.1	MG/KG	<20	<20
418.1 AZ PERCENT MOISTURE		3	13



Analytical Technologies, Inc.

GENERAL CHEMISTRY - QUALITY CONTROL

CLIENT : GEOTECHNICAL & ENVIRONMENTAL CONS.
PROJECT # : 94-0069B
PROJECT NAME : (NONE)

ATI I.D. : 504979

PARAMETER	UNITS	ATI I.D.	SAMPLE RESULT	DUP. RESULT	RPD	SPIKED SAMPLE	SPIKE CONC	% REC
PETROLEUM HYDROCARBONS	MG/KG	50449815	<20	<20	NA	210	200	105

% Recovery = $\frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$

RPD (Relative Percent Difference) = $\frac{(\text{Sample Result} - \text{Duplicate Result})}{\text{Average Result}} \times 100$



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 50497901

TEST : VOLATILE HALOCARBONS (EPA METHOD 8010)

CLIENT	: GEOTECHNICAL & ENVIRONMENTAL CONS.	DATE SAMPLED	: 04/25/95
PROJECT #	: 94-0069B	DATE RECEIVED	: 04/25/95
PROJECT NAME	: (NONE)	DATE EXTRACTED	: 04/27/95
CLIENT I.D.	: HS-7	DATE ANALYZED	: 05/05/95
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 2

COMPOUNDS	RESULTS
BROMODICHLOROMETHANE	<0.050
BROMOFORM	<0.050
BROMOMETHANE	<0.2
CARBON TETRACHLORIDE	<0.05
CHLOROBENZENE	<0.050
CHLOROETHANE	<0.050
CHLOROFORM	<0.050
CHLOROMETHANE	<0.050
DIBROMOCHLOROMETHANE	<0.050
1,3-DICHLOROBENZENE	<0.050
1,4-DICHLOROBENZENE	<0.050
1,2-DICHLOROBENZENE	<0.050
DICHLORODIFLUOROMETHANE	<0.050
1,1-DICHLOROETHANE	<0.050
1,2-DICHLOROETHANE	<0.050
1,1-DICHLOROETHENE	<0.050
1,2-DICHLOROETHENE (TOTAL)	<0.050
1,2-DICHLOROPROPANE	<0.050
CIS-1,3-DICHLOROPROPENE	<0.050
TRANS-1,3-DICHLOROPROPENE	<0.050
METHYLENE CHLORIDE	<0.050
1,1,2,2-TETRACHLOROETHANE	<0.20
TETRACHLOROETHENE	<0.050
1,1,1-TRICHLOROETHANE	<0.050
1,1,2-TRICHLOROETHANE	<0.050
TRICHLOROETHENE	<0.050
TRICHLOROFLUOROMETHANE	<0.050
TRICHLOROTRIFLUOROETHANE	<0.20
VINYL CHLORIDE	<0.050
2-CHLOROETHYL VINYL ETHER	<0.050

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	95
TIME EXT	9:15



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 50497902

TEST : VOLATILE HALOCARBONS (EPA METHOD 8010)

CLIENT	: GEOTECHNICAL & ENVIRONMENTAL CONS.	DATE SAMPLED	: 04/25/95
PROJECT #	: 94-0069B	DATE RECEIVED	: 04/25/95
PROJECT NAME	: (NONE)	DATE EXTRACTED	: 04/27/95
CLIENT I.D.	: HS-8	DATE ANALYZED	: 05/05/95
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BROMODICHLOROMETHANE	<0.025
BROMOFORM	<0.025
BROMOMETHANE	<0.1
CARBON TETRACHLORIDE	<0.025
CHLOROBENZENE	<0.025
CHLOROETHANE	<0.025
CHLOROFORM	<0.025
CHLOROMETHANE	<0.025
DIBROMOCHLOROMETHANE	<0.025
1,3-DICHLOROBENZENE	<0.025
1,4-DICHLOROBENZENE	<0.025
1,2-DICHLOROBENZENE	<0.025
DICHLORODIFLUOROMETHANE	<0.025
1-DICHLOROETHANE	0.12
1,2-DICHLOROETHANE	<0.025
1,1-DICHLOROETHENE	<0.025
1,2-DICHLOROETHENE (TOTAL)	<0.025
1,2-DICHLOROPROPANE	<0.025
CIS-1,3-DICHLOROPROPENE	<0.025
TRANS-1,3-DICHLOROPROPENE	<0.025
METHYLENE CHLORIDE	<0.025
1,1,2,2-TETRACHLOROETHANE	<0.10
TETRACHLOROETHENE	<0.025
1,1,1-TRICHLOROETHANE	0.63
1,1,2-TRICHLOROETHANE	<0.025
TRICHLOROETHENE	<0.025
TRICHLOROFLUOROMETHANE	<0.025
TRICHLOROTRIFLUOROETHANE	<0.10
VINYL CHLORIDE	<0.025
2-CHLOROETHYL VINYL ETHER	<0.025

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	90
TIME EXT	9:17



GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 50497903

TEST : VOLATILE HALOCARBONS (EPA METHOD 8010)

CLIENT	: GEOTECHNICAL & ENVIRONMENTAL CONS.	DATE SAMPLED	: 04/25/95
PROJECT #	: 94-0069B	DATE RECEIVED	: 04/25/95
PROJECT NAME	: (NONE)	DATE EXTRACTED	: 04/27/95
CLIENT I.D.	: HS-9	DATE ANALYZED	: 05/04/95
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BROMODICHLOROMETHANE	<0.025
BROMOFORM	<0.025
BROMOMETHANE	<0.1
CARBON TETRACHLORIDE	<0.025
CHLOROBENZENE	<0.025
CHLOROETHANE	<0.025
CHLOROFORM	<0.025
CHLOROMETHANE	<0.025
DIBROMOCHLOROMETHANE	<0.025
1,3-DICHLOROBENZENE	<0.025
1,4-DICHLOROBENZENE	<0.025
1,2-DICHLOROBENZENE	<0.025
DICHLORODIFLUOROMETHANE	<0.025
1-DICHLOROETHANE	<0.025
2-DICHLOROETHANE	<0.025
1,1-DICHLOROETHENE	<0.025
1,2-DICHLOROETHENE (TOTAL)	<0.025
1,2-DICHLOROPROPANE	<0.025
CIS-1,3-DICHLOROPROPENE	<0.025
TRANS-1,3-DICHLOROPROPENE	<0.025
METHYLENE CHLORIDE	<0.025
1,1,2,2-TETRACHLOROETHANE	<0.10
TETRACHLOROETHENE	<0.025
1,1,1-TRICHLOROETHANE	0.04
1,1,2-TRICHLOROETHANE	<0.025
TRICHLOROETHENE	<0.025
TRICHLOROFLUOROMETHANE	<0.025
TRICHLOROTRIFLUOROETHANE	<0.10
VINYL CHLORIDE	<0.025
2-CHLOROETHYL VINYL ETHER	<0.025

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	95
TIME EXT	9:20



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 50497904

TEST : VOLATILE HALOCARBONS (EPA METHOD 8010)

CLIENT	: GEOTECHNICAL & ENVIRONMENTAL CONS.	DATE SAMPLED	: 04/25/95
PROJECT #	: 94-0069B	DATE RECEIVED	: 04/25/95
PROJECT NAME	: (NONE)	DATE EXTRACTED	: 04/27/95
CLIENT I.D.	: HS-10	DATE ANALYZED	: 05/04/95
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BROMODICHLOROMETHANE	<0.025
BROMOFORM	<0.025
BROMOMETHANE	<0.1
CARBON TETRACHLORIDE	<0.025
CHLOROBENZENE	<0.025
CHLOROETHANE	<0.025
CHLOROFORM	<0.025
CHLOROMETHANE	<0.025
DIBROMOCHLOROMETHANE	<0.025
1,3-DICHLOROBENZENE	<0.025
1,4-DICHLOROBENZENE	<0.025
1,2-DICHLOROBENZENE	<0.025
DICHLORODIFLUOROMETHANE	<0.025
1,1-DICHLOROETHANE	<0.025
1,2-DICHLOROETHANE	<0.025
1,1-DICHLOROETHENE	<0.025
1,2-DICHLOROETHENE (TOTAL)	<0.025
1,2-DICHLOROPROPANE	<0.025
CIS-1,3-DICHLOROPROPENE	<0.025
TRANS-1,3-DICHLOROPROPENE	<0.025
METHYLENE CHLORIDE	<0.025
1,1,2,2-TETRACHLOROETHANE	<0.10
TETRACHLOROETHENE	<0.025
1,1,1-TRICHLOROETHANE	<0.025
1,1,2-TRICHLOROETHANE	<0.025
TRICHLOROETHENE	<0.025
TRICHLOROFLUOROMETHANE	<0.025
TRICHLOROTRIFLUOROETHANE	<0.10
VINYL CHLORIDE	<0.025
2-CHLOROETHYL VINYL ETHER	<0.025

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	90
TIME EXT	9:25



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 50497905

TEST : VOLATILE HALOCARBONS (EPA METHOD 8010)

CLIENT	: GEOTECHNICAL & ENVIRONMENTAL CONS.	DATE SAMPLED	: 04/25/95
PROJECT #	: 94-0069B	DATE RECEIVED	: 04/25/95
PROJECT NAME	: (NONE)	DATE EXTRACTED	: 04/27/95
CLIENT I.D.	: HS-11	DATE ANALYZED	: 05/04/95
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BROMODICHLOROMETHANE	<0.025
BROMOFORM	<0.025
BROMOMETHANE	<0.1
CARBON TETRACHLORIDE	<0.025
CHLOROBENZENE	<0.025
CHLOROETHANE	<0.025
CHLOROFORM	<0.025
CHLOROMETHANE	<0.025
DIBROMOCHLOROMETHANE	<0.025
1,3-DICHLOROBENZENE	<0.025
1,4-DICHLOROBENZENE	<0.025
1,2-DICHLOROBENZENE	<0.025
DICHLORODIFLUOROMETHANE	<0.025
1-DICHLOROETHANE	<0.025
2-DICHLOROETHANE	<0.025
1,1-DICHLOROETHENE	<0.025
1,2-DICHLOROETHENE (TOTAL)	<0.025
1,2-DICHLOROPROPANE	<0.025
CIS-1,3-DICHLOROPROPENE	<0.025
TRANS-1,3-DICHLOROPROPENE	<0.025
METHYLENE CHLORIDE	<0.025
1,1,2,2-TETRACHLOROETHANE	<0.10
TETRACHLOROETHENE	<0.025
1,1,1-TRICHLOROETHANE	<0.025
1,1,2-TRICHLOROETHANE	<0.025
TRICHLOROETHENE	<0.025
TRICHLOROFLUOROMETHANE	<0.025
TRICHLOROTRIFLUOROETHANE	<0.10
VINYL CHLORIDE	<0.025
2-CHLOROETHYL VINYL ETHER	<0.025

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	99
TIME EXT	9:30



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 50497906

TEST : VOLATILE HALOCARBONS (EPA METHOD 8010)

CLIENT	: GEOTECHNICAL & ENVIRONMENTAL CONS.	DATE SAMPLED	: 04/25/95
PROJECT #	: 94-0069B	DATE RECEIVED	: 04/25/95
PROJECT NAME	: (NONE)	DATE EXTRACTED	: 04/27/95
CLIENT I.D.	: HS-12	DATE ANALYZED	: 05/03/95
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BROMODICHLOROMETHANE	<0.025
BROMOFORM	<0.025
BROMOMETHANE	<0.1
CARBON TETRACHLORIDE	<0.025
CHLOROBENZENE	<0.025
CHLOROETHANE	<0.025
CHLOROFORM	<0.025
CHLOROMETHANE	<0.025
DIBROMOCHLOROMETHANE	<0.025
1,3-DICHLOROBENZENE	<0.025
1,4-DICHLOROBENZENE	<0.025
1,2-DICHLOROBENZENE	<0.025
DICHLORODIFLUOROMETHANE	<0.025
1-DICHLOROETHANE	<0.025
2-DICHLOROETHANE	<0.025
1,1-DICHLOROETHENE	<0.025
1,2-DICHLOROETHENE (TOTAL)	<0.025
1,2-DICHLOROPROPANE	<0.025
CIS-1,3-DICHLOROPROPENE	<0.025
TRANS-1,3-DICHLOROPROPENE	<0.025
METHYLENE CHLORIDE	<0.025
1,1,2,2-TETRACHLOROETHANE	<0.10
TETRACHLOROETHENE	<0.025
1,1,1-TRICHLOROETHANE	<0.025
1,1,2-TRICHLOROETHANE	<0.025
TRICHLOROETHENE	<0.025
TRICHLOROFLUOROMETHANE	<0.025
TRICHLOROTRIFLUOROETHANE	<0.10
VINYL CHLORIDE	<0.025
2-CHLOROETHYL VINYL ETHER	<0.025

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	93
TIME EXT	9:35



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 50497907

TEST : VOLATILE HALOCARBONS (EPA METHOD 8010)

CLIENT	: GEOTECHNICAL & ENVIRONMENTAL CONS.	DATE SAMPLED	: 04/25/95
PROJECT #	: 94-0069B	DATE RECEIVED	: 04/25/95
PROJECT NAME	: (NONE)	DATE EXTRACTED	: 04/27/95
CLIENT I.D.	: HS-13	DATE ANALYZED	: 05/04/95
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 1

COMPOUNDS	RESULTS
BROMODICHLOROMETHANE	<0.025
BROMOFORM	<0.025
BROMOMETHANE	<0.1
CARBON TETRACHLORIDE	<0.025
CHLOROBENZENE	<0.025
CHLOROETHANE	<0.025
CHLOROFORM	<0.025
CHLOROMETHANE	<0.025
DIBROMOCHLOROMETHANE	<0.025
1,3-DICHLOROBENZENE	<0.025
1,4-DICHLOROBENZENE	<0.025
1,2-DICHLOROBENZENE	<0.025
DICHLORODIFLUOROMETHANE	<0.025
1-DICHLOROETHANE	<0.025
1,2-DICHLOROETHANE	<0.025
1,1-DICHLOROETHENE	<0.025
1,2-DICHLOROETHENE (TOTAL)	<0.025
1,2-DICHLOROPROPANE	<0.025
CIS-1,3-DICHLOROPROPENE	<0.025
TRANS-1,3-DICHLOROPROPENE	<0.025
METHYLENE CHLORIDE	<0.025
1,1,2,2-TETRACHLOROETHANE	<0.10
TETRACHLOROETHENE	<0.025
1,1,1-TRICHLOROETHANE	<0.025
1,1,2-TRICHLOROETHANE	<0.025
TRICHLOROETHENE	<0.025
TRICHLOROFLUOROMETHANE	<0.025
TRICHLOROTRIFLUOROETHANE	<0.10
VINYL CHLORIDE	<0.025
2-CHLOROETHYL VINYL ETHER	<0.025

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	97
TIME EXT	9:43



REAGENT BLANK

TEST : VOLATILE HALOCARBONS (EPA METHOD 8010)

CLIENT	: GEOTECHNICAL & ENVIRONMENTAL CONS.	ATI I.D.	: 504979
PROJECT #	: 94-0069B	DATE EXTRACTED	: 04/27/95
PROJECT NAME	: (NONE)	DATE ANALYZED	: 05/02/95
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/KG
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
BROMODICHLOROMETHANE	<0.025
BROMOFORM	<0.025
BROMOMETHANE	<0.1
CARBON TETRACHLORIDE	<0.025
CHLOROBENZENE	<0.025
CHLOROETHANE	<0.025
CHLOROFORM	<0.025
CHLOROMETHANE	<0.025
DIBROMOCHLOROMETHANE	<0.025
1,3-DICHLOROBENZENE	<0.025
1,4-DICHLOROBENZENE	<0.025
1,2-DICHLOROBENZENE	<0.025
DICHLORODIFLUOROMETHANE	<0.025
1,1-DICHLOROETHANE	<0.025
1,2-DICHLOROETHANE	<0.025
1,1-DICHLOROETHENE	<0.025
2-DICHLOROETHENE (TOTAL)	<0.025
1,2-DICHLOROPROPANE	<0.025
CIS-1,3-DICHLOROPROPENE	<0.025
TRANS-1,3-DICHLOROPROPENE	<0.025
METHYLENE CHLORIDE	<0.025
1,1,2,2-TETRACHLOROETHANE	<0.10
TETRACHLOROETHENE	<0.025
1,1,1-TRICHLOROETHANE	<0.025
1,1,2-TRICHLOROETHANE	<0.025
TRICHLOROETHENE	<0.025
TRICHLOROFLUOROMETHANE	<0.025
TRICHLOROTRIFLUOROETHANE	<0.10
VINYL CHLORIDE	<0.025
2-CHLOROETHYL VINYL ETHER	<0.025

SURROGATE PERCENT RECOVERIES

BROMOCHLOROMETHANE (%)	87
TIME EXT	9:00



Analytical Technologies, Inc.

QUALITY CONTROL DATA

ATI I.D. : 504979

TEST : VOLATILE HALOCARBONS (EPA METHOD 8010)

CLIENT : GEOTECHNICAL & ENVIRONMENTAL CONS.

PROJECT # : 94-0069B

PROJECT NAME : (NONE)

REF I.D. : 50497906

DATE ANALYZED : 05/03/95

SAMPLE MATRIX : SOIL

UNITS : MG/KG

COMPOUNDS	SAMPLE CONC.		SPIKED SAMPLE	% REC.	DUP.	DUP.	RPD
	RESULT	SPIKED			SPIKED SAMPLE	% REC.	
1,1-DICHLOROETHENE	<0.025	1.0	0.83	83	0.85	85	2
TRICHLOROETHENE	<0.025	1.0	0.93	93	0.97	97	4
TETRACHLOROETHENE	<0.025	1.0	0.94	94	0.93	93	1
BROMODICHLOROMETHANE	<0.025	1.0	0.93	93	0.95	95	2
CHLOROFORM	<0.025	1.0	0.90	90	0.89	89	1
1,1,1-TRICHLOROETHANE	<0.025	1.0	0.93	93	0.93	93	0
CHLOROBENZENE	<0.025	1.0	0.93	93	0.93	93	0

$$\% \text{ Recovery} = \frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$$

$$\text{RPD (Relative \% Difference)} = \frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$$



Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

ATI I.D. : 50497902

TEST : FUEL HYDROCARBONS (MOD. EPA 8015)

CLIENT	: GEOTECHNICAL & ENVIRONMENTAL CONS.	DATE SAMPLED	: 04/25/95
PROJECT #	: 94-0069B	DATE RECEIVED	: 04/25/95
PROJECT NAME	: (NONE)	DATE EXTRACTED	: 04/27/95
CLIENT I.D.	: HS-8	DATE ANALYZED	: 04/27/95
SAMPLE MATRIX	: SOIL	UNITS	: MG/KG
		DILUTION FACTOR	: 5

COMPOUNDS	RESULTS
FUEL HYDROCARBONS, C6-C10	2000
FUEL HYDROCARBONS, C10-C22	77
FUEL HYDROCARBONS, C22-C36	170
FUEL HYDROCARBONS (CALCULATED SUM)	2247

SURROGATE PERCENT RECOVERIES

O-TERPHENYL (%)	81
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Analytical Technologies, Inc.

GAS CHROMATOGRAPHY - RESULTS

REAGENT BLANK

TEST : FUEL HYDROCARBONS (MOD. EPA 8015)

CLIENT	: GEOTECHNICAL & ENVIRONMENTAL CONS.	ATI I.D.	: 504979
PROJECT #	: 94-0069B	DATE EXTRACTED	: 04/27/95
PROJECT NAME	: (NONE)	DATE ANALYZED	: 04/27/95
CLIENT I.D.	: REAGENT BLANK	UNITS	: MG/KG
		DILUTION FACTOR	: N/A

COMPOUNDS	RESULTS
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FUEL HYDROCARBONS, C6-C10	<5
FUEL HYDROCARBONS, C10-C22	<5
FUEL HYDROCARBONS, C22-C36	<5
FUEL HYDROCARBONS (CALCULATED SUM)	<15

SURROGATE PERCENT RECOVERIES

O-TERPHENYL (%)	105
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Analytical Technologies, Inc.

QUALITY CONTROL DATA

TEST : FUEL HYDROCARBONS (MOD. EPA 8015)

ATI I.D. : 504979

CLIENT : GEOTECHNICAL & ENVIRONMENTAL CONS.

PROJECT # : 94-0069B

PROJECT NAME : (NONE)

REF I.D. : 50449905

DATE ANALYZED : 04/27/95

SAMPLE MATRIX : NON-AQUEOUS

UNITS : MG/KG

COMPOUNDS	SAMPLE RESULT	CONC. SPIKED	SPIKED SAMPLE	% REC.	DUP. SPIKED SAMPLE	DUP. % REC.	RPD
FUEL HYDROCARBONS (C10-C22)	<5	50	52	104	43	86	19

% Recovery = $\frac{(\text{Spike Sample Result} - \text{Sample Result})}{\text{Spike Concentration}} \times 100$

RPD (Relative % Difference) = $\frac{(\text{Spiked Sample Result} - \text{Duplicate Spike Sample Result})}{\text{Average of Spiked Sample}} \times 100$



Analytical Technologies, Inc., Phoenix, Arizona
San Diego • Phoenix • Seattle • Pensacola • Ft. Collins • Portland

CHAIN OF CUSTODY

DATE: 4/25/95 PAGE 1 OF 1

ATI LAB I.D. 504979

PROJECT MANAGER: Roger Brewer
COMPANY: GEC
ADDRESS: 2447 W. 12th St. Suite 4
Tempe, AZ 85281
PHONE: 966-8631
FAX: 966-8821
BILL TO: Same
COMPANY:
ADDRESS:

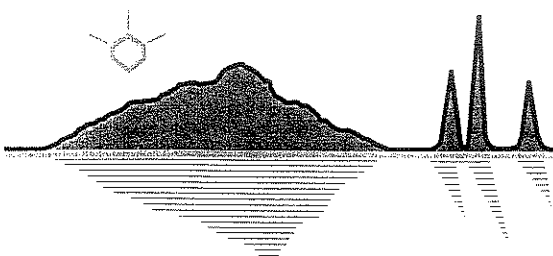
ANALYSIS REQUEST		NUMBER OF CONTAINERS	
RCRA Metals by TCLP (1311)		2	
RCRA Metals by Total Digestion		1	
The 13 Priority Pollutant Metals		2	
SDWA Secondary Standards - Federal		2	
SDWA Primary Standards - Federal		1	
SDWA Secondary Standards - Arizona		2	
SDWA Primary Standards - Arizona		1	
Polynuclear Aromatics (610/8310)		2	
Volatile Organics GC/MS (624/8240)		2	
Base/Neutral/Acid Compounds GC/MS (625/8270)		1	
Herbicides (615/8150)		2	
Pesticides/PCB (608/8080)		2	
SDWA Volatiles (502.1/503.1), 502.2 Reg. & Unreg.			
Aromatic Hydrocarbons (602/8020)			
Chlorinated Hydrocarbons (601/8010)			
BTXE/MTBE (8020)			
(BLS-191) Diesel			
(MOD 8015) Gas			
(MOD 8015) Fuel Fingerprint			
Petroleum Hydrocarbons (418.1)			

SAMPLE ID	DATE	TIME	MATRIX	LAB ID
HS-7	4/25/95	0730	Soil	1
HS-8	"	0749	"	2
HS-9	"	0820	"	3
HS-10	"	0900	"	4
HS-11	"	0917	"	5
HS-12	"	0930	"	6
HS-13	"	0950	"	7

PROJECT INFORMATION
PROJ. NO.: 94-0069B
PROJ. NAME: -
P.O. NO.: 94-0069B
SHIPPED VIA: hand
NO. CONTAINERS: 12
CUSTODY SEALS: DIN/NA
RECEIVED INTACT: Y
BLUE ICE: (X)
PRIOR AUTHORIZATION IS REQUIRED FOR RUSH PROJECTS
(RUSH) ☐ 24hr ☐ 48hr ☐ 72hr ☐ 1 WEEK (NORMAL) ☐ 2 WEEK
Comments:

SAMPLED & RELINQUISHED BY: 1		RELINQUISHED BY: 2	
Signature: David Foreman	Time: 1410	Signature:	Time:
Printed Name: David Foreman	Date: 4/25/95	Printed Name:	Date:
Company: GEC	Phone: 966-8631	Company:	
RECEIVED BY: 1		RECEIVED BY: 2	
Signature:	Time:	Signature: Melane Giangrasso	Time: 1410
Printed Name:	Date:	Printed Name: Melane Giangrasso	Date: 4/25/95
Company:		Company: Analytical Technologies, Inc.	

PLEASE FILL THIS FORM IN COMPLETELY. SHADED AREAS ARE FOR LAB USE ONLY.



TRANSWEST
GEOCHEM

TGI ID: A711031

December 02, 1997

GEC, Inc.
2447 W. 12th Street, Suite 4
Tempe, AZ 85281

Attention: Don Spadola

Project Name/No: 94-0069H
Samples Received: 11/19/97
Matrix: Soil
Mobile Lab No.: TGI01

Transwest Geochem, Inc. received and analyzed samples on the above date(s). The samples were analyzed with EPA methodology or equivalent methods. The results of these analyses and the quality control data are enclosed.

Samples for EPA Method 8260A were preserved in methanol in the field on 11/19/97. Samples for analysis by EPA Method 8310 were networked to AEN. The results for Method 8310 will be forwarded along with an invoice for the analyses on a separate report as soon as they are received.

If you have any questions or comments, please do not hesitate to contact us at (602)443-0508.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael E. Barber".

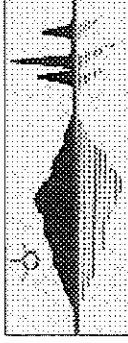
Michael E. Barber
Laboratory Director

ADHS License No.: AZM133

Transwest Geochem, Inc.
Analytical Results

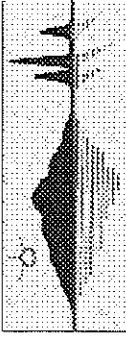
Client Name: GEC, Inc.
Project Name/No.: 94-0069H
Samples Received: 11/19/97

TGI ID No.: A711031
ADHS Cert. No.: AZM133



TGI ID/ SAMPLE NUMBER	CLIENT ID	Matrix	Units	Fuel Fingerprint								Sur. Rec. %
				Date Extracted	Date Analyzed	Dil.	C6-C10 Gasoline	C10-C22 Diesel	C22-C32 Oil	C6-C32 Total		
A711031 -04	TR4-102-5	Soil	mg/kg	11/20/97	11/21/97	1	<20	4000	<50	4000	104	
A711031 -05	TR5-101-5	Soil	mg/kg	11/20/97	11/20/97	1	<20	<30	<50	<100	113	
A711031 -06	TR5-102-5	Soil	mg/kg	11/20/97	11/20/97	1	<20	<30	<50	<100	116	
A711031 -07	TR6-101-5	Soil	mg/kg	11/20/97	11/20/97	1	<20	<30	<50	<100	113	
A711031 -11	TR6-102-5	Soil	mg/kg	11/20/97	11/21/97	1	<20	<30	<50	<100	116	
A711031 -16	TR6-103-15	Soil	mg/kg	11/20/97	11/21/97	5	660	1500	5600	7760	116	
A711031 -20	TR6-104-15	Soil	mg/kg	11/20/97	11/21/97	5	730	940	3800	5470	112	
A711031 -23	TR3-101A-5	Soil	mg/kg	11/20/97	11/21/97	1	<20	<30	<50	<100	112	
A711031 -24	TR3-102A-5	Soil	mg/kg	11/20/97	11/20/97	1	<20	<30	<50	<100	114	
A711031 -25	TR4-101A-5	Soil	mg/kg	11/20/97	11/20/97	1	<20	<30	<50	<100	105	

Transwest Geochem, Inc.
Analytical Quality Control Data
Reagent Blank - Fuel Fingerprint



TGI ID No.: A711031
ADHS Cert. No.: AZM133

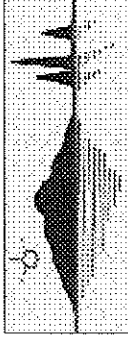
Client Name: GEC, Inc.
Project Name/No.: 94-0069H
Samples Received: 11/19/97

Units:	mg/kg
Matrix:	Soil
C6-C10 Gasoline:	<20
C10-C22 Diesel:	<30
C22-C32 Oil:	<50
C6-C32 Total:	<100
Surrogate Recovery %:	127
Date Extracted:	11/20/97
Date Analyzed:	11/21/97
Samples Linked:	A711031 -(4,5,6,7,11)
Samples Linked:	A711031 -(16,20,23)
Samples Linked:	A711031 -(24,25)

Transwest Geochem, Inc.
Analytical Quality Control Data
Fuel Fingerprint

Client Name: GEC, Inc.
Project Name/No.: 94-0069H
Samples Received: 11/19/97

TGI ID No.: A711031
ADHS Cert. No.: AZM133



	C10-C22 Diesel
Units:	mg/kg
Matrix:	Soil
Sample Result:	<30
Spike Amount:	500
Spike Result:	460
Percent Recovery:	92%
Duplicate Result:	470
Percent Recovery:	94%
RPD:	2%
Date Extracted:	11/20/97
Date Analyzed:	11/21/97
Sample Spiked:	A711031 -5
Samples Linked:	A711031 -(4,5,6,7,11)
Samples Linked:	A711031 -(16,20,23)
Samples Linked:	A711031 -(24,25)

Transwest Geochem, Inc.
Analytical Results

Client Name: GEC, Inc.
Project Name/No.: 94-0069H
Samples Received: 11/19/97



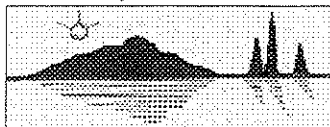
TGI ID No.: A711031
ADHS Cert. No.: AZM133

ANALYTE	EPA Method 8260					
	Lab ID	A711031-4	A711031-5	A711031-6	A711031-7	A711031-8
	Sample ID	TR4-102-5	TR5-101-5	TR5-102-5	TR6-101-5	TR6-101-15
	Date Extracted	11/19/97	11/19/97	11/19/97	11/19/97	11/19/97
	Date Analyzed	11/20/97	11/20/97	11/20/97	11/20/97	11/20/97
	Dilution Factor	1	1	1	1	1
	Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Bromodichloromethane		<0.05	<0.05	<0.05	<0.05	<0.05
Bromoform		<0.1	<0.1	<0.1	<0.1	<0.1
Bromomethane		<0.2	<0.2	<0.2	<0.2	<0.2
Carbon Tetrachloride		<0.05	<0.05	<0.05	<0.05	<0.05
Chlorobenzene		<0.05	<0.05	<0.05	<0.05	<0.05
Chloroethane		<0.2	<0.2	<0.2	<0.2	<0.2
Chloroform		<0.05	<0.05	<0.05	<0.05	<0.05
Chloromethane		<0.2	<0.2	<0.2	<0.2	<0.2
Dibromochloromethane		<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene		<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene		<0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene		<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorodifluoromethane (Freon-12)		<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane		<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichloroethane		<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethene		<0.1	<0.1	<0.1	<0.1	<0.1
trans-1,2-Dichloroethene		<0.05	<0.05	<0.05	<0.05	<0.05
cis-1,2-Dichloroethene		<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichloropropane		<0.05	<0.05	<0.05	<0.05	<0.05
cis-1,3-Dichloropropene		<0.05	<0.05	<0.05	<0.05	<0.05
trans-1,3-Dichloropropene		<0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride		0.26 B	0.29 B	0.23 B	0.24 B	0.23 B
1,1,2,2-Tetrachloroethane		<0.1	<0.1	<0.1	<0.1	<0.1
Trichloroethene		<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1-Trichloroethane		<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2-Trichloroethane		<0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethene		<0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane (Freon-11)		<0.2	<0.2	<0.2	<0.2	<0.2
Vinyl Chloride		<0.2	<0.2	<0.2	<0.2	<0.2
Benzene		<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene		<0.1	<0.1	<0.1	<0.1	<0.1
Toluene		<0.1	<0.1	<0.1	<0.1	<0.1
Xylenes (Total)		<0.15	<0.15	<0.15	<0.15	<0.15
Surrogate - 1,2-Dichloroethane-d4 %		85%	85%	88%	88%	86%
Surrogate - Toluene-d8 %		97%	99%	98%	101%	94%
Surrogate - Bromofluorobenzene %		85%	94%	87%	89%	82%
Surrogate - Dibromofluoromethane %		96%	93%	94%	97%	90%

Notes:

B Indicates the compound was also detected in the reagent blank.

Transwest Geochem, Inc.
Analytical Results



Client Name: GEC, Inc.
Project Name/No.: 94-0069H
Samples Received: 11/19/97

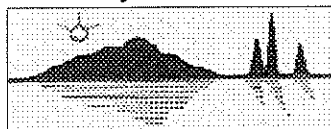
TGI ID No.: A711031
ADHS Cert. No.: AZM133

ANALYTE	EPA Method 8260					
	Lab ID	A711031-9	A711031-10	A711031-11	A711031-12	A711031-13
	Sample ID	TR6-101-25	TR6-101-35	TR6-102-5	TR6-102-15	TR6-102-25
	Date Extracted	11/19/97	11/19/97	11/19/97	11/19/97	11/19/97
	Date Analyzed	11/20/97	11/20/97	11/20/97	11/20/97	11/21/97
	Dilution Factor	1	1	1	1	1
	Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Bromodichloromethane		<0.05	<0.05	<0.05	<0.05	<0.05
Bromoform		<0.1	<0.1	<0.1	<0.1	<0.1
Bromomethane		<0.2	<0.2	<0.2	<0.2	<0.2
Carbon Tetrachloride		<0.05	<0.05	<0.05	<0.05	<0.05
Chlorobenzene		<0.05	<0.05	<0.05	<0.05	<0.05
Chloroethane		<0.2	<0.2	<0.2	<0.2	<0.2
Chloroform		<0.05	<0.05	<0.05	<0.05	<0.05
Chloromethane		<0.2	<0.2	<0.2	<0.2	<0.2
Dibromochloromethane		<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene		<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene		<0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene		<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorodifluoromethane (Freon-12)		<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane		<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichloroethane		<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethene		<0.1	<0.1	<0.1	<0.1	<0.1
trans-1,2-Dichloroethene		<0.05	<0.05	<0.05	<0.05	<0.05
cis-1,2-Dichloroethene		<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichloropropane		<0.05	<0.05	<0.05	<0.05	<0.05
cis-1,3-Dichloropropene		<0.05	<0.05	<0.05	<0.05	<0.05
trans-1,3-Dichloropropene		<0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride		0.25 B	0.25 B	0.24 B	0.25 B	0.25 B
1,1,2,2-Tetrachloroethane		<0.1	<0.1	<0.1	<0.1	<0.1
Trichloroethene		<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1-Trichloroethane		<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2-Trichloroethane		<0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethene		<0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane (Freon-11)		<0.2	<0.2	<0.2	<0.2	<0.2
Vinyl Chloride		<0.2	<0.2	<0.2	<0.2	<0.2
Benzene		<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene		<0.1	<0.1	<0.1	<0.1	<0.1
Toluene		<0.1	<0.1	<0.1	<0.1	<0.1
Xylenes (Total)		<0.15	<0.15	<0.15	<0.15	<0.15
Surrogate - 1,2-Dichloroethane-d4 %		96%	99%	95%	94%	92%
Surrogate - Toluene-d8 %		101%	100%	101%	100%	99%
Surrogate - Bromofluorobenzene %		94%	92%	93%	85%	87%
Surrogate - Dibromofluoromethane %		97%	98%	96%	92%	94%

Notes:

B Indicates the compound was also detected in the reagent blank.

Transwest Geochem, Inc.
Analytical Results



Client Name: GEC, Inc.
Project Name/No.: 94-0069H
Samples Received: 11/19/97

TGI ID No.: A711031
ADHS Cert. No.: AZM133

ANALYTE	EPA Method 8260					
	Lab ID	A711031-14	A711031-15	A711031-16	A711031-17	A711031-18
	Sample ID	TR6-102-35	TR6-103-5	TR6-103-15	TR6-103-25	TR6-103-35
	Date Extracted	11/19/97	11/19/97	11/19/97	11/19/97	11/19/97
	Date Analyzed	11/21/97	11/21/97	11/21/97	11/21/97	11/22/97
	Dilution Factor	1	1	1	1	1
	Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Bromodichloromethane		<0.05	<0.05	<0.05	<0.05	<0.05
Bromoform		<0.1	<0.1	<0.1	<0.1	<0.1
Bromomethane		<0.2	<0.2	<0.2	<0.2	<0.2
Carbon Tetrachloride		<0.05	<0.05	<0.05	<0.05	<0.05
Chlorobenzene		<0.05	<0.05	<0.05	<0.05	<0.05
Chloroethane		<0.2	<0.2	<0.2	<0.2	<0.2
Chloroform		<0.05	<0.05	<0.05	<0.05	<0.05
Chloromethane		<0.2	<0.2	<0.2	<0.2	<0.2
Dibromochloromethane		<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene		<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene		<0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene		<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorodifluoromethane (Freon-12)		<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane		<0.05	<0.05	0.09	<0.05	<0.05
1,2-Dichloroethane		<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethene		<0.1	<0.1	<0.1	<0.1	<0.1
trans-1,2-Dichloroethene		<0.05	<0.05	<0.05	<0.05	<0.05
cis-1,2-Dichloroethene		<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichloropropane		<0.05	<0.05	<0.05	<0.05	<0.05
cis-1,3-Dichloropropene		<0.05	<0.05	<0.05	<0.05	<0.05
trans-1,3-Dichloropropene		<0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride		0.27 B	0.19 B	0.19 B	0.22 B	0.18 B
1,1,2,2-Tetrachloroethane		<0.1	<0.1	<0.1	<0.1	<0.1
Trichloroethene		<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1-Trichloroethane		<0.05	<0.05	0.23	<0.05	0.15
1,1,2-Trichloroethane		<0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethene		<0.05	<0.05	2.0	1.5	0.77
Trichlorofluoromethane (Freon-11)		<0.2	<0.2	<0.2	<0.2	<0.2
Vinyl Chloride		<0.2	<0.2	<0.2	<0.2	<0.2
Benzene		<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene		<0.1	<0.1	<0.1	<0.1	<0.1
Toluene		<0.1	<0.1	0.23	0.14	<0.1
Xylenes (Total)		<0.15	<0.15	2.8	0.24	0.19
Surrogate - 1,2-Dichloroethane-d4 %		94%	89%	92%	90%	85%
Surrogate - Toluene-d8 %		98%	97%	89%	91%	93%
Surrogate - Bromofluorobenzene %		86%	85%	97%	91%	97%
Surrogate - Dibromofluoromethane %		95%	93%	78%	89%	97%

Notes:

B Indicates the compound was also detected in the reagent blank.

Transwest Geochem, Inc.
Analytical Results



Client Name: GEC, Inc.
Project Name/No.: 94-0069H
Samples Received: 11/19/97

TGI ID No.: A711031
ADHS Cert. No.: AZM133

ANALYTE	EPA Method 8260					
	Lab ID	A711031-19	A711031-20	A711031-21	A711031-22	A711031-23
	Sample ID	TR6-104-5	TR6-104-15	TR6-104-25	TR6-104-30	TR3-101A-5
	Date Extracted	11/19/97	11/19/97	11/19/97	11/19/97	11/19/97
	Date Analyzed	11/22/97	11/22/97	11/22/97	11/22/97	11/21/97
	Dilution Factor	1	1	1	1	1
	Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Bromodichloromethane		<0.05	<0.05	<0.05	<0.05	<0.05
Bromoform		<0.1	<0.1	<0.1	<0.1	<0.1
Bromomethane		<0.2	<0.2	<0.2	<0.2	<0.2
Carbon Tetrachloride		<0.05	<0.05	<0.05	<0.05	<0.05
Chlorobenzene		<0.05	<0.05	<0.05	<0.05	<0.05
Chloroethane		<0.2	<0.2	<0.2	<0.2	<0.2
Chloroform		<0.05	<0.05	<0.05	<0.05	<0.05
Chloromethane		<0.2	<0.2	<0.2	<0.2	<0.2
Dibromochloromethane		<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene		<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene		<0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene		<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorodifluoromethane (Freon-12)		<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane		<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichloroethane		<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethene		<0.1	<0.1	<0.1	<0.1	<0.1
trans-1,2-Dichloroethene		<0.05	<0.05	<0.05	<0.05	<0.05
cis-1,2-Dichloroethene		<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichloropropane		<0.05	<0.05	<0.05	<0.05	<0.05
cis-1,3-Dichloropropene		<0.05	<0.05	<0.05	<0.05	<0.05
trans-1,3-Dichloropropene		<0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride		0.14 B	0.13 B	0.14 B	0.14 B	0.19 B
1,1,2,2-Tetrachloroethane		<0.1	<0.1	<0.1	<0.1	<0.1
Trichloroethene		<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1-Trichloroethane		<0.05	0.10	0.17	0.27	<0.05
1,1,2-Trichloroethane		<0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethene		0.09	0.08	<0.05	0.22	<0.05
Trichlorofluoromethane (Freon-11)		<0.2	<0.2	<0.2	<0.2	<0.2
Vinyl Chloride		<0.2	<0.2	<0.2	<0.2	<0.2
Benzene		<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene		<0.1	<0.1	<0.1	<0.1	<0.1
Toluene		<0.1	0.18	0.14	0.20	<0.1
Xylenes (Total)		0.37	5.7 D	1.7	0.95	<0.15
Surrogate - 1,2-Dichloroethane-d4 %		83%	83%	86%	86%	84%
Surrogate - Toluene-d8 %		90%	88%	94%	90%	92%
Surrogate - Bromofluorobenzene %		83%	79%	87%	93%	81%
Surrogate - Dibromofluoromethane %		93%	91%	95%	94%	88%

Notes:

D Indicates the compound was analyzed at a greater dilution.

B Indicates the compound was also detected in the reagent blank.

Transwest Geochem, Inc.
Analytical Results

Client Name: GEC, Inc.
Project Name/No.: 94-0069H
Samples Received: 11/19/97



TGI ID No.: A711031
ADHS Cert. No.: AZM133

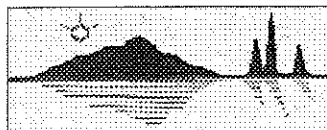
ANALYTE	EPA Method 8260		
	Lab ID	A711031-24	A711031-25
	Sample ID	TR3-102A-5	TR4-101A-5
	Date Extracted	11/19/97	11/19/97
	Date Analyzed	11/21/97	11/21/97
	Dilution Factor	1	1
	Units	mg/kg	mg/kg
Bromodichloromethane		<0.05	<0.05
Bromoform		<0.1	<0.1
Bromomethane		<0.2	<0.2
Carbon Tetrachloride		<0.05	<0.05
Chlorobenzene		<0.05	<0.05
Chloroethane		<0.2	<0.2
Chloroform		<0.05	<0.05
Chloromethane		<0.2	<0.2
Dibromochloromethane		<0.05	<0.05
1,2-Dichlorobenzene		<0.05	<0.05
1,3-Dichlorobenzene		<0.05	<0.05
1,4-Dichlorobenzene		<0.05	<0.05
Dichlorodifluoromethane (Freon-12)		<0.5	<0.5
1,1-Dichloroethane		<0.05	<0.05
1,2-Dichloroethane		<0.05	<0.05
1,1-Dichloroethene		<0.1	<0.1
trans-1,2-Dichloroethene		<0.05	<0.05
cis-1,2-Dichloroethene		<0.05	<0.05
1,2-Dichloropropane		<0.05	<0.05
cis-1,3-Dichloropropene		<0.05	<0.05
trans-1,3-Dichloropropene		<0.05	<0.05
Methylene Chloride		0.19 B	0.19 B
1,1,2,2-Tetrachloroethane		<0.1	<0.1
Trichloroethene		<0.05	<0.05
1,1,1-Trichloroethane		<0.05	<0.05
1,1,2-Trichloroethane		<0.05	<0.05
Tetrachloroethene		<0.05	<0.05
Trichlorofluoromethane (Freon-11)		<0.2	<0.2
Vinyl Chloride		<0.2	<0.2
Benzene		<0.05	<0.05
Ethylbenzene		<0.1	<0.1
Toluene		<0.1	<0.1
Xylenes (Total)		<0.15	<0.15
Surrogate - 1,2-Dichloroethane-d4 %		91%	88%
Surrogate - Toluene-d8 %		96%	93%
Surrogate - Bromofluorobenzene %		84%	85%
Surrogate - Dibromofluoromethane %		90%	97%

Notes:

B Indicates the compound was also detected in the reagent blank.

Transwest Geochem, Inc.
Analytical Results
8260 QC Summary

Client Name: GEC, Inc.
Project Name/No.: 94-0069H
Samples Received: 11/19/97

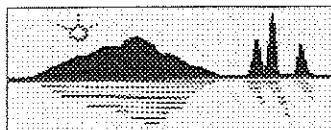


TGI ID No.: A711031
ADHS Cert. No.: AZM133

EPA Method 8260				
ANALYTE	Lab ID	Reagent Blank	Reagent Blank	Reagent Blank
	Sample ID	n/a	n/a	n/a
	Date Extracted	11/19/97	11/19/97	11/19/97
	Date Analyzed	11/20/97	11/21/97	11/22/97
	Dilution Factor	1	1	1
	Units	mg/kg	mg/kg	mg/kg
Bromodichloromethane		<0.05	<0.05	<0.05
Bromoform		<0.1	<0.1	<0.1
Bromomethane		<0.2	<0.2	<0.2
Carbon Tetrachloride		<0.05	<0.05	<0.05
Chlorobenzene		<0.05	<0.05	<0.05
Chloroethane		<0.2	<0.2	<0.2
Chloroform		<0.05	<0.05	<0.05
Chloromethane		<0.2	<0.2	<0.2
Dibromochloromethane		<0.05	<0.05	<0.05
1,2-Dichlorobenzene		<0.05	<0.05	<0.05
1,3-Dichlorobenzene		<0.05	<0.05	<0.05
1,4-Dichlorobenzene		<0.05	<0.05	<0.05
Dichlorodifluoromethane (Freon-12)		<0.5	<0.5	<0.5
1,1-Dichloroethane		<0.05	<0.05	<0.05
1,2-Dichloroethane		<0.05	<0.05	<0.05
1,1-Dichloroethene		<0.1	<0.1	<0.1
trans-1,2-Dichloroethene		<0.05	<0.05	<0.05
cis-1,2-Dichloroethene		<0.05	<0.05	<0.05
1,2-Dichloropropane		<0.05	<0.05	<0.05
cis-1,3-Dichloropropene		<0.05	<0.05	<0.05
trans-1,3-Dichloropropene		<0.05	<0.05	<0.05
Methylene Chloride		0.25	0.24	0.15
1,1,2,2-Tetrachloroethane		<0.1	<0.1	<0.1
Trichloroethene		<0.05	<0.05	<0.05
1,1,1-Trichloroethane		<0.05	<0.05	<0.05
1,1,2-Trichloroethane		<0.05	<0.05	<0.05
Tetrachloroethene		<0.05	<0.05	<0.05
Trichlorofluoromethane (Freon-11)		<0.2	<0.2	<0.2
Vinyl Chloride		<0.2	<0.2	<0.2
Benzene		<0.05	<0.05	<0.05
Ethylbenzene		<0.1	<0.1	<0.1
Toluene		<0.1	<0.1	<0.1
Xylenes (Total)		<0.15	<0.15	<0.15
Surrogate - 1,2-Dichloroethane-d4 %		93%	97%	92%
Surrogate - Toluene-d8 %		103%	102%	104%
Surrogate - Bromofluorobenzene %		88%	87%	96%
Surrogate - Dibromofluoromethane %		101%	101%	104%
Samples Linked	A711031	-(4-14)	-(15-17,23-25)	-(18-22)

Transwest Geochem, Inc.
Analytical Results
8260 QC Summary

Client Name: GEC, Inc.
Project Name/No.: 94-0069H
Samples Received: 11/19/97



TGI ID No.: A711031
ADHS Cert. No.: AZM133

EPA Method 8260							
ANALYTE	Sample	Amount	Matrix	%Rec.	Matrix	%Rec.	% RPD
		Spiked	Spike		Spike		
1,1-Dichloroethene	<0.1	1.0	1.1	110%	1.1	110%	0%
Benzene	<0.05	1.0	1.0	100%	0.98	98%	2%
Trichloroethene	<0.05	1.0	1.0	100%	1.0	100%	0%
Toluene	<0.1	1.0	0.98	98%	0.97	97%	1%
Chlorobenzene	<0.05	1.0	0.95	95%	0.96	96%	1%
Date Extracted		11/19/97					
Date Analyzed		11/21/97					
Dilution Factor		1					
Units		mg/kg					
Sample Spiked		A711031 -4					
Samples Linked		A711031 -(4-20)					

EPA Method 8260							
ANALYTE	Sample	Amount	Matrix	%Rec.	Matrix	%Rec.	% RPD
		Spiked	Spike		Spike		
1,1-Dichloroethene	<0.1	1.0	1.0	100%	1.0	100%	0%
Benzene	<0.05	1.0	0.96	96%	0.95	95%	1%
Trichloroethene	<0.05	1.0	1.0	100%	1.0	100%	0%
Toluene	<0.1	1.0	0.97	97%	0.95	95%	2%
Chlorobenzene	<0.05	1.0	0.96	96%	0.94	94%	2%
Date Extracted		11/19/97					
Date Analyzed		11/21/97					
Dilution Factor		1					
Units		mg/kg					
Sample Spiked		A711031 -24					
Samples Linked		A711031 -(21-25)					



TRANSWEST
GEOCHEM
ADHS License # AZM133

7950 East Acorn Drive, Suite 103
Scottsdale, Arizona 85260
Phone: (602) 443-0508/1-800-927-5183
Fax: (602) 443-0422

CHAIN-OF-CUSTODY RECORD

TRANSWEST PROJECT # A711031

CLIENT: <u>GEC</u>		DATE: <u>11-19-97</u>		PAGE <u>1</u> OF <u>3</u>	
ADDRESS: <u>2447 W. 12th St. Suite 4, Tempe, AZ</u>		CLIENT PROJECT #: <u>94-0069H</u>			
PHONE: <u>966-8631</u>		FAX: <u>966-8821</u>			
PROJECT NAME: <u>—</u>		COLLECTOR: <u>David Foreman</u>			
PROJECT MANAGER: <u>Don Spada</u>		LOCATION: <u>—</u>			

Sample ID	Date	Time	Sample Matrix	Container Type			Lab ID	FIELD NOTES:
				Brass Tubes	Glass Jar	Other		
TR3-101-5	11/19/97	0728	soil	/	/	/	001	ext 1018 2:50
TR4-101-5	"	0805	"	/	/	/	003	ext 1021 2:36
TR3-102-5	"	0745	"	/	/	/	002	ext 1019 2:39
TR4-102-5	"	0820	"	/	/	/	004	ext 1020 2:00
TR5-101-5	"	0835	"	/	/	/	005	ext 1023
TR5-102-5	"	0845	"	/	/	/	006	ext 1024
TR6-101-5	"	0905	"	/	/	/	607	ext 1025
TR6-101-25	"	0915	"	/	/	/	608	ext 1030
TR6-101-25	"	0935	"	/	/	/	009	ext 1032
TR6-101-35	"	1000	"	/	/	/	610	ext 1035

Turnaround: ☐ < 24-hr. RUSH	☐ 24-72 hr. PRIORITY	☐ Standard	☐ Other: <u>—</u>
Report Requirements: ☐ Verbal	☐ Preliminary	☐ Final	☐ Other: <u>—</u>

RELINQUISHED BY		RELINQUISHED BY	
(Signature)	(Time)	(Signature)	(Time)
David Foreman	1638		
David Foreman	11/19/97		
GEC			
RECEIVED BY		RECEIVED BY	
(Signature)	(Time)	(Signature)	(Time)
(Printed Name)	(Date)	(Printed Name)	(Date)
(Company)		(Company)	

RECEIVED BY		RECEIVED BY	
(Signature)	(Time)	(Signature)	(Time)
(Printed Name)	(Date)	(Printed Name)	(Date)
(Company)		(Company)	
		Scott Johnson	1638
		Scott Johnson	11/19/97
		Transwest Geochem, Inc.	

LABORATORY NOTES:	
CHAIN OF CUSTODY SEALS	
REC'D GOOD CONDITION/COLD	ON-SITE
Y	N
IN-HOUSE	
Y	

SAMPLE RECEIPT	
CHAIN OF CUSTODY SEALS	
REC'D GOOD CONDITION/COLD	ON-SITE
Y	N
IN-HOUSE	
Y	

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7950 East Acoma Drive, Suite 103
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Fax: (602) 443-0422

CHAIN-OF-CUSTODY RECORD
TRANSWEST PROJECT # A711031

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