



Independent Remedial Action Report

Scougal Rubber Property Seattle, Washington

Prepared by:

**The RETEC Group, Inc.
1011 S.W. Klickitat Way, Suite 207
Seattle, Washington 98134-1162**

Retec Project Number: SRC00-02417-400

Prepared for:

**Scougal Rubber Corporation
6293 Corson Avenue South
Seattle, Washington 98108**

March 28, 2002

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August 20, 2001

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1 Introduction

Scougal Rubber Corporation (Scougal) has completed independent remedial actions for soil and groundwater at their Seattle facility. Remedial actions included soil removal at one location and soil removal, groundwater recovery, and air sparging/soil vapor recovery (AS/SVE) at a second location. This report documents the investigation and cleanup activities conducted at the Scougal facility. The report was prepared for submittal to the Washington Department of Ecology (Ecology) for review under the Voluntary Cleanup Program. Scougal is considering transferring property ownership. To facilitate a property transfer, Scougal would be seeking a letter of No Further Action from Ecology for the cleanup at their Seattle facility.

The investigation and remedial work at Scougal was conducted in accordance with the Model Toxics Control Act (MTCA) regulations (WAC 173-340). The final cleanup was initiated, and largely completed prior to the major MTCA revision in 2001. However, this report is being submitted after the 2001 MTCA revision. As indicated in the MTCA regulations [WAC 173-340-720(12)] for independent cleanups, cleanup levels are those based on the rules in effect when the final cleanup began, or when the cleanup action is reviewed, whichever is less stringent. The majority of the work cited in this cleanup report is based on the MTCA regulations that existed when the final cleanup began (1994). Therefore, this completion report relies primarily on regulations prior to the August 2001 revision of MTCA. In addition to revisions to the MTCA regulations, the Ecology program for independent cleanups has been revised somewhat since work at the Scougal facility was initiated in the early 1990's. Scougal began consulting with Ecology in the early 1990's under the Independent Remedial Action Program; this program has been modified slightly in the past decade, and is now called the Voluntary Cleanup Program.

1.1 Site Location

The Scougal facility is located at 6239 Corson Avenue in Seattle, Washington. The mailing address and main phone number for the company are as follows:

Scougal Rubber Corporation
P.O. Box 80226
6239 Corson Avenue S.
Seattle, Washington 98108
(206) 763-3650

A vicinity map for the property is presented in Figure 1-1. Land-use in the vicinity of Scougal property is depicted in Figure 1-2. The Scougal facility is located in an Industrial Buffer (IB) zone. This industrial buffer zone extends a considerable distance to the south of Scougal's property. Zoning designated Low-rise 2 (L-2) exists immediately across Corson Avenue east of the

Scougal facility. To the west and north of the Scougal facility, land is zoned General Industrial 2 (IG-2).

The 1.25-acre property is bordered by Michigan Avenue to the north, Corson Avenue to the east, a Washington State Department of Transportation Facility to the south and Machinists Inc. to the west. The Eagles facility is located northeast of Scougal (Figure 1-3). The Duwamish River is located approximately 2,000 feet to the west. The property is generally flat and varies in elevation by no more than ± 2 feet across the site. Several noteworthy features of the site are identified in Figure 1-3 including:

- office, warehouse, and production buildings
- the locations of current and former chemical storage facilities such as tanks and barrel storage racks
- a 50-inch sewer line running north-south near the western property line
- existing and former groundwater monitoring wells
- existing air sparging wells

1.2 Facility History

Scougal manufactures molded rubber products for commercial and industrial applications. A mixture of rubber and additives is placed into a mold where it is heated and pressed into the final configuration. A lubricating solution is used to remove excess rubber from the molds following each pressing. The lubricating solution is comprised of approximately 5 percent lubricating oil and 95 percent water. The mold equipment is removed from the machinery periodically and cleaned with a degreasing solvent. Historically the cleaning solvent of choice was trichloroethene (TCE). Methyl ethyl ketone (MEK) and toluene are currently used for degreasing mold equipment.

Solvents were previously stored in five underground storage tanks (USTs), located as shown on Figure 1-3. The USTs were removed in December 1989 and, thereafter, solvents were stored in 55-gallon drums between the Mix Room and the Main Plant (Figure 1-3). Solvent barrels are currently stored in two racks that are equipped with secondary containment systems.

Environmental work at the Scougal facility began in 1989 with removal of five USTs. Several investigation and remediation efforts have occurred at the Scougal facility and the Machinists Inc. property immediately west of Scougal. All activities and related reports are listed in Table 1-1.

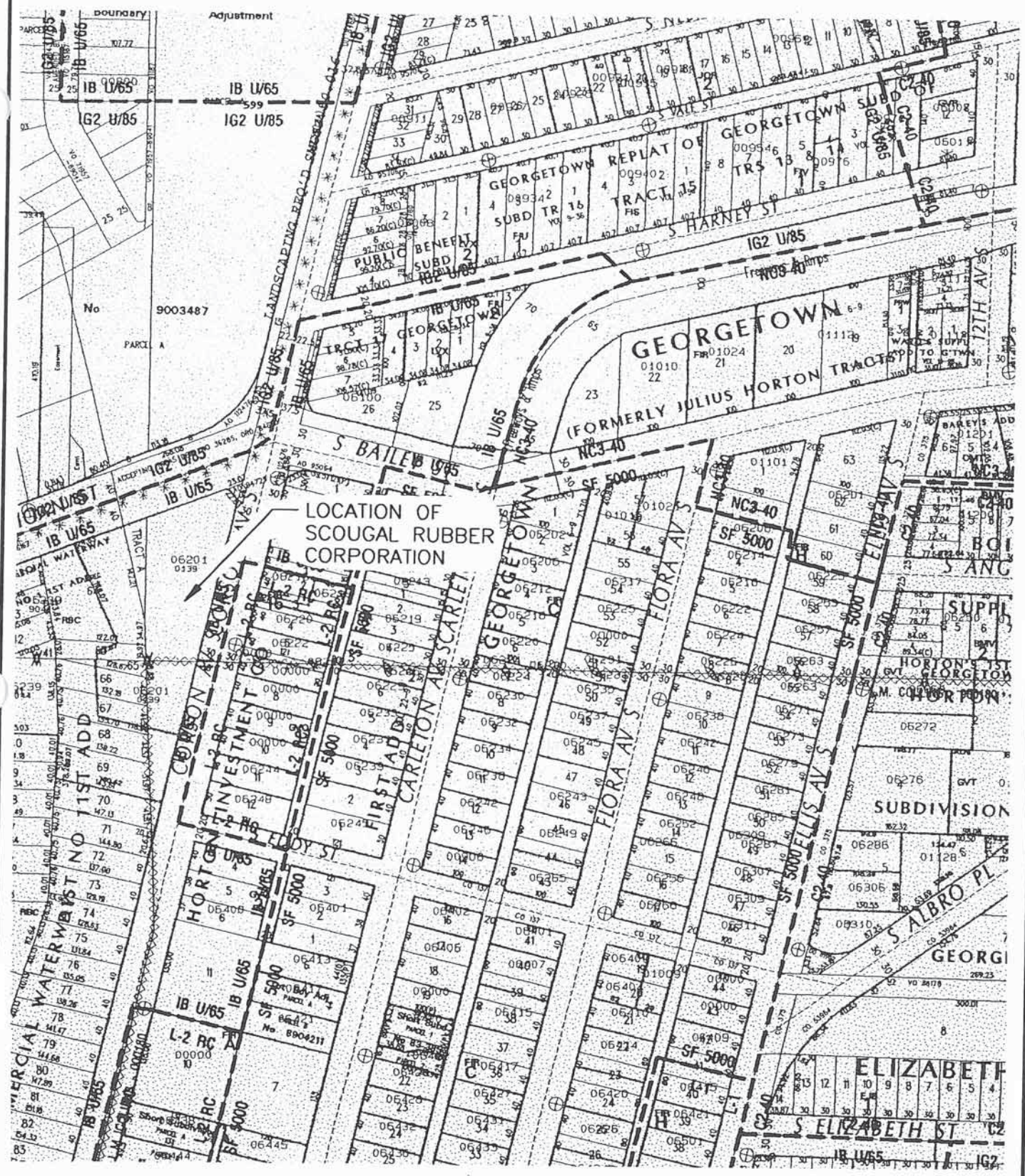
Table 1-1 Summary of Site Activities

Date	Activity	Reference
December 1989	Removal of five USTs used to store solvents	AGI, 1991
March 1990	Soil sampling and testing in UST excavation	RZA, 1990
October 1990	Phase I Property Assessment conducted	AGI, 1990
May 1991	Phase II Property Assessment conducted	AGI, 1991
September 1991	Ecology notified of releases	RETEC, 1991
February 1992	Soil excavated near East Warehouse and Former USTs	RETEC, 1992
March 1992	Groundwater extraction system installed	RETEC, 1992
August-October 1993	Delineation of groundwater plume	RETEC, 1993a and 1993b
February-March 1994	Installation and start-up of air sparging system	(This report)
1994-Present	Continued operation of air sparging system and groundwater monitoring	(This report)

The remedial activities have been conducted in two general areas at the site. One area is located in a 4-foot wide alley on the east side of the Warehouse (Figure 1-3). Remediation here involved the excavation of less than 10 cubic yards of soil. The other area corresponds to the former locations of the USTs and Barrel Storage rack (Figure 1-3) west and northwest of the Main Plant. Soil was excavated from the UST area and groundwater was pumped as an interim action. The final remedy, AS/SVE, was initiated and the system was operated to reduce concentrations of volatile organics and total petroleum hydrocarbons (TPH) in soil and groundwater.

1.3 Report Organization

Site geology and hydrogeology are discussed in Section 2 of this document. Site characterization and release data are presented in Section 3. The remedial actions and results of all monitoring and performance verification work conducted at the site are described in Section 4. Laboratory analytical reports for all soil and groundwater sampling conducted by The RETEC Group, Inc. (RETEC) are provided in Appendices A and B respectively. Boring and well logs are assembled in Appendix C.



SCOUGAL RUBBER CORPORATION
 SEATTLE, WA
 SRC00-02417-400

VICINITY MAP FOR
 THE SCOUGAL RUBBER SITE

DATE: 06/25/01 DRWN: N.S. FILE: Drawing2

FIGURE 1-1



☐ Duwamish Manufacturing Industrial Center

City of Seattle



Produced by the Seattle
Engineering Department,
Geographic Systems

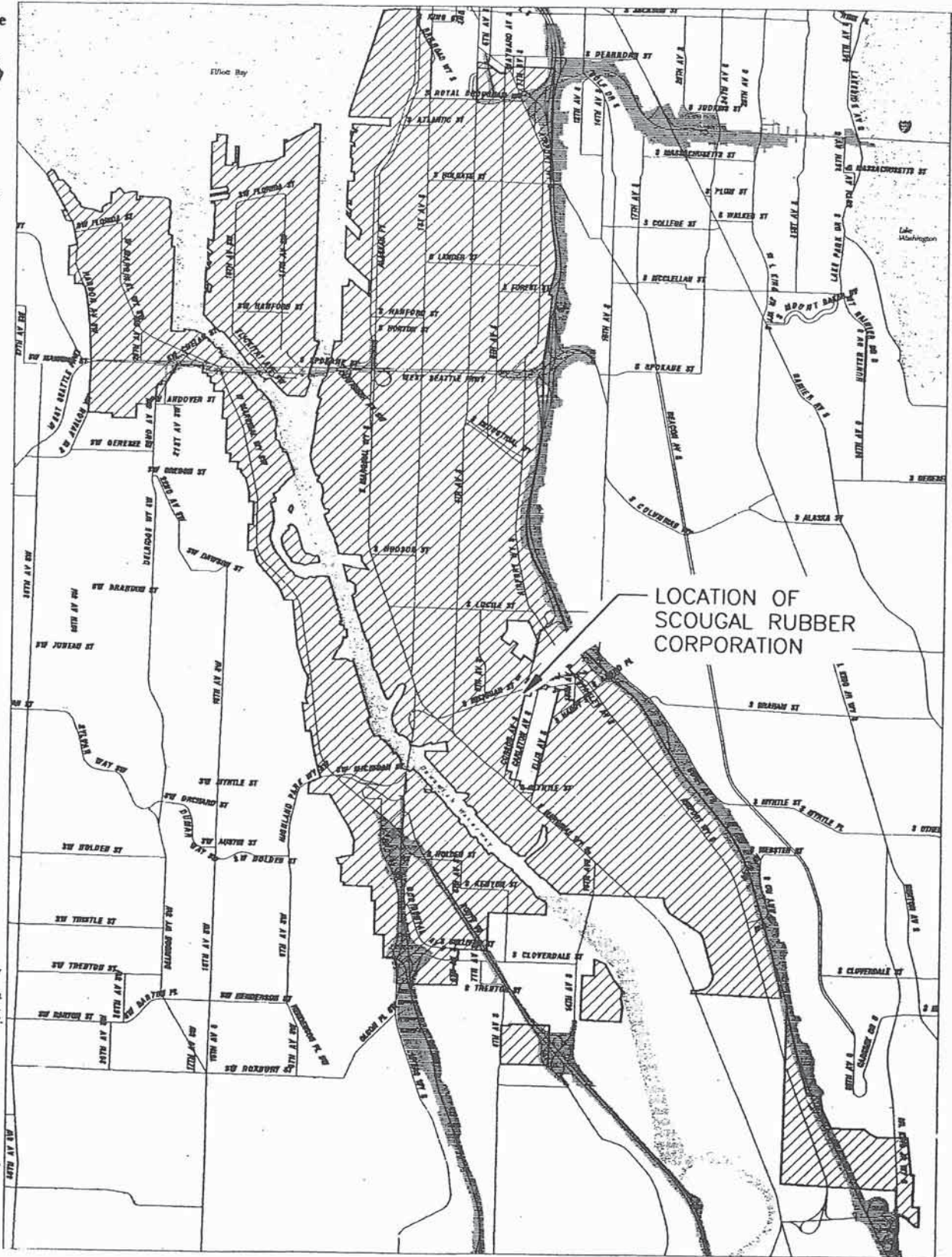
October 18, 1994



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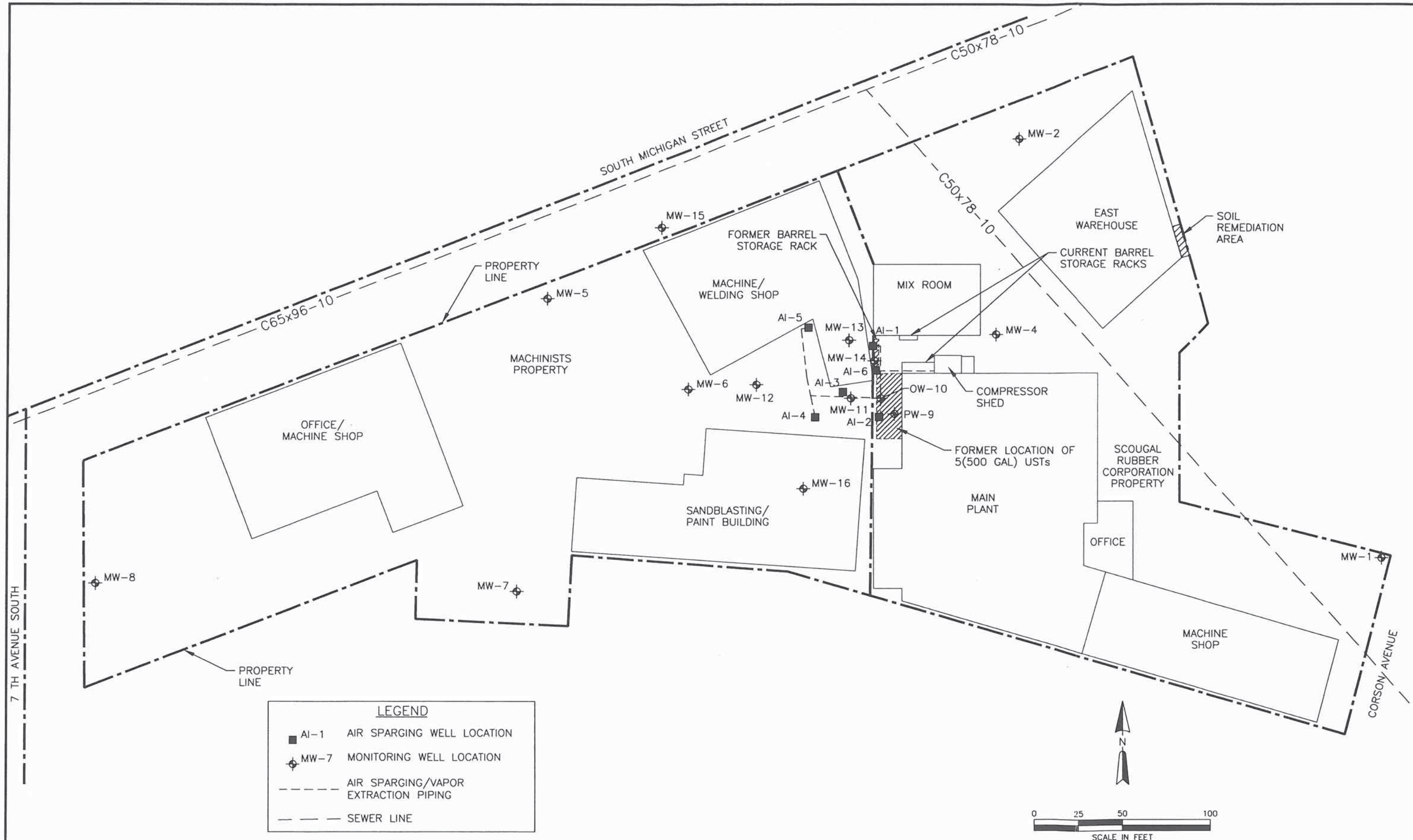
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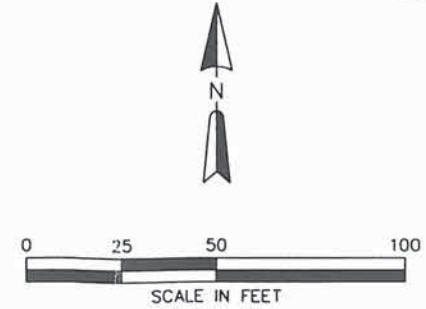
Scale 1 : 216900

SGOUGAL RUBBER CORPORATION SEATTLE, WA SRC00-02417-400		LAND USE SURROUNDING THE SGOUGAL RUBBER SITE	
DATE: 06/25/01	DRWN: N.S.	FILE: Drawing2	FIGURE 1-2





LEGEND	
■ AI-1	AIR SPARGING WELL LOCATION
⊕ MW-7	MONITORING WELL LOCATION
- - - -	AIR SPARGING/VAPOR EXTRACTION PIPING
- - - -	SEWER LINE



DATUM: CITY OF SEATTLE



SRC00-02417-400		SITE PLAN SCOUGAL RUBBER CORPORATION	
DATE: 06/20/01	DRWN: N.S.	FILE: 2417s020	FIGURE 1-3

2 Site Geology and Hydrogeology

The geology and hydrogeology of the Scougal Rubber facility were defined by several investigations completed since 1990. A total of 16 monitoring wells and 5 sparging points were installed. One deep boring [36.5 ft below ground surface (bgs)] and nine shallow borings (6.5 to 11.5 ft bgs) were drilled and sampled. In addition, several shallow trenches were excavated as part of the site remediation, exposing the surficial geology. Investigations focused on the 0.25-acre (10,000 square foot) area of impacted groundwater. However, wells installed across the Scougal and Machinist properties provide site-wide information on soil type and groundwater flow. Groundwater flow characteristics were defined by numerous gauging events. A short pump test was completed to estimate the hydraulic conductivity of the unconfined aquifer beneath the site.

2.1 Geology

Soil beneath the Scougal and Machinists properties is relatively homogeneous to a depth of 36 feet bgs. The sediment type is primarily brown to dark gray, medium grained sand with some silty sands. Some borings contain layers of sandy gravel to gravelly sand within the upper 10 feet. Thin (less than 0.5 feet) silt and silty sand layers were reported in one boring (PW-9). Boring and well locations are shown on Figure 1-3 and installation details are summarized on Table 2-1. Boring logs are included in Appendix C.

2.2 Aquifer Characteristics

The upper aquifer beneath the Scougal facility is an unconfined sand to silty sand. Groundwater is encountered at 3 to 7 feet below ground surface (see Table 2-2). Groundwater levels generally fluctuate seasonally by less than 2 feet. Water levels are lowest in late summer and fall and highest in the spring. Groundwater elevation data obtained during high and low groundwater periods show that flow is consistently westward.

Groundwater contour maps are included in Appendix D. Data for these contour maps were collected periodically between 1991 and 2001. Figures 2-1 and 2-2 present typical high and low water groundwater contour maps for the site. Wells are concentrated in the area of the plume and groundwater elevations are variable and give the appearance of small-scale, irregular highs and lows in the area of the plume. A comparison of the elevation variation with well construction details shows that wells completed to slightly greater depths (approximately 20 feet bgs) have consistently lower elevations than the shallower wells completed to 10 feet bgs. This data suggests a slight downward gradient. Both the wells screened at 10 and 20 feet bgs show a westward groundwater gradient. Horizontal gradients were near 0.0013 feet/foot for most gauging events.

The transmissivity and hydraulic conductivity at the site were estimated in 1992 by conducting a six-hour pump test. Transmissivity and storativity were evaluated by the methods of Theis and Cooper-Jacob using the Aqtesolv computer program. PW-9 was pumped at 10 gallons per minute and drawdown was observed in observation wells OW-10 and MW-4. A maximum drawdown of 0.68 feet was observed in PW-9. Calculated transmissivity values for the pump and recovery tests in PW-9 ranged from 4.0 to 4.4 ft²/min. In observation wells, transmissivity estimates ranged from 10.32 to 14.2 ft²/min. Values for the observation wells are considered more reliable due to the effect of the filter pack in the production well. A transmissivity of 11 ft²/min is thought to be representative. Assuming an unconfined aquifer thickness of 30 feet, this equates to a hydraulic conductivity of 0.37 ft/min (0.19 cm/s). Storativity values ranged from 0.21 to 0.5 in observation wells. Pump test results are included in Appendix B of the Report of Independent Action Project Status (RETEC, July 1992).

2.2.1 Groundwater Flow

Groundwater velocity at the site can be estimated using the following equation:

$$V = KI / n_e$$

where: K = the hydraulic conductivities
I = hydraulic gradient
n_e = effective porosity

Using the estimated hydraulic conductivity of 0.37 ft/min, a gradient of 0.0013 ft/ft and an assumed effective porosity of 35 percent, the groundwater velocity across the site is estimated to be 2 ft/day. This flow rate estimates the groundwater movement; chemical migration is commonly retarded and is slower.

Table 2-1 Well Construction Details

Well ID	Northing ¹	Easting	Installation Date	TOC Elev. (ft)	Grd. Surface Elev. (ft)	Boring Depth (ft)	Screen Length (ft)	Well Constr. Material	Well Dia. (in.)
MW-1	830.63	5542.86	1/17/1991	8.29	8.53	12.0	5.0	PVC	2
MW-2	1066.23	5338.24	1/17/1991	7.81	8.02	11.0	5.0	PVC	2
MW-3	---	---	1/17/1991	98.19 ²	---	11.0	7.0	PVC	2
MW-4	956.31	5325.42	3/27/1991	6.55	6.87	10.5	5.5	PVC	2
MW-5	976.53	5073.55	3/27/1991	6.68	6.83	10.5	5.5	PVC	2
MW-6	925.56	5151.55	3/27/1991	5.42	5.64	10.5	5.5	PVC	2
MW-7	812.01	5056.87	3/27/1991	3.74	3.97	10.5	5.5	PVC	2
MW-8	816.40	4820.81	UNK	3.74	4.09	UNK	UNK	PVC	2
PW-9	911.71	5268.34	3/25/1992	8.69	6.79	23	15	PVC	4
OW-10	920.46	5260.63	3/25/1992	6.08	6.65	15	10	PVC	2
MW-11	920.49	5244.09	12/7/1992	5.72	6.11	20	15	PVC	4
MW-12	928.15	5190.89	8/6/1993	5.35	5.67	20	15	PVC	4
MW-13	953.14	5243.07	8/13/1993	6.3	6.66	21.5	15	PVC	2
MW-14	941.55	5257.17	9/29/1993	6.97	7.28	20	15	PVC	2
MW-15	1016.49	5137.52	9/29/1993	6.40	7.10	20	15	PVC	2
MW-16	869.72	5217.62	2/21/1994	6.15	6.34	21.5	15	PVC	2

Note:

¹ Datum used for Northing/Easting coordinates is the City of Seattle.

² Well abandoned on Dec. 1991 and was not surveyed under current system.
UNK - Unknown

Table 2-2 Groundwater Elevation Data

Well No.	TOC Elev (ft)	10/18/90		02/04/91		04/17/91		04/15/92		07/22/93		09/02/93		10/02/93		01/26/94	
		DTW (ft)	GW Elev (ft)	DTW (ft)	GW Elev (ft)	DTW (ft)	GW Elev (ft)	DTW (ft)	GW Elev (ft)	DTW (ft)	GW Elev (ft)	DTW (ft)	GW Elev (ft)	DTW (ft)	GW Elev (ft)	DTW (ft)	GW Elev (ft)
MW-1	8.29	---	---	7.65	0.64	7.27	1.02	8.10	0.19	---	---	---	---	---	---	8.70	-0.41
MW-2	7.81	7.32	0.49	7.36	0.45	7.13	0.68	7.88	-0.07	---	---	---	---	---	---	8.50	-0.69
MW-3*	98.19	---	---	6.29	91.90	6.08	92.11	---	---	---	---	---	---	---	---	---	---
MW-4	6.55	---	---	---	---	5.98	0.57	6.75	-0.20	---	---	---	---	---	---	---	---
MW-5	6.68	---	---	---	---	6.19	0.49	---	---	---	---	7.60	-1.05	---	---	7.49	-0.94
MW-6	5.42	---	---	---	---	4.84	0.58	---	---	---	---	7.82	-1.14	---	---	7.56	-0.88
MW-7	3.74	---	---	---	---	3.28	0.46	---	---	---	---	6.43	-1.01	---	---	6.20	-0.78
MW-8	3.74	---	---	---	---	3.80	-0.06	4.48	-0.74	---	---	4.90	-1.16	---	---	4.57	-0.83
PW-9	8.69	---	---	---	---	---	---	8.96	-0.27	---	---	5.32	-1.58	---	---	5.04	-1.30
OW-10	6.08	---	---	---	---	---	---	---	---	6.86	-0.78	---	---	---	---	---	---
MW-11	5.72	---	---	---	---	---	---	---	---	6.40	-0.68	---	---	---	---	6.98	-0.90
MW-12	5.35	---	---	---	---	---	---	---	---	---	---	---	---	---	---	6.51	-0.79
MW-13	6.30	---	---	---	---	---	---	---	---	---	---	---	---	---	---	6.17	-0.82
MW-14	6.97	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-15	6.40	---	---	---	---	---	---	---	---	---	---	---	---	7.31	-1.01	8.01	-1.04
MW-16	6.15	---	---	---	---	---	---	---	---	---	---	---	---	7.48	-1.08	7.17	-0.77

NOTES:

TOC - Top of PVC Casing elevation

DTW - Depth of Water from TOC

GW Elev - Groundwater Elevation

City of Seattle Datum was used to determine the TOC elevation.

Water levels were measured after a 24-hour shutdown of the air sparging system.

* Monitoring well MW-3 was abandoned in Dec. 1991 and was replaced with monitoring well PW-9 at approx. the same location.

--- - not measured

The TOC elevation for monitoring well MW-3 was based on a local datum (AGITBM) set at +100.00.

Table 2-2 Groundwater Elevation Data (Continued)

Well No.	TOC Elev (ft)	2/25/94		05/26/94		06/08/94		09/20/94		10/24/94		03/09/95		06/01/95		11/06/95		05/09/96	
		DTW (ft)	GW Elev (ft)	DTW (ft)	GW Elev (ft)	DTW (ft)	GW Elev (ft)	DTW (ft)	GW Elev (ft)	DTW (ft)	GW Elev (ft)	DTW (ft)	GW Elev (ft)	DTW (ft)	GW Elev (ft)	DTW (ft)	GW Elev (ft)	DTW (ft)	GW Elev (ft)
MW-1	8.29	---	-0.47	8.76	-0.47	---	---	9.11	-0.82	---	---	7.62	0.67	8.06	0.23	---	---	---	---
MW-2	7.81	---	-0.79	8.60	-0.79	---	---	---	---	---	---	7.46	0.35	7.52	0.29	---	-0.76	---	0.53
MW-3*	98.19	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-4	6.55	---	-0.75	7.30	-0.75	---	-1.10	7.65	-1.10	---	---	6.20	0.35	6.66	-0.11	---	-0.77	---	---
MW-5	6.88	---	-0.88	7.56	-0.88	---	-1.37	8.05	-1.37	---	---	6.57	0.11	6.96	-0.28	---	-0.96	---	0.44
MW-6	5.42	6.04	-0.62	6.20	-0.78	6.10	-0.68	6.67	-1.25	---	---	5.19	0.23	5.62	-0.20	6.28	-0.86	6.30	0.38
MW-7	3.74	---	-0.90	4.64	-0.90	---	---	5.13	-1.39	---	---	3.62	0.12	4.16	-0.42	4.80	-1.06	5.02	0.40
MW-8	3.74	---	-1.36	5.10	-1.36	---	---	5.55	-1.81	---	---	4.01	-0.27	4.57	-0.83	5.22	-1.48	3.55	0.19
PW-9	8.69	---	-0.66	9.55	-0.66	---	---	9.94	-1.25	---	---	8.39	0.30	8.92	-0.23	9.60	-0.91	8.36	0.33
OW-10	6.08	---	-0.79	6.74	-0.79	---	---	7.23	-1.15	10.05	-1.36	5.62	0.46	6.20	-0.12	6.85	-0.77	5.64	0.44
MW-11	5.72	---	-0.85	6.51	-0.85	---	---	6.93	-1.21	7.38	-1.30	5.35	0.37	5.88	-0.16	6.57	-0.85	5.28	0.44
MW-12	5.35	5.95	-0.60	6.20	-0.85	6.20	-0.85	6.72	-1.37	7.04	-1.32	5.21	0.14	5.72	-0.37	6.34	-0.99	5.06	0.29
MW-13	6.30	6.79	-0.49	7.20	-0.90	6.82	-0.52	7.53	-1.23	---	---	5.93	0.37	6.44	-0.14	7.09	-0.79	5.88	0.42
MW-14	6.97	---	-0.85	7.82	-0.85	---	---	8.20	-1.23	8.32	-1.35	6.67	0.30	7.17	-0.20	7.88	-0.91	6.60	0.37
MW-15	6.40	7.05	-0.65	7.27	-0.87	7.25	-0.85	7.73	-1.33	---	---	6.24	0.16	6.68	-0.28	7.35	-0.95	6.09	0.31
MW-16	6.15	6.80	-0.65	7.02	-0.87	7.02	-0.87	7.48	-1.33	---	---	7.95	-1.80	6.49	-0.34	7.17	-1.02	5.86	0.29

NOTES:

TOC - Top of PVC Casing elevation

DTW - Depth of Water from TOC

GW Elev - Groundwater Elevation

City of Seattle Datum was used to determine the TOC elevation.

Water levels were measured after a 24-hour shutdown of the air sparging system.

* - Monitoring well MW-3 was abandoned in December 1991 and was replaced with monitoring well PW-9 at approximately the same location.

--- - not measured

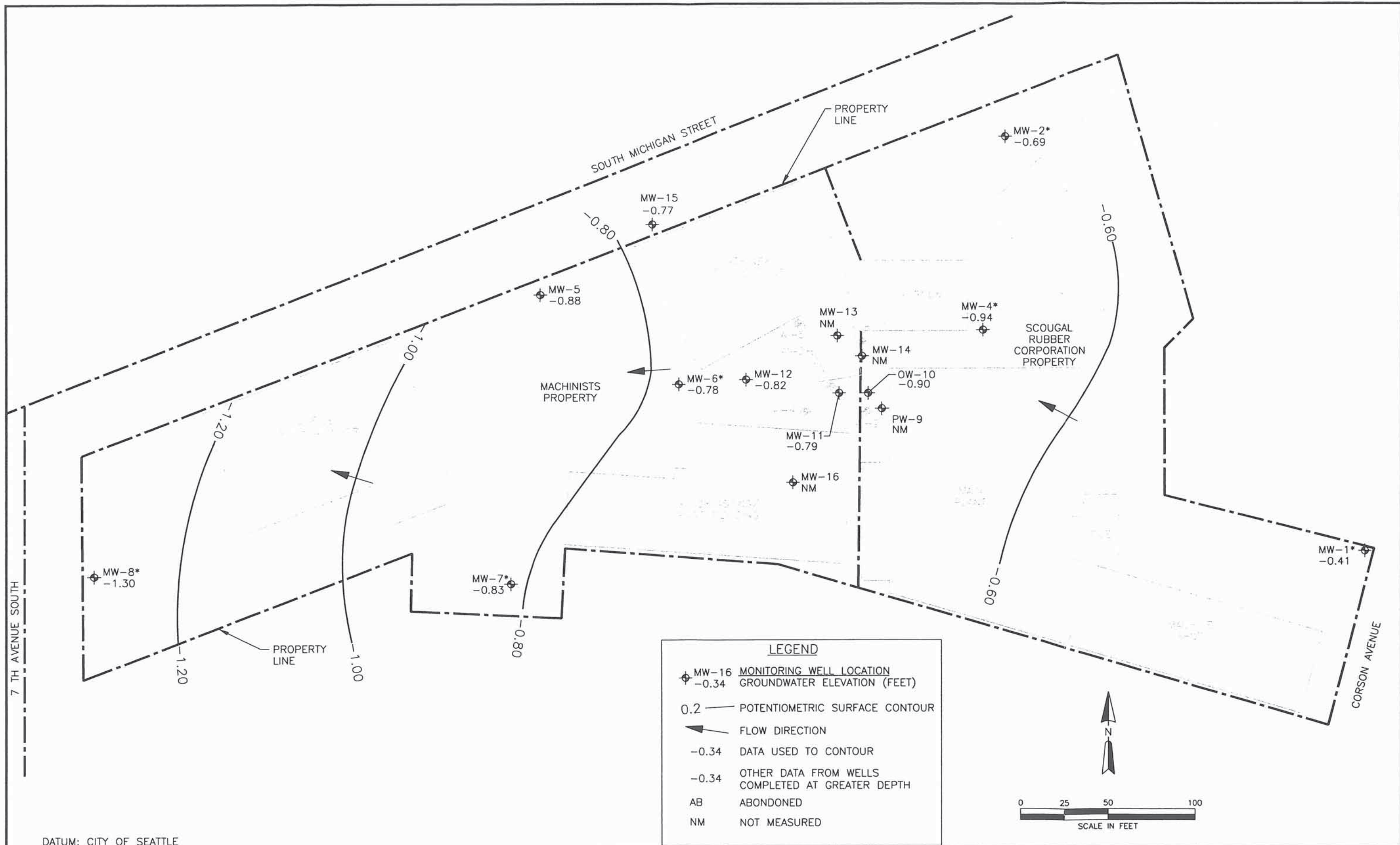
The TOC elevation for monitoring well MW-3 was based on a local datum (AGITBM) set at +100.00.

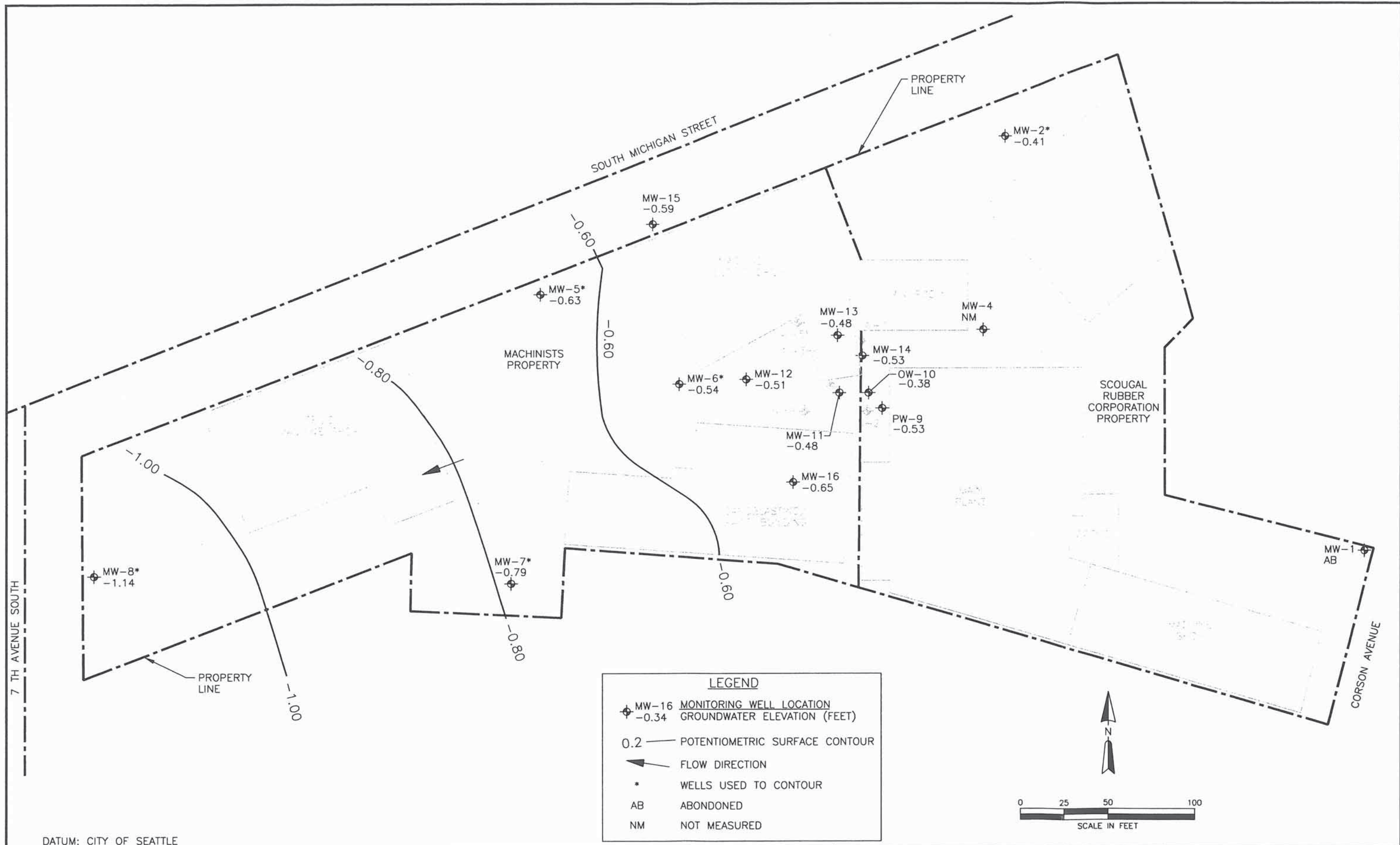
Table 2-2 Groundwater Elevation Data (Continued)

Well No.	TOC Elev (ft)	08/14/96		02/26/97		07/15/97		11/20/97		09/01/99		01/11/00		05/10/00		08/02/00	
		DTW (ft)	GW Elev (ft)	DTW (ft)	GW Elev (ft)	DTW (ft)	GW Elev (ft)	DTW (ft)	GW Elev (ft)	DTW (ft)	GW Elev (ft)	DTW (ft)	GW Elev (ft)	DTW (ft)	GW Elev (ft)	DTW (ft)	GW Elev (ft)
MW-1	8.29	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-2	7.81	7.95	-0.14	7.09	0.72	7.51	0.30	7.82	-0.01	---	---	---	---	---	---	---	---
MW-3*	98.19	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-4	6.55	6.79	-0.24	5.98	0.57	6.35	0.20	---	---	---	---	---	---	---	---	---	---
MW-5	6.68	7.03	-0.35	6.15	0.53	6.57	0.11	6.92	-0.24	---	---	---	---	---	---	---	---
MW-6	5.42	5.59	-0.17	4.85	0.57	5.23	0.19	5.55	-0.13	6.82	-0.14	6.82	-0.14	6.82	-0.14	6.82	-0.14
MW-7	3.74	4.23	-0.49	3.32	0.42	3.81	-0.07	4.03	-0.29	5.43	-0.01	5.43	-0.01	5.51	-0.09	5.96	-0.54
MW-8	3.74	4.64	-0.90	3.69	0.05	4.21	-0.47	4.41	-0.67	3.96	-0.22	4.02	-0.28	4.02	-0.28	4.53	-0.79
PW-9	8.69	9.02	-0.33	8.12	0.57	8.58	0.11	8.86	-0.17	4.33	-0.59	4.01	-0.27	4.88	-1.14	4.88	-1.14
OW-10	6.08	6.29	-0.21	5.49	0.59	5.84	0.24	6.11	-0.03	8.49	0.20	8.69	0.00	9.22	-0.53	9.22	-0.53
MW-11	5.72	6.00	-0.28	5.18	0.54	5.51	0.21	---	---	5.98	0.10	5.96	0.12	6.46	-0.38	6.46	-0.38
MW-12	5.35	5.72	-0.37	4.82	0.53	5.26	0.09	5.56	-0.21	5.65	0.07	---	---	6.20	-0.48	6.20	-0.48
MW-13	6.30	6.57	-0.27	5.74	0.56	6.06	0.24	6.35	-0.05	5.32	-0.17	5.50	-0.15	5.86	-0.51	5.86	-0.51
MW-14	6.97	7.30	-0.33	6.40	0.57	6.82	0.15	7.12	-0.15	6.23	0.07	6.28	0.02	6.78	-0.48	6.78	-0.48
MW-15	6.40	6.78	-0.38	5.87	0.53	6.30	0.10	6.66	-0.26	6.97	0.00	7.05	-0.08	7.50	-0.53	7.50	-0.53
MW-16	6.15	6.57	-0.42	5.61	0.54	6.07	0.08	6.39	-0.24	6.50	-0.10	6.53	-0.13	6.99	-0.59	6.99	-0.59

NOTES:

- TOC - Top of PVC Casing elevation
- DTW - Depth of Water from TOC
- GW Elev - Groundwater Elevation
- City of Seattle Datum was used to determine the TOC elevation.
- Water levels were measured after a 24-hour shutdown of the air sparging system.
- * - Monitoring well MW-3 was abandoned in December 1991 and was replaced with monitoring well PW-9 at approximately the same location.
- - not measured
- The TOC elevation for monitoring well MW-3 was based on a local datum (AGITBM) set at +100.00.





SRC00-02417-400

**GROUNDWATER CONTOUR MAP -
LOW WATER (AUGUST 2, 2000)**

DATE: 06/20/01

DRWN: N.S.

FILE: 2417s004s

FIGURE 2-2

3 Release Information/Site Characterization

Three releases were identified at the Scougal facility in late 1989 and the early 1990s as part of underground storage tank (UST) removal and property transfer investigations.

3.1 Release East of Warehouse

A release was identified between the Warehouse and the property line during the Phase II Assessment (AGI, 1991). The location of the release is shown in Figure 3-1. A narrow strip of soil is exposed in this area between the Warehouse and an adjacent building running along the property line to the east. Surface staining was evident near the entryway to this narrow alley. One composite sample of surficial soil was collected during the AGI investigation. The sample contained chlorinated solvents and petroleum hydrocarbons (Table 3-1). RETEC collected additional samples at depth and analyzed them for volatile organics and petroleum hydrocarbons (Table 3-1 and Figure 3-1). Method 418.1 was selected for analysis of TPH in these samples based on the AGI sample result, which suggested the presence of hydrocarbons in the C16 to C32 range (i.e., hydraulic fluid). The data confirmed that contamination next to the Warehouse was very limited in extent and was confined to near-surface soil (e.g., < 2 feet below ground surface). TPH concentrations were at or below 100 mg/kg below 2 feet. In addition, very low levels of chlorinated solvent and volatile aromatic compounds were reported.

Contamination in this area arose from the occasional, unauthorized disposal of material by plant personnel working in the Warehouse. Plant personnel were informed of proper waste management procedures, which are now rigorously followed (Section 5.0).

3.2 Release from Underground Storage Tanks

Five USTs were removed from the Scougal facility in December 1989. The tanks were grouped together along the west side of the Main Plant building (Figure 3-2) and were used to store solvents. Soil samples were collected from the UST excavation in March 1990 (Rittenhouse Zeman and Associates, April 1990). TPH concentrations in the soil ranged from 21 to 3,066 mg/kg (Method 418.1). The excavation was then backfilled. Additional samples were subsequently collected in the vicinity of the UST area as follows:

- AGI collected a sample of soil at 10 ft bgs during the installation of monitoring well MW-3 and another sample from boring HA-3 at a depth of 6 ft bgs (Figure 3-2). The sample from the boring for MW-3 contained petroleum hydrocarbons and chlorinated solvent compounds (AGI, 1991; Table 3-2). The sample from Boring HA-3 contained only

trace amounts of chlorinated solvent compounds and no petroleum hydrocarbons.

- RETEC advanced a boring (B-3) near the southern boundary of the UST area in December 1992. Soil collected at 10 feet bgs contained a trace of TCE and no detectable hydrocarbons (Table 3-2).

These results suggested that soil beneath the tanks was impacted. However, the contamination did not extend south or north of the USTs based on sample results from borings HA-3 and B-3.

Groundwater sampled from MW-3 between January 1991 and April 1992 contained elevated levels of mono-aromatic and chlorinated solvent compounds (Table 3-2). The source of the observed soil and groundwater contamination in this area was attributed to leakage from the former USTs.

3.3 Release From Barrel Storage Facility

Solvents and other chemicals used in the manufacturing process were stored and dispensed from barrels located near the northwest corner of the Main Plant building (Figure 1-3). Various petroleum distillates (e.g., toluene), methyl ethyl ketone, and TCE were stored and dispensed from these facilities. Most of the ground surface in this area is paved.

Soil beneath the pavement was sampled from borings in December 1992 and again during installation of a monitoring well (MW-14) in October 1993. The sample locations are represented in Figure 3-2 and the analytical results are presented in Table 3-3. Soil encountered in the borings consisted predominantly of sand with minor amounts of gravel and silt. Groundwater was encountered at approximately 7 feet bgs.

Petroleum hydrocarbons and volatile aromatics were not detected in samples from the 10-foot bgs depth in borings B-2 and B-4. TCE and related solvent compounds were detected in soil from borings B-4, S-7, and MW-14. Concentrations of TCE decreased with depth. There is no evidence of a free-phase TCE in this area. The boring for Well MW-14 was advanced to a total depth of 21 feet bgs. No free-phase material was encountered and the concentration of TCE diminished greatly between the 6- and 21-foot sample depths (Table 3-3).

The source of solvents in this area is attributed to spills and leaks from barrels previously stored above the sample locations. In the past, spilled material was not carefully contained and solvent could have migrated through the asphalt surface. Solvent is no longer dispensed from this location and the adjacent barrel storage racks (Figure 3-2) are equipped with secondary containment systems.

3.4 Delineation of Groundwater Plume

Groundwater samples have been collected from monitoring wells periodically since 1991. Groundwater quality data is summarized on Table 3-4. Sampling events have focused on volatile organic hydrocarbons (EPA 624, EPA Method 8240 or Method 8260), primarily TCE and vinyl chloride. TPH samples were collected in the early sampling events (prior to 1994).

Volatile organic compounds (VOCs) were detected in groundwater near the source of contamination (i.e., the UST and barrel storage areas), but VOC concentrations were low or not detected in groundwater from downgradient wells MW-6, MW-15 and MW-16 (Figure 3-3).

TPH concentrations in groundwater collected from wells in the vicinity of the former USTs ranged from 2.1 to 3.7 mg/L (Figure 3-4). In downgradient wells, TPH concentrations ranged from 0.28 to 0.54 mg/L.

Table 3-1 Characterization of Soil East of Warehouse

Location Sample Depth (ft) Sample ID	NA Surface S-1	WS-1 2 S-2-2	WS-1 4.5 S-2-4.5	WS-1 7 S-2-7	WS-2 2 S-3-2	WS-2 4.5 S-3-4.5
Volatile Organics (mg/kg) ^{1,2}						
Chloromethane	< 0.08	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
Bromomethane	< 0.20	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
Vinyl Chloride	< 0.08	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
Chloroethane	< 0.20	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
Methylene Chloride	< 0.08	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Acetone	NA	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Carbon Disulfide	NA	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
1,1-Dichloroethene	< 0.08	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
1,1-Dichloroethane	< 0.08	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
1,2-Dichloroethene (Total)	< 0.08	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Chloroform	< 0.08	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
1,2-Dichloroethane	< 0.08	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
2-Butanone	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	< 0.08	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Carbon Tetrachloride	< 0.08	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Vinyl Acetate	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	< 0.08	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
1,2-Dichloropropane	NA	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Cis-1,3-Dichloropropene	< 0.08	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Trichloroethene	4.2	J	0.26	0.34	J	0.10
Dibromochloromethane	NA	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
1,1,2-Trichloroethane	< 0.08	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Benzene	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Trans-1,3-Dichloropropene	NA	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Bromoform	< 0.08	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
4-Methyl-2-Pentanone	NA	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Hexanone	NA	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Tetrachloroethene	0.30	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
1,2,2-Tetrachloroethane	< 0.08	< 0.20	< 0.20	J	< 0.20	< 0.20
Toluene	4.0	< 0.20	< 0.20	J	< 0.20	< 0.20
Chlorobenzene	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Ethylbenzene	1.1	< 0.20	< 0.22	< 0.20	< 0.20	< 0.20
Styrene	NA	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Total Xylenes	8.1	< 0.20	< 1.5	< 0.20	< 0.20	< 0.20
Petroleum Hydrocarbons (mg/kg)						
Method 418.1	NA	100	46	NA	67	24
Gasoline by Method 8015 mod.	< 25	NA	NA	NA	NA	NA
Diesel by Method 8015 mod.	160	NA	NA	NA	NA	NA
Hydraulic Fluid by Method 8015 mod.	3,300	NA	NA	NA	NA	NA

Notes:
¹ Composite surface sample collected January 16, 1991 at the ground surface (AGI, 1991)
² Analyzed by Method 8240
 J - Compound was detected, but concentration was below the PQL, therefore concentration reported is an estimate.
 NA - Not analyzed

Table 3-2 Soil and Groundwater Quality Near Location of Former Underground Storage Tanks

Sample Date Sample ID Sample Depth (ft) Sampled By	Soil (mg/kg)			Groundwater (mg/L)			
	17-Jan-91	18-Jan-91	7-Dec-92	21-Jan-91	28-Mar-91	24-Oct-91	30-Apr-92
	MW-3 10 AGI	HA-3 6 AGI	B-3 10 RETEC	MW-3 NA AGI	MW-3 NA AGI	W-03-04 NA RETEC	W-9-4-30 NA RETEC
Volatile Organics (mg/kg)							
Chloromethane	< 0.10	< 0.10	< 0.50	< 0.10	< 0.05	< 0.01	< 0.01
Bromomethane	< 0.025	< 0.025	< 0.50	< 0.10	< 0.05	< 0.01	< 0.01
Vinyl Chloride	< 0.025	< 0.025	< 0.50	< 0.22	< 0.61	< 0.086	< 0.43
Chloroethane	< 0.025	< 0.025	< 0.50	< 0.01	< 0.005	< 0.01	< 0.01
Methylene Chloride	< 0.17	< 0.10	< 0.25	< 0.05	< 0.03	< 0.005	< 0.005
Acetone	NA	NA	< 2.5	< 0.10	< 0.10	< 0.10	< 0.05
Carbon Disulfide	NA	NA	< 0.25	< 0.01	< 0.005	< 0.005	< 0.005
1,1-Dichloroethane	< 0.01	< 0.01	< 0.25	< 0.01	< 0.005	< 0.005	< 0.005
1,1-Dichloroethane	< 0.01	< 0.01	< 0.25	< 0.01	< 0.005	< 0.005	< 0.005
1,2-Dichloroethane (Total)	< 0.012	< 0.01	< 0.25	< 0.01	< 0.005	< 0.005	< 0.005
Chloroform	< 0.01	< 0.01	< 0.25	< 0.01	< 0.005	< 0.005	< 0.005
1,2-Dichloroethane	< 0.01	< 0.01	< 0.25	< 0.01	< 0.005	< 0.005	< 0.005
2-Butanone	NA	NA	< 1.25	< 0.01	< 0.05	< 0.04	< 0.025
1,1,1-Trichloroethane	0.045	< 0.01	< 0.25	< 1.3	< 0.28	< 0.42	< 0.10
Carbon Tetrachloride	< 0.01	< 0.01	< 0.25	< 0.01	< 0.005	< 0.005	< 0.005
Vinyl Acetate	NA	NA	< 1.25	< 0.10	< 0.05	< 0.025	< 0.025
Bromodichloromethane	< 0.01	< 0.01	< 0.25	< 0.01	< 0.005	< 0.005	< 0.005
1,2-Dichloropropane	< 0.01	< 0.01	< 0.25	< 0.01	< 0.005	< 0.005	< 0.005
Cis-1,3-Dichloropropene	< 0.01	< 0.01	< 0.25	< 0.01	< 0.005	< 0.005	< 0.005
Trichloroethene	0.77	0.18	0.21	< 0.05	< 0.05	< 0.15	< 0.22
Dibromochloromethane	< 0.01	< 0.01	< 0.25	< 0.01	< 0.005	< 0.005	< 0.005
1,1,2-Trichloroethane	< 0.01	< 0.01	< 0.25	< 0.01	< 0.005	< 0.005	< 0.005
Benzene	< 0.025	< 0.025	< 0.25	< 0.01	< 0.005	< 0.005	< 0.005
Trans-1,3-Dichloropropene	< 0.01	< 0.01	< 0.25	< 0.01	< 0.005	< 0.005	< 0.011
Bromoform	< 0.01	< 0.01	< 0.25	< 0.01	< 0.005	< 0.005	< 0.005
4-Methyl-2-Pentanone	NA	NA	< 1.25	< NA	< NA	< 0.025	< 0.025
2-Hexanone	NA	NA	< 0.25	< 0.10	< 0.05	< 0.005	< 0.005
Tetrachloroethene	0.16	0.013	< 0.25	< 0.01	< 0.005	< 0.005	< 0.005
1,1,2,2-Tetrachloroethane	< 0.01	< 0.01	< 0.25	< 0.01	< 0.005	< 0.005	< 0.005
Toluene	0.037	< 0.025	< 0.25	< 0.01	< 0.005	< 0.005	< 0.005
Chlorobenzene	< 0.025	< 0.025	< 0.25	< 1.3	< 0.28	< 0.42	< 0.10
Ethylbenzene	< 0.025	< 0.025	< 0.25	< 0.24	< 0.18	< 0.13	< 0.14
Styrene	NA	NA	< 0.25	< 0.01	< 0.005	< 0.005	< 0.005
Total Xylenes	< 0.025	< 0.025	< 0.25	< 1.2	< 0.58	< 0.26	< 0.42
Non-Halogenated Hydrocarbons (mg/kg)							
Gasoline by Method 8015 mod.	< 11,000	NA	< 100	6	NA	75	3
Diesel by Method 8015 mod.	< 50	< 5	NA	NA	5	NA	NA
	1,000	< 5	NA	NA	3	NA	NA

Notes:
 NA - Not analyzed
 B - Compound detected in method blank
 J - Compound was detected, but concentration was below the PQL, therefore concentration reported is an estimate.

Table 3-3 Results of Site Investigation Sampling -- Former Barrel Storage Area

Sample Location Sample Date Sample ID Sample Depth (ft)	B-2 7-Dec-92 S-12-92-2-10 10	B-4 7-Dec-92 S-12-92-4-10 10	S-7 21-Dec-92 S-12-92-7 0.5	WS-2 1-Oct-93 MW-14-6.0 6	WS-2 1-Oct-93 MW-14-21 21
Volatile Organics (mg/kg)					
Chloromethane	< 0.50	< 0.50	< 0.40	< 1.0	< 0.50
Bromomethane	< 0.50	< 0.50	< 0.40	< 1.0	< 0.50
Vinyl Chloride	< 0.50	< 0.50	< 0.40	< 1.0	< 3.50
Chloroethane	< 0.50	< 0.50	< 0.40	< 1.0	< 0.50
Methylene Chloride	0.18	< 0.25	< 0.60	< 0.50	< 2.50
Acetone	< 2.5	< 2.5	< 0.20	< 2.5	< 2.5
Carbon Disulfide	< 0.25	< 0.25	< 0.20	< 0.50	< 0.25
1,1-Dichloroethene	< 0.25	< 0.25	< 0.20	< 0.50	< 0.25
1,1-Dichloroethane	< 0.25	< 0.25	< 0.20	< 0.50	< 0.25
1,2-Dichloroethene (Total)	< 0.25	< 0.25	< 0.20	< 0.50	0.10 J
Chloroform	< 0.25	< 0.25	< 0.20	6.30	0.91
1,2-Dichloroethane	< 0.25	< 0.25	< 0.20	< 0.50	< 0.25
2-Butanone	< 1.25	< 1.25	< 0.20	< 0.50	< 0.25
1,1,1-Trichloroethane	< 0.25	< 0.25	< 1.0	0.86	0.14 B, J
Carbon Tetrachloride	< 0.25	< 0.25	< 0.25	< 0.50	< 0.25
Vinyl Acetate	< 1.25	< 1.25	< 1.0	< 0.50	< 0.25
Bromodichloromethane	< 0.25	< 0.25	< 0.25	< 2.5	< 1.25
1,2-Dichloropropane	< 0.25	< 0.25	< 0.25	< 0.50	< 0.25
Cis-1,3-Dichloropropene	< 0.25	< 0.25	< 0.25	< 0.50	< 0.25
Trichloroethene	0.21	J 0.91	< 0.25	< 0.50	< 0.25
Dibromochloromethane	< 0.25	< 0.25	2.4	15	0.43
1,1,2-Trichloroethane	< 0.25	< 0.25	< 0.20	< 0.50	< 0.25
Benzene	< 0.25	< 0.25	< 0.20	< 0.50	< 0.25
Trans-1,3-Dichloropropene	< 0.25	< 0.25	< 0.20	< 0.50	< 0.25
Bromoform	< 0.25	< 0.25	< 0.20	< 0.50	< 0.25
4-Methyl-2-Pentanone	< 1.25	< 1.25	< 1.0	< 2.5	< 1.3
2-Hexanone	< 0.25	< 0.25	< 0.20	< 0.50	< 0.25
1,1,2,2-Tetrachloroethane	< 0.25	< 0.25	< 0.86	2.5	< 0.25
Toluene	< 0.25	< 0.25	< 0.20	< 0.50	0.08 J
Chlorobenzene	< 0.25	< 0.25	0.055 J	< 0.50	< 0.25
Ethylbenzene	< 0.25	< 0.25	< 0.20	< 0.50	< 0.25
Styrene	< 0.25	< 0.25	< 0.20	< 0.50	< 0.25
Total Xylenes	< 0.25	< 0.25	< 0.20	< 0.50	< 0.25
Petroleum Hydrocarbons (mg/kg)					
Method 418.1	< 100	< 100	NA	NA	NA

Notes:
 NA Not analyzed
 B Compound detected in method blank
 J - Compound was detected, but concentration was below the PQL, therefore concentration reported is an estimate.

Table 3-4 Groundwater Quality

WELL NO. SAMPLE DATE: SAMPLE ID.:	MW-1 01/21/91 MW-1	MW-1 03/28/91 MW-1	MW-2 01/21/91 MW-2	MW-2 03/28/91 MW-2	MW-2 04/30/92 W-2-4-30	MW-2 03/09/95 MW-2
<u>VOLATILE ORGANICS:</u>						
Acetone	< 10	< 10	< 10	< 10	<	--
Benzene	< 1	< 1	< 1	< 1	<	--
2-Butanone (MEK)	< 10	< 10	< 10	< 10	<	--
Chloroethane	< 1	< 1	< 1	< 1	<	--
Chloroform	< 1	< 1	< 1	< 1	<	--
1,1-Dichloroethane	< 1	< 1	< 1	< 1	<	--
1,1-Dichloroethene	< 1	< 1	< 1	< 1	<	--
1,2-Dichloroethene (Total)	< 1	< 1	< 1	< 1	<	--
Ethyl Benzene	< 1	< 1	< 1	< 1	<	--
Tetrachloroethene	< 1	< 1	< 1	< 1	<	--
Toluene	< 1	< 1	< 1	< 1	<	--
1,1,1-Trichloroethane	< 1	< 1	< 1	< 1	<	--
Trichloroethene	< 1	< 1	< 1	< 1	<	0.82
Vinyl Chloride	< 1	< 1	< 1	< 1	<	0.2
Total Xylenes	< 1	< 1	< 1	< 1	<	--
<u>PETROLEUM HYDROCARBONS:</u>						
(EPA Method 8015)						
As gasoline	--	--	--	--	--	--
As diesel	--	--	--	--	1,000	--
<u>PETROLEUM HYDROCARBONS:</u>						
(EPA Method 418.1)						
	< 1,000	--	< 1,000	--	--	--

NOTES:

- 1 Analyzed by EPA 8020
- 2 Analyzed by EPA 8010 (Trans-1,2-dichloroethene releases 1,2-Dichloroethene (Total))
- 3 Analyzed by EPA 624
- 4 Analyzed by EPA 8240
- 5 Analyzed by EPA 8260
- : Not tested

All concentrations reported as ug/L.

J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity

B1: This analyte was also detected in the associated method blank

D: The reported result for this analyte is calculated based on a secondary dilution factor

X1: Contaminant does not appear to be "typical" product. Single component contamination.

X2: Contaminant does not appear to be "typical" product.

Table 3-4 Groundwater Quality (Continued)

WELL NO. SAMPLE DATE: SAMPLE ID.:	MW-3 01/21/91 MW-3	MW-3 03/28/91 MW-3	MW-3 10/24/91 W-03-04	MW-4 03/28/91 MW-4	MW-4 10/24/91 W-04-03	MW-4 04/30/92 W-4-4-30	MW-4 01/30/96 MW-4	MW-4 05/09/96 MW-4	MW-4 08/14/96 MW-4	MW-4 02/26/97 MW-4
<u>VOLATILE ORGANICS:</u>										
Acetone	< 100	140	< 100	< 10	< 100	--	1.2	--	--	--
Benzene	< 10	5	< 5	< 1	< 5	< 2	< 0.5	--	--	--
2-Butanone (MEK)	< 100	50	40	< 10	< 25	--	0.41	--	--	--
Chloroethane	< 10	5	< 10	< 1	< 10	--	1	--	--	--
Chloroform	< 10	5	< 5	< 1	< 5	--	< 0.5	--	--	--
1,1-Dichloroethane	< 10	5	< 5	< 1	< 5	--	< 0.5	--	--	--
1,1-Dichloroethene	< 10	5	4.7	< 1	< 5	--	< 0.5	--	--	--
1,2-Dichloroethene (Total)	190	120	< 5	< 1	< 5	--	< 0.5	--	--	--
Ethyl Benzene	240	180	130	< 1	< 5	< 2	< 0.5	--	--	--
Tetrachloroethene	< 10	5	< 5	< 1	< 5	--	< 0.5	--	--	--
Toluene	1,300	280	420	< 1	< 5	< 2	< 0.5	--	--	--
1,1,1-Trichloroethane	< 10	5	< 5	3	< 5	--	< 0.5	--	--	--
Trichloroethene	50	53	150	120	< 5	--	13	14	13	8.5
Vinyl Chloride	220	610	86	< 1	< 10	--	< 0.2	< 0.2	< 0.2	< 0.2
Total Xylenes	1,200	580	260	< 1	< 5	< 2	< 0.5	--	--	--
<u>PETROLEUM HYDROCARBONS:</u>										
(EPA Method 8015)										
As gasoline	--	5,000	--	--	--	--	--	--	--	--
As diesel	--	3,000	--	--	--	< 1,000	--	--	--	--
<u>PETROLEUM HYDROCARBONS:</u>										
(EPA Method 418.1)										
	6,000	--	75,000	--	--	--	< 1,000	< 1,000	< 1,000	< 1,000

NOTES:

- 1 Analyzed by EPA 8020
- 2 Analyzed by EPA 8010 (Trans-1,2-dichloroethene replaces 1,2-Dichloroethene (Total))
- 3 Analyzed by EPA 624
- 4 Analyzed by EPA 8240
- 5 Analyzed by EPA 8260
- : Not tested
- All concentrations reported as ug/L.
- J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity
- B1: This analyte was also detected in the associated method blank
- D: The reported result for this analyte is calculated based on a secondary dilution factor
- X1: Contaminant does not appear to be "typical" product. Single component contamination.
- X2: Contaminant does not appear to be "typical" product.

Table 3-4 (Groundwater Quality (continued))

WELL NO. SAMPLE DATE: SAMPLE ID.:	MW-5 03/29/91 MW-5	MW-5 10/24/91 W-05-01	MW-6 03/29/91 MW-6	MW-6 10/24/91 W-06-02	MW-6 02/25/94 MW-6	MW-6 06/08/94 MW-6	MW-6 09/19/94 MW-6	MW-6 11/06/95 MW-6
<u>VOLATILE ORGANICS:</u>								
Acetone	30	< 10	81	< 100	--	--	--	1.4
Benzene	< 1	< 5	< 1	< 5	--	--	--	0.2
2-Butanone (MEK)	< 10	< 25	< 10	< 25	--	--	--	0.5
Chloroethane	< 1	< 10	< 1	< 10	--	--	--	< 1
Chloroform	2	< 5	< 1	< 5	< 1	2	--	< 0.5
1,1-Dichloroethane	< 1	< 5	< 1	< 5	< 1	2	--	< 0.5
1,1-Dichloroethene	< 1	< 5	< 1	< 5	< 1	2	--	< 0.5
1,2-Dichloroethene (Total)	< 1	< 5	< 1	< 5	< 1	2	--	0.43
Ethyl Benzene	< 1	< 5	< 1	< 5	--	--	--	< 0.5
Tetrachloroethene	< 1	< 5	< 1	< 5	< 1	2	--	< 0.5
Toluene	< 1	< 5	< 1	< 5	--	--	--	0.4
1,1,1-Trichloroethane	< 1	< 5	< 1	< 5	< 1	2	--	< 0.5
Trichloroethene	< 1	< 5	< 1	< 5	< 1	2	< 0.2	< 0.2
Vinyl Chloride	< 1	< 10	< 1	< 10	< 1	2	< 0.2	< 0.2
Total Xylenes	< 1	< 5	< 1	< 5	--	--	--	< 0.5
<u>PETROLEUM HYDROCARBONS:</u>								
(EPA Method 8015)								
As gasoline	--	--	< 1,000	--	550	--	--	--
As diesel	--	--	< 1,000	--	--	--	--	--
<u>PETROLEUM HYDROCARBONS:</u>								
(EPA Method 418.1)								
	--	--	--	--	--	--	--	--

NOTES:

- 1 Analyzed by EPA 8020
- 2 Analyzed by EPA 8010 (Trans-1,2-dichloroethene replaces 1,2-Dichloroethene (Total))
- 3 Analyzed by EPA 624
- 4 Analyzed by EPA 8240
- 5 Analyzed by EPA 8260

-- : Not tested

All concentrations reported as ug/L.

J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity

B1: This analyte was also detected in the associated method blank

D: The reported result for this analyte is calculated based on a secondary dilution factor

X1: Contaminant does not appear to be "typical" product. Single component contamination.

Table 3-4 Groundwater Quality

WELL NO. SAMPLE DATE: SAMPLE ID.:	MW-1 01/21/91 MW-1	MW-1 03/28/91 MW-1	MW-2 01/21/91 MW-2	MW-2 03/28/91 MW-2	MW-2 04/30/92 W-2-4-30	MW-2 03/09/95 MW-2
<u>VOLATILE ORGANICS:</u>						
Acetone	< 10	< 10	< 10	< 10	--	--
Benzene	< 1	< 1	< 1	< 1	< 2	--
2-Butanone (MEK)	< 10	< 10	< 10	< 10	--	--
Chloroethane	< 1	< 1	< 1	< 1	--	--
Chloroform	< 1	< 1	< 1	< 1	--	--
1,1-Dichloroethane	< 1	< 1	< 1	< 1	--	--
1,1-Dichloroethene	< 1	< 1	< 1	< 1	--	--
1,2-Dichloroethene (Total)	< 1	< 1	< 1	< 1	--	--
Ethyl Benzene	< 1	< 1	< 1	< 1	< 2	0.82
Tetrachloroethene	< 1	< 1	< 1	< 1	--	0.2
Toluene	< 1	< 1	< 1	< 1	< 2	--
1,1,1-Trichloroethane	< 1	< 1	< 1	< 1	--	--
Trichloroethene	< 1	< 1	< 1	< 1	--	--
Vinyl Chloride	< 1	< 1	< 1	< 1	--	--
Total Xylenes	< 1	< 1	< 1	< 1	< 2	--
<u>PETROLEUM HYDROCARBONS:</u>						
(EPA Method 8015)						
As gasoline	--	--	--	--	--	--
As diesel	--	--	--	--	< 1,000	--
<u>PETROLEUM HYDROCARBONS:</u>						
(EPA Method 418.1)	< 1,000	--	< 1,000	--	--	--

NOTES:

- 1 Analyzed by EPA 8020
- 2 Analyzed by EPA 8010 (Trans-1,2-dichloroethene replaces 1,2-Dichloroethene (Total))
- 3 Analyzed by EPA 624
- 4 Analyzed by EPA 8240
- 5 Analyzed by EPA 8260
- : Not tested
- All concentrations reported as ug/L.
- J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity
- B1: This analyte was also detected in the associated method blank
- D: The reported result for this analyte is calculated based on a secondary dilution factor
- X1: Contaminant does not appear to be "typical" product. Single component contamination.
- X2: Contaminant does not appear to be "typical" product.

Table 3-4 Groundwater Quality (Continued)

WELL NO. SAMPLE DATE: SAMPLE ID:	MW-3 01/21/91 MW-3	MW-3 03/28/91 MW-3	MW-3 10/24/91 W-03-04	MW-4 03/28/91 MW-4	MW-4 10/24/91 W-04-03	MW-4 04/30/92 W-4-4-30	MW-4 01/30/96 MW-4	MW-4 05/09/96 MW-4	MW-4 08/14/96 MW-4	MW-4 02/26/97 MW-4
VOLATILE ORGANICS:										
Acetone	< 100	140	< 100	< 10	< 100	--	1.2	--	--	--
Benzene	< 10	5	< 5	< 1	< 5	< 2	0.5	--	--	--
2-Butanone (MEK)	< 100	50	40	< 10	< 25	--	0.41	--	--	--
Chloroethane	< 10	5	< 10	< 1	< 10	--	1	--	--	--
Chloroform	< 10	5	< 5	< 1	< 5	--	0.5	--	--	--
1,1-Dichloroethane	< 10	5	< 5	< 1	< 5	--	0.5	--	--	--
1,1-Dichloroethene	< 10	5	< 5	< 1	< 5	--	0.5	--	--	--
1,2-Dichloroethene (Total)	190	120	< 5	< 1	< 5	--	0.5	--	--	--
Ethyl Benzene	240	180	130	< 1	< 5	< 2	0.5	--	--	--
Tetrachloroethene	< 10	5	< 5	< 1	< 5	--	0.5	--	--	--
Toluene	1,300	280	420	< 1	< 5	< 2	0.5	--	--	--
1,1,1-Trichloroethane	< 10	5	< 5	3	< 5	--	0.5	--	--	--
Trichloroethene	50	53	150	120	< 5	--	13	14	13	8.5
Vinyl Chloride	220	610	86	< 1	< 10	--	0.2	< 0.2	< 0.2	< 0.2
Total Xylenes	1,200	580	260	< 1	< 5	< 2	0.5	--	--	--
PETROLEUM HYDROCARBONS:										
(EPA Method 8015)										
As gasoline	--	5,000	--	--	--	--	--	--	--	--
As diesel	--	3,000	--	--	--	< 1,000	--	--	--	--
PETROLEUM HYDROCARBONS:										
(EPA Method 418.1)										
	6,000	--	75,000	--	--	--	< 1,000	< 1,000	< 1,000	< 1,000

NOTES:

- 1 Analyzed by EPA 8020
- 2 Analyzed by EPA 8010 (Trans-1,2-dichloroethene replaces 1,2-Dichloroethene (Total))
- 3 Analyzed by EPA 624
- 4 Analyzed by EPA 8240
- 5 Analyzed by EPA 8260
- : Not tested
- All concentrations reported as ug/L.
- J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity
- B1: This analyte was also detected in the associated method blank
- D: The reported result for this analyte is calculated based on a secondary dilution factor
- X1: Contaminant does not appear to be "typical" product. Single component contamination.
- X2: Contaminant does not appear to be "typical" product.

Table 3-4 (Groundwater Quality (continued))

WELL NO. SAMPLE DATE: SAMPLE ID.:	MW-5 03/29/91 MW-5	MW-5 10/24/91 W-05-01	MW-6 03/29/91 MW-6	MW-6 10/24/91 W-06-02	MW-6 02/25/94 MW-6	MW-6 06/08/94 MW-6	MW-6 09/19/94 MW-6	MW-6 11/06/95 MW-6
<u>VOLATILE ORGANICS:</u>								
Acetone	30	< 10	81	< 100	--	--	--	1.4
Benzene	< 1	< 5	< 1	< 5	--	--	--	0.2
2-Butanone (MEK)	< 10	< 25	< 10	< 25	--	--	--	0.5
Chloroethane	< 1	< 10	< 1	< 10	--	--	--	< 1
Chloroform	2	< 5	< 1	< 5	< 1	< 2	< 2	< 0.5
1,1-Dichloroethane	< 1	< 5	< 1	< 5	< 1	< 2	< 2	< 0.5
1,1-Dichloroethene	< 1	< 5	< 1	< 5	< 1	< 2	< 2	< 0.5
1,2-Dichloroethene (Total)	< 1	< 5	< 1	< 5	< 1	< 2	< 2	0.43
Ethyl Benzene	< 1	< 5	< 1	< 5	--	--	--	< 0.5
Tetrachloroethene	< 1	< 5	< 1	< 5	< 1	< 2	< 2	< 0.5
Toluene	< 1	< 5	< 1	< 5	--	--	--	< 0.4
1,1,1-Trichloroethane	< 1	< 5	< 1	< 5	< 1	< 2	< 2	< 0.5
Trichloroethene	< 1	< 5	< 1	< 5	< 1	< 2	< 0.2	< 0.2
Vinyl Chloride	< 1	< 10	< 1	< 10	< 1	< 2	< 0.2	< 0.2
Total Xylenes	< 1	< 5	< 1	< 5	--	--	--	< 0.5
<u>PETROLEUM HYDROCARBONS:</u>								
(EPA Method 8015)								
As gasoline	--	--	< 1,000	--	550	--	--	--
As diesel	--	--	< 1,000	--	--	--	--	--
<u>PETROLEUM HYDROCARBONS:</u>								
(EPA Method 418.1)								
	--	--	--	--	--	--	--	--

NOTES:

- 1 Analyzed by EPA 8020
- 2 Analyzed by EPA 8010 (Trans-1,2-dichloroethene replaces 1,2-Dichloroethene (Total))
- 3 Analyzed by EPA 624
- 4 Analyzed by EPA 8240
- 5 Analyzed by EPA 8260
- : Not tested
- All concentrations reported as ug/L.
- J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity
- B1: This analyte was also detected in the associated method blank
- D: The reported result for this analyte is calculated based on a secondary dilution factor
- X1: Contaminant does not appear to be "typical" product. Single component contamination.
- X2: Contaminant does not appear to be "typical" product.

Table 3-4 Groundwater Quality (continued)

WELL NO. SAMPLE DATE: SAMPLE ID.:	MW-7 03/29/91 MW-7	MW-8 03/29/91 MW-8	PW-9 04/30/92 W-9-4-30	PW-9 07/22/93 PW-9	PW-9 10/24/94 PW-9	PW-9 03/09/95 PW-9	PW-9 06/01/95 PW-9
<u>VOLATILE ORGANICS:</u>							
Acetone	< 10	< 10	< 50	< 250	--	--	--
Benzene	< 1	< 1	11	< 50	--	--	--
2-Butanone (MEK)	< 10	< 10	< 25	49 J	--	--	--
Chloroethane	< 1	< 1	< 10	< 100	--	--	--
Chloroform	< 1	< 1	< 5	< 50	--	--	--
1,1-Dichloroethane	< 1	< 1	< 5	< 50	--	--	--
1,1-Dichloroethene	< 1	< 1	9.4	< 50	--	--	--
1,2-Dichloroethene (Total)	< 1	< 1	< 5	< 50	--	--	--
Ethyl Benzene	< 1	< 1	140	270	--	--	--
Tetrachloroethene	< 1	< 1	< 5	< 50	--	--	--
Toluene	< 1	< 1	100	28	--	--	--
1,1,1-Trichloroethane	< 1	< 1	< 5	< 50	--	--	--
Trichloroethene	< 1	< 1	220	140	2.1	1.8	< 0.2
Vinyl Chloride	< 1	< 1	430	120	54	2.3	1.9
Total Xylenes	< 1	< 1	420	500	--	--	--
<u>PETROLEUM HYDROCARBONS:</u>							
(EPA Method 8015)							
As gasoline	< 1,000	< 1,000	--	--	--	--	--
As diesel	< 1,000	< 1,000	3,100 X1	3,700 X1	--	--	--
<u>PETROLEUM HYDROCARBONS:</u>							
(EPA Method 418.1)							
	--	--	--	--	--	--	--

NOTES:

- 1 Analyzed by EPA 8020
- 2 Analyzed by EPA 8010 (Trans-1,2-dichloroethene replaces 1,2-Dichloroethene (Total))
- 3 Analyzed by EPA 624
- 4 Analyzed by EPA 8240
- 5 Analyzed by EPA 8260
- : Not tested

All concentrations reported as ug/L.

J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity

B1: This analyte was also detected in the associated method blank

D: The reported result for this analyte is calculated based on a secondary dilution factor

X1: Contaminant does not appear to be "typical" product. Single component contamination.

X2: Contaminant does not appear to be "typical" product.

Table 3-4 Groundwater Quality (continued)

WELL NO. SAMPLE DATE: SAMPLE ID.:	OW-10 4 07/22/93 OW-10	OW-10 3 10/24/94 OW-10	OW-10 3 03/09/95 OW-10	OW-10 3 06/01/95 OW-10	OW-10 3 07/15/97 MW-10
<u>VOLATILE ORGANICS:</u>					
Acetone	< 250	--	--	--	--
Benzene	< 50	--	--	--	1.6
2-Butanone (MEK)	< 250	--	--	--	--
Chloroethane	< 100	--	--	--	< 0.4
Chloroform	< 50	--	--	--	< 0.4
1,1-Dichloroethane	< 50	--	--	--	< 0.4
1,1-Dichloroethene	< 50	--	--	--	< 0.4
1,2-Dichloroethene (Total)	< 50	--	--	--	3.4
Ethyl Benzene	< 50	--	--	--	< 0.4
Tetrachloroethene	< 50	--	--	--	0.32 J
Toluene	< 50	--	--	--	< 0.4
1,1,1-Trichloroethane	< 50	--	--	--	< 0.4
Trichloroethene	730	19	13	14	17 D
Vinyl Chloride	110	13	0.29	2.6	0.37 J
Total Xylenes	< 50	--	--	--	--
<u>PETROLEUM HYDROCARBONS:</u>					
(EPA Method 8015)					
As gasoline	--	--	--	--	--
As diesel	2,100 X2	--	--	--	--
<u>PETROLEUM HYDROCARBONS:</u>					
(EPA Method 418.1)					
	--	--	--	--	--

NOTES:

- 1 Analyzed by EPA 8020
- 2 Analyzed by EPA 8010 (Trans-1,2-dichloroethene replaces 1,2-Dichloroethene (Total))
- 3 Analyzed by EPA 624
- 4 Analyzed by EPA 8240
- 5 Analyzed by EPA 8260
- : Not tested
- All concentrations reported as ug/L.
- J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity
- B1: This analyte was also detected in the associated method blank
- D: The reported result for this analyte is calculated based on a secondary dilution factor
- X1: Contaminant does not appear to be "typical" product. Single component contamination.
- X2: Contaminant does not appear to be "typical" product.

Table 3-4 Groundwater Quality (continued)

WELL NO. SAMPLE DATE: SAMPLE ID.:	MW-11 4 07/22/93 MW-11	MW-11 3 10/24/94 MW-11	MW-11 3 03/09/95 MW-11	MW-11 3 06/01/95 MW-11	MW-11 3 11/06/95 MW-11	MW-11 3 05/09/96 MW-11	MW-11 3 08/14/96 MW-11	MW-11 3 02/26/97 MW-11	MW-11 3 07/15/97 MW-11	MW-11 5 09/01/99 MW-11-999	MW-11 5 01/11/00 MW-11-100	MW-11 5 08/02/00 MW-11-0800
VOLATILE ORGANICS:												
Acetone	< 50	--	--	--	< 0.5	--	--	--	--	1.2	< 1	< 1
Benzene	< 10	--	--	--	0.22 J	--	--	< 0.4	0.4	0.2	< 0.2	0.3
2-Butanone (MEK)	< 50	--	--	--	< 0.5	--	--	--	--	1	< 1	< 1
Chloroethane	2.1 J	--	--	--	1	--	--	< 0.4	0.4	0.2	< 0.2	< 0.2
Chloroform	< 10	--	--	--	0.22 J	--	--	< 0.4	0.4	0.2	< 0.2	< 0.2
1,1-Dichloroethane	2.1 J	--	--	--	0.68	--	--	< 0.4	0.4	0.2	< 0.2	< 0.2
1,1-Dichloroethene	1.7 J	--	--	--	0.52	--	--	< 0.4	0.4	0.2	< 0.2	< 0.2
1,2-Dichloroethene (Total)	< 10	--	--	--	18	--	--	0.82	0.82	0.3	0.6	2.5
Ethyl Benzene	< 10	--	--	--	0.5	--	--	< 0.4	0.4	0.2	< 0.2	< 0.2
Tetrachloroethene	2.4 J	--	--	--	0.53	--	--	< 0.4	0.4	0.2	< 0.2	< 0.2
Toluene	< 10	--	--	--	< 0.5	--	--	< 0.5	0.5	0.2	< 0.2	< 0.2
1,1,1-Trichloroethane	< 10	--	--	--	0.5	--	--	< 0.4	0.4	0.2	< 0.2	< 0.2
Trichloroethene	400	4.8	3.9	8.6	50 D	4.2	2.2	< 0.4	9.9 DJ	5.0	9.4	11
Vinyl Chloride	220	0.48	< 0.2	< 0.2	6.7	< 0.2	< 0.2	< 0.2	0.4	0.2	< 0.2	< 0.2
Total Xylenes	< 10	--	--	--	< 0.5	--	--	--	--	0.4	< 0.4	< 0.4
PETROLEUM HYDROCARBONS: (EPA Method 8015)												
As gasoline	--	--	--	--	--	--	--	--	--	--	--	--
As diesel	2,100 X2	--	--	--	--	--	--	--	--	--	--	--
PETROLEUM HYDROCARBONS: (EPA Method 418.1)												
	--	--	--	--	--	--	--	--	--	--	--	--

NOTES:

- 1 Analyzed by EPA 8020
- 2 Analyzed by EPA 8010 (Trans-1,2-dichloroethene replaces 1,2-Dichloroethene (Total))
- 3 Analyzed by EPA 624
- 4 Analyzed by EPA 8240
- 5 Analyzed by EPA 8260
- : Not tested
- All concentrations reported as ug/L.
- J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity
- B1: This analyte was also detected in the associated method blank
- D: The reported result for this analyte is calculated based on a secondary dilution factor
- X1: Contaminant does not appear to be "typical" product. Single component contamination.
- X2: Contaminant does not appear to be "typical" product.

Table 3-4 Groundwater Quality (continued)

WELL NO. SAMPLE DATE: SAMPLE ID:	MW-12 4 08/20/93 MW-12	MW-12 2 02/25/94 MW-12	MW-12 3 09/19/94 MW-12	MW-12 3 03/09/95 MW-12	MW-12 3 11/06/95 MW-12	MW-12 3 05/09/96 MW-12	MW-12 3 02/26/97 MW-12	MW-12 3 07/15/97 MW-12	MW-12 3 11/20/97 MW-12	MW-12 6 09/01/99 MW-12-999	MW-12 5 01/11/00 MW-12-100	MW-12 5 05/10/00 MW-12-0500	MW-12 5 08/02/00 MW-12-0800
VOLATILE ORGANICS:													
Acetone	< 50	--	--	--	< 0.5	< 0.1	< 0.4	< 0.4	--	< 1.1	< 1	< 2.9	< 1
Benzene	< 10	--	--	--	< 0.5	< 0.1	< 0.4	< 0.4	--	< 0.2	< 0.2	< 0.2	< 0.2
2-Butanone (MEK)	< 10	--	--	--	< 0.5	< 0.1	--	--	--	< 1	< 1	< 1	< 1
Chloroethane	< 20	--	--	--	< 1	0.27	< 0.4	< 0.4	--	< 0.2	< 0.2	< 0.2	< 0.2
Chloroform	< 10	< 1	< 1	< 1	< 0.5	< 0.1	< 0.4	< 0.4	--	< 0.2	< 0.2	< 0.2	< 0.2
1,1-Dichloroethane	< 10	< 1	< 1	< 1	< 0.5	0.41	< 0.4	0.45	--	< 0.3	0.3	< 0.4	< 0.4
1,1-Dichloroethene	< 10	< 1	< 1	< 1	0.46	< 0.1	< 0.4	< 0.4	--	< 0.2	< 0.2	< 0.2	< 0.2
1,2-Dichloroethene (Total)	< 10	< 1	< 1	< 1	0.87	0.72	0.76	2.6	--	1.7	2	< 2.1	< 1.7
Ethyl Benzene	< 10	< 1	< 1	< 1	< 0.5	< 0.1	< 0.4	< 0.4	--	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachloroethene	< 10	< 1	< 1	< 1	< 0.5	< 0.1	< 0.4	< 0.4	--	< 0.2	< 0.2	< 0.2	< 0.2
Toluene	< 10	< 1	< 1	< 1	< 0.5	< 0.1	< 0.4	< 0.4	--	< 0.2	< 0.2	< 0.2	< 0.2
1,1,1-Trichloroethane	< 10	< 1	< 1	< 1	< 0.5	< 0.1	< 0.4	< 0.4	--	< 0.2	< 0.2	< 0.2	< 0.2
Trichloroethene	< 10	< 1	< 1	< 1	< 0.5	< 0.1	< 0.4	< 0.4	--	< 0.2	< 0.2	< 0.2	< 0.2
Vinyl Chloride	9.6	< 1	< 1	< 1	< 0.2	< 0.1	< 0.2	< 0.4	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Total Xylenes	< 10	< 1	< 1	< 1	1.9	< 0.1	0.26	4	1.1	0.9	< 0.2	< 2	< 0.8
					< 0.5	--	--	--	--	< 0.4	< 0.4	< 0.4	< 0.4
PETROLEUM HYDROCARBONS:													
(EPA Method 8015)													
As gasoline	--	--	--	--	--	--	--	--	--	--	--	--	--
As diesel	1,400	X2	610	X2	--	--	--	--	--	--	--	--	--
PETROLEUM HYDROCARBONS:													
(EPA Method 418.1)													

NOTES:
 1 Analyzed by EPA 8020
 2 Analyzed by EPA 8010 (Trans-1,2-dichloroethene replaces 1,2-Dichloroethene (Total))
 3 Analyzed by EPA 824
 4 Analyzed by EPA 8240
 5 Analyzed by EPA 8260
 -- : Not tested
 All concentrations reported as ug/L.
 J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity
 B1: This analyte was also detected in the associated method blank
 D: The reported result for this analyte is calculated based on a secondary dilution factor
 X1: Contaminant does not appear to be "typical" product. Single component contamination.
 X2: Contaminant does not appear to be "typical" product.

Table 3-4 Groundwater Quality (continued)

WELL NO. SAMPLE DATE: SAMPLE ID:	MW-14 1001193 MW-14	MW-14 1074494 MW-14	MW-14 03/09/95 MW-14	MW-14 06/01/95 MW-14	MW-14 11/06/85 MW-14	MW-14 05/09/86 MW-14	MW-14 08/14/96 MW-14	MW-14 10/04/96 MW-14	MW-14 02/26/97 MW-14	MW-14 04/01/97 MW-14	MW-14 07/16/97 MW-14	MW-14 09/01/99 MW-14-999	MW-14 01/11/00 MW-14-100	MW-14 05/10/00 MW-14-0500	MW-14 08/02/00 MW-14-0800
VOLATILE ORGANICS:															
Acetone	< 1,000	--	--	--	< 0.5	--	--	--	--	--	--	3.1	<	2.4	<
Benzene	< 200	--	--	--	0.24	--	--	--	--	0.44	<	0.2	0.2	0.4	<
2-Butanone (MEK)	< 1,000	--	--	--	< 0.5	--	--	--	--	--	<	1	<	1	<
Chloroethane	< 200	--	--	--	<	--	--	--	--	0.31	J	<	0.2	<	<
Chloroform	< 200	--	--	--	0.27	--	--	--	--	0.4	<	0.2	<	0.2	<
1,1-Dichloroethane	< 200	--	--	--	5.9	--	--	--	--	1.9	<	1.8	1.8	1.5	<
1,1-Dichloroethene	< 200	--	--	--	6.7	--	--	--	--	1.4	<	0.6	0.7	0.9	<
1,2-Dichloroethene (Total)	1,600	--	--	--	412	--	--	--	--	88	D	32	D	32	D
Ethyl Benzene	< 200	--	--	--	<	--	--	--	--	0.4	<	0.2	<	0.2	<
Tetrachloroethene	< 200	--	--	--	11	--	--	--	--	4.1	<	3.6	3.5	4.1	<
Toluene	< 200	--	--	--	3.3	--	--	--	--	0.59	<	0.2	<	0.2	<
1,1,1-Trichloroethane	< 200	--	--	--	0.29	--	--	--	--	0.4	<	0.2	<	0.2	<
Trichloroethene	390	--	--	--	210	D	28	D	2.1	30	D	18	D	24	D
Vinyl Chloride	2,600	<	0.2	15	510	D	73	D	12	73	D	34	D	140	D
Total Xylenes	< 200	--	--	--	0.67	--	--	--	--	--	--	0.4	<	0.4	<
PETROLEUM HYDROCARBONS:															
(EPA Method 8015)															
As gasoline	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
As diesel	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PETROLEUM HYDROCARBONS:															
(EPA Method 418.1)															

NOTES:
 1 Analyzed by EPA 8020
 2 Analyzed by EPA 8010 (Trans-1,2-dichloroethene replaces 1,2-Dichloroethene (Total))
 3 Analyzed by EPA 624
 4 Analyzed by EPA 8240
 5 Analyzed by EPA 8260
 -- : Not tested
 All concentrations reported as ug/L.
 J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity
 B1: This analyte was also detected in the associated method blank
 D: The reported result for this analyte is calculated based on a secondary dilution factor
 X1: Contaminant does not appear to be "typical" product. Single component contamination.
 X2: Contaminant does not appear to be "typical" product.

Table 3-4 Groundwater Quality (continued)

WELL NO. SAMPLE DATE: SAMPLE ID.:	MW-15 4 10/01/93 MW-15	MW-15 2 02/25/94 MW-15	MW-15 2 06/08/94 MW-15	MW-15 2 09/19/94 MW-15	MW-15 3 11/06/95 MW-15	MW-15 3 05/09/96 MW-15	MW-15 3 02/28/97 MW-15	MW-15 3 07/16/97 MW-15	MW-15 5 09/01/99 MW-15-999	MW-15 5 01/11/00 MW-15-100	MW-15 5 05/10/00 MW-15-0500	MW-15 5 08/02/00 MW-15-0800
VOLATILE ORGANICS:												
Acetone	< 50	--	--	--	< 0.5	< 0.1	--	--	3.1	< 1	1.2	< 1
Benzene	< 10	--	--	--	< 0.5	< 0.1	< 0.4	< 0.4	< 0.2	< 0.2	< 0.2	< 0.2
2-Butanone (MEK)	< 50	--	--	--	< 0.5	< 0.1	--	--	< 1	< 1	< 1	< 1
Chloroethane	< 20	--	--	--	< 1	< 0.2	< 0.4	< 0.4	< 0.2	< 0.2	< 0.2	< 0.2
Chloroform	< 10	< 1	< 2	< 2	< 0.5	< 0.1	< 0.4	< 0.4	< 0.2	< 0.2	< 0.2	< 0.2
1,1-Dichloroethane	< 10	< 1	< 2	< 2	< 0.5	< 0.1	< 0.4	< 0.4	< 0.2	< 0.2	< 0.2	< 0.2
1,1-Dichloroethene	< 10	< 1	< 2	< 2	< 0.5	< 0.1	< 0.4	< 0.4	< 0.2	< 0.2	< 0.2	< 0.2
1,2-Dichloroethene (Total)	< 10	< 1	< 2	< 2	< 0.5	< 0.1	< 0.4	< 0.4	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl Benzene	< 10	--	--	--	< 0.5	< 0.1	< 0.4	< 0.4	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachloroethene	< 10	< 1	< 2	< 2	< 0.5	< 0.1	< 0.4	< 0.4	< 0.2	< 0.2	< 0.2	< 0.2
Toluene	< 10	--	--	--	< 0.5	< 0.1	< 0.4	< 0.4	< 0.2	< 0.2	< 0.2	< 0.2
1,1,1-Trichloroethane	< 10	< 1	< 2	< 2	< 0.5	< 0.1	< 0.4	< 0.4	< 0.2	< 0.2	< 0.2	< 0.2
Trichloroethene	< 10	< 1	< 2	< 2	< 0.5	< 0.1	< 0.4	< 0.4	< 0.2	< 0.2	< 0.2	< 0.2
Vinyl Chloride	< 20	< 1	< 2	< 2	< 0.2	< 0.1	< 0.2	< 0.4	< 0.2	< 0.2	< 0.2	< 0.2
Total Xylenes	< 10	< 1	< 2	< 2	< 0.2	< 0.2	< 0.2	< 0.4	< 0.2	< 0.2	< 0.2	< 0.2
					< 0.5	< 0.1	--	--	< 0.4	< 0.4	< 0.4	< 0.4
PETROLEUM HYDROCARBONS: (EPA Method 8015)												
As gasoline	--	--	280	--	--	--	--	--	--	--	--	--
As diesel	--	--	--	--	--	--	--	--	--	--	--	--
PETROLEUM HYDROCARBONS: (EPA Method 418-1)												

NOTES:

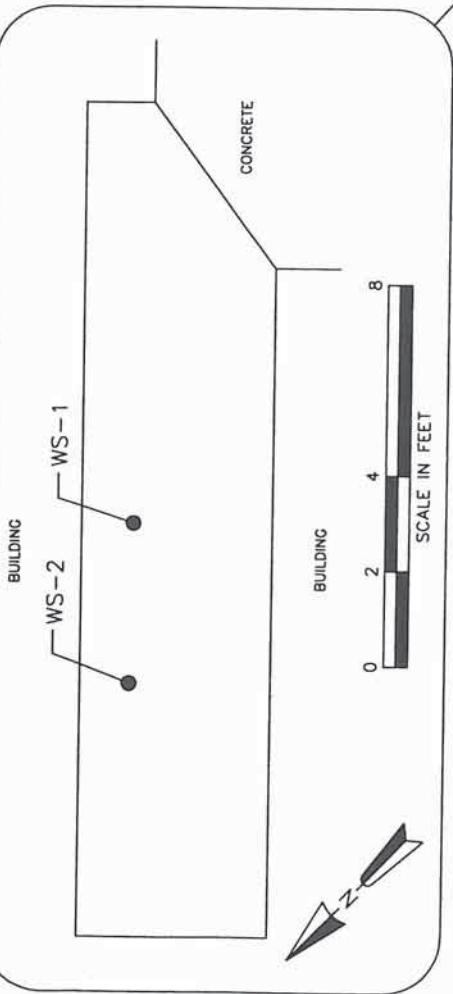
- 1 Analyzed by EPA 8020
- 2 Analyzed by EPA 8010 (Trans-1,2-dichloroethene replaces 1,2-Dichloroethene (Total))
- 3 Analyzed by EPA 624
- 4 Analyzed by EPA 8240
- 5 Analyzed by EPA 8260
- : Not tested
- All concentrations reported as ug/L.
- J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity
- B1: This analyte was also detected in the associated method blank
- D: The reported result for this analyte is calculated based on a secondary dilution factor
- X1: Contaminant does not appear to be "typical" product. Single component contamination.
- X2: Contaminant does not appear to be "typical" product.

Table 3-4 Groundwater Quality (continued)

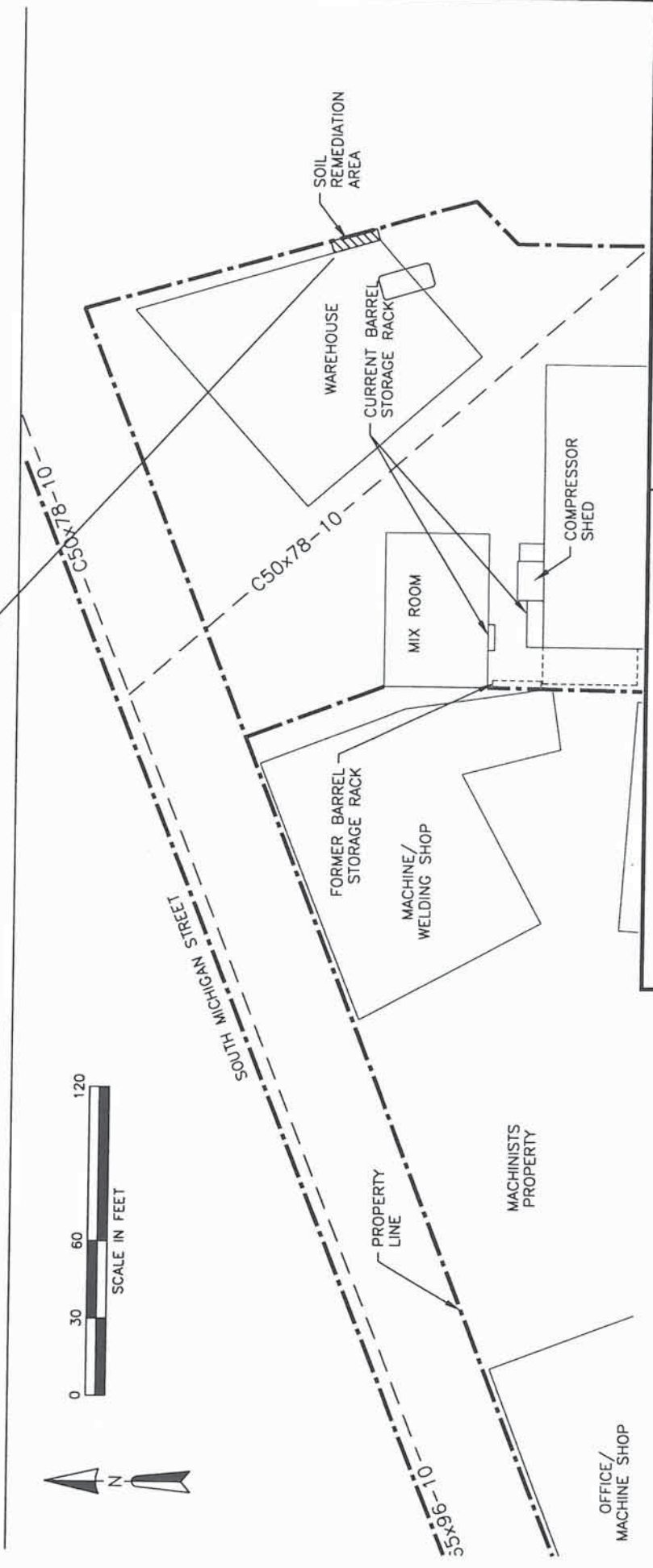
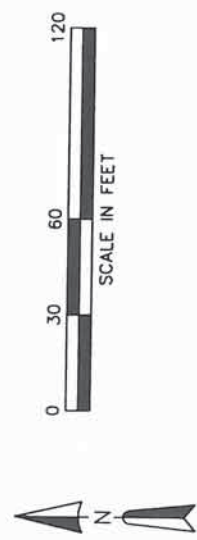
WELL NO. SAMPLE DATE: SAMPLE ID.:	MW-16 ² 02/25/94 MW-16	MW-16 ² 06/08/94 MW-16	MW-16 ² 09/19/94 MW-16	MW-16 ³ 11/06/95 MW-16	MW-16 ³ 01/30/96 MW-16	MW-16 ³ 05/09/96 MW-16	MW-16 ³ 02/26/97 MW-16	MW-16 ³ 07/15/97 MW-16	MW-16 ⁵ 09/01/99 MW-16-999	MW-16 ⁵ 01/11/00 MW-16-100	MW-16 ⁵ 05/10/00 MW-16-0500	MW-16 ⁵ 08/02/00 MW-16-0800
VOLATILE ORGANICS:												
Acetone	--	--	--	< 0.5	1.7	6.9	--	--	2.4	< 1	1.8	< 1
Benzene	--	--	--	1.6	0.5	0.1	< 0.4	0.34	0.2	0.2	0.2	0.4
2-Butanone (MEK)	--	--	--	< 0.5	1.6	1.5	--	--	1	< 1	< 1	< 1
Chloroethane	--	--	--	< 1	1	0.49	< 0.4	0.4	0.2	0.2	0.2	0.2
Chloroform	< 1	< 2	< 2	< 0.5	0.5	0.1	< 0.4	0.4	0.2	0.2	0.2	0.2
1,1-Dichloroethane	< 1	< 2	< 2	0.44	0.5	0.1	< 0.4	0.4	0.2	0.2	0.2	0.2
1,1-Dichloroethene	< 1	< 2	< 2	< 0.5	0.5	0.1	< 0.4	0.4	0.2	0.2	0.2	0.2
1,2-Dichloroethene (Total)	< 1	< 2	< 2	13	0.76	0.1	< 0.4	0.4	0.2	0.2	0.2	0.2
Ethyl Benzene	--	--	--	< 0.5	0.5	0.1	< 0.4	1.6	0.2	1	1	3.4
Tetrachloroethene	< 1	< 2	< 2	< 0.5	0.5	0.1	< 0.4	0.4	0.2	0.2	0.2	0.2
Toluene	--	--	--	< 0.5	0.5	0.1	< 0.4	0.4	0.2	0.2	0.2	0.2
1,1,1-Trichloroethane	< 1	< 2	< 2	< 0.5	0.5	0.1	< 0.4	0.4	0.2	0.2	0.2	0.2
Trichloroethene	< 1	< 2	< 2	< 0.5	0.5	0.44	< 0.4	0.4	0.2	0.2	0.2	0.2
Vinyl Chloride	< 1	< 2	< 2	0.2	0.2	0.1	< 0.4	0.4	0.2	0.2	0.2	0.2
Total Xylenes	< 1	< 2	< 2	6.2	0.27	0.2	< 0.2	0.32	0.2	0.2	0.4	0.3
	--	--	--	< 0.5	0.5	0.1	--	--	0.4	0.4	0.4	0.4
PETROLEUM HYDROCARBONS: (EPA Method 8015)												
As gasoline	--	--	--	--	--	--	--	--	--	--	--	--
As diesel	540	X2	--	--	--	--	--	--	--	--	--	--
PETROLEUM HYDROCARBONS: (EPA Method 418.1)												
	--	--	--	--	--	--	--	--	--	--	--	--

NOTES:

- 1 Analyzed by EPA 8020
- 2 Analyzed by EPA 8010 (Trans-1,2-dichloroethene releases 1,2-Dichloroethene (Total))
- 3 Analyzed by EPA 624
- 4 Analyzed by EPA 6240
- 5 Analyzed by EPA 8260
- : Not tested
- J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity
- B: This analyte was also detected in the associated method blank
- D: The reported result for this analyte is calculated based on a secondary dilution factor
- X1: Contaminant does not appear to be "typical" product. Single component contamination.
- X2: Contaminant does not appear to be "typical" product.



LEGEND
 ● LOCATION OF SOIL SAMPLE

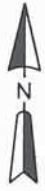


IMPACTED AREA EAST OF THE WAREHOUSE
 SCOU GAL RUBBER CORPORATION

SRC00-02417-400

DATE: 06/20/01 FILE: 2417s021 DRWN: N.S.

FIGURE 3-1



MACHINISTS, INC. PROPERTY

BUILDING

MW-11

MW-13

FENCE-PROPERTY LINE

MW-14

B-3

METAL SHED

OVEN

OW-10

FORMER
UST AREA

SEWER

PW-9

MW-3

HA-3

B-2

S-7

B-4


BARREL STORAGE

BARREL STORAGE

SCOU GAL RUBBER
MAIN PLANT

GENERAL GROUNDWATER
FLOW DIRECTION

LEGEND

-  MW-11 MONITORING WELL LOCATION
-  MW-3 LOCATION
-  B-1 BORING LOCATION
-  FORMER STRUCTURE



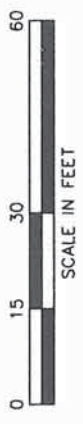
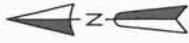
SRC00-02417-400

DATE: 06/20/01

DRWN: N.S.

FILE: 2417s022

WELL AND BORING LOCATION MAP
 NEAR FORMER UST AND
 BARREL STORAGE AREAS
 SCOU GAL RUBBER CORPORATION
 FIGURE 3-2



SCOUGAL RUBBER CORPORATION PROPERTY

MIX ROOM

MAIN PLANT

MACHINE/WELDING SHOP

SANDBLASTING/PAINT BUILDING

PROPERTY LINE

SOUTH MICHIGAN STREET 1

MACHINISTS PROPERTY

2/25/94
0.28

MW-15

8/20/93	2/25/94
1.2	0.36

MW-13

2/25/94
0.55

MW-6

8/20/93	2/25/94
1.4	0.61

MW-12

7/22/93
2.1

MW-16

8/20/93	2/25/94
1.4	0.61

MW-6

SAMPLE DATE
TPH (WTPH-D) (mg/l)

LEGEND

⊕ MW-6 MONITORING WELL LOCATION

AI-1

MW-14

OW-10

FW-9

AI-2

AI-3

MW-11

AI-4

AI-5

MW-4

4/30/92	7/22/93
3.1	3.7

SCOUGAL RUBBER CORPORATION

TPH CONCENTRATIONS IN GROUNDWATER

SRC00-02417-400

DRWN: N.S.

FILE: 2417S023

FIGURE 3-4



MICHIGAN STREET

PROPERTY LINE

MACHINE/
WELDING SHOP

SCOUGAL
RUBBER
CORPORATION
PROPERTY

	10/93	2/94	6/94	9/94	11/95	5/96	2/97	7/97	9/99	1/00	5/00	8/00
VC	<20	<1	<2	<0.2	<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	<0.2	<0.2
TCE	<10	<1	<2	<0.2	<0.2	<0.1	<0.2	<0.4	<0.2	<0.2	<0.2	<0.2

	10/93	10/94	3/95	6/95	11/95	5/96	8/96	10/96	2/97	4/97	7/97	11/97	9/99	1/00	5/00	8/00
VC	2,600	1,300	<0.2	28	510	15	300	230	12	73	73	100	34	58	140	54
TCE	390	1,000	20	47	210	28	130	100	2.1	30	44	57	18	27	24	30

	8/93	10/93	2/94	6/94	9/94	3/95	6/95	11/95	5/96	8/96	2/97	7/97	11/97	9/99	1/00	5/00	8/00
VC	22J	40J	89	4	3.7	0.3	7.9	17	<0.2	<0.2	<0.2	0.49	3.4	1.1	<0.2	1.9	1.5
TCE	1,500	670	540	4	11	16	18	42	20	5.6	1.9	18	30	3.2	15	18	16

MW-5

MACHINISTS
PROPERTY

	8/93	2/94	6/94	9/94	3/95	11/95	5/96	2/97	7/97	11/97	9/99	1/00	5/00	8/00
VC	9.6J	4	<2	<0.2	<0.2	<0.2	<0.1	0.26	4.0	1.1	0.9	<0.2	2.0	0.80
TCE	<10	<1	<2	<0.2	<0.2	1.9	<0.1		<0.4	<0.2	<0.2	<0.2	<0.2	<0.2

AI-5

MIX ROOM

	1/96	5/96	8/96	2/97
VC	<0.2	<0.2	<0.2	<0.2
TCE	13	14	13	8.5

MW-4

	2/94	6/94	9/94	11/95
VC	<1	<2	<0.2	<0.2
TCE	<1	<2	<0.2	<0.2

MW-6

MW-12

AI-3

MW-11

AI-4

	2/94	6/94	9/94	11/95	1/96	5/96	2/97	7/97	9/99	1/00	5/00	8/00
VC	<1	<2	<0.2	6.2	0.27	<0.2	<0.2	0.32J	<0.2	<0.2	<0.2	0.3
TCE	<1	<2	<0.2	0.2	<0.2	<0.1	<0.2	<0.4	<0.2	<0.2	0.4	<0.2

OW-10

PW-9

AI-2

	7/93	10/94	3/95	6/95	7/97
VC	110	13	0.29	2.6	0.37J
TCE	730	19	13	14	17

	7/93	10/94	3/95	6/95
VC	120	54	2.3	1.9
TCE	140	2.1	1.8	<0.2

MAIN
PLANT

SANDBLASTING/
PAINT BUILDING

	7/93	10/94	3/95	6/95	11/95	5/96	8/96	2/97	7/97	9/99	1/00	5/00	8/00
VC	220	0.48	<0.2	<0.2	6.7	<0.2	<0.2	<0.2	<0.4	<0.2	<0.2	NS	<0.2
TCE	400	4.8	3.9	8.6	50	4.2	2.2	1.1	9.9	5.0	9.4	NS	11

NOTES:

1. SURFACE WATER STANDARDS:
TCE - 55.6 ug/L
VINYL CHLORIDE - 2.9 ug/L
2. SPARGING SYSTEM OPERATED:
MARCH 1994 - JUNE 1995
DECEMBER 1995 - FEBRUARY 1997
3. NS - NOT SAMPLED

LEGEND



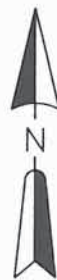
MONITORING WELL LOCATION

	2/25/94	6/8/94	11/7/95
VC	<1	<2	<0.2
TCE	<1	<2	<0.2

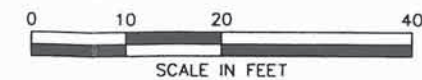
VINYL CHLORIDE
CONCENTRATION (ug/l)
TRICHLOROETHYLENE
CONCENTRATION (ug/l)

BEFORE
SPARGING
DURING
SPARGING
AFTER
SPARGING

ESTIMATED EXTENT OF
PRE-SPARGING
GROUNDWATER PLUME



MW-16



SCOUGAL RUBBER CORPORATION

SRC00-02417-300

VINYL CHLORIDE AND TRICHLOROETHYLENE
CONCENTRATIONS IN GROUNDWATER

DATE: 06/20/01

DRWN: N.S.

FILE: 2417s003

FIGURE 3-3

4 Site Remediation

4.1 Selection of Cleanup Standards

4.1.1 Groundwater Cleanup Levels

Groundwater cleanup levels for the Scougal facility were developed based on protection of surface water. Protection of groundwater as a source of current or future drinking water supplies is inappropriate for this site.

Groundwater at the Scougal facility is not a viable source of drinking water primarily because of institutional constraints. The facility lies in a highly developed portion of Seattle where city water is readily accessible. King County Board of Health, Title 12, Section 12.24.010A states that drinking water supply must come from the highest quality source feasible. The highest quality source available in the vicinity of Scougal is from the city. Connection to the city water supply is mandatory for businesses or residences in this area. In addition, WAC 173-160-205(2) specifies certain setback distances for water supply wells. The code stipulates that wells be setback at least 100 feet from storm or sanitary sewers, public right-of-ways and buildings. Sewer mains run through the Scougal property and down Michigan Avenue as shown in Figure 1-3. A storm sewer line runs directly over the source area west of the Main plant building. These facilities, the nearby roads and buildings, and the permeability of the aquifer would preclude the installation of a drinking water supply well anywhere near the site.

The institutional constraints outlined above do not fully satisfy conditions of WAC 173-340-720 (a) for determining whether groundwater cleanup levels may be based on a beneficial use other than drinking water. However, Scougal asserts that it is unreasonable to assume consumption of groundwater beneath this site is likely under future site use conditions. The conditions of WAC 173-340-720(1)(c) are satisfied at Scougal as described below:

- There are known or projected points of entry of the groundwater into the surface water
 - ▶ The surficial aquifer in this area discharges into the Duwamish River located approximately 2,000 feet to the west of the site.
- The surface water is not classified as a suitable domestic water supply source under chapter 173-201 WAC.
 - ▶ The Duwamish River is not classified as a suitable water supply source.

- Groundwater flows into surface waters will result in no exceedance of surface water cleanup levels at the point of entry or at any downstream location where it is reasonable to believe that hazardous substances may accumulate.
 - ▶ Constituent concentrations will be reduced to cleanup levels protective of surface water at a point of compliance located between the waterway and the project site. This will ensure that groundwater flows into the Duwamish River will not result in exceedances of surface water cleanup levels at the point of entry to surface water. Groundwater monitoring will be conducted as necessary to demonstrate compliance.

- The cleanup action includes institutional controls that will prevent the use of contaminated groundwater at any point between the source of hazardous substances and the point(s) of entry of the groundwater into the surface water.
 - ▶ As discussed above, institutional controls are already in place to prevent the use of groundwater at and near the project site. City, county, and state ordinances and regulations preclude the development of groundwater in this part of Seattle for drinking water purposes. In addition, the deed on Scougal's property will be amended to contain specific language forbidding the development of groundwater as a source of drinking water. Scougal will work with Machinists to obtain a similar restriction on the deed for their property. Finally, the point of compliance will be established at a location that is near the source of contamination and well removed from any potential point of groundwater withdrawal.

- The department determines it is unlikely that hazardous substances will be transported from the contaminated groundwater that is a current or potential future source of drinking water at concentrations that exceed groundwater quality criteria.
 - ▶ There are no current or planned uses of groundwater for drinking water in the Duwamish River basin. Further, contamination at the site is extremely limited in areal extent. There is no evidence of free-phase solvent at the site. Solvent sources (i.e., the USTs and solvent-contaminated soil) were removed and existing barrel storage areas are equipped with secondary containment.

Based on the foregoing discussion, cleanup levels for the Scougal site were established for protection of surface water. The constituents of primary concern (COC) are petroleum hydrocarbons (i.e., diesel and heavier in composition), and the compounds benzene, TCE, vinyl chloride, and 1,1-dichloroethene. The latter two compounds occur at this site as natural breakdown products of TCE.

Dissolved petroleum hydrocarbons associated with the soluble oils used at the facility were present in groundwater near the source area and just downgradient of this area as shown in Figure 4-1. Concentrations ranged between 2 and 4 mg/L (WTPH-D) in the source area to less than 1 mg/L in downgradient wells. MTCA does not specify a surface water cleanup level for TPH. The Method A cleanup level of 1 mg/L for groundwater is based on the prevention of adverse aesthetic impacts (i.e., taste and odor) of drinking water. Ecology typically sets a 10 mg/L oil and grease limit for the NPDES permitted discharge of industrial and stormwater effluents. This concentration is the TPH (WTPH-D) cleanup level for protection of downgradient surface water.

The Method B cleanup levels for protection of surface water are the cleanup levels for groundwater at Scougal. The applicable concentrations are listed below for the individual compounds of concern:

- TCE 55.6 µg/L
- vinyl chloride 2.92 µg/L
- 1,1 - dichloroethene 1.93 µg/L
- benzene 43.0 µg/L

4.1.2 Groundwater Point of Compliance

The point of compliance for groundwater was established using two wells located just downgradient of the source area and adjacent to the property boundary (MW-11 and MW-13). Wells MW-11 and MW-13 are west, and downgradient of the source. In addition, wells MW-6, MW-12, and MW-15, located west of MW-11 and MW-13, have been monitored to provide additional information on COC concentrations further downgradient of the source area.

4.1.3 Soil Cleanup Levels

Petroleum hydrocarbons were detected in soil next to the Warehouse and in the UST area. MTCA establishes fixed cleanup levels for petroleum hydrocarbon contamination based on the nature of the hydrocarbons (i.e., gasoline, diesel, or heavier fractions) and the goal of protecting groundwater. Hydrocarbons next to the Warehouse were heavy in nature (See Table 3-1, sample S-1) and adequately characterized by Method 418.1. Hydrocarbons in the UST area were also heavier than diesel. AGI collected a sample from the boring for MW-3 which contained 1,000 mg/kg as diesel with the laboratory

qualifier that the hydrocarbons were heavier than diesel (AGI, 1991). The MTCA Method A cleanup level for TPH as diesel or heavier material (e.g., determined using Method 418.1) is 200 mg/kg.

TCE, tetrachloroethene, and vinyl chloride were the individual compounds of primary concern detected in soil at all three of the impacted areas (i.e., next to the Warehouse, the UST area, and the Barrel Storage Area). Toluene, ethylbenzene, and xylenes were detected in some samples (Tables 3-1, 3-2, and 3-3) at concentrations well below Method A levels and are therefore not a concern at the site.

Soil cleanup levels for the chlorinated compounds were established based on protection of groundwater. Scougal Rubber is an industrial facility where 95% of the surface is paved and the potential for ingestion of soil is negligible. As discussed above, groundwater quality at Scougal facility is important insofar as it impacts surface water quality in the Duwamish River. The aquifer will not be tapped as a source of drinking water. MTCA stipulates that individual hazardous substances not exceed 100 times the groundwater cleanup level. The soil cleanup levels for individual constituents of concern at the Scougal facility were therefore calculated to equal 100 times the Method B cleanup levels for surface water:

- TCE 5.56 mg/kg
- vinyl chloride 292 µg/kg
- 1,1 - dichloroethene 193 µg/kg
- tetrachloroethene 415 µg/kg

4.2 Remediation of Soil East of the Warehouse

Contaminated soil was excavated from the area east of the Warehouse in February and October 1992. The excavations extended approximately 18 feet into the alley from the southeast corner of the Warehouse. The width of the alley is only 4 feet. Soil was excavated to an average depth of 2 feet below ground surface. Approximately 6 cubic yards of material was removed altogether (4.2 cubic yards in February and 1.5 cubic yards in October 1992). The first excavation left in place a concrete surface approximately 1 foot bgs under portions of the excavation (See Figure 4-2). The concrete was determined to be very thin, and a soil sample collected just beneath the concrete revealed additional contaminated soil. Sample S-2-92-3 contained 3 mg/kg of TCE and 380 mg/kg of TPH (analyzed by EPA Method 418.1).

The concrete and soil just beneath the concrete were removed in October 1992. All excavated soil was transported to the Chemical Waste Management, Inc. landfill in Arlington, Oregon. The excavation was backfilled with a clean sand/gravel mixture.

Data presented in Table 3-1 showed that contamination next to the Warehouse was very surficial (i.e., <2 feet below ground surface). Samples collected after both excavations and analyzed for TPH and volatile organics were below the cleanup levels established for the site (Section 4.1.3). Analysis of samples WS-4 and WS-5 after the excavation in October 1992 demonstrated compliance with the cleanup levels at the base and southern ends of the excavation (Table 4-1, Figure 4-2). The excavation extended to the building slabs to the east and west, which precluded the collection of sidewall verification samples in these locations. Analysis of sample WS-3 collected after the excavation in February confirmed that cleanup was achieved at the North end (Table 4-1).

4.3 Remediation of Soil in UST Area

Soil in the UST area was excavated in February 1992. The excavation was approximately 31 feet in length, 12 feet wide, and 2.5 to 6 feet deep depending on location (Figure 4-3). The excavation was sloped away from the plant building to prevent structural damage to the building. The west side of the excavation extended down to groundwater at approximately 6 feet bgs. A total of 51.4 cubic yards of soil was removed and transported to the Chemical Waste Management landfill in Arlington, Oregon for disposal. The excavation was backfilled with sand and gravel and the 4-inch storm sewer running north-south through the center of the excavation area was repaired.

Nine soil samples were collected during the excavation for verification testing. The samples were analyzed for volatile organic compounds and diesel-range TPH (Table 4-2). Sample S-2-92-3 was obtained from the sidewall as the excavation moved northward. Excavation continued to the north in response to the sample result of 1,600 mg/kg TPH (as diesel). Another sample (S-2-92-9) collected at the northern limit of the excavation contained only trace amounts of tetrachloroethene and no detectable hydrocarbons. Samples S-2-92-4, S-2-92-5 and S-2-92-6 collected along the western and southern sidewalls of the excavation contained no detectable levels of volatile organics or TPH. Some localized contamination was detected along the eastern sidewall of the excavation. Sample S-2-92-8 was obtained beneath a building footing at 3.5 feet bgs. The sample contained concentrations of TPH in excess of the cleanup level (16,000 mg/kg TPH). The soil beneath the footing was fine-grained and uncharacteristic of the sandy soil typically encountered at the site. Samples S-2-92-7 and S-2-92-12 located just north and south of the footing consisted of the sandy soil commonly found at the site. TPH was not detected in these samples and only trace quantities of TCE were detected in S-2-92-7. These results along with field observations indicated that residual contamination along the eastern sidewall was confined to the area near the footing. No additional soil could be removed from this location without risking the structural integrity of the building.

The extent of soil with TPH near the footing was evaluated by collecting two samples of soil (S-9-92-1 and S-9-92-2) from borings placed inside the building to a depth of 4 feet (Figure 4-3). The borings were located close to the building wall and just east of the footing where residual contamination was previously encountered. The samples consisted of the sandy soil common to the site. No contamination was registered for the samples based on PID readings. Sample S-9-92-1 was analyzed and found to contain no detectable levels of volatile organics and TPH (Table 4-2).

In summary, the eastern portion of the excavation in this area was constrained by the presence of the plant building. Approximately 15 cubic yards of vadose zone soil was left in place extending from 2.5 bgs to the water table. This soil contains TPH at concentrations in excess of the cleanup level based on field observations. The soil could not be removed without implementing very costly shoring measures to protect the building. As such, a small additional volume of TPH-contaminated soil remains beneath a building footing at the location of Sample S-2-92-8. The remaining vadose zone contamination in this area represents no significant threat to human health by direct contact because the surface was paved after backfilling. The paved surface also minimizes the transport of mobile constituents to groundwater by eliminating infiltration of surface water. Scougal recognizes that additional remedial action (soil removal) in this area may be necessary at some future time should the plant be demolished whereupon additional excavation becomes a practical option. This remaining TPH soil will be addressed with institutional controls such as a deed restriction that requires proper handling and management of these soils when the building is removed.

4.4 Groundwater Remediation

4.4.1 Groundwater Pumping

Groundwater pumping was implemented as an interim measure at the site in March of 1992. Groundwater was pumped from well PW-9 (Figure 1-3) at a rate of 3 gpm to establish containment in the vicinity of the UST release. Water from PW-9 was discharged to the sewer under Metro Discharge Authorization (#346). A total of approximately 2.25 million gallons of water were produced and discharged over the course of the pumping project. The operation was discontinued in February of 1994 following construction and start-up of the AS/SVE system.

4.4.2 Air Sparging/Soil Vapor Extraction System - Design and Construction

An AS/SVE system was installed at the site in January 1994. The AS/SVE system was designed to remediate soil and groundwater in the UST and former Barrel Storage areas. The system consisted of six air injection wells and a horizontal vapor recovery pipe installed in a piping trench (Figure 4-3).

A process and instrumentation diagram, air-injection well detail and trench cross-section are provided in Figures 4-4, 4-5 and 4-6 respectively. Five of the wells (AI-1 through AI-5) were completed as shown in Figure 4-5 to a depth of approximately 34 feet bgs. This ensured that the sparging influenced a substantial vertical section of the aquifer. One well (AI-6) consisted of a 1 1/4 inch diameter well-point installed near MW-14 to a depth of 12 feet bgs. The well-point was driven by hand and connected to the air sparging system approximately 6 months into the sparging program.

Compressed air was provided using the plant's main air compressor. Injection air was passed through particulate, coalescing, and carbon filters prior to injection. Vapor extraction was performed with an EG&G Rotron EN-707 regenerative blower. A Puget Sound Air Pollution Control Agency (PSAPCA) permit was obtained and no vapor treatment of the off-gas was required.

4.4.3 System Operation

Routine operation of the system commenced on March 16, 1994. The system was operated 24 hours per day, 5 days per week. Operations were discontinued on weekends when the plant's main compressor was shut down. The air injection rate was maintained at 6.5 to 7 scfm per well and produced a pressure of 12 to 15 psi at the injection manifold. The vapor extraction flow rate was 210 scfm or roughly six times the cumulative air injection flow rate.

During the first six months, five injection wells (AI-1 through AI-5) were operated. An additional well (AI-6) was installed and brought on-line in response to groundwater monitoring data from the source area. After another six months, the system was shutdown (April 25, 1995). Due to vinyl chloride concentrations in downgradient wells, the sparging system was restarted in December 1995 and operated until March 1997. Vinyl chloride concentrations again rebounded to levels above MTCA Method B surface water standards in offsite wells, so the sparging system was restarted in January 1998 and operated until June 1999. Groundwater monitoring was continued to determine the effectiveness of the sparging operation. After the system was shutdown in June 1999, groundwater was monitored quarterly for one year.

4.4.4 Performance Monitoring

Vapor extraction air was sampled and analyzed at start-up and after 1, 2, 3, and 6 weeks of operation. These samples were used to determine whether the system was effectively removing volatile organic compounds from the subsurface. The initial sample had 2,000 ppb TCE and 14 ppb vinyl chloride. TCE results varied between 1.2 to 2.8 ppb for the remainder of the samples analyzed and vinyl chloride was not detected.

Groundwater in wells MW-6, MW-12, MW-13, MW-15 and MW-16 was monitored at start-up and after 3 (June 1994) and 6 (September/October 1994) months of operation to evaluate performance of the AS/SVE system. The

October 1994, results indicate a significant reduction in vinyl chloride and TCE concentrations in all wells, except for the TCE concentration in MW-14. The data from this period of sampling indicated that the concentration of TCE in MW-13 was reduced significantly (>95 percent). However, the TCE results for MW-14 indicated that air was not being adequately distributed in the subsurface under the former Barrel Storage Area. After AI-6 was installed in this area, sparging operations were continued for another 6 months. Groundwater data from March and June 1995 indicate that AI-6 was successful at reducing groundwater concentrations.

However, after shutdown of the air sparging system in June 1995 vinyl chloride concentrations increased in many wells between the June 1995 and November 1995 groundwater sampling events. The sparging system was operated for another 15 months (December 1995 to February 1997). Groundwater monitoring continued after this term of air sparging and concentrations of vinyl chloride and TCE were below MTCA Method B surface water standards in most wells. In November 1997, vinyl chloride concentrations in wells MW-12, MW-13 and MW-14 remained above MTCA Method B surface water standards. In January 1998, another term of air sparging was initiated. The air sparging system was operated until June 1999. Groundwater monitoring completed since termination of air sparging operations has indicated all offsite wells are remain below MTCA Method B surface water standards. Figure 3-3 presents groundwater concentrations for vinyl chloride and TCE from 1993 to present.

4.4.5 Soil Verification Sampling

Soil samples were collected from the former Barrel Storage area on June 30, 1995 to determine the level of contamination remaining in this location following soil venting that was completed as part of the groundwater remedy (Figure 4-9). Two borings were advanced by hand and samples were obtained approximately 1 feet and 6 feet bgs from each boring. These locations were selected to obtain material nearest the source of contamination (i.e., at the surface) and the water table interface respectively. The samples were analyzed for volatile organics by U.S. EPA Method 8240 (Table 4-3). Both samples collected immediately above the water table contained TCE at concentrations on the order of 10 µg/kg, well below the cleanup level. Vinyl chloride, tetrachloroethene and 1,1-dichloroethene were not detected in either of these two samples. In these two verification samples, constituent concentrations were substantially lower than those in the sample collected at the same elevation during the October 1993 installation of MW-14 just a few feet away (Table 3-3). This is an indication that the remediation system was effective.

One of the two surficial samples (Sample ID 6-30-95-1) contained tetrachloroethene at a concentration of 590 µg/kg. This is slightly above the cleanup level of 415 µg/L. This soil presents little threat to groundwater. The soil is near-surface, represents a very small volume, and is capped which

precludes surface water infiltration. In addition, soil venting since 1995 would have reduced concentrations in this area.

Table 4-1 Soil Verification Sample Results

Location Sample ID Sample Depth (ft)	WS-3 S-2-92-1 1	WS-4 S-9-92-4 2.5	WS-5 S-10-92-5 2.5
Volatile Organics (mg/kg)			
Method 8240			
Chloromethane	< 0.40	< 0.40	< 0.40
Bromomethane	< 0.40	< 0.40	< 0.40
Vinyl Chloride	< 0.40	< 0.40	< 0.40
Chloroethane	< 0.40	< 0.40	< 0.40
Methylene Chloride	< 0.20	< 0.20	< 0.40
Acetone	< 4.0	< 0.20	< 0.20
Carbon Disulfide	< 0.20	0.35	J < 2.0
1,1-Dichloroethene	< 0.20	< 0.20	< 0.20
1,1-Dichloroethane	< 0.20	< 0.20	< 0.20
1,2-Dichloroethene (Total)	< 0.20	< 0.20	< 0.20
Chloroform	< 0.20	< 0.20	< 0.20
1,2-Dichloroethane	< 0.20	< 0.20	< 0.20
2-Butanone	< 1.0	< 0.20	< 0.20
1,1,1-Trichloroethane	< 0.20	< 1.0	< 1.0
Carbon Tetrachloride	< 0.20	< 0.20	< 0.20
Vinyl Acetate	< 0.20	< 0.20	< 0.20
Bromodichloromethane	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	< 0.20	< 0.20	< 0.20
Cis-1,3-Dichloropropene	< 0.20	< 0.20	< 0.20
Trichloroethene	0.17	< 0.20	< 0.20
Dibromochloromethane	< 0.20	J	J < 0.20
1,1,2-Trichloroethane	< 0.20	< 0.20	< 0.20
Benzene	< 0.20	< 0.20	< 0.20
Trans-1,3-Dichloropropene	< 0.20	< 0.20	< 0.20
Bromoform	< 0.20	< 0.20	< 0.20
4-Methyl-2-Pentanone	< 1.0	< 0.20	< 0.20
2-Hexanone	< 0.20	< 1.0	< 1.0
Tetrachloroethene	< 0.20	< 0.20	< 0.20
1,1,2,2-Tetrachloroethane	< 0.20	< 0.20	< 0.20
Toluene	< 0.20	< 0.20	< 0.20
Chlorobenzene	< 0.20	< 0.20	< 0.20
Ethylbenzene	< 0.20	< 0.20	< 0.20
Styrene	< 0.20	< 0.20	< 0.20
Total Xylenes	< 0.20	< 0.20	< 0.20
Petroleum Hydrocarbons (mg/kg)			
Method 418.1	< 10	130	< 10

Notes:

J - Compound was detected, but concentration was below the PQL, therefore concentration reported is an estimate.

Table 4-2 Soil Verification Sample Results -- UST Soil Excavation

Sample Date Sample ID Sample Depth (ft)	10-Feb-92 S-2-92-1 1	12-Feb-92 S-2-92-3 4	12-Feb-92 S-2-92-4 4	12-Feb-92 S-2-92-5 4	12-Feb-92 S-2-92-6 4	12-Feb-92 S-2-92-7 3.5	12-Feb-92 S-2-92-8 3.5
Volatile Organics (mg/kg)							
Chloromethane	<	0.40	<	0.40	<	0.40	<
Bromomethane	<	0.40	<	0.40	<	0.40	<
Vinyl Chloride	<	0.40	<	0.40	<	0.40	<
Chloroethane	<	0.40	<	0.40	<	0.40	<
Methylene Chloride	<	0.20	<	0.20	<	0.20	<
Acetone	<	4.0	<	2.0	<	2.0	<
Carbon Disulfide	<	0.20	<	0.20	<	0.20	<
1,1-Dichloroethene	<	0.20	<	0.20	<	0.20	<
1,1-Dichloroethane	<	0.20	<	0.20	<	0.20	<
1,2-Dichloroethene (Total)	<	0.20	<	0.20	<	0.20	<
Chloroform	<	0.20	<	0.20	<	0.20	<
1,2-Dichloroethane	<	0.20	<	0.20	<	0.20	<
2-Butanone	<	1.0	<	1.0	<	1.0	<
1,1,1-Trichloroethane	<	0.20	<	0.20	<	0.20	<
Carbon Tetrachloride	<	0.20	<	0.20	<	0.20	<
Vinyl Acetate	<	1.0	<	1.0	<	1.0	<
Bromodichloromethane	<	0.20	<	0.20	<	0.20	<
1,2-Dichloropropane	<	0.20	<	0.20	<	0.20	<
Cis-1,3-Dichloropropene	<	0.20	<	0.20	<	0.20	<
Trichloroethene	<	0.17	J	0.20	<	0.20	<
Dibromochloromethane	<	0.20	<	0.20	<	0.20	<
1,1,2-Trichloroethane	<	0.20	<	0.20	<	0.20	<
Benzene	<	0.20	<	0.20	<	0.20	<
Trans-1,3-Dichloropropene	<	0.20	<	0.20	<	0.20	<
Bromoform	<	0.20	<	0.20	<	0.20	<
4-Methyl-2-Pentanone	<	1.0	<	1.0	<	1.0	<
2-Hexanone	<	0.20	<	0.20	<	0.20	<
Tetrachloroethene	<	0.20	J	0.045	<	0.20	<
1,1,2,2-Tetrachloroethane	<	0.20	<	0.20	<	0.20	<
Toluene	<	0.20	<	0.20	<	0.20	<
Chlorobenzene	<	0.20	<	0.20	<	0.20	<
Ethylbenzene	<	0.20	<	0.20	<	0.20	<
Styrene	<	0.20	<	0.20	<	0.20	<
Total Xylenes	<	0.20	<	0.20	<	0.20	<
Petroleum Hydrocarbons (mg/kg)							
Diesel by Method 8015 mod.	<	10	<	10	<	10	<
Soluble Oil by Method 8015 mod.	<	10	<	10	<	10	<
							16,000
							24,000

Notes:
 NA Not analyzed
 J - Compound was detected, but concentration was below the PQL, therefore concentration reported is an estimate.

Table 4-2. Soil Verification Sample Results -- UST Soil Excavation (continued)

Sample Date Sample ID Sample Depth (ft)	20-Feb-92 S-2-92-9 4	20-Feb-92 S-2-92-9(d) 4	20-Feb-92 S-2-92-11 3.5	20-Feb-92 S-2-92-12 3.5	15-Sep-92 S-9-92-1 4
Volatile Organics (mg/kg)					
Chloromethane	<	<	<	<	<
Bromomethane	0.40	0.40	0.40	0.40	0.40
Vinyl Chloride	0.40	0.40	0.40	0.40	0.40
Chloroethane	0.40	0.40	0.40	0.40	0.40
Methylene Chloride	0.20	0.20	0.20	0.20	0.20
Acetone	2.0	2.0	2.0	2.0	0.19
Carbon Disulfide	0.20	0.20	0.20	0.20	0.20
1,1-Dichloroethene	0.20	0.20	0.20	0.20	0.20
1,1-Dichloroethane	0.20	0.20	0.20	0.20	0.20
1,2-Dichloroethene (Total)	0.20	0.20	0.20	0.20	0.20
Chloroform	0.20	0.20	0.20	0.20	0.20
1,2-Dichloroethane	0.20	0.20	0.20	0.20	0.20
2-Butanone	1.0	1.0	1.0	1.0	1.0
1,1,1-Trichloroethane	0.20	0.20	0.20	0.20	0.20
Carbon Tetrachloride	0.20	0.20	0.20	0.20	0.20
Vinyl Acetate	1.0	1.0	1.0	1.0	1.0
Bromodichloromethane	0.20	0.20	0.20	0.20	0.20
1,2-Dichloropropane	0.20	0.20	0.20	0.20	0.20
Cis-1,3-Dichloropropene	0.20	0.20	0.20	0.20	0.20
Trichloroethene	0.20	0.20	0.20	0.20	0.20
Dibromochloromethane	0.20	0.20	0.20	0.20	0.20
1,1,2-Trichloroethane	0.20	0.20	0.20	0.20	0.20
Benzene	0.20	0.20	0.20	0.20	0.20
Trans-1,3-Dichloropropene	0.20	0.20	0.20	0.20	0.20
Bromoform	0.20	0.20	0.20	0.20	0.20
4-Methyl-2-Pentanone	1.0	1.0	1.0	1.0	1.0
2-Hexanone	0.20	0.20	0.20	0.20	0.20
Tetrachloroethene	0.16	0.10	0.20	0.20	0.20
1,1,2,2-Tetrachloroethane	0.20	0.20	0.20	0.20	0.20
Toluene	0.20	0.20	0.20	0.20	0.20
Chlorobenzene	0.20	0.20	0.20	0.20	0.20
Ethylbenzene	0.20	0.20	0.20	0.20	0.20
Styrene	0.20	0.20	0.20	0.20	0.20
Total Xylenes	0.20	0.20	0.20	0.20	0.20
Petroleum Hydrocarbons (mg/kg)					
Diesel by Method 8015 mod.	<	<	<	<	<
Soluble Oil by Method 8015 mod.	10	10	10	10	10
	NA	NA	NA	NA	NA

Notes:
 NA - Not analyzed
 J - Compound was detected, but concentration was below the PQL, therefore concentration reported is an estimate.

Table 4-3 Soil Verification Sample Results for the Former Barrel Storage Area

Sample ID Lab ID Sample Depth (ft)	6-30-95-1 49835-01 0.8-1.3	6-30-95-1 49835-02 5.8-6.0	6-30-95-2 49835-03 1.0-1.5	6-30-95-2 49835-04 5.7-6.0
Volatile Organics (mg/kg)				
Chloromethane	< 60	< 11	< 12	< 11
Bromomethane	< 60	< 11	< 12	< 11
Vinyl Chloride	< 60	< 11	< 12	< 11
Chloroethane	< 60	< 11	< 12	< 11
Methylene Chloride	< 30	< 5.4	< 5.8	< 5.4
Acetone	< 30	< 5.4	9.6	< 5.4
Carbon Disulfide	< 30	< 5.4	< 5.8	< 5.4
1,1-Dichloroethene	< 30	< 5.4	< 5.8	< 5.4
1,1-Dichloroethane	< 30	< 5.4	< 5.8	< 5.4
1,2-Dichloroethene (Total)	80	< 5.4	33	< 5.4
Chloroform	< 30	< 5.4	< 5.8	< 5.4
1,2-Dichloroethane	< 30	< 5.4	< 5.8	< 5.4
2-Butanone	< 30	< 5.4	< 5.8	< 5.4
1,1,1-Trichloroethane	< 30	< 5.4	< 5.8	< 5.4
Carbon Tetrachloride	< 30	< 5.4	< 5.8	< 5.4
Vinyl Acetate	< 30	< 5.4	< 5.8	< 5.4
Bromodichloromethane	< 30	< 5.4	< 5.8	< 5.4
1,2-Dichloropropane	< 30	< 5.4	< 5.8	< 5.4
Cis-1,3-Dichloropropene	< 30	< 5.4	< 5.8	< 5.4
Trichloroethene	370	15	12	6.9
Dibromochloromethane	< 30	< 5.4	< 5.8	< 5.4
1,1,2-Trichloroethane	< 30	< 5.4	< 5.8	< 5.4
Benzene	< 30	< 5.4	< 5.8	< 5.4
Trans-1,3-Dichloropropene	< 30	< 5.4	< 5.8	< 5.4
Formoform	< 30	< 5.4	< 5.8	< 5.4
2-Methyl-2-Pentanone	< 30	< 5.4	< 5.8	< 5.4
2-Hexanone	< 30	< 5.4	< 5.8	< 5.4
Tetrachloroethene	< 30	< 5.4	< 5.8	< 5.4
1,1,2,2-Tetrachloroethane	< 30	< 5.4	< 5.8	< 5.4
Toluene	< 30	< 5.4	< 5.8	< 5.4
Chlorobenzene	< 30	< 5.4	< 5.8	< 5.4
Ethylbenzene	< 30	< 5.4	< 5.8	< 5.4
Styrene	< 30	< 5.4	< 5.8	< 5.4
Total Xylenes	< 30	< 5.4	< 5.8	< 5.4



OFFICE/
MACHINE SHOP

MACHINISTS
PROPERTY

PROPERTY
LINE

MACHINE/
WELDING SHOP

FORMER BARREL
STORAGE RACK

MIX ROOM

COMPRESSOR
SHED

CURRENT BARREL
STORAGE RACK

WAREHOUSE

SOIL
REMEDIAATION
AREA

EXCAVATION EAST OF THE WAREHOUSE

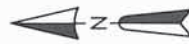
SCOUGAL RUBBER CORPORATION

SRC00-02417-400

DRWN: N.S.

FILE: 2417s024

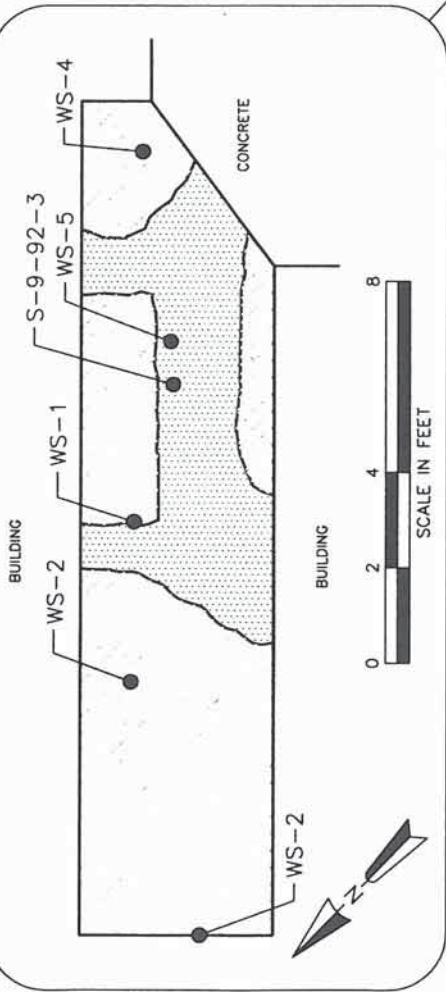
FIGURE 4-1



SCALE IN FEET

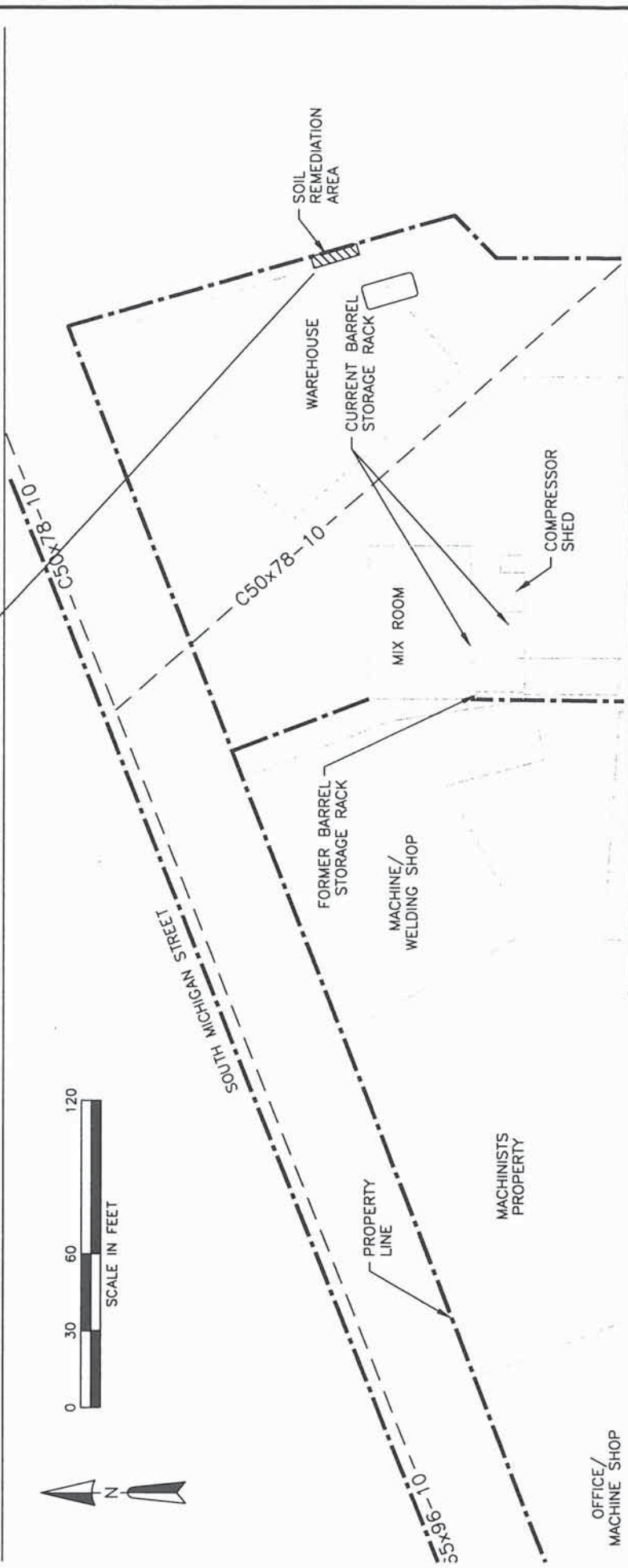


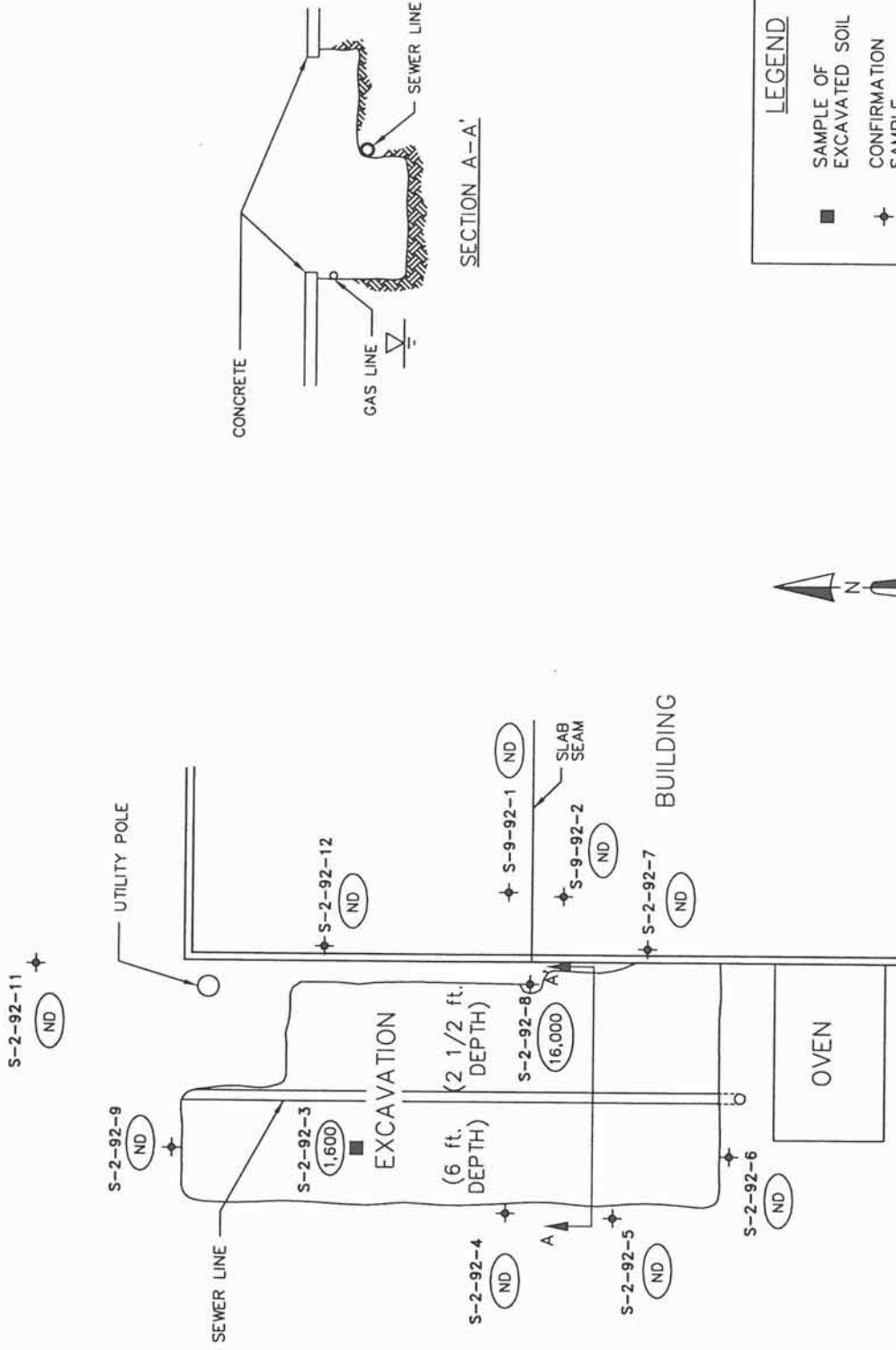
SCALE IN FEET



LEGEND

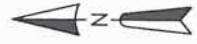
- CONFIRMATION SAMPLE
- ▨ SOIL REMOVED TO 2' BGS (OCT. 1992)
- SOIL REMOVED TO 2' BGS (FEB. 1992)
- SOIL REMOVED TO 1' BGS (FEB. 1992)





LEGEND

- SAMPLE OF EXCAVATED SOIL
- ✦ CONFIRMATION SAMPLE
- (1,000) TPH SOIL CONCENTRATION (MG/KG)



SCOUGAL RUBBER CORPORATION

SRC00-02417-400

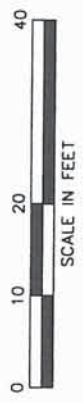
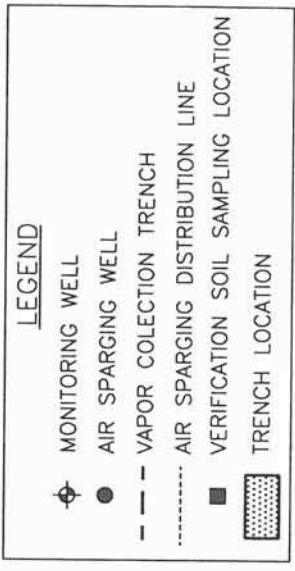
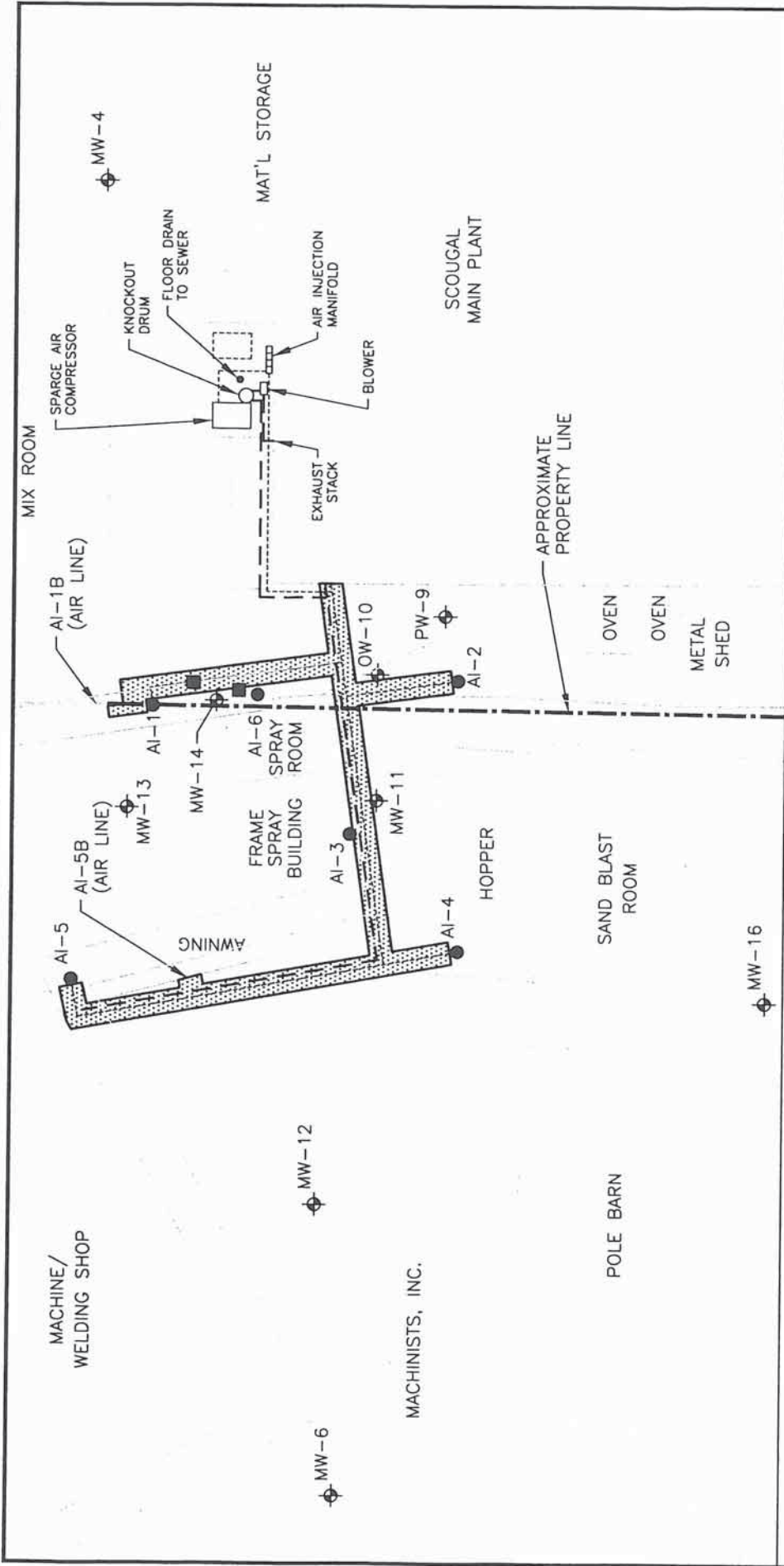
DATE: 06/20/01

DRWN: N.S.

FILE: 2417s025

EXCAVATION FROM
UST AREA

FIGURE 4-2



SCOUGAL RUBBER CORPORATION
 SEATTLE, WASHINGTON
 SFC00-02417-400

DATE: 06/20/01

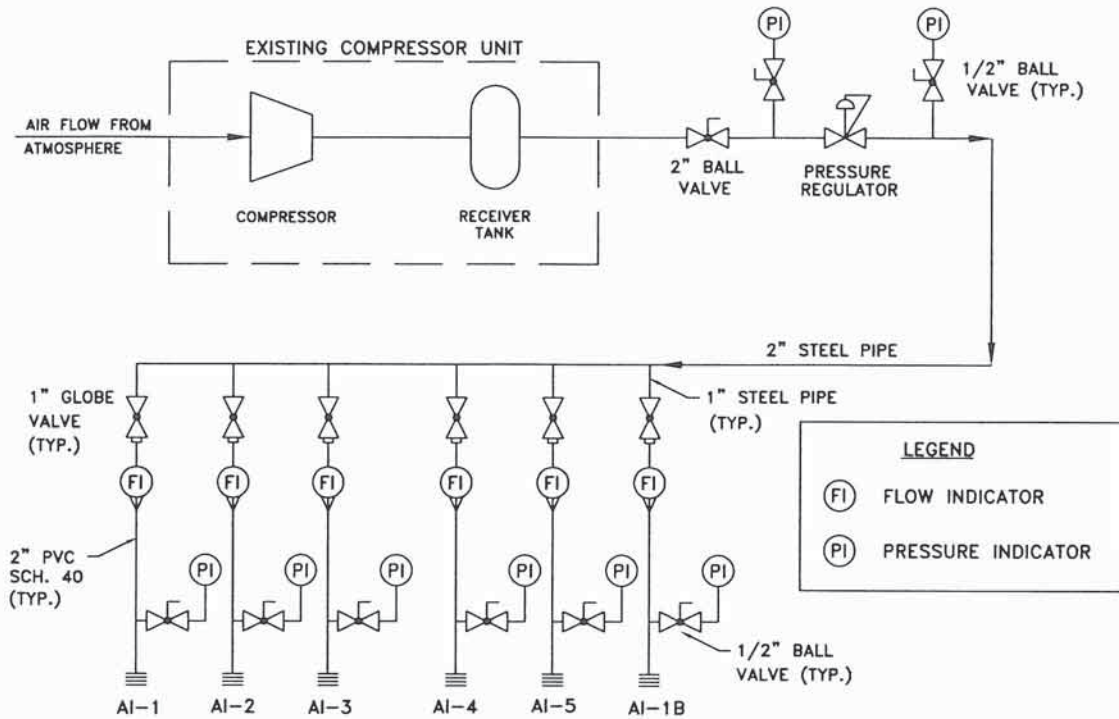
DRWN: N.S.

FILE: 2417s026

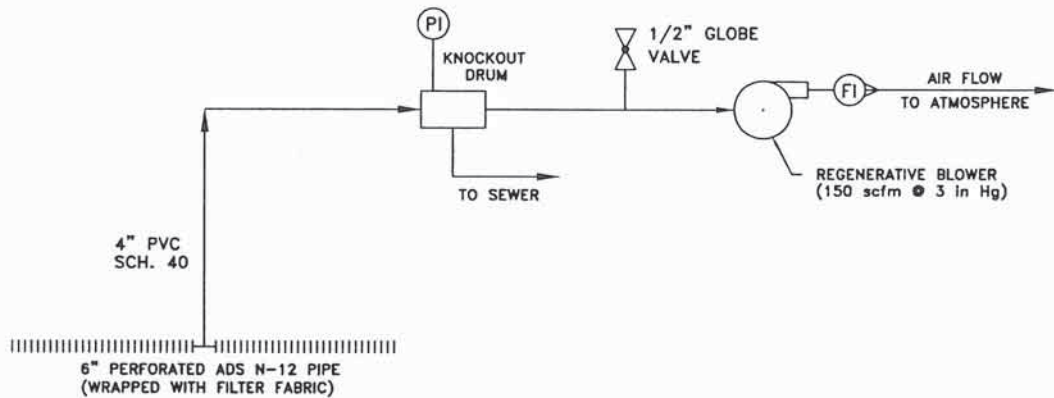
AIR SPARGING SYSTEM LAYOUT

FIGURE 4-3

AIR INJECTION SYSTEM



SOIL VENTING SYSTEM



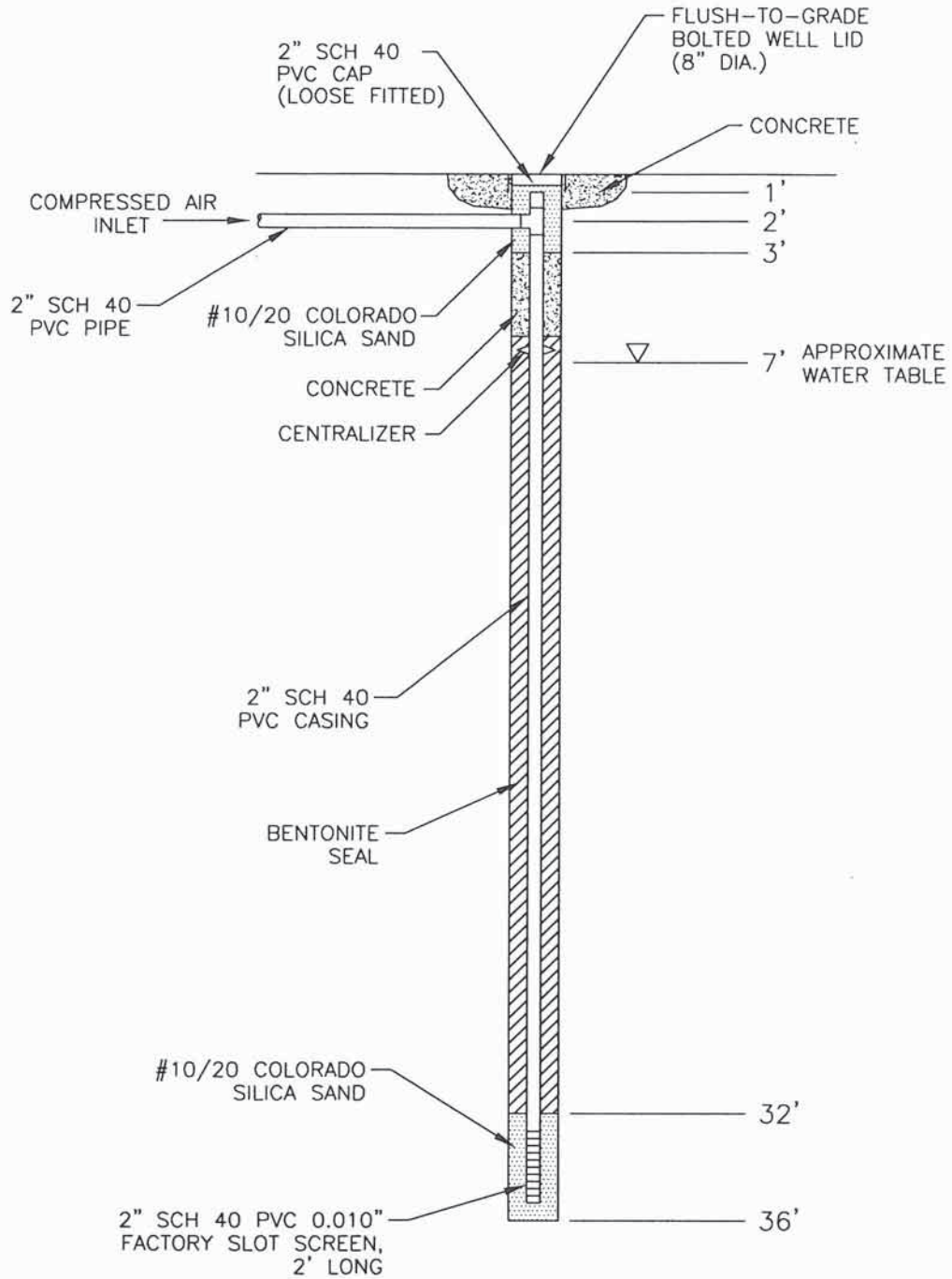
SCOUGAL RUBBER CORPORATION

PIPING AND INSTRUMENTATION
DIAGRAM

SRC00-02417-400

DATE: 06/20/01 DRWN: N.S. FILE: 2417D001

FIGURE 4-4



SCOUGAL RUBBER CORPORATION

SRC00-02417-400

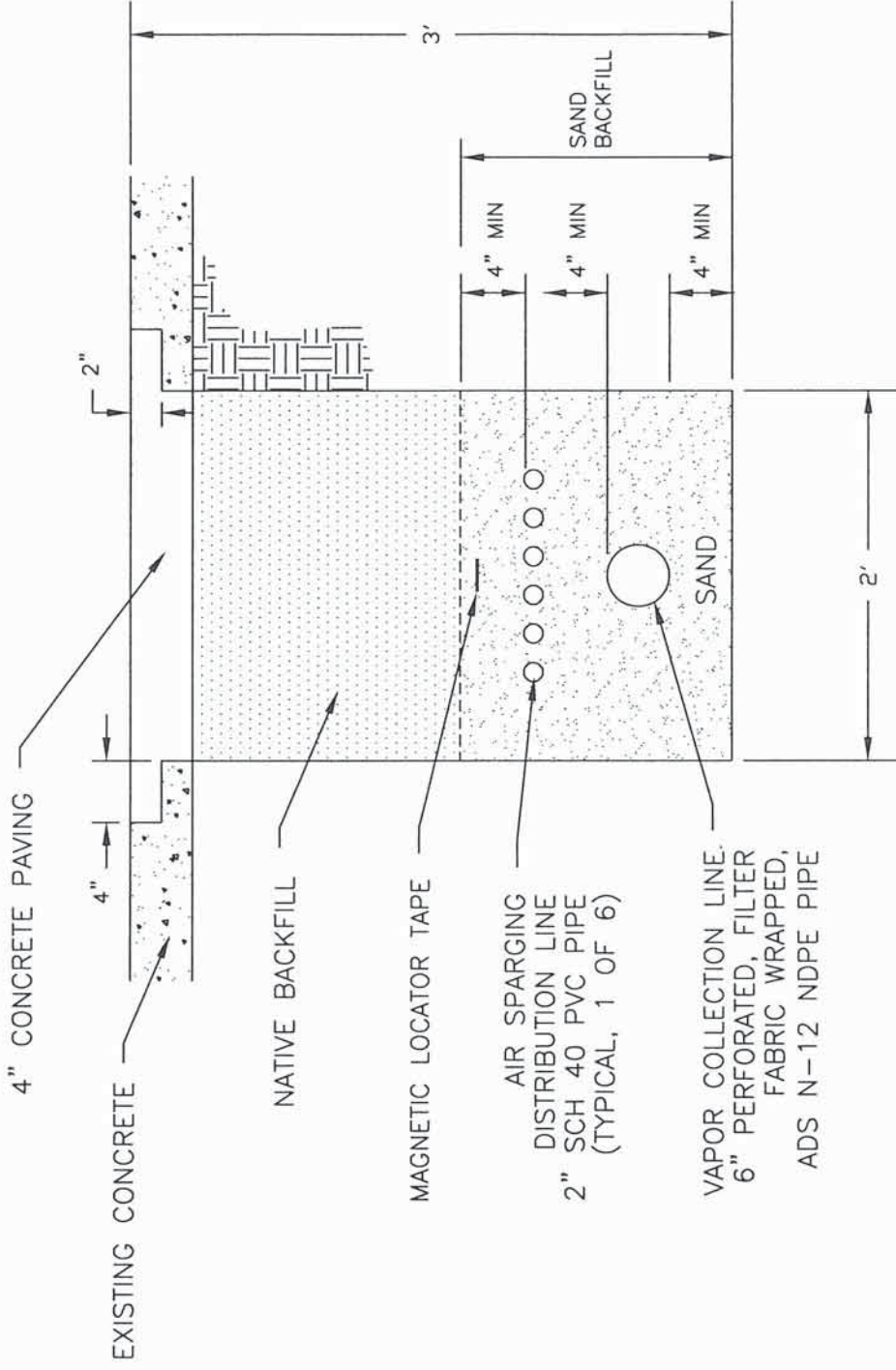
DATE: 06/20/01

DRWN: N.S.

FILE: 2417D002

AIR INJECTION WELL
CONSTRUCTION DETAIL

FIGURE 4-5



SCOU GAL RUBBER CORPORATION

TYPICAL TRENCH CROSS SECTION
CONSTRUCTION DETAIL

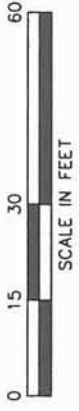
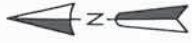
SRC00-02417-400

FILE: 2417D003

DRWN: N.S.

FIGURE 4-6





SCOUGAL RUBBER CORPORATION PROPERTY

MIX ROOM

MAIN PLANT

6-30-95-1

6-30-95-2

MACHINE/
WELDING SHOP

SANDBLASTING/
PAINT BUILDING

PROPERTY LINE

SOUTH MICHIGAN STREET

MACHINISTS PROPERTY

LEGEND

MONITORING WELL LOCATION

6-30-95-2 SOIL SAMPLING LOCATION

SCOUGAL RUBBER CORPORATION		POST REMEDIATION SOIL SAMPLING LOCATIONS
DATE: 06/20/01	DRWN: N.S.	FIGURE 4-7
SRC00-02417-400		
FILE: 2417s027		



5 Summary And Remaining Activities

Impacted soil and groundwater at the Scougal Rubber facility was identified in the early 1990s. Scougal began characterization and remedial activities soon after identification or releases. In addition, Scougal modified plant practices by implementing procedures to control unauthorized, unacceptable disposal practices, eliminating the use of USTs, modifying the barrel storage area to include containment, a cover, and vertical storage of barrels.

Remedial actions completed and final steps remaining to be completed for the Scougal facility are summarized on Table 5-1. Scougal would like to work with Ecology to refine the institutional controls necessary for completing the cleanup and to securing a No Further Action letter to facilitate a potential property transfer.

Table 5-1 Summary of Remedial Actions and Remaining Steps

Area of Release	Affected Media	Remedial Action	Outcome of Action	Remaining Steps
East of the East Warehouse	Soil	Excavation and offsite disposal of six cubic yards of impacted soil	Sampling indicated the soils exceeding MTCAs criteria were removed.	Remediation Completed
Former UST Area	Soil	Excavation and offsite disposal of 51 cubic yards of impacted soil	Sampling indicated that the sidewalls of the excavation met MTCAs criteria everywhere except a small portion of the eastern sidewalk. Soil near a footing on the eastern sidewalk contained TPH in the diesel range; these soils could not be excavated without compromising the structural integrity of the building. Adjacent samples, including samples from within the building indicate that the volume of the TPH impacted soil is 15 cubic yards or less.	Soil Remediation Completed – Need to file deed restriction concerning management of soil when building is removed.
Former Barrel Storage Area	Soil	Soil vapor extraction periodically over a period of five years to remove solvents from soil	Sampling indicates that soil vapor extraction effectively removed solvents from soil. Soil remains capped.	Soil Remediation Completed
Former UST and Barrel Storage Area	Groundwater	Removal of approximately 2.25 million gallons of impacted groundwater from the former UST area as an interim measure. Operation and monitoring of AS/SVE system periodically over a period of five years	Groundwater concentrations have been reduced by one to three orders of magnitude. Concentrations at point of compliance wells, adjacent to the property boundary meet surface water cleanup criteria. A year of quarterly monitoring indicates that rebound will not cause concentrations to rise above cleanup levels.	Groundwater Remediation Completed. Conduct an additional year of semiannual monitoring to confirm that concentrations continue to meet cleanup levels. Need to file deed restriction indicating that site groundwater may not be used as drinking water.

6 References

AGI, 1990. Phase I Environmental Assessment, Scougal Rubber Company, Seattle, Washington. December 5.

RZA, 1990. Proposal for Subsurface Exploration for Phase II Assessment, Scougal Rubber Corporation, Seattle, Washington. December 7.

AGI, 1991. Phase II Environmental Assessment, Scougal Rubber Company, Seattle, Washington. May 21.

RETEC, 1992. Independent Interim Action Report, Scougal Rubber, Seattle, Washington. July.

RETEC, 1993. Results of Plume Delineation, Scougal Rubber, Seattle, Washington. September.

RETEC, 1993. Results of Plume Investigation Activities, Scougal Rubber, Seattle, Washington. November 3.

Appendix A
Analytical Data – Soil

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Retec

Date: February 18, 1992

Report On: Analysis of Soil

Lab No.: 22632-2

Page 1 of 3

IDENTIFICATION:

Sample Received on 02-12-92
Project: 30-771-400 Scougal
Client ID: RUSH S-2-92-4

ANALYSIS:

Sample was analyzed in accordance with Test Methods for Evaluating Solid Waste, (SW-846), U.S.E.P.A., 1986 Method 8240 (Volatile Organics)

CAS No.	Compounds	Concentration ug/kg	PQL
74-87-3	Chloromethane	ND	400
74-83-9	Bromomethane	ND	400
75-01-4	Vinyl Chloride	ND	400
75-00-3	Chloroethane	ND	400
75-09-2	Methylene Chloride	ND	200
67-64-1	Acetone	ND	2,000
75-15-0	Carbon Disulfide	ND	200
75-35-4	1,1-Dichloroethene	ND	200
75-34-3	1,1-Dichloroethane	ND	200
540-59-0	1,2-Dichloroethene (Total)	ND	200
67-66-3	Chloroform	ND	200
107-06-2	1,2-Dichloroethane	ND	200
78-93-3	2-Butanone	ND	1,000
71-55-6	1,1,1-Trichloroethane	ND	200
56-23-5	Carbon Tetrachloride	ND	200
108-05-4	Vinyl Acetate	ND	1,000
75-27-4	Bromodichloromethane	ND	200
78-87-5	1,2-Dichloropropane	ND	200
10061-01-5	Cis-1,3-Dichloropropene	ND	200
79-01-6	Trichloroethene	ND	200
124-48-1	Dibromochloromethane	ND	200
79-00-5	1,1,2-Trichloroethane	ND	200

ND = Not Detected

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 30-771-400
 Lab No. 22632-2
 Page 2 of 3
 February 18, 1992

Client ID: RUSH S-2-92-4

EPA Method 8240 Continued

CAS No.	Compounds	Concentration ug/kg	PQL
71-43-2	Benzene	ND	200
10061-02-6	Trans-1,3-Dichloropropene	ND	200
75-25-2	Bromoform	ND	200
108-10-1	4-Methyl-2-Pentanone	ND	1,000
591-78-6	2-Hexanone	ND	200
127-18-4	Tetrachloroethene	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	200
108-88-3	Toluene	ND	200
108-90-7	Chlorobenzene	ND	200
100-41-4	Ethyl Benzene	ND	200
100-42-5	Styrene	ND	200
1330-20-7	Total Xylenes	ND	200

ND = Not Detected

PQL - Practical Quantitation Limit - These are the detection limits for this sample. This number is based on sample size, matrix and dilution required.

Volatile Surrogates

Surrogate	Percent Recovery	Control Limits
Toluene - D8	102	81 - 117
Bromofluorobenzene	102	74 - 121
1,2-Dichloroethane D4	116	70 - 121

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
Project: 30-771-400
Page 3 of 3
Lab No. 22632-2
February 18, 1992

Client ID: RUSH S-2-92-4

Sample was analyzed for Total Petroleum Fuel Hydrocarbons in accordance with EPA SW-846 Modified Method 8015. The hydrocarbons present were quantified against a diesel standard curve and against a curve created from a soluble oil standard submitted by client.

TPFH as diesel, mg/kg < 10

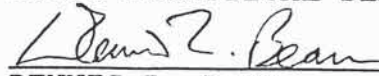
TPFH as soluble oil, mg/kg < 10

SURROGATE RECOVERY:

1-Chlorooctane, %	95
Perylene, %	93

Results are reported on a dry weight basis.

SOUND ANALYTICAL SERVICES



DENNIS L. BEAN

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Retec

Date: February 18, 1992

Report On: Analysis of Soil

Lab No.: 22632-3

Page 1 of 3

IDENTIFICATION:

Sample Received on 02-12-92
Project: 30-771-400 Scougal
Client ID: RUSH S-2-92-5

ANALYSIS:

Sample was analyzed in accordance with Test Methods for Evaluating Solid Waste, (SW-846), U.S.E.P.A., 1986 Method 8240 (Volatile Organics)

CAS No.	Compounds	Concentration ug/kg	PQL
74-87-3	Chloromethane	ND	400
74-83-9	Bromomethane	ND	400
75-01-4	Vinyl Chloride	ND	400
75-00-3	Chloroethane	ND	400
75-09-2	Methylene Chloride	ND	200
67-64-1	Acetone	ND	2,000
75-15-0	Carbon Disulfide	ND	200
75-35-4	1,1-Dichloroethene	ND	200
75-34-3	1,1-Dichloroethane	ND	200
540-59-0	1,2-Dichloroethene (Total)	ND	200
67-66-3	Chloroform	ND	200
107-06-2	1,2-Dichloroethane	ND	200
78-93-3	2-Butanone	ND	1,000
71-55-6	1,1,1-Trichloroethane	ND	200
56-23-5	Carbon Tetrachloride	ND	200
108-05-4	Vinyl Acetate	ND	1,000
75-27-4	Bromodichloromethane	ND	200
78-87-5	1,2-Dichloropropane	ND	200
10061-01-5	Cis-1,3-Dichloropropene	ND	200
79-01-6	Trichloroethene	ND	200
124-48-1	Dibromochloromethane	ND	200
79-00-5	1,1,2-Trichloroethane	ND	200

ND = Not Detected

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 30-771-400
 Lab No. 22632-3
 Page 2 of 3
 February 18, 1992

Client ID: RUSH S-2-92-5

EPA Method 8240 Continued

CAS No.	Compounds	Concentration ug/kg	PQL
71-43-2	Benzene	ND	200
10061-02-6	Trans-1,3-Dichloropropene	ND	200
75-25-2	Bromoform	ND	200
108-10-1	4-Methyl-2-Pentanone	ND	1,000
591-78-6	2-Hexanone	ND	200
127-18-4	Tetrachloroethene	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	200
108-88-3	Toluene	ND	200
108-90-7	Chlorobenzene	ND	200
100-41-4	Ethyl Benzene	ND	200
100-42-5	Styrene	ND	200
1330-20-7	Total Xylenes	ND	200

ND = Not Detected

PQL - Practical Quantitation Limit - These are the detection limits for this sample. This number is based on sample size, matrix and dilution required.

Volatile Surrogates

Surrogate	Percent Recovery	Control Limits
Toluene - D8	103	81 - 117
Bromofluorobenzene	98	74 - 121
1,2-Dichloroethane D4	115	70 - 121

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
Project: 30-771-400
Page 3 of 3
Lab No. 22632-3
February 18, 1992

Client ID: RUSH S-2-92-5

Sample was analyzed for Total Petroleum Fuel Hydrocarbons in accordance with EPA SW-846 Modified Method 8015. The hydrocarbons present were quantified against a diesel standard curve and against a curve created from a soluble oil standard submitted by client.

TPFH as diesel, mg/kg < 10

TPFH as soluble oil, mg/kg < 10

SURROGATE RECOVERY:

1-Chlorooctane, %	107
Perylene, %	94

Results are reported on a dry weight basis.

SOUND ANALYTICAL SERVICES



DENNIS L. BEAN

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Retec

Date: February 18, 1992

Report On: Analysis of Soil

Lab No.: 22632-4

Page 1 of 3

IDENTIFICATION:

Sample Received on 02-12-92

Project: 30-771-400 Scougal

Client ID: RUSH S-2-92-6

ANALYSIS:

Sample was analyzed in accordance with Test Methods for Evaluating Solid Waste, (SW-846), U.S.E.P.A., 1986 Method 8240 (Volatile Organics)

CAS No.	Compounds	Concentration ug/kg	PQL
74-87-3	Chloromethane	ND	400
74-83-9	Bromomethane	ND	400
75-01-4	Vinyl Chloride	ND	400
75-00-3	Chloroethane	ND	400
75-09-2	Methylene Chloride	ND	200
67-64-1	Acetone	ND	2,000
75-15-0	Carbon Disulfide	ND	200
75-35-4	1,1-Dichloroethene	ND	200
75-34-3	1,1-Dichloroethane	ND	200
540-59-0	1,2-Dichloroethene (Total)	ND	200
67-66-3	Chloroform	ND	200
107-06-2	1,2-Dichloroethane	ND	200
78-93-3	2-Butanone	ND	1,000
71-55-6	1,1,1-Trichloroethane	ND	200
56-23-5	Carbon Tetrachloride	ND	200
108-05-4	Vinyl Acetate	ND	1,000
75-27-4	Bromodichloromethane	ND	200
78-87-5	1,2-Dichloropropane	ND	200
10061-01-5	Cis-1,3-Dichloropropene	ND	200
79-01-6	Trichloroethene	ND	200
124-48-1	Dibromochloromethane	ND	200
79-00-5	1,1,2-Trichloroethane	ND	200

ND = Not Detected

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 30-771-400
 Lab No. 22632-4
 Page 2 of 3
 February 18, 1992

Client ID: RUSH S-2-92-6

EPA Method 8240 Continued

CAS No.	Compounds	Concentration ug/kg	PQL
71-43-2	Benzene	ND	200
10061-02-6	Trans-1,3-Dichloropropene	ND	200
75-25-2	Bromoform	ND	200
108-10-1	4-Methyl-2-Pentanone	ND	1,000
591-78-6	2-Hexanone	ND	200
127-18-4	Tetrachloroethene	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	200
108-88-3	Toluene	ND	200
108-90-7	Chlorobenzene	ND	200
100-41-4	Ethyl Benzene	ND	200
100-42-5	Styrene	ND	200
1330-20-7	Total Xylenes	ND	200

ND = Not Detected

PQL - Practical Quantitation Limit - These are the detection limits for this sample. This number is based on sample size, matrix and dilution required.

Volatile Surrogates

Surrogate	Percent Recovery	Control Limits
Toluene - D8	101	81 - 117
Bromofluorobenzene	99	74 - 121
1,2-Dichloroethane D4	120	70 - 121

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
Project: 30-771-400
Page 3 of 3
Lab No. 22632-4
February 18, 1992

Client ID: RUSH S-2-92-6

Sample was analyzed for Total Petroleum Fuel Hydrocarbons in accordance with EPA SW-846 Modified Method 8015. The hydrocarbons present were quantified against a diesel standard curve and against a curve created from a soluble oil standard submitted by client.

TPFH as diesel, mg/kg < 10

TPFH as soluble oil, mg/kg < 10

SURROGATE RECOVERY:

1-Chlorooctane, %	96
Perylene, %	96

Results are reported on a dry weight basis.

SOUND ANALYTICAL SERVICES


DENNIS L. BEAN

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Retec

Date: February 18, 1992

Report On: Analysis of Soil

Lab No.: 22632-5

Page 1 of 3

IDENTIFICATION:

Sample Received on 02-12-92

Project: 30-771-400 Scougal

Client ID: RUSH S-2-92-7

ANALYSIS:

Sample was analyzed in accordance with Test Methods for Evaluating Solid Waste, (SW-846), U.S.E.P.A., 1986 Method 8240 (Volatile Organics)

CAS No.	Compounds	Concentration ug/kg	PQL
74-87-3	Chloromethane	ND	400
74-83-9	Bromomethane	ND	400
75-01-4	Vinyl Chloride	ND	400
75-00-3	Chloroethane	ND	400
75-09-2	Methylene Chloride	ND	200
67-64-1	Acetone	ND	2,000
75-15-0	Carbon Disulfide	ND	200
75-35-4	1,1-Dichloroethene	ND	200
75-34-3	1,1-Dichloroethane	ND	200
540-59-0	1,2-Dichloroethene (Total)	ND	200
67-66-3	Chloroform	ND	200
107-06-2	1,2-Dichloroethane	ND	200
78-93-3	2-Butanone	ND	1,000
71-55-6	1,1,1-Trichloroethane	ND	200
56-23-5	Carbon Tetrachloride	ND	200
108-05-4	Vinyl Acetate	ND	1,000
75-27-4	Bromodichloromethane	ND	200
78-87-5	1,2-Dichloropropane	ND	200
10061-01-5	Cis-1,3-Dichloropropene	ND	200
79-01-6	Trichloroethene	*(120)	200
124-48-1	Dibromochloromethane	ND	200
79-00-5	1,1,2-Trichloroethane	ND	200

ND = Not Detected

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 30-771-400
 Lab No. 22632-5
 Page 2 of 3
 February 18, 1992

Client ID: RUSH S-2-92-7

EPA Method 8240 Continued

CAS No.	Compounds	Concentration ug/kg	PQL
71-43-2	Benzene	ND	200
10061-02-6	Trans-1,3-Dichloropropene	ND	200
75-25-2	Bromoform	ND	200
108-10-1	4-Methyl-2-Pentanone	ND	1,000
591-78-6	2-Hexanone	ND	200
127-18-4	Tetrachloroethene	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	200
108-88-3	Toluene	ND	200
108-90-7	Chlorobenzene	ND	200
100-41-4	Ethyl Benzene	ND	200
100-42-5	Styrene	ND	200
1330-20-7	Total Xylenes	ND	200

ND = Not Detected

PQL - Practical Quantitation Limit - These are the detection limits for this sample. This number is based on sample size, matrix and dilution required.

* Compound was detected but below PQL. Value shown is an estimated quantity.

Volatile Surrogates

Surrogate	Percent Recovery	Control Limits
Toluene - D8	101	81 - 117
Bromofluorobenzene	98	74 - 121
1,2-Dichloroethane D4	113	70 - 121

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
Project: 30-771-400
Page 3 of 3
Lab No. 22632-5
February 18, 1992

Client ID: RUSH S-2-92-7

Sample was analyzed for Total Petroleum Fuel Hydrocarbons in accordance with EPA SW-846 Modified Method 8015. The hydrocarbons present were quantified against a diesel standard curve and against a curve created from a soluble oil standard submitted by client.

TPFH as diesel, mg/kg < 10

TPFH as soluble oil, mg/kg < 10

SURROGATE RECOVERY:

1-Chlorooctane, %	109
Perylene, %	103

Results are reported on a dry weight basis.

SOUND ANALYTICAL SERVICES



DENNIS L. BEAN

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Retec

Date: February 18, 1992

Report On: Analysis of Soil

Lab No.: 22632-6

Page 1 of 3

IDENTIFICATION:

Sample Received on 02-12-92
Project: 30-771-400 Scougal
Client ID: RUSH S-2-92-8

ANALYSIS:

Sample was analyzed in accordance with Test Methods for Evaluating Solid Waste, (SW-846), U.S.E.P.A., 1986 Method 8240 (Volatile Organics)

CAS No.	Compounds	Concentration ug/kg	PQL
74-87-3	Chloromethane	ND	400
74-83-9	Bromomethane	ND	400
75-01-4	Vinyl Chloride	ND	400
75-00-3	Chloroethane	ND	400
75-09-2	Methylene Chloride	ND	200
67-64-1	Acetone	ND	2,000
75-15-0	Carbon Disulfide	ND	200
75-35-4	1,1-Dichloroethene	ND	200
75-34-3	1,1-Dichloroethane	ND	200
540-59-0	1,2-Dichloroethene (Total)	ND	200
67-66-3	Chloroform	ND	200
107-06-2	1,2-Dichloroethane	ND	200
78-93-3	2-Butanone	ND	1,000
71-55-6	1,1,1-Trichloroethane	ND	200
56-23-5	Carbon Tetrachloride	ND	200
108-05-4	Vinyl Acetate	ND	1,000
75-27-4	Bromodichloromethane	ND	200
78-87-5	1,2-Dichloropropane	ND	200
10061-01-5	Cis-1,3-Dichloropropene	ND	200
79-01-6	Trichloroethene	4,000	200
124-48-1	Dibromochloromethane	ND	200
79-00-5	1,1,2-Trichloroethane	ND	200

ND = Not Detected

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 30-771-400
 Lab No. 22632-6
 Page 2 of 3
 February 18, 1992

Client ID: RUSH S-2-92-8

EPA Method 8240 Continued

CAS No.	Compounds	Concentration ug/kg	PQL
71-43-2	Benzene	ND	200
10061-02-6	Trans-1,3-Dichloropropene	ND	200
75-25-2	Bromoform	ND	200
108-10-1	4-Methyl-2-Pentanone	ND	1,000
591-78-6	2-Hexanone	ND	200
127-18-4	Tetrachloroethene	210	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	200
108-88-3	Toluene	ND	200
108-90-7	Chlorobenzene	ND	200
100-41-4	Ethyl Benzene	ND	200
100-42-5	Styrene	ND	200
1330-20-7	Total Xylenes	ND	200

ND = Not Detected

PQL - Practical Quantitation Limit - These are the detection limits for this sample. This number is based on sample size, matrix and dilution required.

Volatile Surrogates

Surrogate	Percent Recovery	Control Limits
Toluene - D8	101	81 - 117
Bromofluorobenzene	100	74 - 121
1,2-Dichloroethane D4	101	70 - 121

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
Project: 30-771-400
Page 3 of 3
Lab No. 22632-6
February 18, 1992

Client ID: RUSH S-2-92-8

Sample was analyzed for Total Petroleum Fuel Hydrocarbons in accordance with EPA SW-846 Modified Method 8015. The hydrocarbons present were quantified against a diesel standard curve and against a curve created from a soluble oil standard submitted by client.

TPFH as diesel, mg/kg 16,000

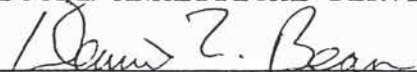
TPFH as soluble oil, mg/kg 24,000

SURROGATE RECOVERY:

1-Chlorooctane, %	130
Perylene, %	100

Results are reported on a dry weight basis.

SOUND ANALYTICAL SERVICES


DENNIS L. BEAN

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Retec

Date: February 25, 1992

Report On: Analysis of Soil

Lab No.: 22787

Page 1 of 3

IDENTIFICATION:

Sample Received on 02-21-92

Project: 30-771-400 Scougal Rubber

Client ID: RUSH S-2-92-9

ANALYSIS:

Sample was analyzed in accordance with Test Methods for Evaluating Solid Waste, (SW-846), U.S.E.P.A., 1986 Method 8240 (Volatile Organics)

CAS No.	Compounds	Concentration ug/kg	PQL
74-87-3	Chloromethane	ND	400
74-83-9	Bromomethane	ND	400
75-01-4	Vinyl Chloride	ND	400
75-00-3	Chloroethane	ND	400
75-09-2	Methylene Chloride	ND	200
67-64-1	Acetone	ND	2,000
75-15-0	Carbon Disulfide	ND	200
75-35-4	1,1-Dichloroethene	ND	200
75-34-3	1,1-Dichloroethane	ND	200
540-59-0	1,2-Dichloroethene (Total)	ND	200
67-66-3	Chloroform	ND	200
107-06-2	1,2-Dichloroethane	ND	200
78-93-3	2-Butanone	ND	1,000
71-55-6	1,1,1-Trichloroethane	ND	200
56-23-5	Carbon Tetrachloride	ND	200
108-05-4	Vinyl Acetate	ND	1,000
75-27-4	Bromodichloromethane	ND	200
78-87-5	1,2-Dichloropropane	ND	200
10061-01-5	Cis-1,3-Dichloropropene	ND	200
79-01-6	Trichloroethene	ND	200
124-48-1	Dibromochloromethane	ND	200
79-00-5	1,1,2-Trichloroethane	ND	200

ND = Not Detected

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 30-771-400
 Lab No. 22787
 Page 2 of 3
 February 25, 1992

Client ID: RUSH S-2-92-9

EPA Method 8240 Continued

CAS No.	Compounds	Concentration ug/kg	PQL
71-43-2	Benzene	ND	200
10061-02-6	Trans-1,3-Dichloropropene	ND	200
75-25-2	Bromoform	ND	200
108-10-1	4-Methyl-2-Pentanone	ND	1,000
591-78-6	2-Hexanone	ND	200
127-18-4	Tetrachloroethene	*(160)	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	200
108-88-3	Toluene	ND	200
108-90-7	Chlorobenzene	ND	200
100-41-4	Ethyl Benzene	ND	200
100-42-5	Styrene	ND	200
1330-20-7	Total Xylenes	ND	200

ND = Not Detected

PQL - Practical Quantitation Limit - These are the detection limits for this sample. This number is based on sample size, matrix and dilution required.

* = Compound was detected but below PQL. Value shown is an estimated quantity.

Volatile Surrogates

Surrogate	Percent Recovery	Control Limits
Toluene - D8	99	81 - 117
Bromofluorobenzene	95	74 - 121
1,2-Dichloroethane D4	104	70 - 121

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
Project: 30-771-400
Page 3 of 3
Lab No. 22787
February 25, 1992

Client ID: RUSH S-2-92-9

Total Petroleum Fuel Hydrocarbons, mg/kg < 10
by EPA SW-846 Modified Method 8015

SURROGATE RECOVERY:

1-Chlorooctane, %	79
Perylene, %	87

SOUND ANALYTICAL SERVICES



DENNIS L. BEAN

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Retec

Date: February 25, 1992

Report On: Analysis of Soil

Lab No.: 22787-D

Page 1 of 2

IDENTIFICATION:

Sample Received on 02-21-92

Project: 30-771-400 Scougal Rubber

Client ID: RUSH S-2-92-9 (DUPLICATE)

ANALYSIS:

Sample was analyzed in accordance with Test Methods for Evaluating Solid Waste, (SW-846), U.S.E.P.A., 1986 Method 8240 (Volatile Organics)

CAS No.	Compounds	Concentration ug/kg	PQL
74-87-3	Chloromethane	ND	400
74-83-9	Bromomethane	ND	400
75-01-4	Vinyl Chloride	ND	400
75-00-3	Chloroethane	ND	400
75-09-2	Methylene Chloride	ND	200
67-64-1	Acetone	ND	2,000
75-15-0	Carbon Disulfide	ND	200
75-35-4	1,1-Dichloroethene	ND	200
75-34-3	1,1-Dichloroethane	ND	200
540-59-0	1,2-Dichloroethene (Total)	ND	200
67-66-3	Chloroform	ND	200
107-06-2	1,2-Dichloroethane	ND	200
78-93-3	2-Butanone	ND	1,000
71-55-6	1,1,1-Trichloroethane	ND	200
56-23-5	Carbon Tetrachloride	ND	200
108-05-4	Vinyl Acetate	ND	1,000
75-27-4	Bromodichloromethane	ND	200
78-87-5	1,2-Dichloropropane	ND	200
10061-01-5	Cis-1,3-Dichloropropene	ND	200
79-01-6	Trichloroethene	ND	200
124-48-1	Dibromochloromethane	ND	200
79-00-5	1,1,2-Trichloroethane	ND	200

ND = Not Detected

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 30-771-400
 Lab No. 22787-D
 Page 2 of 2
 February 25, 1992

Client ID: RUSH S-2-92-9 (DUPLICATE)

EPA Method 8240 Continued

CAS No.	Compounds	Concentration ug/kg	PQL
71-43-2	Benzene	ND	200
10061-02-6	Trans-1,3-Dichloropropene	ND	200
75-25-2	Bromoform	ND	200
108-10-1	4-Methyl-2-Pentanone	ND	1,000
591-78-6	2-Hexanone	ND	200
127-18-4	Tetrachloroethene	*(100)	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	200
108-88-3	Toluene	ND	200
108-90-7	Chlorobenzene	ND	200
100-41-4	Ethyl Benzene	ND	200
100-42-5	Styrene	ND	200
1330-20-7	Total Xylenes	ND	200

ND = Not Detected

PQL - Practical Quantitation Limit - These are the detection limits for this sample. This number is based on sample size, matrix and dilution required.

* = Compound was detected but below PQL. Value shown is an estimated quantity.

Volatile Surrogates

Surrogate	Percent Recovery	Control Limits
Toluene - D8	99	81 - 117
Bromofluorobenzene	92	74 - 121
1,2-Dichloroethane D4	108	70 - 121

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206) 922-2310 - FAX (206) 922-5047

QUALITY CONTROL REPORT

DUPLICATES

Client: Retec
Project: 30-771-400
Client ID: S-2-92-9
Lab No: 22787
Matrix: Soil
Units: mg/kg
Date: February 25, 1992

Parameter	Sample(S)	Duplicate(D)	RPD
Total Petroleum Fuel Hydrocarbons	< 10	< 10	0.0
%Surrogate Recovery			
1-Chlorooctane	79	95	
Perylene	87	97	

RPD = relative percent difference
= $[(S - D) / ((S + D) / 2)] \times 100$

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206) 922-2310 - FAX (206) 922-5047

ANALYTICAL NARRATIVE

Client: Retec Date: February 25, 1992

Project: 30-771-400 Scougal Rubber Lab No.: 22787

Delivered by: SAS

Date Sampled: 02-20-92

Condition of Sample on Receipt:

Sample was received cold and in good condition. Chain-of-custody was in order.

EXTRACTION AND ANALYSIS DATES

Sample was extracted and analyzed for total petroleum fuel hydrocarbons in accordance with EPA SW-846 Modified Method 8015 on 02-21-92.

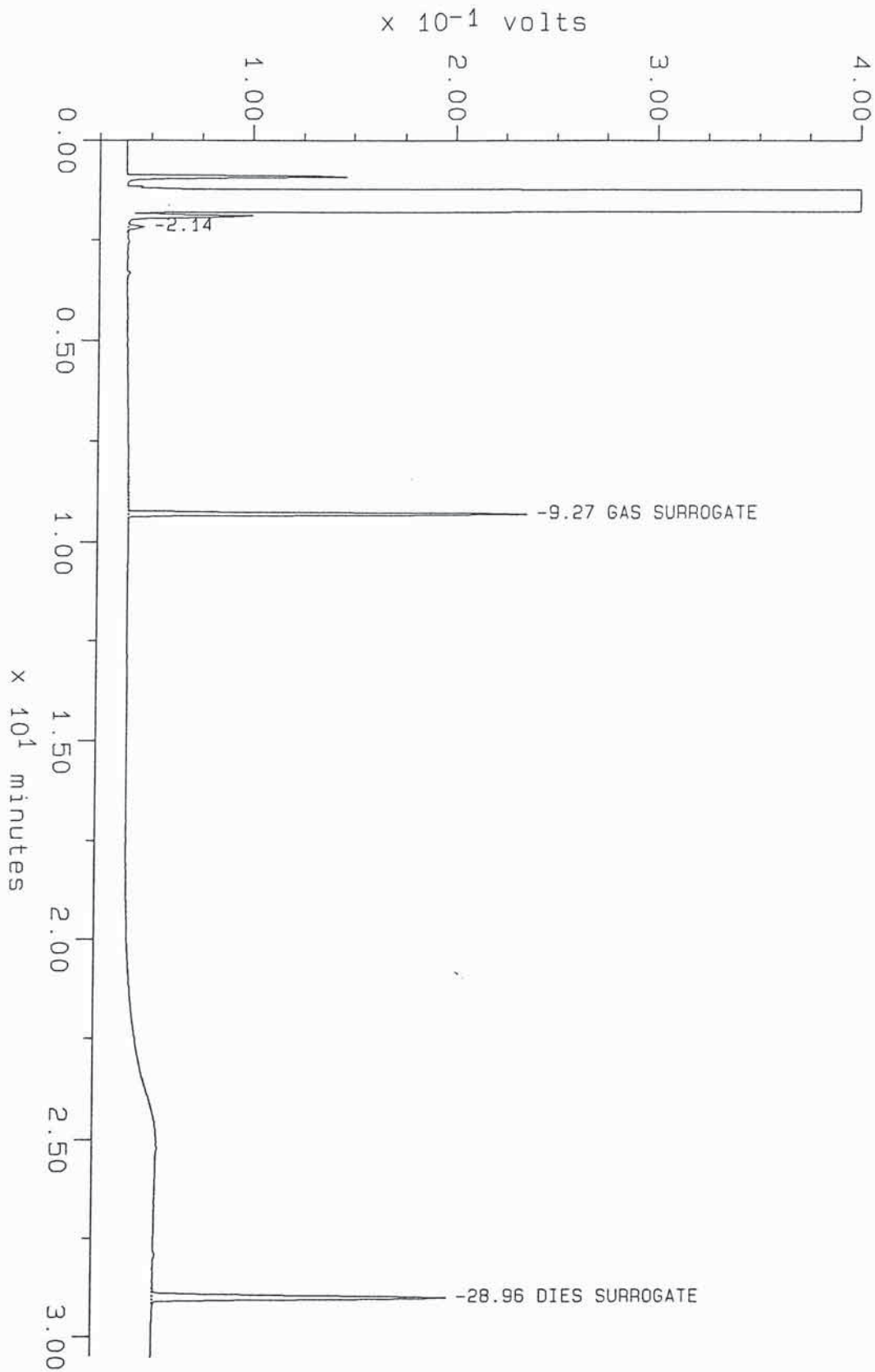
Sample was analyzed for volatile organics by GC/MS in accordance with EPA SW-846 Method 8240. Sample was extracted on 02-21-92 and analyzed on 02-24-92.

All Quality Control was within acceptable limits.

Sample: 22787-1
Acquired: 21-FEB-92 18:29
Dilution: 1 : 10.000

Channel: HP 5890-I
Method: C:\MAX\DATA1\DAS8015
Amount: 10.532

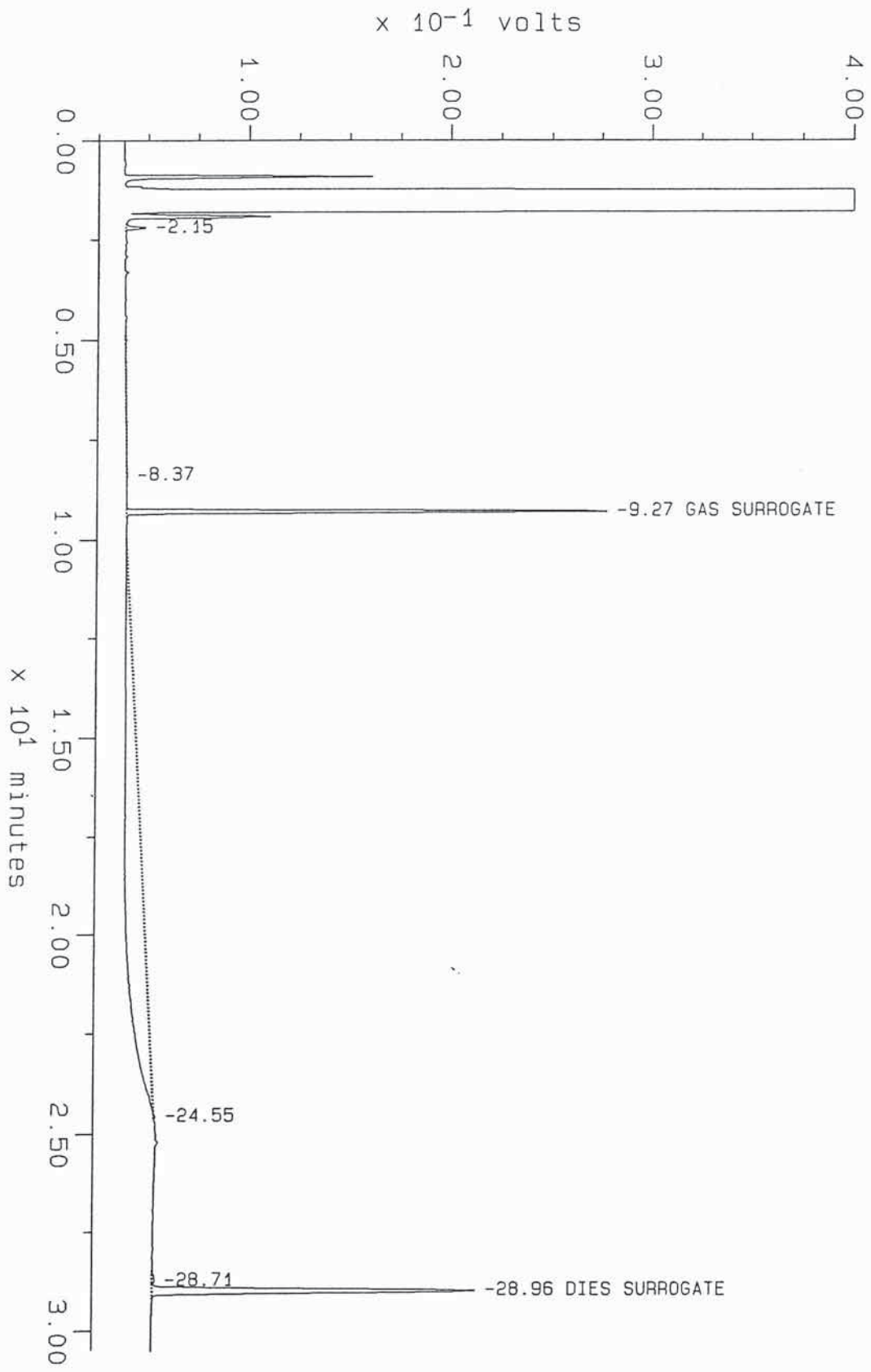
Filename: 22787-1
Operator: DAS



Sample: 22787-10
Acquired: 21-FEB-92 19:09
Dilution: 1 : 10.000

Channel: HP 5890-I
Method: C:\MAX\DATA1\DAS8015
Amount: 10.903

Filename: 22787-10
Operator: DAS



SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Retec

Date: February 26, 1992

Report On: Analysis of Soil

Lab No.: 22821

Page 1 of 3

IDENTIFICATION:

Sample Received on 02-24-92

Project: 30-771-400 Scougal Rubber

Client ID: RUSH S-2-92-11

ANALYSIS:

Sample was analyzed in accordance with Test Methods for Evaluating Solid Waste, (SW-846), U.S.E.P.A., 1986 Method 8240 (Volatile Organics)

CAS No.	Compounds	Concentration ug/kg	PQL
74-87-3	Chloromethane	ND	400
74-83-9	Bromomethane	ND	400
75-01-4	Vinyl Chloride	ND	400
75-00-3	Chloroethane	ND	400
75-09-2	Methylene Chloride	ND	200
67-64-1	Acetone	ND	2,000
75-15-0	Carbon Disulfide	ND	200
75-35-4	1,1-Dichloroethene	ND	200
75-34-3	1,1-Dichloroethane	ND	200
540-59-0	1,2-Dichloroethene (Total)	ND	200
67-66-3	Chloroform	ND	200
107-06-2	1,2-Dichloroethane	ND	200
78-93-3	2-Butanone	ND	1,000
71-55-6	1,1,1-Trichloroethane	ND	200
56-23-5	Carbon Tetrachloride	ND	200
108-05-4	Vinyl Acetate	ND	1,000
75-27-4	Bromodichloromethane	ND	200
78-87-5	1,2-Dichloropropane	ND	200
10061-01-5	Cis-1,3-Dichloropropene	ND	200
79-01-6	Trichloroethene	ND	200
124-48-1	Dibromochloromethane	ND	200
79-00-5	1,1,2-Trichloroethane	ND	200

ND = Not Detected

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 30-771-400
 Lab No. 22821
 Page 2 of 3
 February 26, 1992

Client ID: RUSH S-2-92-11

EPA Method 8240 Continued

CAS No.	Compounds	Concentration ug/kg	PQL
71-43-2	Benzene	ND	200
10061-02-6	Trans-1,3-Dichloropropene	ND	200
75-25-2	Bromoform	ND	200
108-10-1	4-Methyl-2-Pentanone	ND	1,000
591-78-6	2-Hexanone	ND	200
127-18-4	Tetrachloroethene	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	200
108-88-3	Toluene	ND	200
108-90-7	Chlorobenzene	ND	200
100-41-4	Ethyl Benzene	ND	200
100-42-5	Styrene	ND	200
1330-20-7	Total Xylenes	ND	200

ND = Not Detected

PQL - Practical Quantitation Limit - These are the detection limits for this sample. This number is based on sample size, matrix and dilution required.

Volatile Surrogates

Surrogate	Percent Recovery	Control Limits
Toluene - D8	95	81 - 117
Bromofluorobenzene	96	74 - 121
1,2-Dichloroethane D4	103	70 - 121

SOUND ANALYTICAL SERVICES, INC.

Retec
Project: 30-771-400
Page 3 of 3
Lab No. 22821
February 26, 1992

Client ID: RUSH S-2-92-11

Total Petroleum Fuel Hydrocarbons, mg/kg < 10
by EPA SW-846 Modified Method 8015

SURROGATE RECOVERY:

1-Chlorooctane, %	117
Perylene, %	120

SOUND ANALYTICAL SERVICES


DENNIS L. BEAN

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206) 922-2310 - FAX (206) 922-5047

ANALYTICAL NARRATIVE

Client: Retec Date: February 26, 1992

Project: 30-771-400 Scougal Rubber Lab No.: 22821

Delivered by: SAS

Date Sampled: 2-21-92

Condition of Sample upon Receipt:

Sample was received cold and in good condition. Chain-of-custody was in order.

EXTRACTION AND ANALYSIS DATES

Sample was analyzed for total petroleum fuel hydrocarbons in accordance with EPA SW-846 Modified Method 8015 on 2-25-92.

Sample was analyzed for volatile organics by GC/MS in accordance with EPA SW-846 Method 8240 on 2-24-92.

All Quality Control was within acceptable limits.

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Retec

Date: March 9, 1992

Report On: Analysis of Soil

Lab No.: 22909

Page 1 of 3

IDENTIFICATION:

Sample Received on 02-27-92
Project: 30-771-400 Scougal
Client ID: S-2-92-12

ANALYSIS:

Sample was analyzed in accordance with Test Methods for Evaluating Solid Waste, (SW-846), U.S.E.P.A., 1986 Method 8240 (Volatile Organics)

CAS No.	Compounds	Concentration ug/kg	PQL
74-87-3	Chloromethane	ND	400
74-83-9	Bromomethane	ND	400
75-01-4	Vinyl Chloride	ND	400
75-00-3	Chloroethane	ND	400
75-09-2	Methylene Chloride	ND	200
67-64-1	Acetone	ND	2,000
75-15-0	Carbon Disulfide	ND	200
75-35-4	1,1-Dichloroethene	ND	200
75-34-3	1,1-Dichloroethane	ND	200
540-59-0	1,2-Dichloroethene (Total)	ND	200
67-66-3	Chloroform	ND	200
107-06-2	1,2-Dichloroethane	ND	200
78-93-3	2-Butanone	ND	1,000
71-55-6	1,1,1-Trichloroethane	ND	200
56-23-5	Carbon Tetrachloride	ND	200
108-05-4	Vinyl Acetate	ND	1,000
75-27-4	Bromodichloromethane	ND	200
78-87-5	1,2-Dichloropropane	ND	200
10061-01-5	Cis-1,3-Dichloropropene	ND	200
79-01-6	Trichloroethene	ND	200
124-48-1	Dibromochloromethane	ND	200
79-00-5	1,1,2-Trichloroethane	ND	200

ND = Not Detected

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 30-771-400
 Lab No. 22909
 Page 2 of 3
 March 9, 1992

Client ID: S-2-92-12

EPA Method 8240 Continued

CAS No.	Compounds	Concentration ug/kg	PQL
71-43-2	Benzene	ND	200
10061-02-6	Trans-1,3-Dichloropropene	ND	200
75-25-2	Bromoform	ND	200
108-10-1	4-Methyl-2-Pentanone	ND	1,000
591-78-6	2-Hexanone	ND	200
127-18-4	Tetrachloroethene	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	200
108-88-3	Toluene	ND	200
108-90-7	Chlorobenzene	ND	200
100-41-4	Ethyl Benzene	ND	200
100-42-5	Styrene	ND	200
1330-20-7	Total Xylenes	ND	200

ND = Not Detected

PQL - Practical Quantitation Limit - These are the detection limits for this sample. This number is based on sample size, matrix and dilution required.

Volatile Surrogates

Surrogate	Percent Recovery	Control Limits
Toluene - D8	95	81 - 117
Bromofluorobenzene	97	74 - 121
1,2-Dichloroethane D4	100	70 - 121

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
Project: 30-771-400
Page 3 of 3
Lab No. 22909
March 9, 1992

Client ID: S-2-92-12

Total Petroleum Fuel Hydrocarbons, mg/kg < 10
by EPA SW-846 Modified Method 8015

SURROGATE RECOVERY:

1-Chlorooctane, %	98
Perylene, %	90

SOUND ANALYTICAL SERVICES



DENNIS L. BEAN

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Retec

Date: March 9, 1992

Report On: Analysis of Soil

Lab No.: 22909-D

Page 1 of 2

IDENTIFICATION:

Sample Received on 02-27-92

Project: 30-771-400 Scougal

Client ID: S-2-92-12 (DUPLICATE)

ANALYSIS:

Sample was analyzed in accordance with Test Methods for Evaluating Solid Waste, (SW-846), U.S.E.P.A., 1986 Method 8240 (Volatile Organics)

CAS No.	Compounds	Concentration ug/kg	PQL
74-87-3	Chloromethane	ND	400
74-83-9	Bromomethane	ND	400
75-01-4	Vinyl Chloride	ND	400
75-00-3	Chloroethane	ND	400
75-09-2	Methylene Chloride	ND	200
67-64-1	Acetone	ND	2,000
75-15-0	Carbon Disulfide	ND	200
75-35-4	1,1-Dichloroethene	ND	200
75-34-3	1,1-Dichloroethane	ND	200
540-59-0	1,2-Dichloroethene (Total)	ND	200
67-66-3	Chloroform	ND	200
107-06-2	1,2-Dichloroethane	ND	200
78-93-3	2-Butanone	ND	1,000
71-55-6	1,1,1-Trichloroethane	ND	200
56-23-5	Carbon Tetrachloride	ND	200
108-05-4	Vinyl Acetate	ND	1,000
75-27-4	Bromodichloromethane	ND	200
78-87-5	1,2-Dichloropropane	ND	200
10061-01-5	Cis-1,3-Dichloropropene	ND	200
79-01-6	Trichloroethene	ND	200
124-48-1	Dibromochloromethane	ND	200
79-00-5	1,1,2-Trichloroethane	ND	200

ND = Not Detected

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 30-771-400
 Lab No. 22909-D
 Page 2 of 2
 March 9, 1992

Client ID: S-2-92-12 (DUPLICATE)

EPA Method 8240 Continued

CAS No.	Compounds	Concentration ug/kg	PQL
71-43-2	Benzene	ND	200
10061-02-6	Trans-1,3-Dichloropropene	ND	200
75-25-2	Bromoform	ND	200
108-10-1	4-Methyl-2-Pentanone	ND	1,000
591-78-6	2-Hexanone	ND	200
127-18-4	Tetrachloroethene	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	200
108-88-3	Toluene	ND	200
108-90-7	Chlorobenzene	ND	200
100-41-4	Ethyl Benzene	ND	200
100-42-5	Styrene	ND	200
1330-20-7	Total Xylenes	ND	200

ND = Not Detected

PQL - Practical Quantitation Limit - These are the detection limits for this sample. This number is based on sample size, matrix and dilution required.

Volatile Surrogates

Surrogate	Percent Recovery	Control Limits
Toluene - D8	96	81 - 117
Bromofluorobenzene	98	74 - 121
1,2-Dichloroethane D4	98	70 - 121

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206) 922-2310 - FAX (206) 922-5047

QUALITY CONTROL REPORT

DUPLICATES

Client: Retec
Project: 30-771-400 Scougal
Client ID: S-2-92-12
Lab No: 22909 (1)
Matrix: Soil
Units: mg/kg
Date: March 10, 1992

Parameter	Sample(S)	Duplicate(D)	RPD
Total Petroleum Fuel Hydrocarbons	< 10	< 10	0.0
%Surrogate Recovery			
1-Chlorooctane	98	87	
Perylene	90	78	

RPD = relative percent difference
= $[(S - D) / ((S + D) / 2)] \times 100$

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206) 922-2310 - FAX (206) 922-5047

ANALYTICAL NARRATIVE

Client: Retec

Date: March 9, 1992

Project: 30-771-400 Scougal

Lab No.: 22909

Delivered by: SAS

Date Sampled: 2-25-92

Condition of Sample upon Receipt:

Sample was received cool and in good condition. Chain-of-custody was in order.

EXTRACTION AND ANALYSIS DATES

Sample was analyzed for total petroleum fuel hydrocarbons in accordance with EPA SW-846 Modified Method 8015 on 3-6-92.

Sample was analyzed for volatile organics by GC/MS in accordance with EPA SW-846 Method 8240 2-28-92.

All Quality Control was within acceptable limits.

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Retec

Date: September 23, 1992

Report On: Analysis of Soil

Lab No.: 27125

Page 1 of 7

IDENTIFICATION:

Samples Received on 09-15-92

Project: 3-0771-300 Scougal Rubber

ANALYSIS:

Lab No. 27125-1

Client ID: S-9-92-1

Volatile Organics by Method 8240

Date Extracted: 9-17-92

Date Analyzed: 9-17-92

CAS No.	Compounds	Concentration ug/kg	PQL
74-87-3	Chloromethane	ND	400
74-83-9	Bromomethane	ND	400
75-01-4	Vinyl Chloride	ND	400
75-00-3	Chloroethane	ND	400
75-09-2	Methylene Chloride	ND	200
67-64-1	Acetone	*(190)	2,000
75-15-0	Carbon Disulfide	ND	200
75-35-4	1,1-Dichloroethene	ND	200
75-34-3	1,1-Dichloroethane	ND	200
540-59-0	1,2-Dichloroethene (Total)	ND	200
67-66-3	Chloroform	ND	200
107-06-2	1,2-Dichloroethane	ND	200
78-93-3	2-Butanone	ND	1,000
71-55-6	1,1,1-Trichloroethane	ND	200
56-23-5	Carbon Tetrachloride	ND	200
108-05-4	Vinyl Acetate	ND	1,000
75-27-4	Bromodichloromethane	ND	200
78-87-5	1,2-Dichloropropane	ND	200
10061-01-5	Cis-1,3-Dichloropropene	ND	200
79-01-6	Trichloroethene	ND	200
124-48-1	Dibromochloromethane	ND	200
79-00-5	1,1,2-Trichloroethane	ND	200

ND = Not Detected

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 3-0771-300
 Lab No. 27125
 Page 2 of 7
 September 23, 1992

Lab No. 27125-1

Client ID: S-9-92-1

8240 Continued

CAS No.	Compounds	Concentration ug/kg	PQL
71-43-2	Benzene	ND	200
10061-02-6	Trans-1,3-Dichloropropene	ND	200
75-25-2	Bromoform	ND	200
108-10-1	4-Methyl-2-Pentanone	ND	1,000
591-78-6	2-Hexanone	ND	200
127-18-4	Tetrachloroethene	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	200
108-88-3	Toluene	ND	200
108-90-7	Chlorobenzene	ND	200
100-41-4	Ethyl Benzene	ND	200
100-42-5	Styrene	ND	200
1330-20-7	Total Xylenes	ND	200

ND - Not Detected

PQL - Practical Quantitation Limit - These are the detection limits for this sample. This number is based on sample size, matrix and dilution required.

*Compound was detected but below PQL. Value shown is an estimated quantity.

Volatile Surrogates

Surrogate	Percent Recovery	Control Limits
Toluene - D8	101	81 - 117
Bromofluorobenzene	98	74 - 121
1,2-Dichloroethane D4	116	70 - 121

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
Project: 3-0771-300
Lab No. 27125
Page 3 of 7
September 23, 1992

Lab No. 27125-1

Client ID: S-9-92-1

TPH Per EPA SW-846 Modified Method 8015
Date Extracted: 9-16-92
Date Analyzed: 9-22-92

Total Petroleum
Fuel Hydrocarbons, mg/kg < 10

TPH as

<u>SURROGATE RECOVERY, %</u>	
1-Chlorooctane,	86
O-Terphenyl,	69

Continued



SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Retec

Date: December 11, 1992

Report On: Analysis of Soil

Lab No.: 28894

Page 1 of 9

IDENTIFICATION:

Samples Received on 12-08-92

Project: 3-0771-300 Scougal Rubber

ANALYSIS:

Lab No. 28894-1

Client ID: S-12-92-2-10

Volatile Organics Per EPA Method 8240

Date Extracted: 12-8-92

Date Analyzed: 12-8-92

Compound	Concentration ug/kg	PQL	Flag
Chloromethane	ND	500	
Bromomethane	ND	500	
Vinyl Chloride	ND	500	
Chloroethane	ND	500	
Methylene Chloride	180	250	B, J
Acetone	ND	2,500	
Carbon Disulfide	ND	250	
1,1-Dichloroethene	ND	250	
1,1-Dichloroethane	ND	250	
1,2-Dichloroethene (Total)	ND	250	
Chloroform	ND	250	
1,2-Dichloroethane	ND	250	
2-Butanone	ND	1,250	
1,1,1-Trichloroethane	ND	250	
Carbon Tetrachloride	ND	250	
Vinyl Acetate	ND	1,250	
Bromodichloromethane	ND	250	
1,2-Dichloropropane	ND	250	
Cis-1,3-Dichloropropene	ND	250	
Trichloroethene	210	250	J
Dibromochloromethane	ND	250	
1,1,2-Trichloroethane	ND	250	

ND = Not Detected

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 3-0771-300
 Lab No. 28894
 Page 2 of 9
 December 11, 1992

Lab No. 28894-1

Client ID: S-12-92-2-10

8240 Continued . . .

Compound	Concentration ug/kg	PQL	Flag
Benzene	ND	250	
Trans-1,3-Dichloropropene	ND	250	
Bromoform	ND	250	
4-Methyl-2-Pentanone	ND	1,250	
2-Hexanone	ND	250	
Tetrachloroethene	ND	250	
1,1,2,2-Tetrachloroethane	ND	250	
Toluene	ND	250	
Chlorobenzene	ND	250	
Ethyl Benzene	ND	250	
Styrene	ND	250	
Total Xylenes	ND	250	

ND - Not Detected

PQL - Practical Quantitation Limit - These are the detection limits for this sample. This number is based on sample size, matrix and dilution required.

Volatile Surrogates

Surrogate	Percent Recovery	Control Limits
Toluene - D8	103	81 - 117
Bromofluorobenzene	90	74 - 121
1,2-Dichloroethane D4	90	70 - 121

Continued . . .

SOUND ANALYTICAL SERVICES, INC.

Retec

Project: 3-0771-300

Lab No. 28894

Page 3 of 9

December 11, 1992

Lab No. 28894-1

Client ID: S-12-92-2-10

WTPH-418.1 Modified
Date Extracted: 12-9-92
Date Analyzed: 12-10-92

Heavy petroleum oils, mg/kg < 100
(C24+)

Continued . . .

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 3-0771-300
 Lab No. 28894
 Page 4 of 9
 December 11, 1992

Lab No. 28894-2

Client ID: S-12-92-3-10

Volatile Organics Per EPA Method 8240

Date Extracted: 12-8-92

Date Analyzed: 12-8-92

Compound	Concentration ug/kg	PQL	Flag
Chloromethane	ND	500	
Bromomethane	ND	500	
Vinyl Chloride	ND	500	
Chloroethane	ND	500	
Methylene Chloride	ND	250	
Acetone	ND	2,500	
Carbon Disulfide	ND	250	
1,1-Dichloroethene	ND	250	
1,1-Dichloroethane	ND	250	
1,2-Dichloroethene (Total)	ND	250	
Chloroform	ND	250	
1,2-Dichloroethane	ND	250	
2-Butanone	ND	1,250	
1,1,1-Trichloroethane	ND	250	
Carbon Tetrachloride	ND	250	
Vinyl Acetate	ND	1,250	
Bromodichloromethane	ND	250	
1,2-Dichloropropane	ND	250	
Cis-1,3-Dichloropropene	ND	250	
Trichloroethene	54	250	J
Dibromochloromethane	ND	250	
1,1,2-Trichloroethane	ND	250	

ND = Not Detected

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 3-0771-300
 Lab No. 28894
 Page 5 of 9
 December 11, 1992

Lab No. 28894-2

Client ID: S-12-92-3-10

8240 Continued . . .

Compound	Concentration ug/kg	PQL	Flag
Benzene	ND	250	
Trans-1,3-Dichloropropene	ND	250	
Bromoform	ND	250	
4-Methyl-2-Pentanone	ND	1,250	
2-Hexanone	ND	250	
Tetrachloroethene	ND	250	
1,1,2,2-Tetrachloroethane	ND	250	
Toluene	ND	250	
Chlorobenzene	ND	250	
Ethyl Benzene	200	250	J
Styrene	ND	250	
Total Xylenes	400	250	

ND - Not Detected

PQL - Practical Quantitation Limit - These are the detection limits for this sample. This number is based on sample size, matrix and dilution required.

Volatile Surrogates

Surrogate	Percent Recovery	Control Limits
Toluene - D8	103	81 - 117
Bromofluorobenzene	88	74 - 121
1,2-Dichloroethane D4	90	70 - 121

Continued . . .

SOUND ANALYTICAL SERVICES, INC.

Retec
Project: 3-0771-300
Lab No. 28894
Page 6 of 9
December 11, 1992

Lab No. 28894-2

Client ID: S-12-92-3-10

WTPH-418.1 Modified
Date Extracted: 12-9-92
Date Analyzed: 12-10-92

Heavy petroleum oils, mg/kg < 100
(C24+)

Continued . . .

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 3-0771-300
 Lab No. 28894
 Page 7 of 9
 December 11, 1992

Lab No. 28894-3

Client ID: S-12-92-4-10

Volatile Organics Per EPA Method 8240

Date Extracted: 12-8-92

Date Analyzed: 12-8-92

Compound	Concentration ug/kg	PQL	Flag
Chloromethane	ND	500	
Bromomethane	ND	500	
Vinyl Chloride	ND	500	
Chloroethane	ND	500	
Methylene Chloride	ND	250	
Acetone	ND	2,500	
Carbon Disulfide	ND	250	
1,1-Dichloroethene	ND	250	
1,1-Dichloroethane	ND	250	
1,2-Dichloroethene (Total)	ND	250	
Chloroform	ND	250	
1,2-Dichloroethane	ND	250	
2-Butanone	ND	1,250	
1,1,1-Trichloroethane	ND	250	
Carbon Tetrachloride	ND	250	
Vinyl Acetate	ND	1,250	
Bromodichloromethane	ND	250	
1,2-Dichloropropane	ND	250	
Cis-1,3-Dichloropropene	ND	250	
Trichloroethene	910	250	
Dibromochloromethane	ND	250	
1,1,2-Trichloroethane	ND	250	

ND = Not Detected

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 3-0771-300
 Lab No. 28894
 Page 8 of 9
 December 11, 1992

Lab No. 28894-3

Client ID: S-12-92-4-10

8240 Continued . . .

Compound	Concentration ug/kg	PQL	Flag
Benzene	ND	250	
Trans-1,3-Dichloropropene	ND	250	
Bromoform	ND	250	
4-Methyl-2-Pentanone	ND	1,250	
2-Hexanone	ND	250	
Tetrachloroethene	ND	250	
1,1,2,2-Tetrachloroethane	ND	250	
Toluene	ND	250	
Chlorobenzene	ND	250	
Ethyl Benzene	ND	250	
Styrene	ND	250	
Total Xylenes	ND	250	

ND - Not Detected

PQL - Practical Quantitation Limit - These are the detection limits for this sample. This number is based on sample size, matrix and dilution required.

Volatile Surrogates

Surrogate	Percent Recovery	Control Limits
Toluene - D8	102	81 - 117
Bromofluorobenzene	87	74 - 121
1,2-Dichloroethane D4	91	70 - 121

Continued . . .

SOUND ANALYTICAL SERVICES, INC.

Retec
Project: 3-0771-300
Lab No. 28894
Page 9 of 9
December 11, 1992

Lab No. 28894-3

Client ID: S-12-92-4-10

WTPH-418.1 Modified
Date Extracted: 12-9-92
Date Analyzed: 12-10-92

Heavy petroleum oils, mg/kg < 100
(C24+)

SOUND ANALYTICAL SERVICES


DENNIS L. BEAN

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206) 922-2310 - FAX (206) 922-5047

QUALITY CONTROL REPORT

WTPH-418.1 Heavy Petroleum Oils (C24+)

Client: Retec
Lab No: 28894qcl
Matrix: Soil
Units: mg/kg
Date: December 11, 1992

DUPLICATE

Dup No. 28894-3

Parameter	Sample(S)	Duplicate(D)	RPD
Total Petroleum Hydrocarbons	< 100	< 100	0.0

RPD = Relative Percent Difference
= $[(S - D) / ((S + D) / 2)] \times 100$

METHOD BLANK

Parameter	Blank Value
Total Petroleum Hydrocarbons	< 100

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

QUALITY CONTROL REPORT

VOLATILE ORGANICS EPA SW-846 METHOD 8240

Page 1 of 2

Client: Retec
Lab No: 28894qc2
Units: ug/kg
Date: December 11, 1992
Blank No: V7143

METHOD BLANK

Compound	Blank Value	PQL	FLAGS
Chloromethane	ND	400	
Bromomethane	ND	400	
Vinyl Chloride	ND	400	
Chloroethane	ND	400	
Methylene Chloride	600	200	
Acetone	1,200	2,000	J
Carbon Disulfide	ND	200	
1,1-Dichloroethene	ND	200	
1,1-Dichloroethane	ND	200	
1,2-Dichloroethene (Total)	ND	200	
Chloroform	ND	200	
1,2-Dichloroethane	ND	200	
2-Butanone	ND	1,000	
1,1,1-Trichloroethane	ND	200	
Carbon Tetrachloride	ND	200	
Vinyl Acetate	ND	1,000	
Bromodichloromethane	ND	200	
1,2-Dichloropropane	ND	200	
Cis-1,3-Dichloropropene	ND	200	
Trichloroethene	ND	200	
Dibromochloromethane	ND	200	
1,1,2-Trichloroethane	ND	200	
Benzene	ND	200	
Trans-1,3-Dichloropropene	ND	200	
Bromoform	ND	200	
4-Methyl-2-Pentanone	ND	1,000	
2-Hexanone	ND	200	
Tetrachloroethene	ND	200	
1,1,2,2-Tetrachloroethane	ND	200	
Toluene	ND	200	
Chlorobenzene	ND	200	
Ethyl Benzene	ND	200	
Styrene	ND	200	
Total Xylenes	ND	200	

Continued

SOUND ANALYTICAL SERVICES, INC.

QUALITY CONTROL REPORT

VOLATILE ORGANICS EPA SW-846 METHOD 8240

Page 2 of 2

Client: Retec
Lab No: 28894qc2
Units: ug/kg
Date: December 11, 1992
Blank No: V7143

METHOD BLANK

ND = Not Detected

PQL = Practical Quantitation Limit - These are the detection limits for this sample. This number is based on sample size, matrix and dilution required.

VOLATILE SURROGATES

Surrogate	Percent Recovery	Control Limits	
		Water	Soil
Toluene - d8	99	86 - 115	81 - 117
Bromofluorobenzene	92	76 - 114	74 - 121
1,2-Dichloroethane d4	94	88 - 110	70 - 121

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

QUALITY CONTROL REPORT

VOLATILE ORGANICS EPA SW-846 METHOD 8240

Page 1 of 2

Client: Retec
 Lab No: 28894qc3
 Matrix: Soil
 Units: ug/kg
 Date: December 11, 1992
 Dup No: 28894-3

DUPLICATE

Compound	Sample (S)	Duplicate (D)	RPD	FLAGS
Chloromethane	ND	ND	0.0	
Bromomethane	ND	ND	0.0	
Vinyl Chloride	ND	ND	0.0	
Chloroethane	ND	ND	0.0	
Methylene Chloride	ND	ND	0.0	
Acetone	ND	ND	0.0	
Carbon Disulfide	ND	ND	0.0	
1,1-Dichloroethene	ND	ND	0.0	
1,1-Dichloroethane	ND	ND	0.0	
1,2-Dichloroethene (Total)	ND	ND	0.0	
Chloroform	ND	ND	0.0	
1,2-Dichloroethane	ND	ND	0.0	
2-Butanone	ND	ND	0.0	
1,1,1-Trichloroethane	ND	ND	0.0	
Carbon Tetrachloride	ND	ND	0.0	
Vinyl Acetate	ND	ND	0.0	
Bromodichloromethane	ND	ND	0.0	
1,2-Dichloropropane	ND	ND	0.0	
Cis-1,3-Dichloropropene	ND	ND	0.0	
Trichloroethene	910	810	11.6	
Dibromochloromethane	ND	ND	0.0	
1,1,2-Trichloroethane	ND	ND	0.0	
Benzene	ND	ND	0.0	
Trans-1,3-Dichloropropene	ND	ND	0.0	
Bromoform	ND	ND	0.0	
4-Methyl-2-Pentanone	ND	ND	0.0	
2-Hexanone	ND	ND	0.0	
Tetrachloroethene	ND	ND	0.0	
1,1,2,2-Tetrachloroethane	ND	ND	0.0	
Toluene	ND	ND	0.0	
Chlorobenzene	ND	ND	0.0	
Ethyl Benzene	ND	ND	0.0	
Styrene	ND	ND	0.0	
Total Xylenes	ND	ND	0.0	

Continued

SOUND ANALYTICAL SERVICES, INC.

QUALITY CONTROL REPORT

VOLATILE ORGANICS EPA SW-846 METHOD 8240

Page 2 of 2

Client: Retec
Lab No: 28894qc3
Matrix: Soil
Units: ug/kg
Date: December 11, 1992
Dup No: 28894-3

DUPLICATE

ND = Not Detected

RPD = Relative Percent Difference
= $[(S - D) / ((S + D) / 2)] \times 100$

VOLATILE SURROGATE RECOVERY, %

Surrogate	Sample	Duplicate	Control Limits	
			Water	Soil
Toluene - d8	102	103	86 - 115	81 - 117
BFB	87	93	76 - 114	74 - 121
1,2-DCE - d4	91	92	88 - 110	70 - 121

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Retec

Date: January 5, 1993

Report On: Analysis of Soil

Lab No.: 29204

Page 1 of 2

IDENTIFICATION:

Sample Received on 12-22-92

Project: 3-0771-300 Scougal Rubber

Client ID: S-12-92-7

ANALYSIS:

Volatile Organics Per EPA Method 8240

Date Extracted: 1-4-93

Date Analyzed: 1-4-93

Compound	Concentration ug/kg	PQL	Flag
Chloromethane	ND	400	
Bromomethane	ND	400	
Vinyl Chloride	ND	400	
Chloroethane	ND	400	
Methylene Chloride	600	200	B
Acetone	ND	2,000	
Carbon Disulfide	ND	200	
1,1-Dichloroethene	ND	200	
1,1-Dichloroethane	ND	200	
1,2-Dichloroethene (Total)	ND	200	
Chloroform	ND	200	
1,2-Dichloroethane	ND	200	
2-Butanone	ND	1,000	
1,1,1-Trichloroethane	ND	200	
Carbon Tetrachloride	ND	200	
Vinyl Acetate	ND	1,000	
Bromodichloromethane	ND	200	
1,2-Dichloropropane	ND	200	
Cis-1,3-Dichloropropene	ND	200	
Trichloroethene	2,400	200	
Dibromochloromethane	ND	200	
1,1,2-Trichloroethane	ND	200	

ND = Not Detected

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 3-0771-300
 Lab No. 29204
 Page 2 of 2
 January 5, 1993

Client ID: S-12-92-7

8240 Continued . . .

Compound	Concentration ug/kg	PQL	Flag
Benzene	ND	200	
Trans-1,3-Dichloropropene	ND	200	
Bromoform	ND	200	
4-Methyl-2-Pentanone	ND	1,000	
2-Hexanone	ND	200	
Tetrachloroethene	860	200	
1,1,2,2-Tetrachloroethane	ND	200	
Toluene	55	200	J
Chlorobenzene	ND	200	
Ethyl Benzene	ND	200	
Styrene	ND	200	
Total Xylenes	ND	200	

ND - Not Detected

PQL - Practical Quantitation Limit

Volatile Surrogates

Surrogate	Percent Recovery	Control Limits
Toluene - D8	113	81 - 117
Bromofluorobenzene	87	74 - 121
1,2-Dichloroethane D4	74	70 - 121

SOUND ANALYTICAL SERVICES



 DENNIS L. BEAN

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

QUALITY CONTROL REPORT

VOLATILE ORGANICS EPA SW-846 METHOD 8240

Page 1 of 2

Client: Retec
Lab No: 29204qcl
Units: ug/kg
Date: January 5, 1993
Blank No: V7675

METHOD BLANK

Compound	Blank Value	PQL	FLAGS
Chloromethane	ND	400	
Bromomethane	ND	400	
Vinyl Chloride	ND	400	
Chloroethane	ND	400	
Methylene Chloride	470	200	
Acetone	ND	2,000	
Carbon Disulfide	ND	200	
1,1-Dichloroethene	ND	200	
1,1-Dichloroethane	ND	200	
1,2-Dichloroethene (Total)	ND	200	
Chloroform	ND	200	
1,2-Dichloroethane	ND	200	
2-Butanone	ND	1,000	
1,1,1-Trichloroethane	ND	200	
Carbon Tetrachloride	ND	200	
Vinyl Acetate	ND	1,000	
Bromodichloromethane	ND	200	
1,2-Dichloropropane	ND	200	
Cis-1,3-Dichloropropene	ND	200	
Trichloroethene	ND	200	
Dibromochloromethane	ND	200	
1,1,2-Trichloroethane	ND	200	
Benzene	ND	200	
Trans-1,3-Dichloropropene	ND	200	
Bromoform	ND	200	
4-Methyl-2-Pentanone	ND	1,000	
2-Hexanone	ND	200	
Tetrachloroethene	ND	200	
1,1,2,2-Tetrachloroethane	ND	200	
Toluene	ND	200	
Chlorobenzene	ND	200	
Ethyl Benzene	ND	200	
Styrene	ND	200	
Total Xylenes	ND	200	

Continued

SOUND ANALYTICAL SERVICES, INC.

QUALITY CONTROL REPORT

VOLATILE ORGANICS EPA SW-846 METHOD 8240

Page 2 of 2

Client: Retec
Lab No: 29204qc1
Units: ug/kg
Date: January 5, 1993
Blank No: V7675

METHOD BLANK

ND = Not Detected

PQL = Practical Quantitation Limit - These are the quantitation limits for this sample. This number is based on sample size, matrix and dilution required.

VOLATILE SURROGATES

Surrogate	Percent Recovery	Control Limits	
		Water	Soil
Toluene - d8	114	86 - 115	81 - 117
Bromofluorobenzene	88	76 - 114	74 - 121
1,2-Dichloroethane d4	80	88 - 110	70 - 121

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206) 922-2310 - FAX (206) 922-5047

QUALITY CONTROL REPORT

VOLATILE ORGANICS - METHOD 8240

Client: Retec
Lab No: 29204qc2
Units: ug/kg
Date: January 5, 1993

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

MSD No. 29304 Batch Q.C.

Parameter	Sample Result (SR)	Spiked Sample Result (MS)	Spike Added (SA)	%R	Spike Dup Result (MSD)	Spike Added (SA)	%R	RPD
1-DCE	ND	1,900	2,400	79.2	2,300	2,400	95.8	23.2
TCE	ND	2,700	2,400	113	2,800	2,400	117	3.6
Chloro-benzene	ND	2,700	2,400	113	2,800	2,400	117	3.6
Toluene	ND	3,100	2,400	129	3,000	2,400	125	3.3
Benzene	ND	2,500	2,400	104	2,600	2,400	108	3.9

RPD = Relative Percent Difference
= $[(MS - MSD) / ((MS + MSD) / 2)] \times 100$

% REC = Percent Recovery
= $[(MS - SAMPLE RESULT) / SPIKE] \times 100$

Advisory Limits:

	<u>RPD</u>	<u>% RECOVERY</u>
1,1-Dichloroethene	22	59 - 172
Trichloroethene	24	62 - 137
Chlorobenzene	21	60 - 133
Toluene	21	59 - 139
Benzene	21	66 - 142

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Retec

Date: October 12, 1993

Report On: Analysis of Soil

Lab No.: 35208

Page 1 of 6

IDENTIFICATION:

Samples Received on 09-30-93

Project: 3-1308-110 Scougal Rubber

ANALYSIS:

Lab Sample No. 35208-1

Client ID: MW-14-6.0

Volatile Organics Per EPA Method 8240

Date Extracted: 10-1-93

Date Analyzed: 10-7-93

Compound	Concentration ug/kg	PQL	Flag
Chloromethane	ND	1,000	
Bromomethane	ND	1,000	
Vinyl Chloride	ND	1,000	
Chloroethane	ND	1,000	
Methylene Chloride	ND	500	
Acetone	ND	2,500	
Carbon Disulfide	ND	500	
1,1-Dichloroethene	ND	500	
1,1-Dichloroethane	ND	500	
1,2-Dichloroethene (Total)	6,300	500	
Chloroform	ND	500	
1,2-Dichloroethane	ND	500	
2-Butanone	860	2,500	B1, J
1,1,1-Trichloroethane	ND	500	
Carbon Tetrachloride	ND	500	
Vinyl Acetate	ND	2,500	
Bromodichloromethane	ND	500	
1,2-Dichloropropane	ND	500	
Cis-1,3-Dichloropropene	ND	500	
Trichloroethene	15,000	500	
Dibromochloromethane	ND	500	
1,1,2-Trichloroethane	ND	500	

ND - Not Detected

PQL - Practical Quantitation Limit

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 3-1308-110
 Page 2 of 6
 Lab No. 35208
 October 12, 1993

Lab Sample No. 35208-1

Client ID: MW-14-6.0

8240 Continued . . .

Compound	Concentration ug/kg	PQL	Flag
Benzene	ND	500	
Trans-1,3-Dichloropropene	ND	500	
Bromoform	ND	500	
4-Methyl-2-Pentanone	ND	2,500	
2-Hexanone	ND	500	
Tetrachloroethene	2,500	500	
1,1,2,2-Tetrachloroethane	ND	500	
Toluene	ND	500	
Chlorobenzene	ND	500	
Ethyl Benzene	ND	500	
Styrene	ND	500	
Total Xylenes	ND	500	

ND - Not Detected

PQL - Practical Quantitation Limit

Volatile Surrogates

Surrogate Compound	Percent Recovery	Flags	Control Limits	
			Water	Soil
Toluene - D8	98		88 - 110	81 - 117
Bromofluorobenzene	102		86 - 115	74 - 121
1,2-Dichloroethane-D4	94		76 - 114	70 - 121

Continued . . .

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 3-1308-110
 Page 3 of 6
 Lab No. 35208
 October 12, 1993

Lab Sample No. 35208-2

Client ID: MW-14-21

Volatile Organics Per EPA Method 8240

Date Extracted: 10-1-93

Date Analyzed: 10-7-93

Compound	Concentration ug/kg	PQL	Flag
Chloromethane	ND	500	
Bromomethane	ND	500	
Vinyl Chloride	3,500	500	
Chloroethane	ND	500	
Methylene Chloride	ND	250	
Acetone	ND	1,250	
Carbon Disulfide	ND	250	
1,1-Dichloroethene	ND	250	
1,1-Dichloroethane	100	250	J
1,2-Dichloroethene (Total)	910	250	
Chloroform	ND	250	
1,2-Dichloroethane	ND	250	
2-Butanone	140	1,250	B1, J
1,1,1-Trichloroethane	ND	250	
Carbon Tetrachloride	ND	250	
Vinyl Acetate	ND	1,250	
Bromodichloromethane	ND	250	
1,2-Dichloropropane	ND	250	
Cis-1,3-Dichloropropene	ND	250	
Trichloroethene	430	250	
Dibromochloromethane	ND	250	
1,1,2-Trichloroethane	ND	250	

ND - Not Detected

PQL - Practical Quantitation Limit

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 3-1308-110
 Page 4 of 6
 Lab No. 35208
 October 12, 1993

Lab Sample No. 35208-2

Client ID: MW-14-21

8240 Continued . . .

Compound	Concentration ug/kg	PQL	Flag
Benzene	ND	250	
Trans-1,3-Dichloropropene	ND	250	
Bromoform	ND	250	
4-Methyl-2-Pentanone	ND	1,250	
2-Hexanone	ND	250	
Tetrachloroethene	ND	250	
1,1,2,2-Tetrachloroethane	ND	250	
Toluene	82	250	J
Chlorobenzene	ND	250	
Ethyl Benzene	ND	250	
Styrene	ND	250	
Total Xylenes	ND	250	

ND - Not Detected

PQL - Practical Quantitation Limit

Volatile Surrogates

Surrogate Compound	Percent Recovery	Flags	Control Limits	
			Water	Soil
Toluene - D8	98		88 - 110	81 - 117
Bromofluorobenzene	101		86 - 115	74 - 121
1,2-Dichloroethane-D4	90		76 - 114	70 - 121

Continued . . .

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

QUALITY CONTROL REPORT

VOLATILE ORGANICS PER EPA METHOD 8240

Page 1 of 2

Client: Retec
Lab No: 35208qc
Units: ug/kg
Date: October 12, 1993
Blank No: Z3569

Date Extracted: 10-1-93
Date Analyzed: 10-7-93

METHOD BLANK

Compound	Result	PQL	Flags
Chloromethane	ND	400	
Bromomethane	ND	400	
Vinyl Chloride	ND	400	
Chloroethane	ND	400	
Methylene Chloride	ND	200	
Acetone	ND	1,000	
Carbon Disulfide	ND	200	
1,1-Dichloroethene	ND	200	
1,1-Dichloroethane	ND	200	
1,2-Dichloroethene (Total)	ND	200	
Chloroform	ND	200	
1,2-Dichloroethane	ND	200	
2-Butanone	93	1,000	J
1,1,1-Trichloroethane	ND	200	
Carbon Tetrachloride	ND	200	
Vinyl Acetate	ND	1,000	
Bromodichloromethane	ND	200	
1,2-Dichloropropane	ND	200	
Cis-1,3-Dichloropropene	ND	200	
Trichloroethene	ND	200	
Dibromochloromethane	ND	200	
1,1,2-Trichloroethane	ND	200	
Benzene	ND	200	
Trans-1,3-Dichloropropene	ND	200	

ND - Not Detected

PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

QUALITY CONTROL REPORT

VOLATILE ORGANICS PER EPA METHOD 8240

Page 2 of 2

Client: Retec
 Lab No: 35208qc
 Units: ug/kg
 Blank No: Z3569

METHOD BLANK

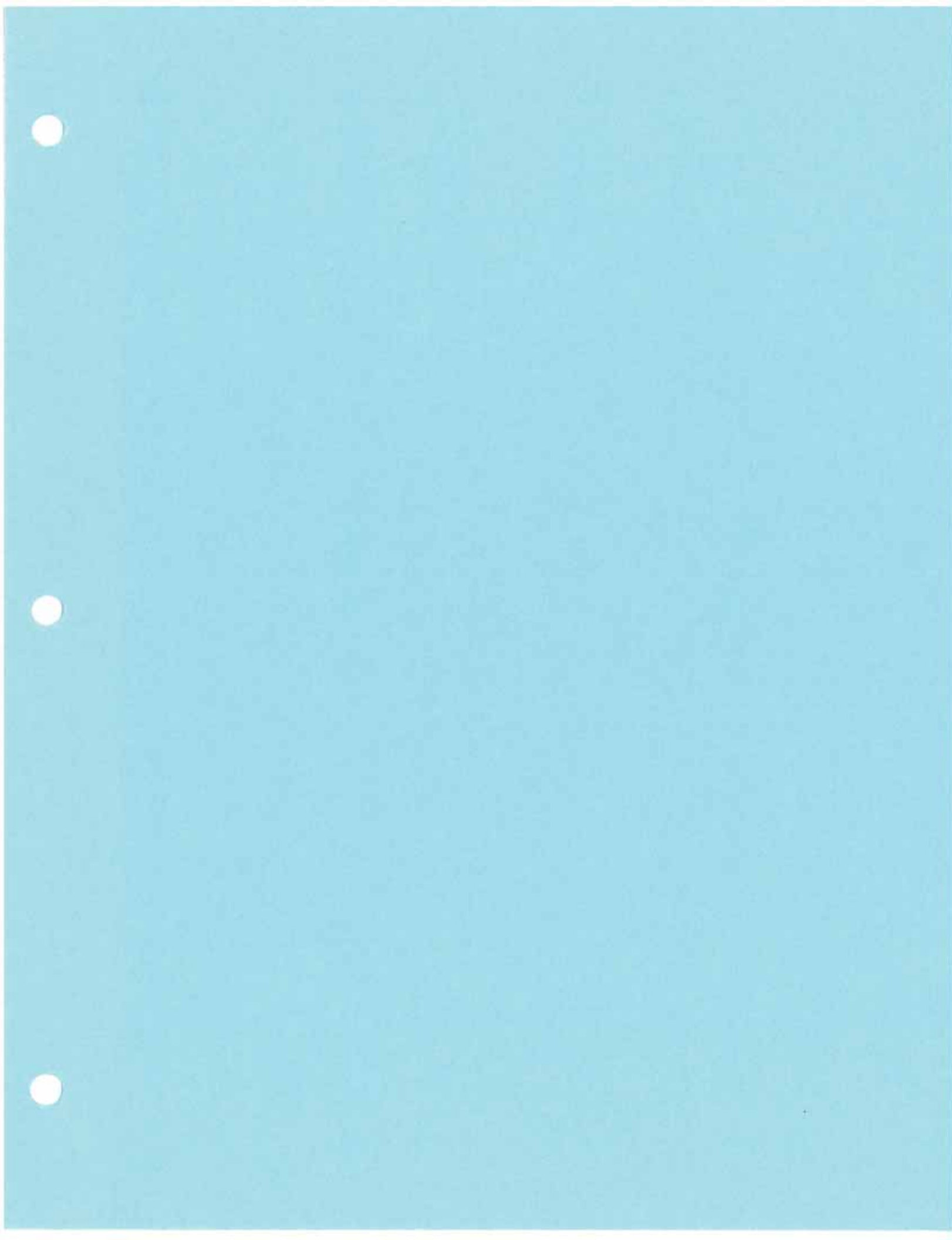
Compound	Result	PQL	Flags
Bromoform	ND	200	
4-Methyl-2-Pentanone	ND	1,000	
2-Hexanone	ND	200	
Tetrachloroethene	ND	200	
1,1,2,2-Tetrachloroethane	ND	200	
Toluene	ND	200	
Chlorobenzene	ND	200	
Ethyl Benzene	ND	200	
Styrene	ND	200	
Total Xylenes	ND	200	

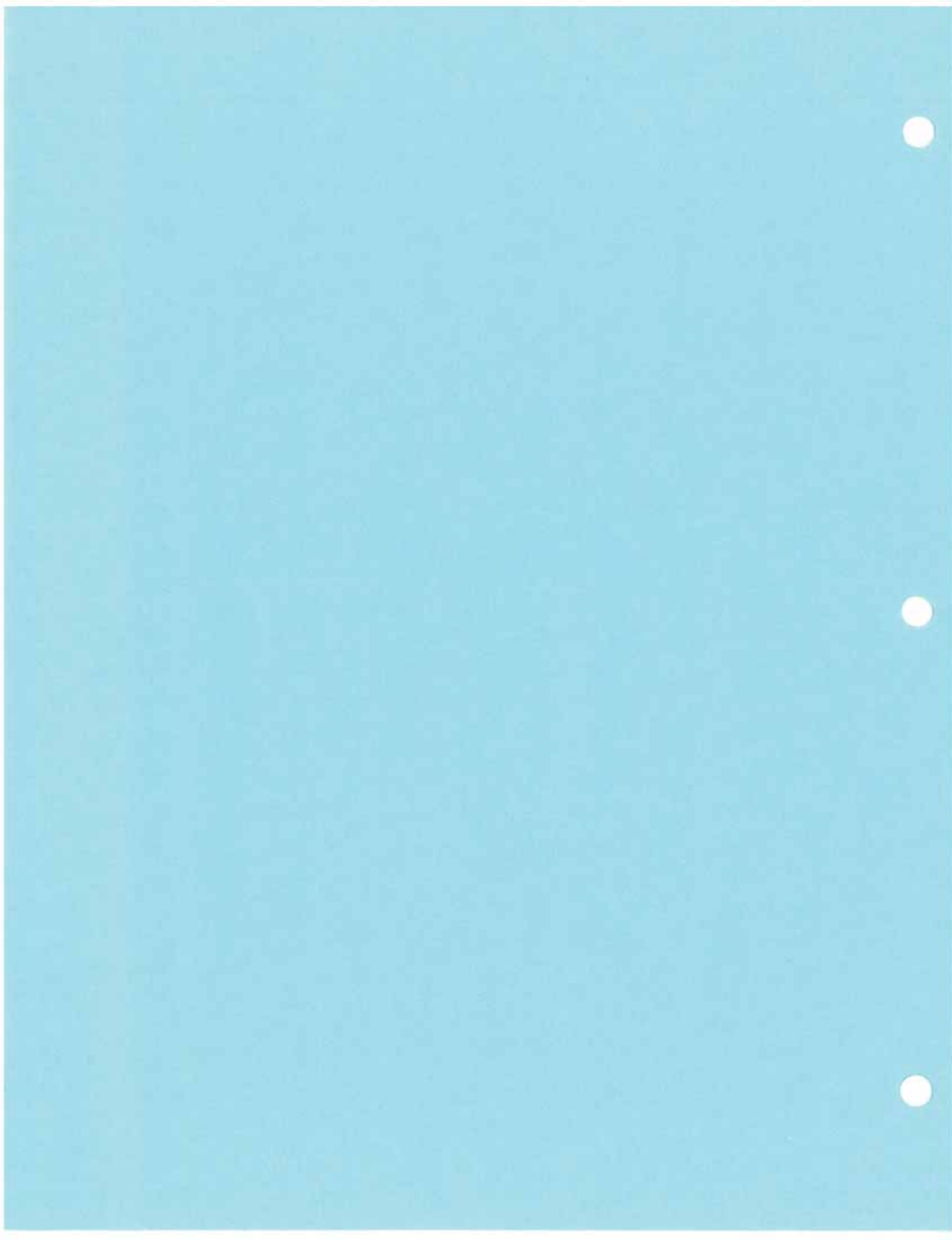
ND - Not Detected

PQL - Practical Quantitation Limit

Volatile Surrogates

Surrogate Compound	Percent Recovery	Flags	Control Limits	
			Water	Soil
Toluene - D8	99		88 - 110	81 - 117
Bromofluorobenzene	102		86 - 115	74 - 121
1,2-Dichloroethane-D4	94		76 - 114	70 - 121





SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Retec

Date: November 4, 1991

Report On: Analysis of Soil

Lab No.: 20845-5

Page 1 of 2

IDENTIFICATION:

Sample Received on 10-25-91

Project: 30-771-300 Scougal Rubber

Client ID: S-2-2

ANALYSIS:

Sample was analyzed in accordance with Test Methods for Evaluating Solid Waste, (SW-846), U.S.E.P.A., 1986 Method 8240 (Volatile Organics)

CAS No.	Compounds	Concentration ug/kg	PQL
74-87-3	Chloromethane	ND	400
74-83-9	Bromomethane	ND	400
75-01-4	Vinyl Chloride	ND	400
75-00-3	Chloroethane	ND	400
75-09-2	Methylene Chloride	ND	200
67-64-1	Acetone	ND	4,000
75-15-0	Carbon Disulfide	ND	200
75-35-4	1,1-Dichloroethene	ND	200
75-34-3	1,1-Dichloroethane	ND	200
540-59-0	1,2-Dichloroethene (Total)	ND	200
67-66-3	Chloroform	ND	200
107-06-2	1,2-Dichloroethane	ND	200
78-93-3	2-Butanone	ND	1,000
71-55-6	1,1,1-Trichloroethane	ND	200
56-23-5	Carbon Tetrachloride	ND	200
108-05-4	Vinyl Acetate	ND	1,000
75-27-4	Bromodichloromethane	ND	200
78-87-5	1,2-Dichloropropane	ND	200
10061-01-5	Cis-1,3-Dichloropropene	ND	200
79-01-6	Trichloroethene	260	200
124-48-1	Dibromochloromethane	ND	200
79-00-5	1,1,2-Trichloroethane	ND	200

ND = Not Detected

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 30-771-300
 Lab No. 20845-5
 Page 2 of 2
 November 4, 1991

Client ID: S-2-2

EPA Method 8240 Continued

CAS No.	Compounds	Concentration ug/kg	PQL
71-43-2	Benzene	ND	200
10061-02-6	Trans-1,3-Dichloropropene	ND	200
75-25-2	Bromoform	ND	200
108-10-1	4-Methyl-2-Pentanone	ND	1,000
591-78-6	2-Hexanone	ND	200
127-18-4	Tetrachloroethene	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	200
108-88-3	Toluene	ND	200
108-90-7	Chlorobenzene	ND	200
100-41-4	Ethyl Benzene	ND	200
100-42-5	Styrene	ND	200
1330-20-7	Total Xylenes	ND	200

ND = Not Detected

PQL - Practical Quantitation Limit - These are the detection limits for this sample. This number is based on sample size, matrix and dilution required.

Volatile Surrogates

Surrogate	Percent Recovery	Control Limits
Toluene - D8	100	81 - 117
Bromofluorobenzene	102	74 - 121
1,2-Dichloroethane D4	99	70 - 121

Total Petroleum Hydrocarbons, mg/kg 100
 by EPA Method 418.1

SOUND ANALYTICAL SERVICES


 DENNIS L. BEAN

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Retec

Date: November 4, 1991

Report On: Analysis of Soil

Lab No.: 20845-5D

Page 1 of 2

IDENTIFICATION:

Sample Received on 10-25-91

Project: 30-771-300 Scougal Rubber

Client ID: S-2-2 (DUPLICATE)

ANALYSIS:

Sample was analyzed in accordance with Test Methods for Evaluating Solid Waste, (SW-846), U.S.E.P.A., 1986 Method 8240 (Volatile Organics)

CAS No.	Compounds	Concentration ug/kg	PQL
74-87-3	Chloromethane	ND	400
74-83-9	Bromomethane	ND	400
75-01-4	Vinyl Chloride	ND	400
75-00-3	Chloroethane	ND	400
75-09-2	Methylene Chloride	ND	200
67-64-1	Acetone	ND	4,000
75-15-0	Carbon Disulfide	ND	200
75-35-4	1,1-Dichloroethene	ND	200
75-34-3	1,1-Dichloroethane	ND	200
540-59-0	1,2-Dichloroethene (Total)	ND	200
67-66-3	Chloroform	ND	200
107-06-2	1,2-Dichloroethane	ND	200
78-93-3	2-Butanone	ND	1,000
71-55-6	1,1,1-Trichloroethane	ND	200
56-23-5	Carbon Tetrachloride	ND	200
108-05-4	Vinyl Acetate	ND	1,000
75-27-4	Bromodichloromethane	ND	200
78-87-5	1,2-Dichloropropane	ND	200
10061-01-5	Cis-1,3-Dichloropropene	ND	200
79-01-6	Trichloroethene	230	200
124-48-1	Dibromochloromethane	ND	200
79-00-5	1,1,2-Trichloroethane	ND	200

ND = Not Detected

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 30-771-300
 Lab No. 20845-5D
 Page 2 of 2
 November 4, 1991

Client ID: S-2-2 (DUPLICATE)

EPA Method 8240 Continued

CAS No.	Compounds	Concentration ug/kg	PQL
71-43-2	Benzene	ND	200
10061-02-6	Trans-1,3-Dichloropropene	ND	200
75-25-2	Bromoform	ND	200
108-10-1	4-Methyl-2-Pentanone	ND	1,000
591-78-6	2-Hexanone	ND	200
127-18-4	Tetrachloroethene	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	200
108-88-3	Toluene	ND	200
108-90-7	Chlorobenzene	ND	200
100-41-4	Ethyl Benzene	ND	200
100-42-5	Styrene	ND	200
1330-20-7	Total Xylenes	ND	200

ND = Not Detected

PQL - Practical Quantitation Limit - These are the detection limits for this sample. This number is based on sample size, matrix and dilution required.

Volatile Surrogates

Surrogate	Percent Recovery	Control Limits
Toluene - D8	102	81 - 117
Bromofluorobenzene	103	74 - 121
1,2-Dichloroethane D4	100	70 - 121

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Retec

Date: November 4, 1991

Report On: Analysis of Soil

Lab No.: 20845-6

Page 1 of 2

IDENTIFICATION:

Sample Received on 10-25-91

Project: 30-771-300 Scougal Rubber

Client ID: S-2-4.5

ANALYSIS:

Sample was analyzed in accordance with Test Methods for Evaluating Solid Waste, (SW-846), U.S.E.P.A., 1986 Method 8240 (Volatile Organics)

CAS No.	Compounds	Concentration ug/kg	PQL
74-87-3	Chloromethane	ND	400
74-83-9	Bromomethane	ND	400
75-01-4	Vinyl Chloride	ND	400
75-00-3	Chloroethane	ND	400
75-09-2	Methylene Chloride	ND	200
67-64-1	Acetone	ND	4,000
75-15-0	Carbon Disulfide	ND	200
75-35-4	1,1-Dichloroethene	ND	200
75-34-3	1,1-Dichloroethane	ND	200
540-59-0	1,2-Dichloroethene (Total)	ND	200
67-66-3	Chloroform	ND	200
107-06-2	1,2-Dichloroethane	ND	200
78-93-3	2-Butanone	ND	1,000
71-55-6	1,1,1-Trichloroethane	ND	200
56-23-5	Carbon Tetrachloride	ND	200
108-05-4	Vinyl Acetate	ND	1,000
75-27-4	Bromodichloromethane	ND	200
78-87-5	1,2-Dichloropropane	ND	200
10061-01-5	Cis-1,3-Dichloropropene	ND	200
79-01-6	Trichloroethene	340	200
124-48-1	Dibromochloromethane	ND	200
79-00-5	1,1,2-Trichloroethane	ND	200

ND = Not Detected

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 30-771-300
 Lab No. 20845-6
 Page 2 of 2
 November 4, 1991

Client ID: S-2-4.5

EPA Method 8240 Continued

CAS No.	Compounds	Concentration ug/kg	PQL
71-43-2	Benzene	ND	200
10061-02-6	Trans-1,3-Dichloropropene	ND	200
75-25-2	Bromoform	ND	200
108-10-1	4-Methyl-2-Pentanone	ND	1,000
591-78-6	2-Hexanone	ND	200
127-18-4	Tetrachloroethene	*(100)	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	200
108-88-3	Toluene	*(140)	200
108-90-7	Chlorobenzene	ND	200
100-41-4	Ethyl Benzene	220	200
100-42-5	Styrene	ND	200
1330-20-7	Total Xylenes	1,500	200

ND = Not Detected

PQL - Practical Quantitation Limit - These are the detection limits for this sample. This number is based on sample size, matrix and dilution required.

* = Compound was detected but below PQL. Value shown is an estimated quantity.

Volatile Surrogates

Surrogate	Percent Recovery	Control Limits
Toluene - D8	106	81 - 117
Bromofluorobenzene	112	74 - 121
1,2-Dichloroethane D4	83	70 - 121

Total Petroleum Hydrocarbons, mg/kg
 by EPA Method 418.1

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SOUND ANALYTICAL SERVICES


 DENNIS L. BEAN

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Retec

Date: November 6, 1991

Report On: Analysis of Soil

Lab No.: 21055

Page 1 of 2

IDENTIFICATION:

Sample originally received on 10-25-91, held under lab report number 20845. Request for additional analysis received on 11-05-91.

Project: 30-771-300 Scougal Rubber

Client ID: S-2-7

ANALYSIS:

Sample was analyzed in accordance with Test Methods for Evaluating Solid Waste, (SW-846), U.S.E.P.A., 1986 Method 8240 (Volatile Organics)

CAS No.	Compounds	Concentration ug/kg	PQL
74-87-3	Chloromethane	ND	400
74-83-9	Bromomethane	ND	400
75-01-4	Vinyl Chloride	ND	400
75-00-3	Chloroethane	ND	400
75-09-2	Methylene Chloride	ND	200
67-64-1	Acetone	ND	4,000
75-15-0	Carbon Disulfide	ND	200
75-35-4	1,1-Dichloroethene	ND	200
75-34-3	1,1-Dichloroethane	ND	200
540-59-0	1,2-Dichloroethene (Total)	ND	200
67-66-3	Chloroform	ND	200
107-06-2	1,2-Dichloroethane	ND	200
78-93-3	2-Butanone	ND	1,000
71-55-6	1,1,1-Trichloroethane	ND	200
56-23-5	Carbon Tetrachloride	ND	200
108-05-4	Vinyl Acetate	ND	1,000
75-27-4	Bromodichloromethane	ND	200
78-87-5	1,2-Dichloropropane	ND	200
10061-01-5	Cis-1,3-Dichloropropene	ND	200
79-01-6	Trichloroethene	*(35)	200
124-48-1	Dibromochloromethane	ND	200
79-00-5	1,1,2-Trichloroethane	ND	200

ND = Not Detected

* = Compound was detected but below PQL. Value shown is an estimated quantity.

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 30-771-300
 Lab No. 21055
 Page 2 of 2
 November 6, 1991

Client ID: S-2-7

EPA Method 8240 Continued

CAS No.	Compounds	Concentration ug/kg	PQL
71-43-2	Benzene	ND	200
10061-02-6	Trans-1,3-Dichloropropene	ND	200
75-25-2	Bromoform	ND	200
108-10-1	4-Methyl-2-Pentanone	ND	1,000
591-78-6	2-Hexanone	ND	200
127-18-4	Tetrachloroethene	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	200
108-88-3	Toluene	ND	200
108-90-7	Chlorobenzene	ND	200
100-41-4	Ethyl Benzene	ND	200
100-42-5	Styrene	ND	200
1330-20-7	Total Xylenes	ND	200

ND = Not Detected

PQL - Practical Quantitation Limit - These are the detection limits for this sample. This number is based on sample size, matrix and dilution required.

Volatile Surrogates

Surrogate	Percent Recovery	Control Limits
Toluene - D8	97	81 - 117
Bromofluorobenzene	100	74 - 121
1,2-Dichloroethane D4	101	70 - 121

SOUND ANALYTICAL SERVICES


 DENNIS L. BEAN

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Retec

Date: November 6, 1991

Report On: Analysis of Soil

Lab No.: 21055-D

Page 1 of 2

IDENTIFICATION:

Sample originally received on 10-25-91, held under lab report number 20845. Request for additional analysis received on 11-05-91.

Project: 30-771-300 Scougal Rubber

Client ID: S-2-7 (DUPLICATE)

ANALYSIS:

Sample was analyzed in accordance with Test Methods for Evaluating Solid Waste, (SW-846), U.S.E.P.A., 1986 Method 8240 (Volatile Organics)

CAS No.	Compounds	Concentration ug/kg	PQL
74-87-3	Chloromethane	ND	400
74-83-9	Bromomethane	ND	400
75-01-4	Vinyl Chloride	ND	400
75-00-3	Chloroethane	ND	400
75-09-2	Methylene Chloride	ND	200
67-64-1	Acetone	ND	4,000
75-15-0	Carbon Disulfide	ND	200
75-35-4	1,1-Dichloroethene	ND	200
75-34-3	1,1-Dichloroethane	ND	200
540-59-0	1,2-Dichloroethene (Total)	ND	200
67-66-3	Chloroform	ND	200
107-06-2	1,2-Dichloroethane	ND	200
78-93-3	2-Butanone	ND	1,000
71-55-6	1,1,1-Trichloroethane	ND	200
56-23-5	Carbon Tetrachloride	ND	200
108-05-4	Vinyl Acetate	ND	1,000
75-27-4	Bromodichloromethane	ND	200
78-87-5	1,2-Dichloropropane	ND	200
10061-01-5	Cis-1,3-Dichloropropene	ND	200
79-01-6	Trichloroethene	*(52)	200
124-48-1	Dibromochloromethane	ND	200
79-00-5	1,1,2-Trichloroethane	ND	200

ND = Not Detected

* = Compound was detected but below PQL. Value shown is an estimated quantity.

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 30-771-300
 Lab No. 21055-D
 Page 2 of 2
 November 6, 1991

Client ID: S-2-7 (DUPLICATE)

EPA Method 8240 Continued

CAS No.	Compounds	Concentration ug/kg	PQL
71-43-2	Benzene	ND	200
10061-02-6	Trans-1,3-Dichloropropene	ND	200
75-25-2	Bromoform	ND	200
108-10-1	4-Methyl-2-Pentanone	ND	1,000
591-78-6	2-Hexanone	ND	200
127-18-4	Tetrachloroethene	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	200
108-88-3	Toluene	ND	200
108-90-7	Chlorobenzene	ND	200
100-41-4	Ethyl Benzene	ND	200
100-42-5	Styrene	ND	200
1330-20-7	Total Xylenes	ND	200

ND = Not Detected

PQL - Practical Quantitation Limit - These are the detection limits for this sample. This number is based on sample size, matrix and dilution required.

Volatile Surrogates

Surrogate	Percent Recovery	Control Limits
Toluene - D8	95	81 - 117
Bromofluorobenzene	99	74 - 121
1,2-Dichloroethane D4	100	70 - 121

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Retec

Date: November 4, 1991

Report On: Analysis of Soil

Lab No.: 20845-7

Page 1 of 2

IDENTIFICATION:

Sample Received on 10-25-91

Project: 30-771-300 Scougal Rubber

Client ID: S-3-2

ANALYSIS:

Sample was analyzed in accordance with Test Methods for Evaluating Solid Waste, (SW-846), U.S.E.P.A., 1986 Method 8240 (Volatile Organics)

CAS No.	Compounds	Concentration ug/kg	PQL
74-87-3	Chloromethane	ND	400
74-83-9	Bromomethane	ND	400
75-01-4	Vinyl Chloride	ND	400
75-00-3	Chloroethane	ND	400
75-09-2	Methylene Chloride	ND	200
67-64-1	Acetone	ND	4,000
75-15-0	Carbon Disulfide	ND	200
75-35-4	1,1-Dichloroethene	ND	200
75-34-3	1,1-Dichloroethane	ND	200
540-59-0	1,2-Dichloroethene (Total)	ND	200
67-66-3	Chloroform	ND	200
107-06-2	1,2-Dichloroethane	ND	200
78-93-3	2-Butanone	ND	1,000
71-55-6	1,1,1-Trichloroethane	ND	200
56-23-5	Carbon Tetrachloride	ND	200
108-05-4	Vinyl Acetate	ND	1,000
75-27-4	Bromodichloromethane	ND	200
78-87-5	1,2-Dichloropropane	ND	200
10061-01-5	Cis-1,3-Dichloropropene	ND	200
79-01-6	Trichloroethene	*(100)	200
124-48-1	Dibromochloromethane	ND	200
79-00-5	1,1,2-Trichloroethane	ND	200

ND = Not Detected

* = Compound was detected but below PQL. Value shown is an estimated quantity.

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 30-771-300
 Lab No. 20845-7
 Page 2 of 2
 November 4, 1991

Client ID: S-3-2

EPA Method 8240 Continued

CAS No.	Compounds	Concentration ug/kg	PQL
71-43-2	Benzene	ND	200
10061-02-6	Trans-1,3-Dichloropropene	ND	200
75-25-2	Bromoform	ND	200
108-10-1	4-Methyl-2-Pentanone	ND	1,000
591-78-6	2-Hexanone	ND	200
127-18-4	Tetrachloroethene	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	200
108-88-3	Toluene	ND	200
108-90-7	Chlorobenzene	ND	200
100-41-4	Ethyl Benzene	ND	200
100-42-5	Styrene	ND	200
1330-20-7	Total Xylenes	ND	200

ND = Not Detected

PQL - Practical Quantitation Limit - These are the detection limits for this sample. This number is based on sample size, matrix and dilution required.


Volatile Surrogates

Surrogate	Percent Recovery	Control Limits
Toluene - D8	106	81 - 117
Bromofluorobenzene	107	74 - 121
1,2-Dichloroethane D4	85	70 - 121

Total Petroleum Hydrocarbons, mg/kg
 by EPA Method 418.1

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SOUND ANALYTICAL SERVICES



 DENNIS L. BEAN

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Retec

Date: November 4, 1991

Report On: Analysis of Soil

Lab No.: 20845-8

Page 1 of 2

IDENTIFICATION:

Sample Received on 10-25-91

Project: 30-771-300 Scougal Rubber

Client ID: S-3-4.5

ANALYSIS:

Sample was analyzed in accordance with Test Methods for Evaluating Solid Waste, (SW-846), U.S.E.P.A., 1986 Method 8240 (Volatile Organics)

CAS No.	Compounds	Concentration ug/kg	PQL
74-87-3	Chloromethane	ND	400
74-83-9	Bromomethane	ND	400
75-01-4	Vinyl Chloride	ND	400
75-00-3	Chloroethane	ND	400
75-09-2	Methylene Chloride	ND	200
67-64-1	Acetone	ND	4,000
75-15-0	Carbon Disulfide	ND	200
75-35-4	1,1-Dichloroethene	ND	200
75-34-3	1,1-Dichloroethane	ND	200
540-59-0	1,2-Dichloroethene (Total)	ND	200
67-66-3	Chloroform	ND	200
107-06-2	1,2-Dichloroethane	ND	200
78-93-3	2-Butanone	ND	1,000
71-55-6	1,1,1-Trichloroethane	ND	200
56-23-5	Carbon Tetrachloride	ND	200
108-05-4	Vinyl Acetate	ND	1,000
75-27-4	Bromodichloromethane	ND	200
78-87-5	1,2-Dichloropropane	ND	200
10061-01-5	Cis-1,3-Dichloropropene	ND	200
79-01-6	Trichloroethene	ND	200
124-48-1	Dibromochloromethane	ND	200
79-00-5	1,1,2-Trichloroethane	ND	200

ND = Not Detected

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 30-771-300
 Lab No. 20845-8
 Page 2 of 2
 November 4, 1991

Client ID: S-3-4.5

EPA Method 8240 Continued

CAS No.	Compounds	Concentration ug/kg	PQL
71-43-2	Benzene	ND	200
10061-02-6	Trans-1,3-Dichloropropene	ND	200
75-25-2	Bromoform	ND	200
108-10-1	4-Methyl-2-Pentanone	ND	1,000
591-78-6	2-Hexanone	ND	200
127-18-4	Tetrachloroethene	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	200
108-88-3	Toluene	ND	200
108-90-7	Chlorobenzene	ND	200
100-41-4	Ethyl Benzene	ND	200
100-42-5	Styrene	ND	200
1330-20-7	Total Xylenes	ND	200

ND = Not Detected

PQL - Practical Quantitation Limit - These are the detection limits for this sample. This number is based on sample size, matrix and dilution required.

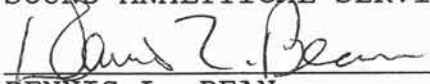
Volatile Surrogates

Surrogate	Percent Recovery	Control Limits
Toluene - D8	109	81 - 117
Bromofluorobenzene	97	74 - 121
1,2-Dichloroethane D4	83	70 - 121

Total Petroleum Hydrocarbons, mg/kg
 by EPA Method 418.1

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SOUND ANALYTICAL SERVICES



 DENNIS L. BEAN

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN
4813 PACIFIC HIGHWAY EAST, T

*Single sample
collected after
Feb. '92 excavation*

TE ANALYSIS
TE (206)922-2310 - FAX (206)922-5047

Report To: Retec

te: February 13, 1992

Report On: Analysis of Soil

Lab No.: 22534

Page 1 of 3

IDENTIFICATION:

Sample Received on 02-07-92
Project: 30-771-440 Scougal
Client ID: S-2-92-1

ANALYSIS:

Sample was analyzed in accordance with Test Methods for Evaluating Solid Waste, (SW-846), U.S.E.P.A., 1986 Method 8240 (Volatile Organics)

CAS No.	Compounds	Concentration ug/kg	PQL
74-87-3	Chloromethane	ND	400
74-83-9	Bromomethane	ND	400
75-01-4	Vinyl Chloride	ND	400
75-00-3	Chloroethane	ND	400
75-09-2	Methylene Chloride	ND	200
67-64-1	Acetone	ND	4,000
75-15-0	Carbon Disulfide	ND	200
75-35-4	1,1-Dichloroethene	ND	200
75-34-3	1,1-Dichloroethane	ND	200
540-59-0	1,2-Dichloroethene (Total)	ND	200
67-66-3	Chloroform	ND	200
107-06-2	1,2-Dichloroethane	ND	200
78-93-3	2-Butanone	ND	1,000
71-55-6	1,1,1-Trichloroethane	ND	200
56-23-5	Carbon Tetrachloride	ND	200
108-05-4	Vinyl Acetate	ND	1,000
75-27-4	Bromodichloromethane	ND	200
78-87-5	1,2-Dichloropropane	ND	200
10061-01-5	Cis-1,3-Dichloropropene	ND	200
79-01-6	Trichloroethene	*(170)	200
124-48-1	Dibromochloromethane	ND	200
79-00-5	1,1,2-Trichloroethane	ND	200

ND = Not Detected

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 30-771-400
 Lab No. 22534
 Page 2 of 3
 February 13, 1992

Client ID: S-2-92-1

EPA Method 8240 Continued

CAS No.	Compounds	Concentration ug/kg	PQL
71-43-2	Benzene	ND	200
10061-02-6	Trans-1,3-Dichloropropene	ND	200
75-25-2	Bromoform	ND	200
108-10-1	4-Methyl-2-Pentanone	ND	1,000
591-78-6	2-Hexanone	ND	200
127-18-4	Tetrachloroethene	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	200
108-88-3	Toluene	ND	200
108-90-7	Chlorobenzene	ND	200
100-41-4	Ethyl Benzene	ND	200
100-42-5	Styrene	ND	200
1330-20-7	Total Xylenes	ND	200

ND = Not Detected

PQL - Practical Quantitation Limit - These are the detection limits for this sample. This number is based on sample size, matrix and dilution required.

Volatile Surrogates

Surrogate	Percent Recovery	Control Limits
Toluene - D8	89	81 - 117
Bromofluorobenzene	86	74 - 121
1,2-Dichloroethane D4	103	70 - 121

Continued . . .

SOUND ANALYTICAL SERVICES, INC.

Retec
Project: 30-771-400
Lab No. 22534
Page 3 of 3
February 13, 1992

Client ID: S-2-92-1

Lab Sample No.	1	1
Client Identification	S-2-92-1	S-2-92-1
Units	mg/kg	mg/kg
Total Petroleum Fuel Hydrocarbons by EPA SW-846 Modified Method 8015	< 10	< 10
TPH as	Diesel	Soluble Oil
SURROGATE RECOVERY, %		
1-Chlorooctane	117	117
Perylene	112	112

Extended G.C. run for characterization. Please see chromatogram and N-Alkane standard chromatogram.

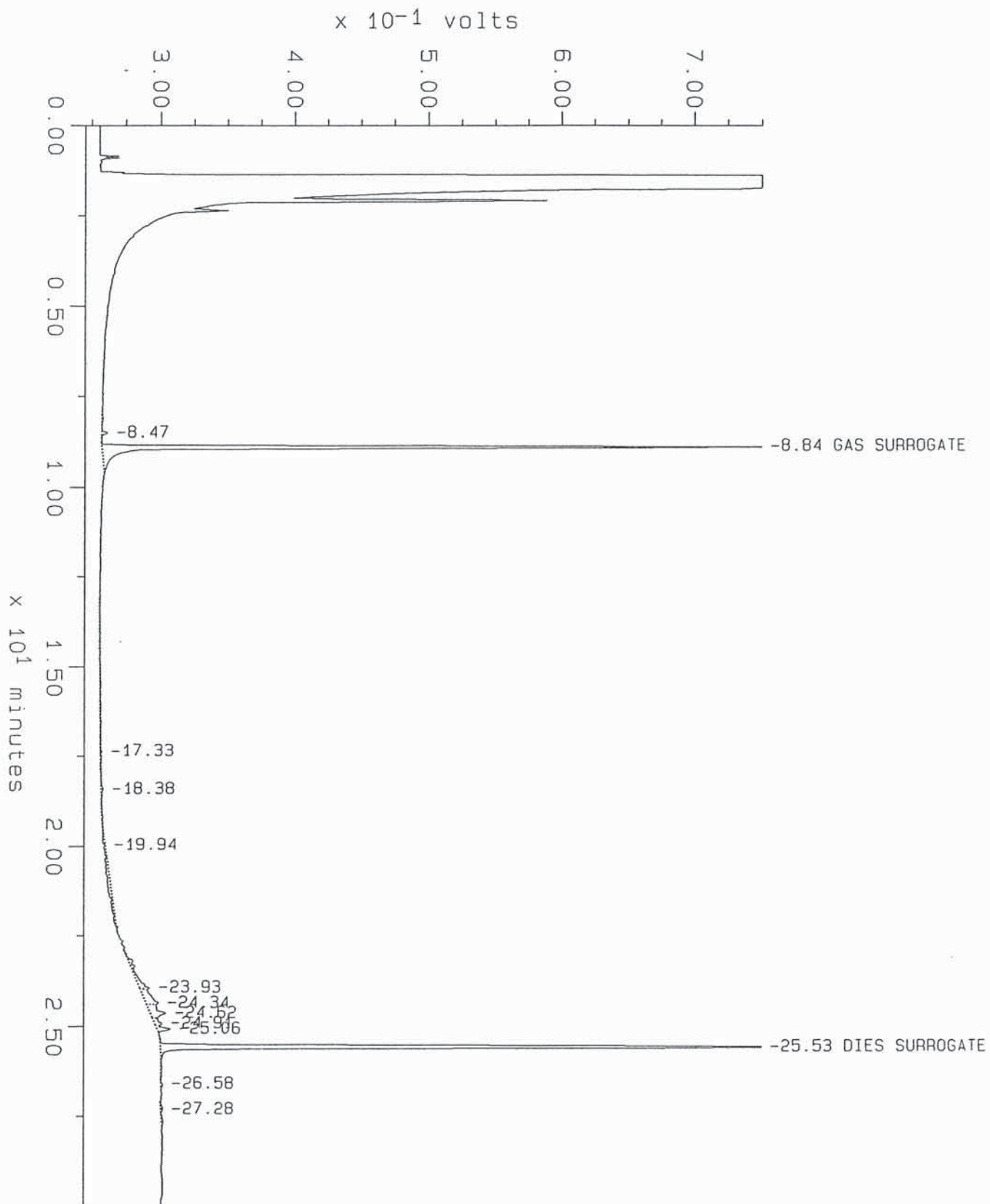
SOUND ANALYTICAL SERVICES


DENNIS L. BEAN

Sample: 22534-1 SOIL
Acquired: 11-FEB-92 16:57
Dilution: 1 : 10.000

Channel: VARIAN 3410
Method: C:\MAX\DATA3\LONGRUN
Amount: 10.045

Filename: 22534-S1
Operator:

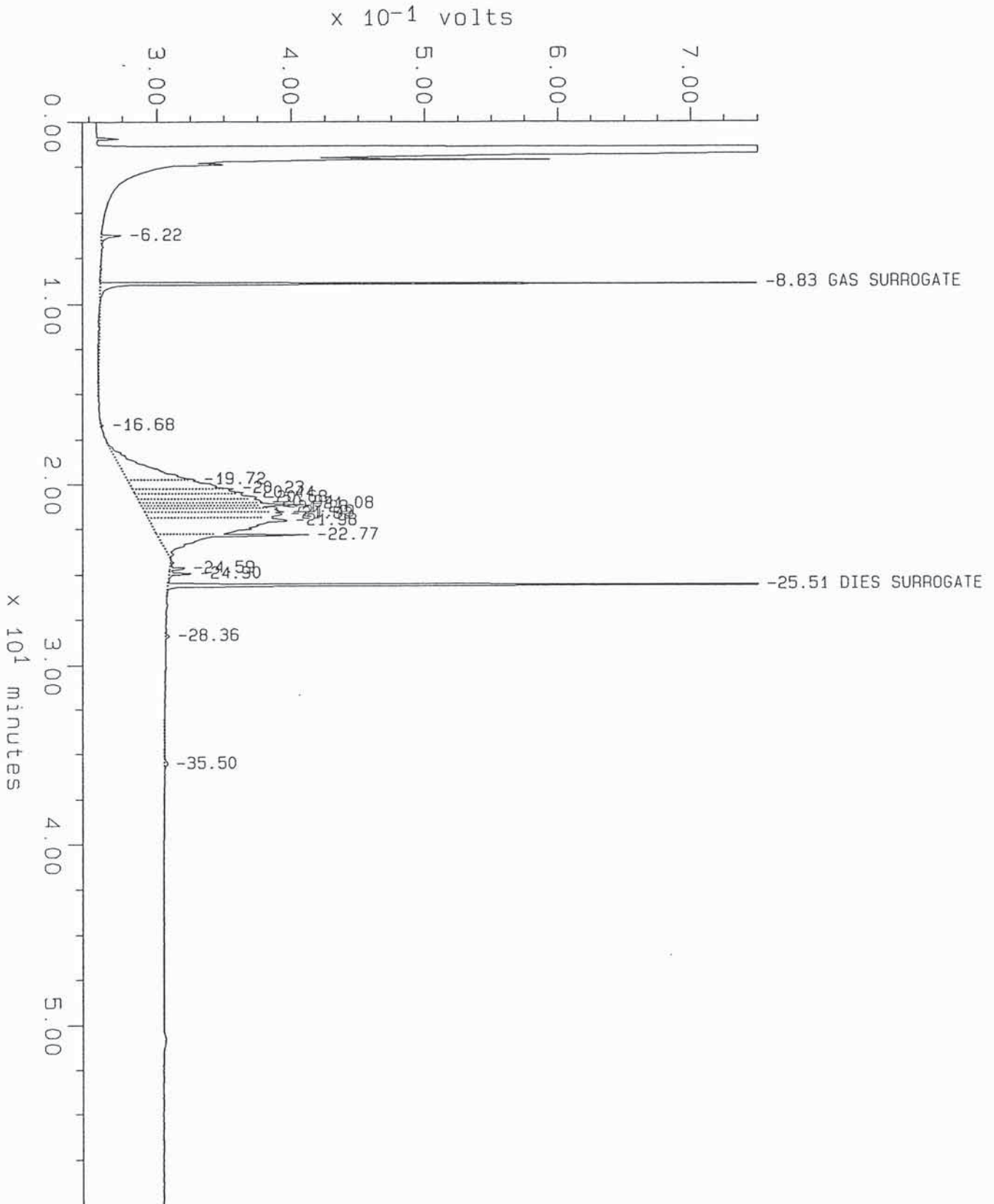


Sample: 22534-1
Acquired: 10-FEB-92 17:16

Channel: VARIAN 3410
Method: C:\MAX\DATA3\LONGRUN

Filename: 22534-1
Operator:

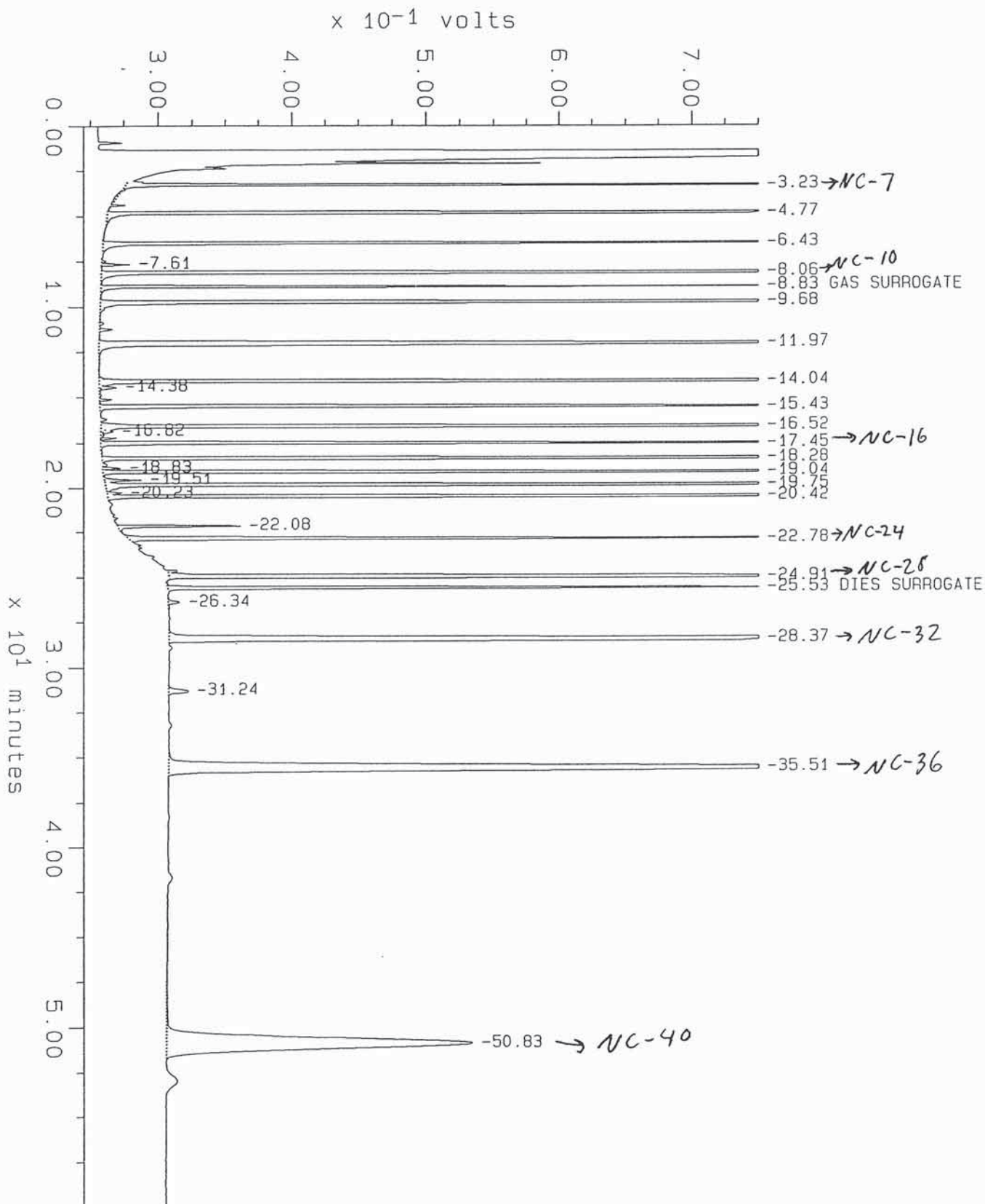
467 mg/L Soluble Oil
Approximate Carbon Range: nC-15 to nC-24



Sample: S-152 CALIB STD
Acquired: 10-FEB-92 16:01

Channel: VARIAN 3410
Method: C:\MAX\DATA3\LONGRUN

Filename: S152-5
Operator:



SOUND ANALYTICAL SERVICES, INC.

*S-9-92-3⁴⁻¹¹ collected
in Sept '92 to
Char. soils,
after Feb. 92
excavation*

Retec
Project: 3-0771-300
Lab No. 27125
Page 4 of 7
September 23, 1992

Lab No. 27125-2

Client ID: S-9-92-3

Volatile Organics by Method 8240

Date Extracted: 9-17-92

Date Analyzed: 9-17-92

CAS No.	Compounds	Concentration ug/kg	PQL
74-87-3	Chloromethane	ND	400
74-83-9	Bromomethane	ND	400
75-01-4	Vinyl Chloride	ND	400
75-00-3	Chloroethane	ND	400
75-09-2	Methylene Chloride	ND	200
67-64-1	Acetone	*(640)	2,000
75-15-0	Carbon Disulfide	ND	200
75-35-4	1,1-Dichloroethene	ND	200
75-34-3	1,1-Dichloroethane	ND	200
540-59-0	1,2-Dichloroethene (Total)	ND	200
67-66-3	Chloroform	ND	200
107-06-2	1,2-Dichloroethane	ND	200
78-93-3	2-Butanone	ND	1,000
71-55-6	1,1,1-Trichloroethane	ND	200
56-23-5	Carbon Tetrachloride	ND	200
108-05-4	Vinyl Acetate	ND	1,000
75-27-4	Bromodichloromethane	ND	200
78-87-5	1,2-Dichloropropane	ND	200
10061-01-5	Cis-1,3-Dichloropropene	ND	200
79-01-6	Trichloroethene	3,000	200
124-48-1	Dibromochloromethane	ND	200
79-00-5	1,1,2-Trichloroethane	ND	200

ND = Not Detected

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 3-0771-300
 Lab No. 27125
 Page 5 of 7
 September 23, 1992

Lab No. 27125-2

Client ID: S-9-92-3

8240 Continued

CAS No.	Compounds	Concentration ug/kg	PQL
71-43-2	Benzene	ND	200
10061-02-6	Trans-1,3-Dichloropropene	ND	200
75-25-2	Bromoform	ND	200
108-10-1	4-Methyl-2-Pentanone	ND	1,000
591-78-6	2-Hexanone	ND	200
127-18-4	Tetrachloroethene	*(89)	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	200
108-88-3	Toluene	ND	200
108-90-7	Chlorobenzene	ND	200
100-41-4	Ethyl Benzene	ND	200
100-42-5	Styrene	ND	200
1330-20-7	Total Xylenes	ND	200

ND - Not Detected

PQL - Practical Quantitation Limit - These are the detection limits for this sample. This number is based on sample size, matrix and dilution required.

*Compound was detected but below PQL. Value shown is an estimated quantity.

Volatile Surrogates

Surrogate	Percent Recovery	Control Limits
Toluene - D8	100	81 - 117
Bromofluorobenzene	103	74 - 121
1,2-Dichloroethane D4	110	70 - 121

TPH Per EPA Method 418.1
 Date Extracted: 9-18-92
 Date Analyzed: 9-18-92

Total Petroleum
 Hydrocarbons, mg/kg

380

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 3-0771-300
 Lab No. 27125
 Page 6 of 7
 September 23, 1992

Lab No. 27125-3

Client ID: S-9-92-4

Volatile Organics by Method 8240

Date Extracted: 9-17-92

Date Analyzed: 9-17-92

CAS No.	Compounds	Concentration ug/kg	PQL
74-87-3	Chloromethane	ND	400
74-83-9	Bromomethane	ND	400
75-01-4	Vinyl Chloride	ND	400
75-00-3	Chloroethane	ND	400
75-09-2	Methylene Chloride	ND	200
67-64-1	Acetone	*(350)	2,000
75-15-0	Carbon Disulfide	ND	200
75-35-4	1,1-Dichloroethene	ND	200
75-34-3	1,1-Dichloroethane	ND	200
540-59-0	1,2-Dichloroethene (Total)	ND	200
67-66-3	Chloroform	ND	200
107-06-2	1,2-Dichloroethane	ND	200
78-93-3	2-Butanone	ND	1,000
71-55-6	1,1,1-Trichloroethane	ND	200
56-23-5	Carbon Tetrachloride	ND	200
108-05-4	Vinyl Acetate	ND	1,000
75-27-4	Bromodichloromethane	ND	200
78-87-5	1,2-Dichloropropane	ND	200
10061-01-5	Cis-1,3-Dichloropropene	ND	200
79-01-6	Trichloroethene	*(120)	200
124-48-1	Dibromochloromethane	ND	200
79-00-5	1,1,2-Trichloroethane	ND	200

ND = Not Detected

*Compound was detected but below PQL. Value shown is an estimated quantity.

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 3-0771-300
 Lab No. 27125
 Page 7 of 7
 September 23, 1992

Lab No. 27125-3

Client ID: S-9-92-4

8240 Continued

CAS No.	Compounds	Concentration ug/kg	PQL
71-43-2	Benzene	ND	200
10061-02-6	Trans-1,3-Dichloropropene	ND	200
75-25-2	Bromoform	ND	200
108-10-1	4-Methyl-2-Pentanone	ND	1,000
591-78-6	2-Hexanone	ND	200
127-18-4	Tetrachloroethene	ND	200
79-34-5	1,1,2,2-Tetrachloroethane	ND	200
108-88-3	Toluene	ND	200
108-90-7	Chlorobenzene	ND	200
100-41-4	Ethyl Benzene	ND	200
100-42-5	Styrene	ND	200
1330-20-7	Total Xylenes	ND	200

ND - Not Detected

PQL - Practical Quantitation Limit - These are the detection limits for this sample. This number is based on sample size, matrix and dilution required.

Volatile Surrogates

Surrogate	Percent Recovery	Control Limits
Toluene - D8	102	81 - 117
Bromofluorobenzene	104	74 - 121
1,2-Dichloroethane D4	108	70 - 121

TPH Per EPA Method 418.1

Date Extracted: 9-18-92

Date Analyzed: 9-18-92

Total Petroleum
 Hydrocarbons, mg/kg

130

SOUND ANALYTICAL SERVICES


 DENNIS L. BEAN

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

QUALITY CONTROL REPORT

Client: Retec
Lab No: 27125qc1
Units: ug/kg
Date: September 23, 1992
Blank No: V5438

METHOD BLANK

VOLATILE ORGANICS EPA SW-846 METHOD 8240

Compound	Blank Value	PQL	FLAGS
Chloromethane	ND	400	
Bromomethane	ND	400	
Vinyl Chloride	ND	400	
Chloroethane	ND	400	
Methylene Chloride	1,600	200	
Acetone	ND	2,000	
Carbon Disulfide	ND	200	
1,1-Dichloroethene	ND	200	
1,1-Dichloroethane	ND	200	
1,2-Dichloroethene (Total)	ND	200	
Chloroform	ND	200	
1,2-Dichloroethane	ND	200	
2-Butanone	ND	1,000	
1,1,1-Trichloroethane	ND	200	
Carbon Tetrachloride	ND	200	
Vinyl Acetate	ND	1,000	
Bromodichloromethane	ND	200	
1,2-Dichloropropane	ND	200	
Cis-1,3-Dichloropropene	ND	200	
Trichloroethene	ND	200	
Dibromochloromethane	ND	200	
1,1,2-Trichloroethane	ND	200	
Benzene	ND	200	
Trans-1,3-Dichloropropene	ND	200	
Bromoform	ND	200	
4-Methyl-2-Pentanone	ND	1,000	
2-Hexanone	ND	200	
Tetrachloroethene	ND	200	
1,1,2,2-Tetrachloroethane	ND	200	
Toluene	*(68)	200	
Chlorobenzene	ND	200	
Ethyl Benzene	ND	200	
Styrene	ND	200	
Total Xylenes	ND	200	

Continued

SOUND ANALYTICAL SERVICES, INC.

QUALITY CONTROL REPORT

Page 2 of 2

Client: Retec
Lab No: 27125qc1
Units: ug/kg
Date: September 23, 1992
Blank No: V5438

METHOD BLANK

VOLATILE ORGANICS EPA SW-846 METHOD 8240

ND = Not Detected

PQL = Practical Quantitation Limit - These are the detection limits for this sample. This number is based on sample size, matrix and dilution required.

*Compound was detected but below PQL. Value shown is an estimated quantity.

VOLATILE SURROGATES

Surrogate	Percent Recovery	Control Limits	
		Water	Soil
Toluene - d8	103	86 - 115	81 - 117
Bromofluorobenzene	100	76 - 114	74 - 121
1,2-Dichloroethane d4	97	88 - 110	70 - 121

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

QUALITY CONTROL REPORT

Page 1 of 2

Client: Retec
 Lab No: 27125qc2
 Matrix: Soil
 Units: ug/kg
 Date: September 23, 1992
 Dup No: 27125-1

DUPLICATE
VOLATILE ORGANICS EPA SW-846 METHOD 8240

Compound	Sample (S)	Duplicate (D)	RPD	FLAGS
Chloromethane	ND	ND	0.0	
Bromomethane	ND	ND	0.0	
Vinyl Chloride	ND	ND	0.0	
Chloroethane	ND	ND	0.0	
Methylene Chloride	ND	ND	0.0	
Acetone	*(190)	*(270)	34.7	
Carbon Disulfide	ND	ND	0.0	
1,1-Dichloroethene	ND	ND	0.0	
1,1-Dichloroethane	ND	ND	0.0	
1,2-Dichloroethene (Total)	ND	ND	0.0	
Chloroform	ND	ND	0.0	
1,2-Dichloroethane	ND	ND	0.0	
2-Butanone	ND	ND	0.0	
1,1,1-Trichloroethane	ND	ND	0.0	
Carbon Tetrachloride	ND	ND	0.0	
Vinyl Acetate	ND	ND	0.0	
Bromodichloromethane	ND	ND	0.0	
1,2-Dichloropropane	ND	ND	0.0	
Cis-1,3-Dichloropropene	ND	ND	0.0	
Trichloroethene	ND	ND	0.0	
Dibromochloromethane	ND	ND	0.0	
1,1,2-Trichloroethane	ND	ND	0.0	
Benzene	ND	ND	0.0	
Trans-1,3-Dichloropropene	ND	ND	0.0	
Bromoform	ND	ND	0.0	
4-Methyl-2-Pentanone	ND	ND	0.0	
2-Hexanone	ND	ND	0.0	
Tetrachloroethene	ND	ND	0.0	
1,1,2,2-Tetrachloroethane	ND	ND	0.0	
Toluene	ND	ND	0.0	
Chlorobenzene	ND	ND	0.0	
Ethyl Benzene	ND	ND	0.0	
Styrene	ND	ND	0.0	
Total Xylenes	ND	ND	0.0	

Continued

SOUND ANALYTICAL SERVICES, INC.

QUALITY CONTROL REPORT

Page 2 of 2

Client: Retec
Lab No: 27125qc2
Date: September 23, 1992

DUPLICATE

VOLATILE ORGANICS EPA SW-846 METHOD 8240

ND = Not Detected

*Compound was detected but below PQL. Value shown is an estimated quantity.

RPD = Relative Percent Difference
= $[(S - D) / ((S + D) / 2)] \times 100$

VOLATILE SURROGATE RECOVERY, %

Surrogate	Sample	Duplicate	Control Limits	
			Water	Soil
Toluene - d8	101	106	86 - 115	81 - 117
BFB	98	94	76 - 114	74 - 121
1,2-DCE - d4	116	102	88 - 110	70 - 121

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206) 922-2310 - FAX (206) 922-5047

QUALITY CONTROL REPORT

TPH by Method 418.1

Client: Retec
Lab No: 27125qc3
Matrix: Soil
Units: mg/kg
Date: September 23, 1992

DUPLICATE

Dup No. 27125-3

Parameter	Sample(S)	Duplicate(D)	RPD
Total Petroleum Hydrocarbons	130	120	8.0

RPD = Relative Percent Difference
= $[(S - D) / ((S + D) / 2)] \times 100$

METHOD BLANK

Parameter	Blank Value
Total Petroleum Hydrocarbons	< 10

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206) 922-2310 - FAX (206) 922-5047

QUALITY CONTROL REPORT

Total Petroleum Fuel Hydrocarbons by Method 8015

Client: Retec
Lab No: 27125qc4
Matrix: Soil
Units: mg/kg
Date: September 23, 1992

DUPLICATE

Dup. No. 27125-1

Parameter	Sample(S)	Duplicate(D)	RPD
Total Petroleum Fuel Hydrocarbons	< 10	< 10	0.0
<u>SURROGATE RECOVERY%</u>			
1-chlorooctane	86	86	
o-terphenyl	69	74	

RPD = relative percent difference
= $[(S - D) / ((S + D) / 2)] \times 100$

METHOD BLANK

Parameter	Blank Value
Total Petroleum Fuel Hydrocarbons	< 10
<u>SURROGATE RECOVERY%</u>	
1-chlorooctane	85
o-terphenyl	90

SOUND ANALYTICAL SERV

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE
4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (2

*Collected
after Oct, '92
excavation*

Report To: Retec

Date:

Report On: Analysis of Soil

Lab No.. 27010
Page 1 of 3

IDENTIFICATION:

Sample Received on 10-07-92
Project: 3-0741-300 Scougal Rubber
Client ID: S-10-92-5

ANALYSIS:

Volatile Organics by Method 8240
Date Extracted: 10-8-92
Date Analyzed: 10-8-92

Compound	Concentration ug/kg	PQL	Flag
Chloromethane	ND	400	
Bromomethane	ND	400	
Vinyl Chloride	ND	400	
Chloroethane	ND	400	
Methylene Chloride	ND	200	
Acetone	ND	2,000	
Carbon Disulfide	ND	200	
1,1-Dichloroethene	ND	200	
1,1-Dichloroethane	ND	200	
1,2-Dichloroethene (Total)	ND	200	
Chloroform	ND	200	
1,2-Dichloroethane	ND	200	
2-Butanone	ND	1,000	
1,1,1-Trichloroethane	ND	200	
Carbon Tetrachloride	ND	200	
Vinyl Acetate	ND	1,000	
Bromodichloromethane	ND	200	
1,2-Dichloropropane	ND	200	
Cis-1,3-Dichloropropene	ND	200	
Trichloroethene	ND	200	
Dibromochloromethane	ND	200	
1,1,2-Trichloroethane	ND	200	

ND = Not Detected

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 3-0771-300
 Lab No. 27616
 Page 2 of 3
 October 12, 1992

Client ID: S-10-92-5

8240 Continued . . .

Compound	Concentration ug/kg	PQL	Flag
Benzene	ND	200	
Trans-1,3-Dichloropropene	ND	200	
Bromoform	ND	200	
4-Methyl-2-Pentanone	ND	1,000	
2-Hexanone	ND	200	
Tetrachloroethene	ND	200	
1,1,2,2-Tetrachloroethane	ND	200	
Toluene	ND	200	
Chlorobenzene	ND	200	
Ethyl Benzene	ND	200	
Styrene	ND	200	
Total Xylenes	ND	200	

ND - Not Detected

PQL - Practical Quantitation Limit - These are the detection limits for this sample. This number is based on sample size, matrix and dilution required.

Volatile Surrogates

Surrogate	Percent Recovery	Control Limits
Toluene - D8	110	81 - 117
Bromofluorobenzene	99	74 - 121
1,2-Dichloroethane D4	96	70 - 121

Continued

SOUND ANALYTICAL SERVICES, INC.

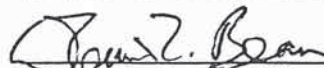
Retec
Project: 3-0771-300
Lab No. 27616
Page 3 of 3
October 12, 1992

Client ID: S-10-92-5

TPH Per EPA Method 418.1
Date Extracted: 10-8-92
Date Analyzed: 10-8-92

Total Petroleum
Hydrocarbons, mg/kg < 10

SOUND ANALYTICAL SERVICES


DENNIS L. BEAN

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

QUALITY CONTROL REPORT

VOLATILE ORGANICS EPA SW-846 METHOD 8240

Page 1 of 2

Client: Retec
Lab No: 27616qc1
Units: ug/kg
Date: October 12, 1992
Blank No: V5874

METHOD BLANK

Compound	Blank Value	PQL	FLAGS
Chloromethane	ND	10	
Bromomethane	ND	10	
Vinyl Chloride	ND	10	
Chloroethane	ND	10	
Methylene Chloride	530	5	
Acetone	ND	50	
Carbon Disulfide	ND	5	
1,1-Dichloroethene	ND	5	
1,1-Dichloroethane	ND	5	
1,2-Dichloroethene (Total)	ND	5	
Chloroform	ND	5	
1,2-Dichloroethane	ND	5	
2-Butanone	ND	25	
1,1,1-Trichloroethane	ND	5	
Carbon Tetrachloride	ND	5	
Vinyl Acetate	ND	25	
Bromodichloromethane	ND	5	
1,2-Dichloropropane	ND	5	
Cis-1,3-Dichloropropene	ND	5	
Trichloroethene	ND	5	
Dibromochloromethane	ND	5	
1,1,2-Trichloroethane	ND	5	
Benzene	ND	5	
Trans-1,3-Dichloropropene	ND	5	
Bromoform	ND	5	
4-Methyl-2-Pentanone	ND	25	
2-Hexanone	ND	5	
Tetrachloroethene	ND	5	
1,1,2,2-Tetrachloroethane	ND	5	
Toluene	ND	5	
Chlorobenzene	ND	5	
Ethyl Benzene	ND	5	
Styrene	ND	5	
Total Xylenes	ND	5	

Continued

SOUND ANALYTICAL SERVICES, INC.

QUALITY CONTROL REPORT

VOLATILE ORGANICS EPA SW-846 METHOD 8240

Page 2 of 2

Client: Retec
Lab No: 27616qc2
Units: ug/kg
Date: October 12, 1992
Blank No: V5874

METHOD BLANK

ND = Not Detected

PQL = Practical Quantitation Limit - These are the detection limits for this sample. This number is based on sample size, matrix and dilution required.

VOLATILE SURROGATES

Surrogate	Percent Recovery	Control Limits	
		Water	Soil
Toluene - d8	108	86 - 115	81 - 117
Bromofluorobenzene	96	76 - 114	74 - 121
1,2-Dichloroethane d4	99	88 - 110	70 - 121

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206) 922-2310 - FAX (206) 922-5047

QUALITY CONTROL REPORT

TPH by Method 418.1

Client: Retec
Lab No: 27616qc2
Matrix: Soil
Units: mg/kg
Date: October 12, 1992

DUPLICATE

Dup No. 27616-1

Parameter	Sample(S)	Duplicate(D)	RPD
Total Petroleum Hydrocarbons	< 10	< 10	0.0

RPD = Relative Percent Difference
= $[(S - D) / ((S + D) / 2)] \times 100$

METHOD BLANK

Parameter	Blank Value
Total Petroleum Hydrocarbons	< 10

Appendix B
Groundwater Sampling Logs and Analytical Data

GROUNDWATER SAMPLING LOG

PROJECT NAME SCOUGAL RUBBER
 PROJECT NO. SCROO-02417-300
 DATE 6.6.01

WELL NO. MW-11-
 SAMPLED BY DA

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>6.51</u> (wl.prot.-ft)
DEPTH OF WELL	(ft) <u>19.90</u>
WELL DIAMETER	(inches) <u>4"</u>
FEET OF WATER	
CASING VOLUME*	(gal)
PURGE VOLUME	(gal)
PRODUCT THICK	(ft)
WELL CONDITION	
WEATHER	

1.65

	PURGE	DATA		
START PURGE TIME:	<u>1130</u>			
VOL. PURGED (gal)				
TIME				
FLOW RATE				
pH (units)	<u>5.96</u>	<u>5.82</u>	<u>5.84</u>	
CONDUCTIVITY (umhos/cm)	<u>605</u>	<u>604</u>	<u>604</u>	
TEMP. (C)	<u>14.0</u>	<u>13.9</u>	<u>13.9</u>	
WATER COLOR				

PURGE AND SAMPLE EQUIPT:

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-11-0601</u>	<u>1300</u>	<u>BTEX</u>	<u>40ml</u>	<u>3</u>	<u>Hel</u>

ADDITIONAL INFORMATION:

TOC=Top of well casing
 wl.prot.=top of well protector
 casing volume= $\pi r^2 h \times 7.48 \text{ gal/ft}^3$

GROUNDWATER SAMPLING LOG

PROJECT NAME SCOUGAL RUBBER
 PROJECT NO. SCROO-02417-300
 DATE 6.6.01

WELL NO. MW-12
 SAMPLED BY DA

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>6.22</u> (wl.prot.-ft)
DEPTH OF WELL	(ft) <u>19.50</u>
WELL DIAMETER	(inches) <u>4"</u>
FEET OF WATER	
CASING VOLUME*	(gal)
PURGE VOLUME	(gal)
PRODUCT THICK	(ft)
WELL CONDITION	
WEATHER	

	PURGE	DATA
START PURGE TIME:	<u>1315</u>	
VOL. PURGED (gal)		
TIME		
FLC DATE		
pH (s)	<u>5.96</u>	<u>6.05</u>
CONDUCTIVITY	<u>648</u>	<u>653</u>
(umhos/cm)		
TEMP. (C)	<u>14.2</u>	<u>13.9</u>
WATER COLOR		

PURGE AND SAMPLE EQUIP:

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-12-0601</u>	<u>1345</u>	<u>BTEX</u>	<u>40ml</u>	<u>3</u>	<u>HeC</u>

ADDITIONAL INFORMATION:

TOC=Top of well casing
 wl.prot.=top of well protector
 *casing volume= $\pi r^2 h \times 7.48 \text{ gal/ft}^3$

GROUNDWATER SAMPLING LOG

PROJECT NAME SCOUGAL RUBBER
 PROJECT NO. SCROO-02417-300
 DATE _____

WELL NO. MW-113
 SAMPLED BY _____

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>7.14</u> (wl.prot.-ft)
DEPTH OF WELL	(ft)
WELL DIAMETER	(inches) <u>19.8</u>
FEET OF WATER	
CASING VOLUME*	(gal)
PURGE VOLUME	(gal)
PRODUCT THICK	(ft)
WELL CONDITION	
WEATHER	

Day MW-113-1140

	PURGE		DATA
START PURGE TIME:	<u>11 20</u>		
VOL. PURGED (gal)	<u>2.0</u>	<u>2.0</u>	<u>2.0</u>
TIME			
FLOW RATE			
pH (units)	<u>5.60</u>	<u>5.71</u>	<u>5.72</u>
CONDUCTIVITY (umhos/cm)	<u>308</u>	<u>285</u>	<u>300</u>
TEMP. (C)	<u>14.1</u>	<u>13.4</u>	<u>13.4</u>
WATER COLOR			

PURGE AND SAMPLE EQUIPT: _____

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-113-0601</u>	<u>1140</u>	<u>BTEX</u>	<u>40 ml</u>	<u>3</u>	<u>HEL</u>
<u>MW113-0601</u>	<u>1140</u>	<u>"</u>	<u>"</u>	<u>3</u>	<u>"</u>

ADDITIONAL INFORMATION:

TOC=Top of well casing
 wl.prot.=top of well protector
 casing volume= $\pi r^2 h \times 7.48 \text{ gal/ft}^3$

GROUNDWATER SAMPLING LOG

PROJECT NAME SCOUGAL RUBBER
 PROJECT NO. SCROO-02417-300
 DATE 6-6-01

WELL NO. MW-14
 SAMPLED BY _____

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>7.81</u> (wl.prot.-ft)
DEPTH OF WELL	(ft) <u>19.3</u>
WELL DIAMETER	(inches) <u>2</u>
FEET OF WATER	
CASING VOLUME*	(gal)
PURGE VOLUME	(gal)
PRODUCT THICK	(ft)
WELL CONDITION	
WEATHER	

	PURGE	DATA		
START PURGE TIME:	<u>1515</u>			
VOL. PURGED (gal)				
TIME				
FLC DATE				
pH (u.ms)	<u>5.96</u>	<u>5.96</u>	<u>6.02</u>	
CONDUCTIVITY (umhos/cm)	<u>348</u>	<u>339</u>	<u>379</u>	
TEMP. (C)	<u>15.8</u>	<u>14.6</u>	<u>14.4</u>	
WATER COLOR				

PURGE AND SAMPLE EQUIP:

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-14-0601</u>	<u>1545</u>	<u>BTEX</u>	<u>HOWL</u>	<u>3</u>	<u>Hel</u>

ADDITIONAL INFORMATION:

OC=Top of well casing
 wl.prot.=top of well protector
 casing volume = $\pi r^2 h (ft) \times 7.48 gal/ft^3$

GROUNDWATER SAMPLING LOG

PROJECT NAME SCOUGAL RUBBER
 PROJECT NO. SCROO-02417-300
 DATE 6.16.06

WELL NO. MW-15
 SAMPLED BY D. G. M.

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>7.34</u> (wl.prot.-ft)
DEPTH OF WELL	(ft) <u>19.2</u>
WELL DIAMETER	(inches) <u>2</u>
FEET OF WATER	
CASING VOLUME*	(gal)
PURGE VOLUME	(gal)
PRODUCT THICK	(ft)
WELL CONDITION	
WEATHER	

	PURGE		DATA
START PURGE TIME:	<u>1730</u>		
VOL. PURGED (gal)			
TIME			
FLOW RATE			
pH (units)	<u>5.60</u>	<u>5.65</u>	<u>5.70</u>
CONDUCTIVITY	<u>417</u>	<u>424</u>	<u>431</u>
(umhos/cm)			
TEMP. (C)	<u>14.3</u>	<u>14.3</u>	<u>14.3</u>
WATER COLOR			

PURGE AND SAMPLE EQUIP:

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW 15-0601</u>	<u>1450</u>	<u>BTEX</u>	<u>40ml</u>	<u>3</u>	<u>HCL</u>

ADDITIONAL INFORMATION:

TOC=Top of well casing
 wl.prot.=top of well protector
 *casing volume= $\pi r^2 h \times 7.48 \text{ gal/ft}^3$

GROUNDWATER SAMPLING LOG

PROJECT NAME SCOUGAL RUBBER
 PROJECT NO. SCROO-02417-300
 DATE 6-6-01

WELL NO. MW-16
 SAMPLED BY DRA

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>7.03</u> (wl.prot.-ft)
DEPTH OF WELL	(ft) <u>19.51</u>
WELL DIAMETER	(inches) 1.5 <u>2"</u>
FEET OF WATER	
CASING VOLUME*	(gal)
PURGE VOLUME	(gal)
PRODUCT THICK	(ft)
WELL CONDITION	
WEATHER	

	PURGE	DATA
START PURGE TIME:	<u>1200</u>	
VOL. PURGED (gal)		
TIME		
FL ATE		
pH (units)	<u>5.83</u>	<u>6.00</u> <u>6.04</u>
CONDUCTIVITY	<u>.236</u>	<u>379</u> <u>380</u>
(umhos/cm)		
TEMP. (C)	<u>13.6</u>	<u>13.8</u> <u>13.8</u>
WATER COLOR		
PURGE AND SAMPLE EQUIP:		

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-16-0601</u>	<u>1220</u>	<u>BTEX</u>	<u>40mL</u>	<u>3</u>	<u>HCL</u>

ADDITIONAL INFORMATION:

TOC=Top of well casing
 wl.prot.=top of well protector
 *cr volume= $\pi r^2 h$ (ft)x7.48gal/ft³



Analytical Resources, Incorporated
Analytical Chemists and Consultants

15 June 2001

Dean Kinney
ThermoRetec, Inc.
1011 S.W. Klickitat Way
Suite 207
Seattle, WA 98134

RE: Client Project: SCR00-02417, Scougal Rubber
ARI Project: DE80

Dear Dean:

Please find enclosed the original Chain-of-Custody record (COC) and the final results for the samples from the project referenced above. Seven water samples and one trip blank were received on June 6, 2001. The samples were received in good condition and there were no discrepancies in the paperwork. The samples were analyzed for VOAs as requested.

No problems were encountered during the analysis.

A copy of these reports will be kept on file with ARI. Should you have any questions or problems please feel free to call me at any time.

Sincerely,

ANALYTICAL RESOURCES, INC.

A handwritten signature in black ink, appearing to read "Mark Harris".

Mark Harris
Project Manager
206/389-6150
<mark@arilabs.com>

Enclosures

cc: file DE80

MDH/kg

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 400 Ninth Avenue North
 Seattle, WA 98109-4708
 206-621-6490 206-621-7523 (fax)

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Turn Around Requested: Standard

Report to: <u>Deans Knavey</u>	Proj Name: <u>Scougel Rubber</u>				Analyses Requested										Notes/Comments						
Company: <u>ThermoKetic</u>	Proj Number: <u>SER00-02417</u>				8260 Full Serum																
Address:	Sampler: <u>Darrell Anderson</u>																				
Phone: <u>206 624 9349</u>	Shipping Method: <u>Hand Delivered</u>																				
Fax:	AirBill:																				
Sample ID	Sample Date	Sample Time	Sample Matrix	No Containers																	
<u>MW-11-0601</u>	<u>6-6-01</u>	<u>1300</u>	<u>H2O</u>	<u>3</u>	<u>X</u>																
<u>MW-12-0601</u>		<u>1345</u>		<u>3</u>	<u>X</u>																
<u>MW-13-0601</u>		<u>1140</u>		<u>3</u>	<u>X</u>																
<u>MW-14-0601</u>		<u>1545</u>		<u>3</u>	<u>X</u>																
<u>MW-15-0601</u>		<u>1450</u>		<u>3</u>	<u>X</u>																
<u>MW-16-0601</u>		<u>1220</u>		<u>3</u>	<u>X</u>																
<u>MW-113-0601</u>		<u>1140</u>		<u>3</u>	<u>X</u>																
<u>Trip Blank</u>				<u>2</u>	<u>X</u>																

Relinquished: (Signature) <u>Darrell Anderson</u>	Relinquished: (Signature)	Relinquished: (Signature)	Special Instructions/Notes
Printed name: <u>Darrell Anderson</u>	Printed name:	Printed name:	
Company: <u>ThermoKetic</u>	Company:	Company:	
Date: <u>6-6-01</u> Time: <u>1620</u>	Date: Time:	Date: Time:	
Received by: <u>S. D. DUNN/HOD</u>	Received by:	Received by:	Number of Coolers: Cooler Temp(s): COC Seals Intact? Bottles Intact?
Printed name: <u>S. D. DUNN/HOD</u>	Printed name:	Printed name:	
Company: <u>ARC</u>	Company:	Company:	
Date: <u>06/06/01</u> Time: <u>1620</u>	Date: Time:	Date: Time:	



ORGANIC COMPOUND DATA REPORTING QUALIFIERS

- U Indicates the compound was undetected at the reported concentration. (Same as ND).
- J Indicates an estimated concentration when the value is less than the calculated reporting limit.
- D Indicates the surrogate/spike(s) was not detected, due to dilution of extract.
- NR Indicates the surrogate recovery cannot be reported due to matrix interference.
- E Indicates a value above the linear range of the detector. Sample dilution required.
- S Indicates no value reported due to saturation of the detector. Sample dilution required.
- NA Indicates compound not analyzed for.
- M Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match.
- B Indicates possible/probable blank contamination. Flagged when the analyte is detected in the blank as well as the sample.
- Y Indicates raised reporting limit due to background interference or to activity on the instrument. Compound is still not detected at or above the raised level.

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS

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Sample No: Method Blank

Lab Sample ID: 061201MB QC Report No: DE80-ThermoRetec
 LIMS ID: 01-9206 Project: SCUGEL RUBBER
 Matrix: Water SCR00-02417
 Data Release Authorized: *W* Date Sampled: NA
 Reported: 06/14/01 Date Received: NA

Instrument: FINN1 Sample Amount: 20.0 mL
 Date Analyzed: 06/12/01 16:24 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	0.2 U
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.5
67-64-1	Acetone	1.0 U
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.2 U
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	0.2 U
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	0.2 U
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.2 U
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

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Sample No: Method Blank



Lab Sample ID: 061201MB QC Report No: DE80-ThermoRetec
LIMS ID: 01-9206 Project: SCOUGEL RUBBER
Matrix: Water SCR00-02417
Data Release Authorized: *SW* Date Sampled: NA
Reported: 06/14/01 Date Received: NA

Instrument: FINN1 Sample Amount: 20.0 mL
Date Analyzed: 06/12/01 16:24 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
594-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	99.8%
d8-Toluene	94.2%
Bromofluorobenzene	83.8%
d4-1,2-Dichlorobenzene	108%

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS
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Sample No: MW-11-0601

Lab Sample ID: DE80A QC Report No: DE80-ThermoRetec
LIMS ID: 01-9206 Project: SCOUGEL RUBBER
Matrix: Water SCR00-02417
Data Release Authorized: *WVW* Date Sampled: 06/06/01
Reported: 06/14/01 Date Received: 06/07/01

Instrument: FINN1 Sample Amount: 20.0 mL
Date Analyzed: 06/12/01 19:16 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	0.4
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	1.0 U
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.2
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	3.9
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	15
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.3
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

Sample No: MW-11-0601

Lab Sample ID: DE80A QC Report No: DE80-ThermoRetec
LIMS ID: 01-9206 Project: SCOUGEL RUBBER
Matrix: Water SCR00-02417
Data Release Authorized: *W* Date Sampled: 06/06/01
Reported: 06/14/01 Date Received: 06/07/01

Instrument: FINN1 Sample Amount: 20.0 mL
Date Analyzed: 06/12/01 19:16 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
594-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	100%
d8-Toluene	94.2%
Bromofluorobenzene	84.0%
d4-1,2-Dichlorobenzene	110%


Sample No: MW-12-0601

Lab Sample ID: DE80B QC Report No: DE80-ThermoRetec
LIMS ID: 01-9207 Project: SCUGEL RUBBER
Matrix: Water SCR00-02417
Data Release Authorized: *MM* Date Sampled: 06/06/01
Reported: 06/14/01 Date Received: 06/07/01

Instrument: FINN1 Sample Amount: 20.0 mL
Date Analyzed: 06/12/01 19:44 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	1.8
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	1.0 U
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.3
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	1.1
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	0.2 U
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.2 U
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

Sample No: MW-12-0601

Lab Sample ID: DE80B QC Report No: DE80-ThermoRetec
LIMS ID: 01-9207 Project: SCOUGEL RUBBER
Matrix: Water SCR00-02417
Data Release Authorized:  Date Sampled: 06/06/01
Reported: 06/14/01 Date Received: 06/07/01


Instrument: FINN1 Sample Amount: 20.0 mL
Date Analyzed: 06/12/01 19:44 Purge Volume: 20.0 mL

<u>CAS Number</u>	<u>Analyte</u>	<u>ug/L</u>
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
594-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	102%
d8-Toluene	95.5%
Bromofluorobenzene	81.2%
d4-1,2-Dichlorobenzene	110%

Sample No: MW-13-0601

Lab Sample ID: DE80C QC Report No: DE80-ThermoRetec
LIMS ID: 01-9208 Project: SCUGEL RUBBER
Matrix: Water SCR00-02417
Data Release Authorized:  Date Sampled: 06/06/01
Reported: 06/14/01 Date Received: 06/07/01

Instrument: FINN1 Sample Amount: 10.0 mL
Date Analyzed: 06/12/01 20:13 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.4 U
74-83-9	Bromomethane	0.4 U
75-01-4	Vinyl Chloride	2.8
75-00-3	Chloroethane	0.4 U
75-09-2	Methylene Chloride	1.1 B
67-64-1	Acetone	2.0 U
75-15-0	Carbon Disulfide	0.4 U
75-35-4	1,1-Dichloroethene	0.4 U
75-34-3	1,1-Dichloroethane	0.7
156-60-5	trans-1,2-Dichloroethene	0.4 U
156-59-2	cis-1,2-Dichloroethene	4.2
67-66-3	Chloroform	0.4 U
107-06-2	1,2-Dichloroethane	0.4 U
78-93-3	2-Butanone	2.0 U
71-55-6	1,1,1-Trichloroethane	0.4 U
56-23-5	Carbon Tetrachloride	0.4 U
108-05-4	Vinyl Acetate	0.4 U
75-27-4	Bromodichloromethane	0.4 U
78-87-5	1,2-Dichloropropane	0.4 U
10061-01-5	cis-1,3-Dichloropropene	0.4 U
79-01-6	Trichloroethene	24
124-48-1	Dibromochloromethane	0.4 U
79-00-5	1,1,2-Trichloroethane	0.4 U
71-43-2	Benzene	0.4 U
10061-02-6	trans-1,3-Dichloropropene	0.4 U
110-75-8	2-Chloroethylvinylether	1.0 U
75-25-2	Bromoform	1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	2.0 U
591-78-6	2-Hexanone	2.0 U
127-18-4	Tetrachloroethene	0.5
79-34-5	1,1,2,2-Tetrachloroethane	0.4 U
108-88-3	Toluene	0.4 U
108-90-7	Chlorobenzene	0.4 U
100-41-4	Ethylbenzene	0.4 U
100-42-5	Styrene	0.4 U
75-69-4	Trichlorofluoromethane	0.4 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.4 U
1330-20-7	m,p-Xylene	0.8 U

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

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Sample No: MW-13-0601



Lab Sample ID: DE80C QC Report No: DE80-ThermoRetec
LIMS ID: 01-9208 Project: SCUGEL RUBBER
Matrix: Water SCR00-02417
Data Release Authorized: *WV* Date Sampled: 06/06/01
Reported: 06/14/01 Date Received: 06/07/01

Instrument: FINN1 Sample Amount: 10.0 mL
Date Analyzed: 06/12/01 20:13 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.4 U
95-50-1	1,2-Dichlorobenzene	0.4 U
541-73-1	1,3-Dichlorobenzene	0.4 U
106-46-7	1,4-Dichlorobenzene	0.4 U
107-02-8	Acrolein	10 U
74-88-4	Methyl Iodide	0.4 U
74-96-4	Bromoethane	0.4 U
107-13-1	Acrylonitrile	2.0 U
563-58-6	1,1-Dichloropropene	0.4 U
74-95-3	Dibromomethane	0.4 U
630-20-6	1,1,1,2-Tetrachloroethane	0.4 U
96-12-8	1,2-Dibromo-3-chloropropane	2.0 U
96-18-4	1,2,3-Trichloropropane	1.0 U
110-57-6	trans-1,4-Dichloro-2-butene	2.0 U
108-67-8	1,3,5-Trimethylbenzene	0.4 U
95-63-6	1,2,4-Trimethylbenzene	0.4 U
87-68-3	Hexachlorobutadiene	1.0 U
106-93-4	Ethylene Dibromide	0.4 U
74-97-5	Bromochloromethane	0.4 U
594-20-7	2,2-Dichloropropane	0.4 U
142-28-9	1,3-Dichloropropane	0.4 U
98-82-8	Isopropylbenzene	0.4 U
103-65-1	n-Propylbenzene	0.4 U
108-86-1	Bromobenzene	0.4 U
95-49-8	2-Chlorotoluene	0.4 U
106-43-4	4-Chlorotoluene	0.4 U
98-06-6	tert-Butylbenzene	0.4 U
135-98-8	sec-Butylbenzene	0.4 U
99-87-6	4-Isopropyltoluene	0.4 U
104-51-8	n-Butylbenzene	0.4 U
120-82-1	1,2,4-Trichlorobenzene	1.0 U
91-20-3	Naphthalene	1.0 U
87-61-6	1,2,3-Trichlorobenzene	1.0 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	104%
d8-Toluene	93.0%
Bromofluorobenzene	83.0%
d4-1,2-Dichlorobenzene	114%

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Sample No: MW-14-0601

Lab Sample ID: DE80D QC Report No: DE80-ThermoRetec
LIMS ID: 01-9209 Project: SCOUGEL RUBBER
Matrix: Water SCR00-02417
Data Release Authorized: *W* Date Sampled: 06/06/01
Reported: 06/14/01 Date Received: 06/07/01

Instrument: FINN1 Sample Amount: 2.00 mL
Date Analyzed: 06/12/01 20:41 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	2.0 U
74-83-9	Bromomethane	2.0 U
75-01-4	Vinyl Chloride	97
75-00-3	Chloroethane	2.0 U
75-09-2	Methylene Chloride	4.6 B
67-64-1	Acetone	10 U
75-15-0	Carbon Disulfide	2.0 U
75-35-4	1,1-Dichloroethene	2.0 U
75-34-3	1,1-Dichloroethane	2.1
156-60-5	trans-1,2-Dichloroethene	2.0 U
156-59-2	cis-1,2-Dichloroethene	29
67-66-3	Chloroform	2.0 U
107-06-2	1,2-Dichloroethane	2.0 U
78-93-3	2-Butanone	10 U
71-55-6	1,1,1-Trichloroethane	2.0 U
56-23-5	Carbon Tetrachloride	2.0 U
108-05-4	Vinyl Acetate	2.0 U
75-27-4	Bromodichloromethane	2.0 U
78-87-5	1,2-Dichloropropane	2.0 U
10061-01-5	cis-1,3-Dichloropropene	2.0 U
79-01-6	Trichloroethene	32
124-48-1	Dibromochloromethane	2.0 U
79-00-5	1,1,2-Trichloroethane	2.0 U
71-43-2	Benzene	2.0 U
10061-02-6	trans-1,3-Dichloropropene	2.0 U
110-75-8	2-Chloroethylvinylether	5.0 U
75-25-2	Bromoform	5.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	10 U
591-78-6	2-Hexanone	10 U
127-18-4	Tetrachloroethene	4.7
79-34-5	1,1,2,2-Tetrachloroethane	2.0 U
108-88-3	Toluene	2.0 U
108-90-7	Chlorobenzene	2.0 U
100-41-4	Ethylbenzene	2.0 U
100-42-5	Styrene	2.0 U
75-69-4	Trichlorofluoromethane	2.0 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	2.0 U
1330-20-7	m,p-Xylene	4.0 U

Sample No: MW-14-0601

Lab Sample ID: DE80D QC Report No: DE80-ThermoRetec
LIMS ID: 01-9209 Project: SCUGEL RUBBER
Matrix: Water SCR00-02417
Data Release Authorized: *mw* Date Sampled: 06/06/01
Reported: 06/14/01 Date Received: 06/07/01

Instrument: FINN1 Sample Amount: 2.00 mL
Date Analyzed: 06/12/01 20:41 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	2.0 U
95-50-1	1,2-Dichlorobenzene	2.0 U
541-73-1	1,3-Dichlorobenzene	2.0 U
106-46-7	1,4-Dichlorobenzene	2.0 U
107-02-8	Acrolein	50 U
74-88-4	Methyl Iodide	2.0 U
74-96-4	Bromoethane	2.0 U
107-13-1	Acrylonitrile	10 U
563-58-6	1,1-Dichloropropene	2.0 U
74-95-3	Dibromomethane	2.0 U
630-20-6	1,1,1,2-Tetrachloroethane	2.0 U
96-12-8	1,2-Dibromo-3-chloropropane	10 U
96-18-4	1,2,3-Trichloropropane	5.0 U
110-57-6	trans-1,4-Dichloro-2-butene	10 U
108-67-8	1,3,5-Trimethylbenzene	2.0 U
95-63-6	1,2,4-Trimethylbenzene	2.0 U
87-68-3	Hexachlorobutadiene	5.0 U
106-93-4	Ethylene Dibromide	2.0 U
74-97-5	Bromochloromethane	2.0 U
594-20-7	2,2-Dichloropropane	2.0 U
142-28-9	1,3-Dichloropropane	2.0 U
98-82-8	Isopropylbenzene	2.0 U
103-65-1	n-Propylbenzene	2.0 U
108-86-1	Bromobenzene	2.0 U
95-49-8	2-Chlorotoluene	2.0 U
106-43-4	4-Chlorotoluene	2.0 U
98-06-6	tert-Butylbenzene	2.0 U
135-98-8	sec-Butylbenzene	2.0 U
99-87-6	4-Isopropyltoluene	2.0 U
104-51-8	n-Butylbenzene	2.0 U
120-82-1	1,2,4-Trichlorobenzene	5.0 U
91-20-3	Naphthalene	5.0 U
87-61-6	1,2,3-Trichlorobenzene	5.0 U

Volatile Surrogate Recovery


d4-1,2-Dichloroethane	105%
d8-Toluene	89.0%
Bromofluorobenzene	83.2%
d4-1,2-Dichlorobenzene	113%

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Sample No: MW-15-0601

Lab Sample ID: DE80E QC Report No: DE80-ThermoRetec
LIMS ID: 01-9210 Project: SCUGEL RUBBER
Matrix: Water SCR00-02417
Data Release Authorized:  Date Sampled: 06/06/01
Reported: 06/14/01 Date Received: 06/07/01

Instrument: FINN1 Sample Amount: 20.0 mL
Date Analyzed: 06/12/01 21:11 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	0.2 U
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	1.0 U
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.2 U
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	0.2 U
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	0.2 U
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.2 U
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

Sample No: MW-15-0601

Lab Sample ID: DE80E QC Report No: DE80-ThermoRetec
LIMS ID: 01-9210 Project: SCOUCEL RUBBER
Matrix: Water SCR00-02417
Data Release Authorized: *MW* Date Sampled: 06/06/01
Reported: 06/14/01 Date Received: 06/07/01

Instrument: FINNI Sample Amount: 20.0 mL
Date Analyzed: 06/12/01 21:11 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
594-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	101%
d8-Toluene	87.8%
Bromofluorobenzene	84.0%
d4-1,2-Dichlorobenzene	115%

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
Sample No: MW-16-0601

Lab Sample ID: DE80F QC Report No: DE80-ThermoRetec
LIMS ID: 01-9211 Project: SCUGEL RUBBER
Matrix: Water SCR00-02417
Data Release Authorized: *[Signature]* Date Sampled: 06/06/01
Reported: 06/14/01 Date Received: 06/07/01

Instrument: FINN1 Sample Amount: 20.0 mL
Date Analyzed: 06/12/01 21:40 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	1.6
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	1.0 U
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.2 U
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	3.9
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	0.2 U
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.2 U
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

Sample No: MW-16-0601

Lab Sample ID: DE80F QC Report No: DE80-ThermoRetec
LIMS ID: 01-9211 Project: SCOUGEL RUBBER
Matrix: Water SCR00-02417
Data Release Authorized:  Date Sampled: 06/06/01
Reported: 06/14/01 Date Received: 06/07/01

Instrument: FINN1 Sample Amount: 20.0 mL
Date Analyzed: 06/12/01 21:40 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
594-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	105%
d8-Toluene	91.0%
Bromofluorobenzene	87.5%
d4-1,2-Dichlorobenzene	112%

Sample No: MW-113-0601

Lab Sample ID: DE80G QC Report No: DE80-ThermoRetec
LIMS ID: 01-9212 Project: SCUGEL RUBBER
Matrix: Water SCR00-02417
Data Release Authorized: *MW* Date Sampled: 06/06/01
Reported: 06/14/01 Date Received: 06/07/01

Instrument: FINN1 Sample Amount: 6.67 mL
Date Analyzed: 06/12/01 22:08 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.6 U
74-83-9	Bromomethane	0.6 U
75-01-4	Vinyl Chloride	2.6
75-00-3	Chloroethane	0.6 U
75-09-2	Methylene Chloride	1.1 B
67-64-1	Acetone	3.0 U
75-15-0	Carbon Disulfide	0.6 U
75-35-4	1,1-Dichloroethene	0.6 U
75-34-3	1,1-Dichloroethane	0.6
156-60-5	trans-1,2-Dichloroethene	0.6 U
156-59-2	cis-1,2-Dichloroethene	4.0
67-66-3	Chloroform	0.6 U
107-06-2	1,2-Dichloroethane	0.6 U
78-93-3	2-Butanone	3.0 U
71-55-6	1,1,1-Trichloroethane	0.6 U
56-23-5	Carbon Tetrachloride	0.6 U
108-05-4	Vinyl Acetate	0.6 U
75-27-4	Bromodichloromethane	0.6 U
78-87-5	1,2-Dichloropropane	0.6 U
10061-01-5	cis-1,3-Dichloropropene	0.6 U
79-01-6	Trichloroethene	23
124-48-1	Dibromochloromethane	0.6 U
79-00-5	1,1,2-Trichloroethane	0.6 U
71-43-2	Benzene	0.6 U
10061-02-6	trans-1,3-Dichloropropene	0.6 U
110-75-8	2-Chloroethylvinylether	1.5 U
75-25-2	Bromoform	1.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	3.0 U
591-78-6	2-Hexanone	3.0 U
127-18-4	Tetrachloroethene	0.6 U
79-34-5	1,1,2,2-Tetrachloroethane	0.6 U
108-88-3	Toluene	0.6 U
108-90-7	Chlorobenzene	0.6 U
100-41-4	Ethylbenzene	0.6 U
100-42-5	Styrene	0.6 U
75-69-4	Trichlorofluoromethane	0.6 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.6 U
1330-20-7	m,p-Xylene	1.2 U

Sample No: MW-113-0601

Lab Sample ID: DE80G QC Report No: DE80-ThermoRetec
LIMS ID: 01-9212 Project: SCUGEL RUBBER
Matrix: Water SCR00-02417
Data Release Authorized: *MW* Date Sampled: 06/06/01
Reported: 06/14/01 Date Received: 06/07/01

Instrument: FINN1 Sample Amount: 6.67 mL
Date Analyzed: 06/12/01 22:08 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.6 U
95-50-1	1,2-Dichlorobenzene	0.6 U
541-73-1	1,3-Dichlorobenzene	0.6 U
106-46-7	1,4-Dichlorobenzene	0.6 U
107-02-8	Acrolein	15 U
74-88-4	Methyl Iodide	0.6 U
74-96-4	Bromoethane	0.6 U
107-13-1	Acrylonitrile	3.0 U
563-58-6	1,1-Dichloropropene	0.6 U
74-95-3	Dibromomethane	0.6 U
630-20-6	1,1,1,2-Tetrachloroethane	0.6 U
96-12-8	1,2-Dibromo-3-chloropropane	3.0 U
96-18-4	1,2,3-Trichloropropane	1.5 U
110-57-6	trans-1,4-Dichloro-2-butene	3.0 U
108-67-8	1,3,5-Trimethylbenzene	0.6 U
95-63-6	1,2,4-Trimethylbenzene	0.6 U
87-68-3	Hexachlorobutadiene	1.5 U
106-93-4	Ethylene Dibromide	0.6 U
74-97-5	Bromochloromethane	0.6 U
594-20-7	2,2-Dichloropropane	0.6 U
142-28-9	1,3-Dichloropropane	0.6 U
98-82-8	Isopropylbenzene	0.6 U
103-65-1	n-Propylbenzene	0.6 U
108-86-1	Bromobenzene	0.6 U
95-49-8	2-Chlorotoluene	0.6 U
106-43-4	4-Chlorotoluene	0.6 U
98-06-6	tert-Butylbenzene	0.6 U
135-98-8	sec-Butylbenzene	0.6 U
99-87-6	4-Isopropyltoluene	0.6 U
104-51-8	n-Butylbenzene	0.6 U
120-82-1	1,2,4-Trichlorobenzene	1.5 U
91-20-3	Naphthalene	1.5 U
87-61-6	1,2,3-Trichlorobenzene	1.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	105%
d8-Toluene	97.2%
Bromofluorobenzene	79.0%
d4-1,2-Dichlorobenzene	110%

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Sample No: TRIP BLANKS

Lab Sample ID: DE80H QC Report No: DE80-ThermoRetec
LIMS ID: 01-9213 Project: SCOUGEL RUBBER
Matrix: Water SCR00-02417
Data Release Authorized: *WV* Date Sampled: 06/06/01
Reported: 06/14/01 Date Received: 06/07/01

Instrument: FINN1 Sample Amount: 20.0 mL
Date Analyzed: 06/12/01 22:37 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	0.2 U
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.5 B
67-64-1	Acetone	1.0 U
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.2 U
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	0.2 U
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	0.2 U
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.2 U
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

Sample No: TRIP BLANKS

Lab Sample ID: DE80H QC Report No: DE80-ThermoRetec
LIMS ID: 01-9213 Project: SCOUGEL RUBBER
Matrix: Water SCR00-02417
Data Release Authorized: *MW* Date Sampled: 06/06/01
Reported: 06/14/01 Date Received: 06/07/01

Instrument: FINN1 Sample Amount: 20.0 mL
Date Analyzed: 06/12/01 22:37 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
594-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	110%
d8-Toluene	93.5%
Bromofluorobenzene	81.2%
d4-1,2-Dichlorobenzene	111%

ORGANICS ANALYSIS DATA SHEET
 Volatiles by Purge & Trap GC/MS
 Page 1 of 2



Lab Sample ID: DE80SB QC Report No: DE80-ThermoRetec
 IMS ID: 01-9206 Project: SCUGEL RUBBER
 Matrix: Water SCR00-02417
 Data Release Authorized: *AW* Date Received: 06/07/01
 Reported: 06/14/01
 Date Analyzed: 06/12/01
 Instrument: FINN1

LABORATORY CONTROL SAMPLE CONSTITUENT	SPIKE VALUE	SPIKE AMT	% RECOVERY
Chloromethane	3.52	4.0	88.0%
Bromomethane	4.03	4.0	101%
Vinyl Chloride	3.87	4.0	96.8%
Chloroethane	3.66	4.0	91.5%
Methylene Chloride	3.85	4.0	96.2%
Acetone	23.0	20.0	115%
Carbon Disulfide	3.66	4.0	91.5%
1,1-Dichloroethene	3.79	4.0	94.8%
1,1-Dichloroethane	3.96	4.0	99.0%
trans-1,2-Dichloroethene	3.68	4.0	92.0%
cis-1,2-Dichloroethene	3.93	4.0	98.2%
Chloroform	3.78	4.0	94.5%
1,2-Dichloroethane	3.56	4.0	89.0%
2-Butanone	20.0	20.0	100%
1,1,1-Trichloroethane	3.93	4.0	98.2%
Carbon Tetrachloride	3.72	4.0	93.0%
Vinyl Acetate	3.03	4.0	75.8%
Bromodichloromethane	3.73	4.0	93.2%
1,2-Dichloropropane	3.57	4.0	89.2%
cis-1,3-Dichloropropene	3.66	4.0	91.5%
Trichloroethene	3.72	4.0	93.0%
Dibromochloromethane	3.90	4.0	97.5%
1,1,2-Trichloroethane	3.75	4.0	93.8%
Benzene	3.62	4.0	90.5%
trans-1,3-Dichloropropene	3.42	4.0	85.5%
2-Chloroethylvinylether	3.29	4.0	82.2%
Bromoform	3.94	4.0	98.5%
4-Methyl-2-Pentanone (MIBK)	19.3	20.0	96.5%
2-Hexanone	19.4	20.0	97.0%
Tetrachloroethene	3.82	4.0	95.5%
1,1,2,2-Tetrachloroethane	3.75	4.0	93.8%
Toluene	3.58	4.0	89.5%
Chlorobenzene	3.69	4.0	92.2%
Ethylbenzene	3.79	4.0	94.8%
Styrene	3.85	4.0	96.2%
Trichlorofluoromethane	3.78	4.0	94.5%
1,1,2-Trichlorotrifluoroethane	3.77	4.0	94.2%
m,p-Xylene	7.69	8.0	96.1%
O-Xylene	3.73	4.0	93.2%

Reported in ug/L

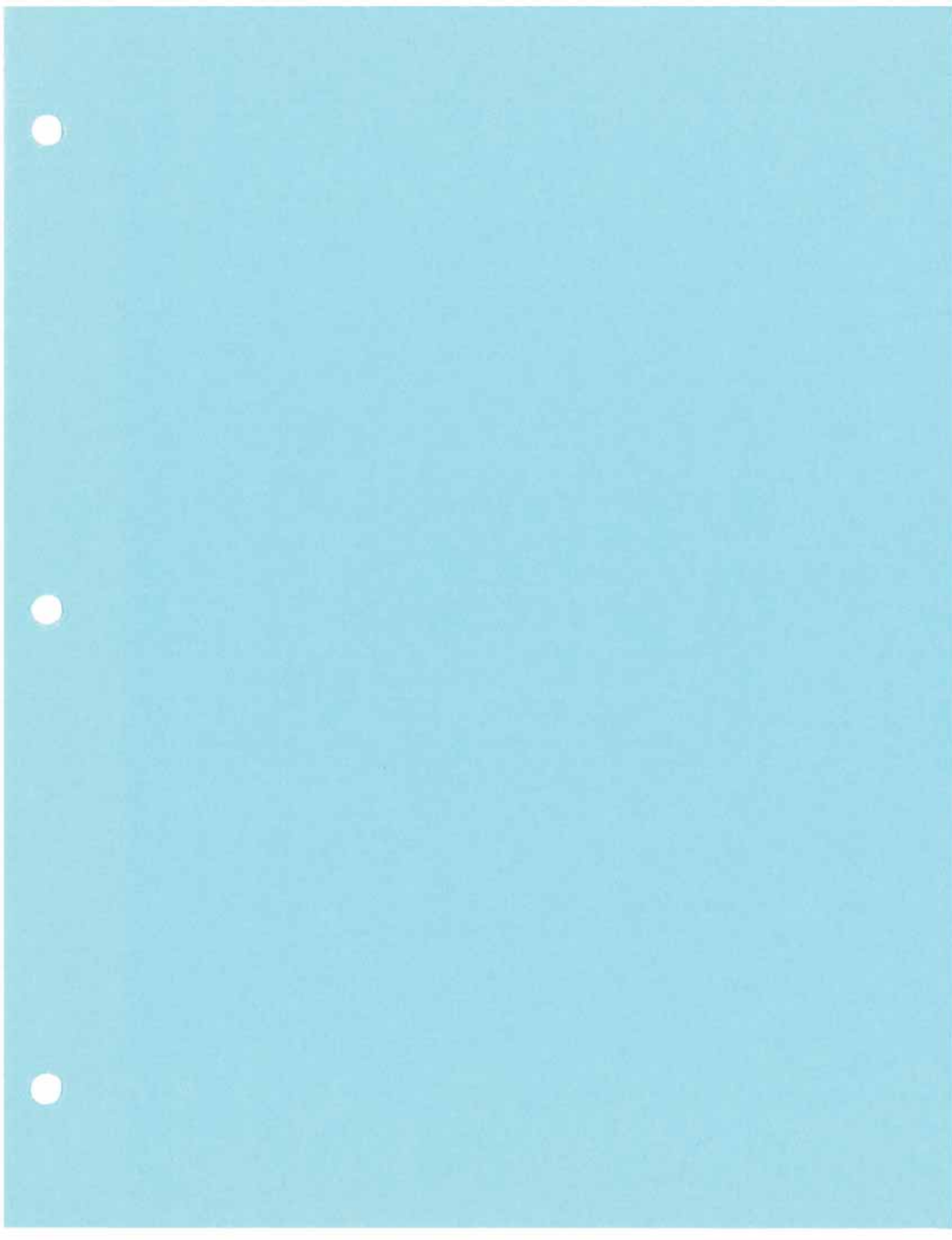
Lab Sample ID: DE80SB QC Report No: DE80-ThermoRetec
 LIMS ID: 01-9206 Project: SCUGEL RUBBER
 Matrix: Water SCR00-02417
 Data Release Authorized: *[Signature]* Date Received: 06/07/01
 Reported: 06/14/01
 Date Analyzed: 06/12/01
 Instrument: FINN1

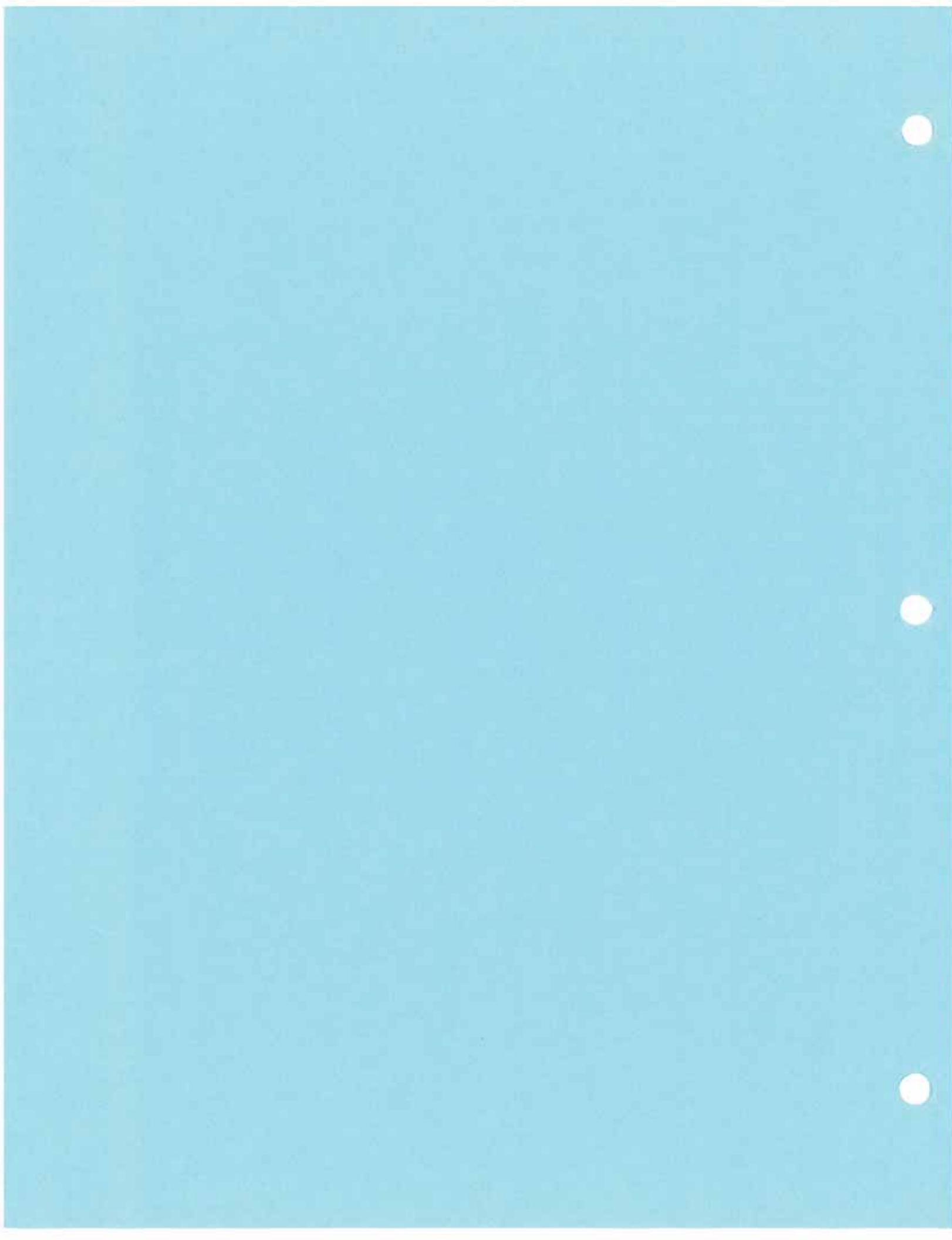
LABORATORY CONTROL SAMPLE CONSTITUENT	SPIKE VALUE	SPIKE AMT	% RECOVERY
1,2-Dichlorobenzene	3.90	4.0	97.5%
1,3-Dichlorobenzene	3.99	4.0	99.8%
1,4-Dichlorobenzene	3.86	4.0	96.5%
Acrolein	22.3	20.0	112%
Methyl Iodide	3.36	4.0	84.0%
Bromoethane	3.20	4.0	80.0%
Acrylonitrile	4.52	4.0	113%
1,1-Dichloropropene	3.60	4.0	90.0%
Dibromomethane	3.34	4.0	83.5%
1,1,1,2-Tetrachloroethane	3.82	4.0	95.5%
1,2-Dibromo-3-chloropropane	4.03	4.0	101%
1,2,3-Trichloropropane	3.69	4.0	92.2%
trans-1,4-Dichloro-2-butene	3.17	4.0	79.2%
1,3,5-Trimethylbenzene	3.76	4.0	94.0%
1,2,4-Trimethylbenzene	3.87	4.0	96.8%
Hexachlorobutadiene	4.14	4.0	104%
Ethylene Dibromide	3.61	4.0	90.2%
Bromochloromethane	3.83	4.0	95.8%
2,2-Dichloropropane	4.05	4.0	101%
1,3-Dichloropropane	3.98	4.0	99.5%
Isopropylbenzene	3.54	4.0	88.5%
n-Propylbenzene	3.69	4.0	92.2%
Bromobenzene	3.86	4.0	96.5%
2-Chlorotoluene	3.79	4.0	94.8%
4-Chlorotoluene	3.74	4.0	93.5%
tert-Butylbenzene	3.76	4.0	94.0%
sec-Butylbenzene	3.72	4.0	93.0%
4-Isopropyltoluene	3.81	4.0	95.2%
n-Butylbenzene	3.78	4.0	94.5%
1,2,4-Trichlorobenzene	4.24	4.0	106%
Naphthalene	4.37	4.0	109%
1,2,3-Trichlorobenzene	4.61	4.0	115%

Lab Control Surrogate Recovery

d4-1,2-Dichloroethane	103%
d8-Toluene	94.5%
Bromofluorobenzene	95.5%
d4-1,2-Dichlorobenzene	105%

Reported in ug/L





GROUNDWATER SAMPLING LOG

PROJECT NAME SCOUGAL RUBBER
 PROJECT NO. SCROO-02417-300
 DATE 8-20-80

WELL NO. mw-12
 SAMPLED BY Rasner

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>5.86</u> (wl.prot.-ft)
DEPTH OF WELL	(ft) <u>19.50</u>
WELL DIAMETER	(inches) <u>4</u>
FEET OF WATER	<u>13.64</u>
CASING VOLUME*	(gal) <u>8.87</u>
PURGE VOLUME	(gal) <u>27</u>
PRODUCT THICK	(ft)
WELL CONDITION	
WEATHER	

	PURGE		DATA
START PURGE TIME: <u>1300</u>	<u>1</u>		
VOL. PURGED (gal)	<u>10</u>	<u>10</u>	<u>7</u>
TIME	<u>1312</u>	<u>1320</u>	<u>1327</u>
FLOW RATE			
pH (units)	<u>5.95</u>	<u>6.04</u>	<u>6.14</u>
CONDUCTIVITY (umhos/cm)	<u>550</u>	<u>517</u>	<u>519</u>
TEMP. (C)	<u>15.9</u>	<u>15.4</u>	<u>15.1</u>
WATER COLOR			
PURGE AND SAMPLE EQUIPT:			

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-12-0800</u>	<u>1335</u>	<u>BTEX</u>	<u>40ML</u>	<u>3</u>	<u>HCL</u>

ADDITIONAL INFORMATION:

TOC=Top of well casing

wl.prot.=top of well protector

*casing volume= $\pi r^2 h$ (ft)x7.48gal/ft³

GROUNDWATER SAMPLING LOG

PROJECT NAME SCOUGAL RUBBER
 PROJECT NO. SCROO-02417-300
 DATE 8-2-00

WELL NO. MW-11
 SAMPLED BY Danell

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>6.20</u> (wl.prot.-ft)
DEPTH OF WELL	(ft) <u>19.90</u>
WELL DIAMETER	(inches) <u>4</u>
FEET OF WATER	<u>13.7</u>
CASING VOLUME*	(gal) <u>8.9</u>
PURGE VOLUME	(gal) <u>27</u>
PRODUCT THICK	(ft)
WELL CONDITION	
WEATHER	

x.65

	PURGE		DATA
START PURGE TIME: <u>1100</u>			
VOL. PURGED (gal)	<u>10</u>	<u>10</u>	<u>8</u>
TIME	<u>1105</u>	<u>1110</u>	<u>1115</u>
RATE			
pH (units)	<u>5.72</u>	<u>5.69</u>	<u>5.72</u>
CONDUCTIVITY	<u>1695</u>	<u>1571</u>	<u>1561</u>
(umhos/cm)			
TEMP. (C)	<u>15.2</u>	<u>14.9</u>	<u>15.0</u>
WATER COLOR			

PURGE AND SAMPLE EQUIPT: HDPE Bailer

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-11-0800</u>	<u>1130</u>	<u>ISTEX</u>	<u>40 ml</u>	<u>3</u>	<u>ACC</u>

ADDITIONAL INFORMATION:

TOC=Top of well casing

wl.prot.=top of well protector

g volume = $\pi r^2 h (ft) \times 7.48 gal/ft^3$

GROUNDWATER SAMPLING LOG

PROJECT NAME SCOUGAL RUBBER
 PROJECT NO. SCROO-02417-300
 DATE 8-2-00

WELL NO. MW-16
 SAMPLED BY slawet

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>6.80</u> (wl.prot.-ft)
DEPTH OF WELL	(ft) <u>19.51</u>
WELL DIAMETER	(inches) <u>2</u>
FEET OF WATER	<u>12.70</u>
CASING VOLUME*	(gal) <u>2.07</u>
PURGE VOLUME	(gal) <u>6.2</u>
PRODUCT THICK	(ft)
WELL CONDITION	
WEATHER	

	PURGE		DATA
START PURGE TIME: <u>1145</u>			
VOL. PURGED (gal)	<u>2</u>	<u>2</u>	<u>2</u>
TIME	<u>1150</u>	<u>1157</u>	<u>1202</u>
FLOW RATE			
pH (units)	<u>5.89</u>	<u>6.00</u>	<u>6.04</u>
CONDUCTIVITY	<u>-139</u>	<u>-207</u>	<u>213</u>
(umhos/cm)			
TEMP. (C)	<u>14.9</u>	<u>14.7</u>	<u>14.6</u>
WATER COLOR	<u>Red tint</u>		
PURGE AND SAMPLE EQUIPT:			

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-16-0800</u>	<u>1210</u>	<u>BTEX</u>	<u>40ml</u>	<u>3</u>	<u>HCL</u>

ADDITIONAL INFORMATION:

TOC=Top of well casing

wl.prot.=top of well protector

*casing volume= $\pi r^2 h(ft) \times 7.48 gal/ft^3$

GROUNDWATER SAMPLING LOG

PROJECT NAME SCOUGAL RUBBER
 PROJECT NO. SCROO-02417-300
 DATE 8-2-00

WELL NO. MW-13
 SAMPLED BY Danell

Drip MW-113-0800 @ 1000

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>6.78</u> (wl.prot.-ft)
DEPTH OF WELL	(ft) <u>19.80</u>
WELL DIAMETER	(inches) <u>2</u>
FEET OF WATER	
CASING VOLUME*	(gal) <u>13.02</u>
PURGE VOLUME	(gal) <u>2.12</u>
PRODUCT THICK	(ft) <u>4.4</u>
WELL CONDITION	
WEATHER	

	PURGE		DATA
START PURGE TIME: <u>1225</u>		<u>✓</u>	
VOL. PURGED (gal)	<u>2.5</u>	<u>2</u>	<u>2</u>
TIME	<u>1238</u>	<u>1234</u>	<u>1239</u>
RATE			
pH (units)	<u>5.45</u>	<u>5.68</u>	<u>5.25</u>
CONDUCTIVITY	<u>220</u>	<u>324</u>	<u>331</u>
(umhos/cm)			
TEMP. (C)	<u>14.4</u>	<u>14.2</u>	<u>14.1</u>
WATER COLOR			

PURGE AND SAMPLE EQUIPT:

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-13-0800</u>	<u>1245</u>	<u>BTEX</u>	<u>40 ML</u>	<u>3</u>	<u>HCL</u>
<u>MW-113-0800</u>	<u>1000</u>	<u>"</u>	<u>"</u>	<u>3</u>	<u>"</u>

ADDITIONAL INFORMATION:

TOC=Top of well casing

wl.prot.=top of well protector

g volume = $\pi r^2 h (ft) \times 7.48 gal/ft^3$

GROUNDWATER SAMPLING LOG

PROJECT NAME SCOUGAL RUBBER
 PROJECT NO. SCROO-02417-300
 DATE 8-2-00

WELL NO. MW-14
 SAMPLED BY Danell

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>7.50</u> (wl.prot.-ft)
DEPTH OF WELL	(ft) <u>19.30</u>
WELL DIAMETER	(inches) <u>2</u>
FEET OF WATER	<u>11.80</u>
CASING VOLUME*	(gal) <u>1.93</u>
PURGE VOLUME	(gal) <u>5.8</u>
PRODUCT THICK	(ft)
WELL CONDITION	
WEATHER	<u>Sunny 90°</u>

	PURGE		DATA
START PURGE TIME: <u>1521</u>			
VOL. PURGED (gal)	<u>1530</u>	<u>1536</u>	<u>1540</u>
TIME	<u>2</u>	<u>2</u>	<u>2</u>
FLOW RATE			
pH (units)	<u>5.82</u>	<u>5.90</u>	<u>5.94</u>
CONDUCTIVITY (umhos/cm)	<u>424</u>	<u>436</u>	<u>440</u>
TEMP. (C)	<u>16.9</u>	<u>16.7</u>	<u>16.7</u>
WATER COLOR			
PURGE AND SAMPLE EQUIPT:			

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-14-0800</u>	<u>1550</u>	<u>BTEX</u>	<u>40 mL</u>	<u>3</u>	<u>HCL</u>

ADDITIONAL INFORMATION:

TOC=Top of well casing

wl.prot.=top of well protector

*casing volume= $\pi r^2 h$ (ft) $\times 7.48$ gal/ft 3

GROUNDWATER SAMPLING LOG

PROJECT NAME SCOUGAL RUBBER
 PROJECT NO. SCROO-02417-300
 DATE 8-2-00

WELL NO. MW-15
 SAMPLED BY darnell

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>6.99</u> (wl.prot.-ft)
DEPTH OF WELL	(ft) <u>19.20</u>
WELL DIAMETER	(inches) <u>2.2</u>
FEET OF WATER	<u>12.21</u>
CASING VOLUME*	(gal) <u>2</u>
PURGE VOLUME	(gal) <u>6</u>
PRODUCT THICK	(ft)
WELL CONDITION	
WEATHER	

	PURGE		DATA
START PURGE TIME: <u>1446</u>			
VOL. PURGED (gal)	<u>2</u>	<u>2</u>	<u>2</u>
TIME	<u>1450</u>	<u>1454</u>	<u>1458</u>
FLOW RATE			
pH (units)	<u>6.24</u>	<u>6.32</u>	<u>6.36</u>
CONDUCTIVITY	<u>.430</u>	<u>.438</u>	<u>.446</u>
(umhos/cm)			
TEMP. (C)	<u>15.4</u>	<u>15.0</u>	<u>15.0</u>
WATER COLOR			

PURGE AND SAMPLE EQUIPT:

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-15-0800</u>	<u>1500</u>	<u>BTEX</u>	<u>40ml</u>	<u>3</u>	<u>HCL</u>

ADDITIONAL INFORMATION:

TOC=Top of well casing

wl.prot.=top of well protector

ing volume= $\pi r^2 h \times 7.48 \text{ gal/ft}^3$



Analytical Resources, Incorporated
Analytical Chemists and Consultants

16 August 2000

Dean Kinney
ThermoRetec, Inc.
1011 S.W. Klickitat Way
Suite 207
Seattle, WA 98134

RE: Client Project: SCR00-02417-300, Scougal Rubber
ARI Project: BY45

Dear Dean:

Please find enclosed the original Chain-of-Custody record (COC) and the final results for the samples from the project referenced above. Seven water samples and one trip blank were received on August 2, 2000. The samples were received in good condition and there were no discrepancies in the paperwork. The samples were analyzed for VOAs as requested.

No problems were encountered during the analysis.

A copy of these reports will be kept on file with ARI. Should you have any questions or problems please feel free to call me at any time.

Sincerely,

ANALYTICAL RESOURCES, INC.

A handwritten signature in black ink, appearing to read "Mark Harris".

Mark Harris
Project Manager
206/389-6150
<mark@arilabs.com>

Enclosures

cc: file BY45

MDH/kg

00-13021 to 00-13028 15145

9312 510 CHAIN OF CUSTODY RECORD

PROJ. NO. SCR00-02417 -300		PROJECT NAME Sausal Adobe Rubber			NO. OF CONTAINERS	SEND RESULTS TO:
SAMPLERS: Receiving Laboratory: ARI		DATE TIME				
LAB I.D. NO.	DATE	TIME	SAMPLE NO.			REMARKS
	8-2-00	1130	MW-11-0800	3		
		1335	MW-12-0800	3		
		1245	MW-13-0800	3		
		1550	MW-14-0800	3		
		1500	MW-15-0800	3		
		1210	MW-16-0800	3		
		1000	MW-113-0800	3		
			TRIP BLANK	3		

Relinquished by: (Signature) *[Signature]* Date / Time 8-2-00 1700

Received by: (Signature) *[Signature]* Date / Time 8/2/00 1700

Relinquished by: (Signature) _____ Date / Time _____

Received for Laboratory by: (Signature) *[Signature]* Date / Time 8/2/00 1700

Shipper Information _____

REHTEC
REMEDIATION
TECHNOLOGIES INC
REMIATION TECHNOLOGIES
1011 S.W. Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349



**ORGANIC COMPOUND
DATA REPORTING QUALIFIERS**

- U Indicates the compound was undetected at the reported concentration. (Same as ND).
- J Indicates an estimated concentration when the value is less than the calculated reporting limit.
- D Indicates the surrogate/spike(s) was not detected, due to dilution of extract.
- NR Indicates the surrogate recovery cannot be reported due to matrix interference.
- E Indicates a value above the linear range of the detector. Sample dilution required.
- S Indicates no value reported due to saturation of the detector. Sample dilution required.
- NA Indicates compound not analyzed for.
- M Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match.
- B Indicates possible/probable blank contamination. Flagged when the analyte is detected in the blank as well as the sample.
- Y Indicates raised reporting limit due to background interference or to activity on the instrument. Compound is still not detected at or above the raised level.

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS
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Sample No: Method Blank

Lab Sample ID: 080800MB QC Report No: BY45-ThermoRetec
LIMS ID: 00-13028 Project: Scougal Rubber
Matrix: Water SCR00-02417-300
Data Release Authorized: *MB* Date Sampled: NA
Reported: 08/10/00 Date Received: NAInstrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 08/08/00 10:55 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	0.2 U
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	1.0 U
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.2 U
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	0.2 U
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	0.2 U
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.2 U
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

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Sample No: Method Blank

Lab Sample ID: 080800MB QC Report No: BY45-ThermoRetec
LIMS ID: 00-13028 Project: Scougal Rubber
Matrix: Water SCR00-02417-300
Data Release Authorized: *MB* Date Sampled: NA
Reported: 08/10/00 Date Received: NA

Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 08/08/00 10:55 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
594-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	97.5%
d8-Toluene	102%
Bromofluorobenzene	97.0%
d4-1,2-Dichlorobenzene	108%

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Volatiles by Purge & Trap GC/MS
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Sample No: Method Blank


Lab Sample ID: 080900MB QC Report No: BY45-ThermoRetec
LIMS ID: 00-13023 Project: Scougal Rubber
Matrix: Water SCR00-02417-300
Data Release Authorized: *[Signature]* Date Sampled: NA
Reported: 08/10/00 Date Received: NA

Instrument: FINN1 Sample Amount: 5.00 mL
Date Analyzed: 08/09/00 09:39 Purge Volume: 5.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	1.0 U
74-83-9	Bromomethane	1.0 U
75-01-4	Vinyl Chloride	1.0 U
75-00-3	Chloroethane	1.0 U
75-09-2	Methylene Chloride	2.0 U
67-64-1	Acetone	5.0 U
75-15-0	Carbon Disulfide	1.0 U
75-35-4	1,1-Dichloroethene	1.0 U
75-34-3	1,1-Dichloroethane	1.0 U
156-60-5	trans-1,2-Dichloroethene	1.0 U
156-59-2	cis-1,2-Dichloroethene	1.0 U
67-66-3	Chloroform	1.0 U
107-06-2	1,2-Dichloroethane	1.0 U
78-93-3	2-Butanone	5.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	1.0 U
108-05-4	Vinyl Acetate	5.0 U
75-27-4	Bromodichloromethane	1.0 U
78-87-5	1,2-Dichloropropane	1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0 U
79-01-6	Trichloroethene	1.0 U
124-48-1	Dibromochloromethane	1.0 U
79-00-5	1,1,2-Trichloroethane	1.0 U
71-43-2	Benzene	1.0 U
10061-02-6	trans-1,3-Dichloropropene	1.0 U
110-75-8	2-Chloroethylvinylether	5.0 U
75-25-2	Bromoform	1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0 U
591-78-6	2-Hexanone	5.0 U
127-18-4	Tetrachloroethene	1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U
108-88-3	Toluene	1.0 U
108-90-7	Chlorobenzene	1.0 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	1.0 U
75-69-4	Trichlorofluoromethane	1.0 U
76-13-1	1,1,2-Trichlorotrifluoroethane	2.0 U
1330-20-7	m,p-Xylene	1.0 U

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Volatiles by Purge & Trap GC/MS
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Sample No: Method Blank

Lab Sample ID: 080900MB QC Report No: BY45-ThermoRetec
LIMS ID: 00-13023 Project: Scougal Rubber
Matrix: Water SCR00-02417-300
Data Release Authorized:  Date Sampled: NA
Reported: 08/10/00 Date Received: NAInstrument: FINN1 Sample Amount: 5.00 mL
Date Analyzed: 08/09/00 09:39 Purge Volume: 5.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	1.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
107-02-8	Acrolein	50 U
74-88-4	Methyl Iodide	1.0 U
74-96-4	Bromoethane	2.0 U
107-13-1	Acrylonitrile	5.0 U
563-58-6	1,1-Dichloropropene	1.0 U
74-95-3	Dibromomethane	1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	5.0 U
96-18-4	1,2,3-Trichloropropane	3.0 U
110-57-6	trans-1,4-Dichloro-2-butene	5.0 U
108-67-8	1,3,5-Trimethylbenzene	1.0 U
95-63-6	1,2,4-Trimethylbenzene	1.0 U
87-68-3	Hexachlorobutadiene	5.0 U
106-93-4	Ethylene Dibromide	1.0 U
74-97-5	Bromochloromethane	1.0 U
594-20-7	2,2-Dichloropropane	1.0 U
142-28-9	1,3-Dichloropropane	1.0 U
98-82-8	Isopropylbenzene	1.0 U
103-65-1	n-Propylbenzene	1.0 U
108-86-1	Bromobenzene	1.0 U
95-49-8	2-Chlorotoluene	1.0 U
106-43-4	4-Chlorotoluene	1.0 U
98-06-6	tert-Butylbenzene	1.0 U
135-98-8	sec-Butylbenzene	1.0 U
99-87-6	4-Isopropyltoluene	1.0 U
104-51-8	n-Butylbenzene	1.0 U
120-82-1	1,2,4-Trichlorobenzene	5.0 U
91-20-3	Naphthalene	5.0 U
87-61-6	1,2,3-Trichlorobenzene	5.0 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	103%
d8-Toluene	95.5%
Bromofluorobenzene	96.3%
d4-1,2-Dichlorobenzene	98.9%

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Volatiles by Purge & Trap GC/MS

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Sample No: MW-11-0800



Lab Sample ID: BY45A QC Report No: BY45-ThermoRetec
LIMS ID: 00-13021 Project: Scougal Rubber
Matrix: Water SCR00-02417-300
Data Release Authorized: *MB* Date Sampled: 08/02/00
Reported: 08/10/00 Date Received: 08/02/00

Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 08/08/00 13:01 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	0.2 U
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	1.0 U
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.2 U
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	2.5
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	11
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.3
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.2 U
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

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Volatiles by Purge & Trap GC/MS
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Sample No: MW-11-0800

Lab Sample ID: BY45A QC Report No: BY45-ThermoRetec
LIMS ID: 00-13021 Project: Scougal Rubber
Matrix: Water SCR00-02417-300
Data Release Authorized: *MB* Date Sampled: 08/02/00
Reported: 08/10/00 Date Received: 08/02/00

Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 08/08/00 13:01 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
594-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	98.2%
d8-Toluene	108%
Bromofluorobenzene	102%
d4-1,2-Dichlorobenzene	105%

Sample No: MW-12-0800

Lab Sample ID: BY45B QC Report No: BY45-ThermoRetec
LIMS ID: 00-13022 Project: Scougal Rubber
Matrix: Water SCR00-02417-300
Data Release Authorized *[Signature]* Date Sampled: 08/02/00
Reported: 08/10/00 Date Received: 08/02/00


Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 08/08/00 13:28 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	0.8
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	1.0 U
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.4
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	1.7
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	0.2 U
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.2 U
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

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Sample No: MW-12-0800

Lab Sample ID: BY45B QC Report No: BY45-ThermoRetec
LIMS ID: 00-13022 Project: Scougal Rubber
Matrix: Water SCR00-02417-300
Data Release Authorized:  Date Sampled: 08/02/00
Reported: 08/10/00 Date Received: 08/02/00

Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 08/08/00 13:28 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
594-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	100%
d8-Toluene	105%
Bromofluorobenzene	102%
d4-1,2-Dichlorobenzene	107%

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Volatiles by Purge & Trap GC/MS

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Sample No: MW-13-0800


Lab Sample ID: BY45C QC Report No: BY45-ThermoRetec
LIMS ID: 00-13023 Project: Scougal Rubber
Matrix: Water SCR00-02417-300
Data Release Authorized: *AK* Date Sampled: 08/02/00
Reported: 08/10/00 Date Received: 08/02/00

Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 08/08/00 13:54 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	1.5
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	1.0 U
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.4
156-60-5	trans-1,2-Dichloroethene	0.2
156-59-2	cis-1,2-Dichloroethene	3.5
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	16 E
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.3
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

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Volatiles by Purge & Trap GC/MS
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Sample No: MW-13-0800

Lab Sample ID: BY45C QC Report No: BY45-ThermoRetec
LIMS ID: 00-13023 Project: Scougal Rubber
Matrix: Water SCR00-02417-300
Data Release Authorized:  Date Sampled: 08/02/00
Reported: 08/10/00 Date Received: 08/02/00Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 08/08/00 13:54 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
594-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	104%
d8-Toluene	104%
Bromofluorobenzene	104%
d4-1,2-Dichlorobenzene	105%

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS
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Sample No: MW-13-0800
DILUTION

Lab Sample ID: BY45C-DL QC Report No: BY45-ThermoRetec
LIMS ID: 00-13023 Project: Scougal Rubber
Matrix: Water SCR00-02417-300
Data Release Authorized *[Signature]* Date Sampled: 08/02/00
Reported: 08/10/00 Date Received: 08/02/00

Instrument: FINN1 Sample Amount: 5.00 mL
Date Analyzed: 08/09/00 11:43 Purge Volume: 5.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	1.0 U
74-83-9	Bromomethane	1.0 U
75-01-4	Vinyl Chloride	2.3
75-00-3	Chloroethane	1.0 U
75-09-2	Methylene Chloride	2.0 U
67-64-1	Acetone	5.0 U
75-15-0	Carbon Disulfide	1.0 U
75-35-4	1,1-Dichloroethene	1.0 U
75-34-3	1,1-Dichloroethane	1.0 U
156-60-5	trans-1,2-Dichloroethene	1.0 U
156-59-2	cis-1,2-Dichloroethene	3.2
67-66-3	Chloroform	1.0 U
107-06-2	1,2-Dichloroethane	1.0 U
78-93-3	2-Butanone	5.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	1.0 U
108-05-4	Vinyl Acetate	5.0 U
75-27-4	Bromodichloromethane	1.0 U
78-87-5	1,2-Dichloropropane	1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0 U
79-01-6	Trichloroethene	16
124-48-1	Dibromochloromethane	1.0 U
79-00-5	1,1,2-Trichloroethane	1.0 U
71-43-2	Benzene	1.0 U
10061-02-6	trans-1,3-Dichloropropene	1.0 U
110-75-8	2-Chloroethylvinylether	5.0 U
75-25-2	Bromoform	1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0 U
591-78-6	2-Hexanone	5.0 U
127-18-4	Tetrachloroethene	1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U
108-88-3	Toluene	1.0 U
108-90-7	Chlorobenzene	1.0 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	1.0 U
75-69-4	Trichlorofluoromethane	1.0 U
76-13-1	1,1,2-Trichlorotrifluoroethane	2.0 U
1330-20-7	m,p-Xylene	1.0 U

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Volatiles by Purge & Trap GC/MS
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Sample No: MW-13-0800

DILUTION

Lab Sample ID: BY45C-DL QC Report No: BY45-ThermoRetec
LIMS ID: 00-13023 Project: Scougal Rubber
Matrix: Water SCR00-02417-300
Data Release Authorized: *[Signature]* Date Sampled: 08/02/00
Reported: 08/10/00 Date Received: 08/02/00

Instrument: FINN1 Sample Amount: 5.00 mL
Date Analyzed: 08/09/00 11:43 Purge Volume: 5.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	1.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
107-02-8	Acrolein	50 U
74-88-4	Methyl Iodide	1.0 U
74-96-4	Bromoethane	2.0 U
107-13-1	Acrylonitrile	5.0 U
563-58-6	1,1-Dichloropropene	1.0 U
74-95-3	Dibromomethane	1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	5.0 U
96-18-4	1,2,3-Trichloropropane	3.0 U
110-57-6	trans-1,4-Dichloro-2-butene	5.0 U
108-67-8	1,3,5-Trimethylbenzene	1.0 U
95-63-6	1,2,4-Trimethylbenzene	1.0 U
87-68-3	Hexachlorobutadiene	5.0 U
106-93-4	Ethylene Dibromide	1.0 U
74-97-5	Bromochloromethane	1.0 U
594-20-7	2,2-Dichloropropane	1.0 U
142-28-9	1,3-Dichloropropane	1.0 U
98-82-8	Isopropylbenzene	1.0 U
103-65-1	n-Propylbenzene	1.0 U
108-86-1	Bromobenzene	1.0 U
95-49-8	2-Chlorotoluene	1.0 U
106-43-4	4-Chlorotoluene	1.0 U
98-06-6	tert-Butylbenzene	1.0 U
135-98-8	sec-Butylbenzene	1.0 U
99-87-6	4-Isopropyltoluene	1.0 U
104-51-8	n-Butylbenzene	1.0 U
120-82-1	1,2,4-Trichlorobenzene	5.0 U
91-20-3	Naphthalene	5.0 U
87-61-6	1,2,3-Trichlorobenzene	5.0 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	107%
d8-Toluene	96.7%
Bromofluorobenzene	97.1%
d4-1,2-Dichlorobenzene	96.6%

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Volatiles by Purge & Trap GC/MS
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Sample No: MW-14-0800

Lab Sample ID: BY45D QC Report No: BY45-ThermoRetec
LIMS ID: 00-13024 Project: Scougal Rubber
Matrix: Water SCR00-02417-300
Data Release Authorized: *MB* Date Sampled: 08/02/00
Reported: 08/10/00 Date Received: 08/02/00Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 08/08/00 14:21 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	36 E
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	1.0 U
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.8
75-34-3	1,1-Dichloroethane	1.5
156-60-5	trans-1,2-Dichloroethene	0.7
156-59-2	cis-1,2-Dichloroethene	28 E
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	36 E
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	3.7
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

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Volatiles by Purge & Trap GC/MS

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Sample No: MW-14-0800

Lab Sample ID: BY45D

QC Report No: BY45-ThermoRetec

LIMS ID: 00-13024

Project: Scougal Rubber

Matrix: Water

SCR00-02417-300

Data Release Authorized: 

Date Sampled: 08/02/00

Reported: 08/10/00

Date Received: 08/02/00

Instrument: FINN3

Sample Amount: 20.0 mL

Date Analyzed: 08/08/00 14:21

Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
594-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	108%
d8-Toluene	102%
Bromofluorobenzene	103%
d4-1,2-Dichlorobenzene	105%


ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS

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Sample No: MW-14-0800

DILUTION

Lab Sample ID: BY45D-DL QC Report No: BY45-ThermoRetec
LIMS ID: 00-13024 Project: Scougal Rubber
Matrix: Water SCR00-02417-300
Data Release Authorized:  Date Sampled: 08/02/00
Reported: 08/10/00 Date Received: 08/02/00

Instrument: FINN1 Sample Amount: 5.00 mL
Date Analyzed: 08/09/00 12:09 Purge Volume: 5.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	1.0 U
74-83-9	Bromomethane	1.0 U
75-01-4	Vinyl Chloride	54
75-00-3	Chloroethane	1.0 U
75-09-2	Methylene Chloride	2.0 U
67-64-1	Acetone	5.0 U
75-15-0	Carbon Disulfide	1.0 U
75-35-4	1,1-Dichloroethene	1.0 U
75-34-3	1,1-Dichloroethane	1.4
156-60-5	trans-1,2-Dichloroethene	1.0 U
156-59-2	cis-1,2-Dichloroethene	28
67-66-3	Chloroform	1.0 U
107-06-2	1,2-Dichloroethane	1.0 U
78-93-3	2-Butanone	5.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	1.0 U
108-05-4	Vinyl Acetate	5.0 U
75-27-4	Bromodichloromethane	1.0 U
78-87-5	1,2-Dichloropropane	1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0 U
79-01-6	Trichloroethene	30
124-48-1	Dibromochloromethane	1.0 U
79-00-5	1,1,2-Trichloroethane	1.0 U
71-43-2	Benzene	1.0 U
10061-02-6	trans-1,3-Dichloropropene	1.0 U
110-75-8	2-Chloroethylvinylether	5.0 U
75-25-2	Bromoform	1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0 U
591-78-6	2-Hexanone	5.0 U
127-18-4	Tetrachloroethene	3.4
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U
108-88-3	Toluene	1.0 U
108-90-7	Chlorobenzene	1.0 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	1.0 U
75-69-4	Trichlorofluoromethane	1.0 U
76-13-1	1,1,2-Trichlorotrifluoroethane	2.0 U
1330-20-7	m,p-Xylene	1.0 U

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Volatiles by Purge & Trap GC/MS

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Sample No: MW-14-0800

DILUTION

Lab Sample ID: BY45D-DL QC Report No: BY45-ThermoRetec
LIMS ID: 00-13024 Project: Scougal Rubber
Matrix: Water SCR00-02417-300
Data Release Authorized: *AB* Date Sampled: 08/02/00
Reported: 08/10/00 Date Received: 08/02/00

Instrument: FINN1 Sample Amount: 5.00 mL
Date Analyzed: 08/09/00 12:09 Purge Volume: 5.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	1.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
107-02-8	Acrolein	50 U
74-88-4	Methyl Iodide	1.0 U
74-96-4	Bromoethane	2.0 U
107-13-1	Acrylonitrile	5.0 U
563-58-6	1,1-Dichloropropene	1.0 U
74-95-3	Dibromomethane	1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	5.0 U
96-18-4	1,2,3-Trichloropropane	3.0 U
110-57-6	trans-1,4-Dichloro-2-butene	5.0 U
108-67-8	1,3,5-Trimethylbenzene	1.0 U
95-63-6	1,2,4-Trimethylbenzene	1.0 U
87-68-3	Hexachlorobutadiene	5.0 U
106-93-4	Ethylene Dibromide	1.0 U
74-97-5	Bromochloromethane	1.0 U
594-20-7	2,2-Dichloropropane	1.0 U
142-28-9	1,3-Dichloropropane	1.0 U
98-82-8	Isopropylbenzene	1.0 U
103-65-1	n-Propylbenzene	1.0 U
108-86-1	Bromobenzene	1.0 U
95-49-8	2-Chlorotoluene	1.0 U
106-43-4	4-Chlorotoluene	1.0 U
98-06-6	tert-Butylbenzene	1.0 U
135-98-8	sec-Butylbenzene	1.0 U
99-87-6	4-Isopropyltoluene	1.0 U
104-51-8	n-Butylbenzene	1.0 U
120-82-1	1,2,4-Trichlorobenzene	5.0 U
91-20-3	Naphthalene	5.0 U
87-61-6	1,2,3-Trichlorobenzene	5.0 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	109%
d8-Toluene	97.6%
Bromofluorobenzene	98.3%
d4-1,2-Dichlorobenzene	98.7%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS

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Sample No: MW-15-0800

Lab Sample ID: BY45E

QC Report No: BY45-ThermoRetec

LIMS ID: 00-13025

Project: Scougal Rubber

Matrix: Water

SCR00-02417-300

Data Release Authorized: 

Date Sampled: 08/02/00

Reported: 08/10/00

Date Received: 08/02/00

Instrument: FINN3

Sample Amount: 20.0 mL

Date Analyzed: 08/08/00 14:48

Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	0.2 U
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	1.0 U
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.2 U
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	0.2 U
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	0.2 U
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.2 U
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS

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Sample No: MW-15-0800

Lab Sample ID: BY45E


QC Report No: BY45-ThermoRetec

LIMS ID: 00-13025

Project: Scougal Rubber

Matrix: Water

SCR00-02417-300

Data Release Authorized: 

Date Sampled: 08/02/00

Reported: 08/10/00

Date Received: 08/02/00

Instrument: FINN3

Sample Amount: 20.0 mL

Date Analyzed: 08/08/00 14:48

Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
594-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	110%
d8-Toluene	100%
Bromofluorobenzene	103%
d4-1,2-Dichlorobenzene	111%

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS
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Sample No: MW-16-0800

Lab Sample ID: BY45F QC Report No: BY45-ThermoRetec
LIMS ID: 00-13026 Project: Scougal Rubber
Matrix: Water SCR00-02417-300
Data Release Authorized: *DB* Date Sampled: 08/02/00
Reported: 08/10/00 Date Received: 08/02/00

Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 08/08/00 15:14 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	0.3
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	1.0 U
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.2 U
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	3.4
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	0.2 U
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.4
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.2 U
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS

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Sample No: MW-16-0800

Lab Sample ID: BY45F

QC Report No: BY45-ThermoRetec

LIMS ID: 00-13026

Project: Scougal Rubber

Matrix: Water

SCR00-02417-300

Data Release Authorized: *[Signature]*

Date Sampled: 08/02/00

Reported: 08/10/00

Date Received: 08/02/00

Instrument: FINN3

Sample Amount: 20.0 mL

Date Analyzed: 08/08/00 15:14

Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
594-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	109%
d8-Toluene	102%
Bromofluorobenzene	103%
d4-1,2-Dichlorobenzene	107%

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS
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Sample No: MW-113-0800

Lab Sample ID: BY45G QC Report No: BY45-ThermoRetec
LIMS ID: 00-13027 Project: Scougal Rubber
Matrix: Water SCR00-02417-300
Data Release Authorized: *MB* Date Sampled: 08/02/00
Reported: 08/10/00 Date Received: 08/02/00Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 08/08/00 15:41 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	1.7
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	1.0 U
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.5
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	3.6
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	15
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.3
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

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Volatiles by Purge & Trap GC/MS

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Sample No: MW-113-0800

Lab Sample ID: BY45G

QC Report No: BY45-ThermoRetec

LIMS ID: 00-13027

Project: Scougal Rubber

Matrix: Water

SCR00-02417-300

Data Release Authorized: *[Signature]*

Date Sampled: 08/02/00

Reported: 08/10/00

Date Received: 08/02/00

Instrument: FINN3

Sample Amount: 20.0 mL

Date Analyzed: 08/08/00 15:41


Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
594-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	102%
d8-Toluene	100%
Bromofluorobenzene	99.5%
d4-1,2-Dichlorobenzene	106%

Sample No: Trip Blank

Lab Sample ID: BY45H QC Report No: BY45-ThermoRetec
LIMS ID: 00-13028 Project: Scougal Rubber
Matrix: Water SCR00-02417-300
Data Release Authorized:  Date Sampled: 08/02/00
Reported: 08/10/00 Date Received: 08/02/00

Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 08/08/00 11:40 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	0.2 U
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	1.0 U
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.2 U
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	0.2 U
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	0.2 U
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.2 U
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

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Volatiles by Purge & Trap GC/MS

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Sample No: Trip Blank

Lab Sample ID: BY45H

QC Report No: BY45-ThermoRetec

LIMS ID: 00-13028

Project: Scougal Rubber

Matrix: Water

SCR00-02417-300

Data Release Authorized: 

Date Sampled: 08/02/00

Reported: 08/10/00

Date Received: 08/02/00

Instrument: FINN3

Sample Amount: 20.0 mL

Date Analyzed: 08/08/00 11:40

Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
594-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	90.8%
d8-Toluene	102%
Bromofluorobenzene	95.2%
d4-1,2-Dichlorobenzene	99.8%

ORGANICS ANALYSIS DATA SHEET
 Volatiles by Purge & Trap GC/MS
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Lab Sample ID: BY45SB QC Report No: BY45-ThermoRetec
 LIMS ID: 00-13028 Project: Scougal Rubber
 Matrix: Water SCR00-02417-300
 Data Release Authorized: *[Signature]* Date Received: 08/02/00
 Reported: 08/10/00
 Date Analyzed: 08/08/00
 Instrument: FINN3

LABORATORY CONTROL SAMPLE CONSTITUENT	SPIKE VALUE	SPIKE AMT	% RECOVERY
Chloromethane	3.42	4.0	85.5%
Bromomethane	3.93	4.0	98.2%
Vinyl Chloride	3.72	4.0	93.0%
Chloroethane	3.57	4.0	89.2%
Methylene Chloride	3.79	4.0	94.8%
Acetone	21.2	20.0	106%
Carbon Disulfide	3.99	4.0	99.8%
1,1-Dichloroethene	3.67	4.0	91.8%
1,1-Dichloroethane	3.64	4.0	91.0%
trans-1,2-Dichloroethene	3.65	4.0	91.2%
cis-1,2-Dichloroethene	3.87	4.0	96.8%
Chloroform	3.69	4.0	92.2%
1,2-Dichloroethane	4.15	4.0	104%
2-Butanone	23.6	20.0	118%
1,1,1-Trichloroethane	3.98	4.0	99.5%
Carbon Tetrachloride	4.45	4.0	111%
Vinyl Acetate	3.63	4.0	90.8%
Bromodichloromethane	4.18	4.0	104%
1,2-Dichloropropane	4.29	4.0	107%
cis-1,3-Dichloropropene	3.95	4.0	98.8%
Trichloroethene	4.16	4.0	104%
Dibromochloromethane	3.79	4.0	94.8%
1,1,2-Trichloroethane	4.04	4.0	101%
Benzene	3.94	4.0	98.5%
trans-1,3-Dichloropropene	3.84	4.0	96.0%
2-Chloroethylvinylether	4.21	4.0	105%
Bromoform	3.68	4.0	92.0%
4-Methyl-2-Pentanone (MIBK)	23.4	20.0	117%
2-Hexanone	20.5	20.0	102%
Tetrachloroethene	3.80	4.0	95.0%
1,1,2,2-Tetrachloroethane	3.63	4.0	90.8%
Toluene	3.99	4.0	99.8%
Chlorobenzene	3.79	4.0	94.8%
Ethylbenzene	3.74	4.0	93.5%
Styrene	3.87	4.0	96.8%
Trichlorofluoromethane	3.67	4.0	91.8%
1,1,2-Trichlorotrifluoroethane	3.73	4.0	93.2%
m,p-Xylene	7.77	8.0	97.1%
O-Xylene	3.94	4.0	98.5%

Reported in ug/L

ORGANICS ANALYSIS DATA SHEET
 Volatiles by Purge & Trap GC/MS
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Lab Sample ID: BY45SB QC Report No: BY45-ThermoRetec
 LIMS ID: 00-13028 Project: Scougal Rubber
 Matrix: Water SCR00-02417-300
 Data Release Authorized: *AP* Date Received: 08/02/00
 Reported: 08/10/00
 Date Analyzed: 08/08/00
 Instrument: FINN3

LABORATORY CONTROL SAMPLE CONSTITUENT	SPIKE VALUE	SPIKE AMT	% RECOVERY
1,2-Dichlorobenzene	3.76	4.0	94.0%
1,3-Dichlorobenzene	3.85	4.0	96.2%
1,4-Dichlorobenzene	3.79	4.0	94.8%
Acrolein	18.8	20.0	94.0%
Methyl Iodide	4.06	4.0	102%
Bromoethane	3.95	4.0	98.8%
Acrylonitrile	4.21	4.0	105%
1,1-Dichloropropene	4.34	4.0	108%
Dibromomethane	4.15	4.0	104%
1,1,1,2-Tetrachloroethane	3.64	4.0	91.0%
1,2-Dibromo-3-chloropropane	3.41	4.0	85.2%
1,2,3-Trichloropropane	3.99	4.0	99.8%
trans-1,4-Dichloro-2-butene	4.52	4.0	113%
1,3,5-Trimethylbenzene	3.93	4.0	98.2%
1,2,4-Trimethylbenzene	3.85	4.0	96.2%
Hexachlorobutadiene	4.21	4.0	105%
Ethylene Dibromide	4.17	4.0	104%
Bromochloromethane	3.88	4.0	97.0%
2,2-Dichloropropane	3.88	4.0	97.0%
1,3-Dichloropropane	3.84	4.0	96.0%
Isopropylbenzene	3.98	4.0	99.5%
n-Propylbenzene	3.93	4.0	98.2%
Bromobenzene	3.77	4.0	94.2%
2-Chlorotoluene	3.75	4.0	93.8%
4-Chlorotoluene	4.08	4.0	102%
tert-Butylbenzene	4.28	4.0	107%
sec-Butylbenzene	3.92	4.0	98.0%
4-Isopropyltoluene	3.79	4.0	94.8%
n-Butylbenzene	3.72	4.0	93.0%
1,2,4-Trichlorobenzene	3.78	4.0	94.5%
Naphthalene	3.89	4.0	97.2%
1,2,3-Trichlorobenzene	3.85	4.0	96.2%

Lab Control Surrogate Recovery

d4-1,2-Dichloroethane	103%
d8-Toluene	107%
Bromofluorobenzene	104%
d4-1,2-Dichlorobenzene	101%

Reported in ug/L

ORGANICS ANALYSIS DATA SHEET
 Volatiles by Purge & Trap GC/MS
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Lab Sample ID: BY45SB QC Report No: BY45-ThermoRetec
 LIMS ID: 00-13023 Project: Scougal Rubber
 Matrix: Water SCR00-02417-300
 Data Release Authorized: *[Signature]* Date Received: 08/02/00
 Reported: 08/10/00
 Date Analyzed: 08/09/00
 Instrument: FINN1

LABORATORY CONTROL SAMPLE CONSTITUENT	SPIKE VALUE	SPIKE AMT	% RECOVERY
Chloromethane	45.9	50.0	91.8%
Bromomethane	56.0	50.0	112%
Vinyl Chloride	55.7	50.0	111%
Chloroethane	52.2	50.0	104%
Methylene Chloride	53.9	50.0	108%
Acetone	251.	250	100%
Carbon Disulfide	55.3	50.0	111%
1,1-Dichloroethene	49.0	50.0	98.0%
1,1-Dichloroethane	54.3	50.0	109%
trans-1,2-Dichloroethene	51.8	50.0	104%
cis-1,2-Dichloroethene	53.7	50.0	107%
Chloroform	53.5	50.0	107%
1,2-Dichloroethane	56.7	50.0	113%
2-Butanone	236.	250	94.4%
1,1,1-Trichloroethane	58.7	50.0	117%
Carbon Tetrachloride	56.5	50.0	113%
Vinyl Acetate	53.1	50.0	106%
Bromodichloromethane	54.6	50.0	109%
1,2-Dichloropropane	59.7	50.0	119%
cis-1,3-Dichloropropene	53.7	50.0	107%
Trichloroethene	55.3	50.0	111%
Dibromochloromethane	56.0	50.0	112%
1,1,2-Trichloroethane	52.7	50.0	105%
Benzene	55.8	50.0	112%
trans-1,3-Dichloropropene	54.0	50.0	108%
2-Chloroethylvinylether	62.2	50.0	124%
Bromoform	56.2	50.0	112%
4-Methyl-2-Pentanone (MIBK)	240.	250	96.0%
2-Hexanone	244.	250	97.6%
Tetrachloroethene	54.6	50.0	109%
1,1,2,2-Tetrachloroethane	56.1	50.0	112%
Toluene	51.7	50.0	103%
Chlorobenzene	53.3	50.0	107%
Ethylbenzene	54.7	50.0	109%
Styrene	54.2	50.0	108%
Trichlorofluoromethane	60.3	50.0	121%
1,1,2-Trichlorotrifluoroethane	48.6	50.0	97.2%
m,p-Xylene	111.	100	111%
O-Xylene	55.8	50.0	112%

Reported in ug/L

ORGANICS ANALYSIS DATA SHEET
 Volatiles by Purge & Trap GC/MS
 Page 2 of 2



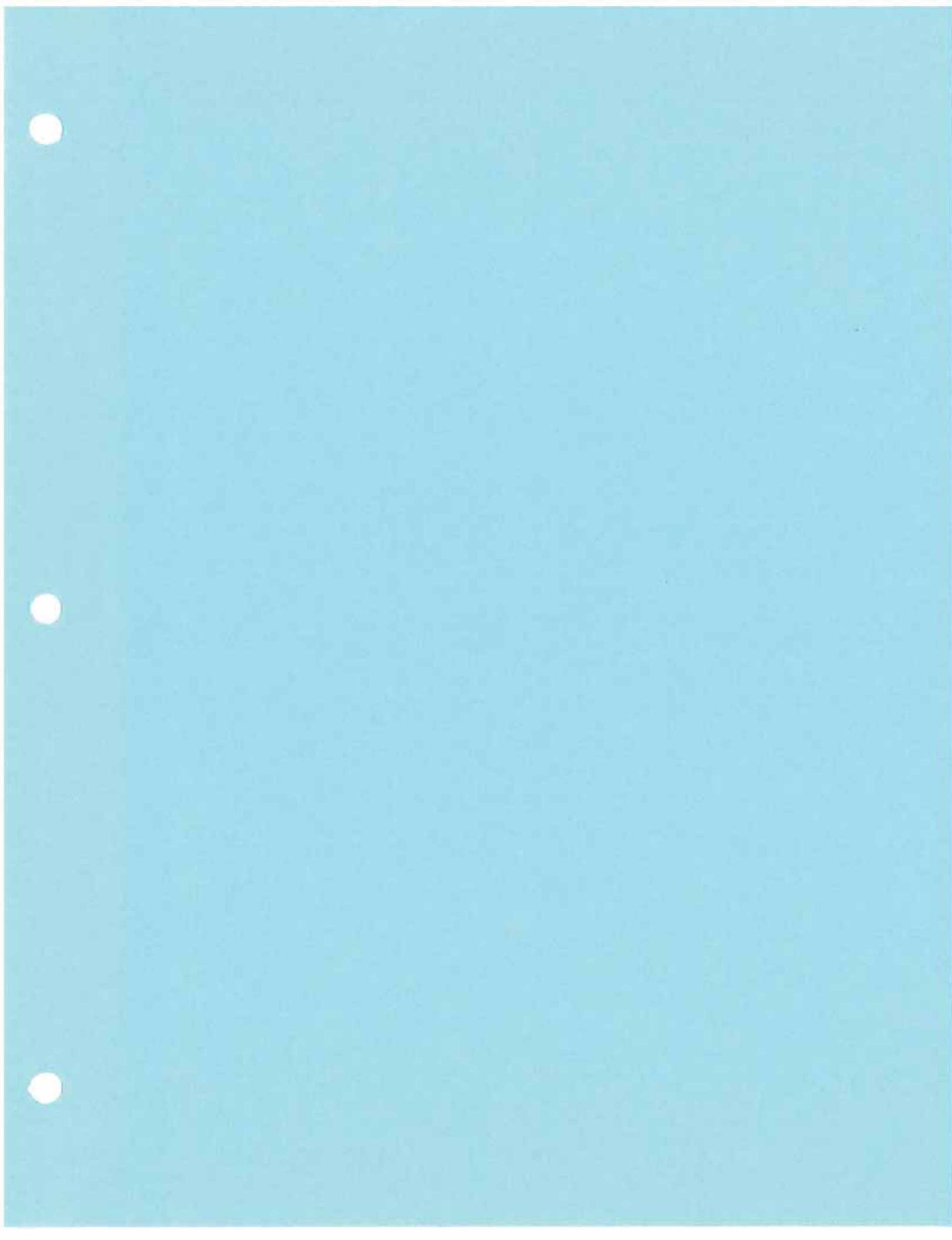
Lab Sample ID: BY45SB QC Report No: BY45-ThermoRetec
 LIMS ID: 00-13023 Project: Scougal Rubber
 Matrix: Water SCR00-02417-300
 Data Release Authorized: *MB* Date Received: 08/02/00
 Reported: 08/10/00
 Date Analyzed: 08/09/00
 Instrument: FINN1

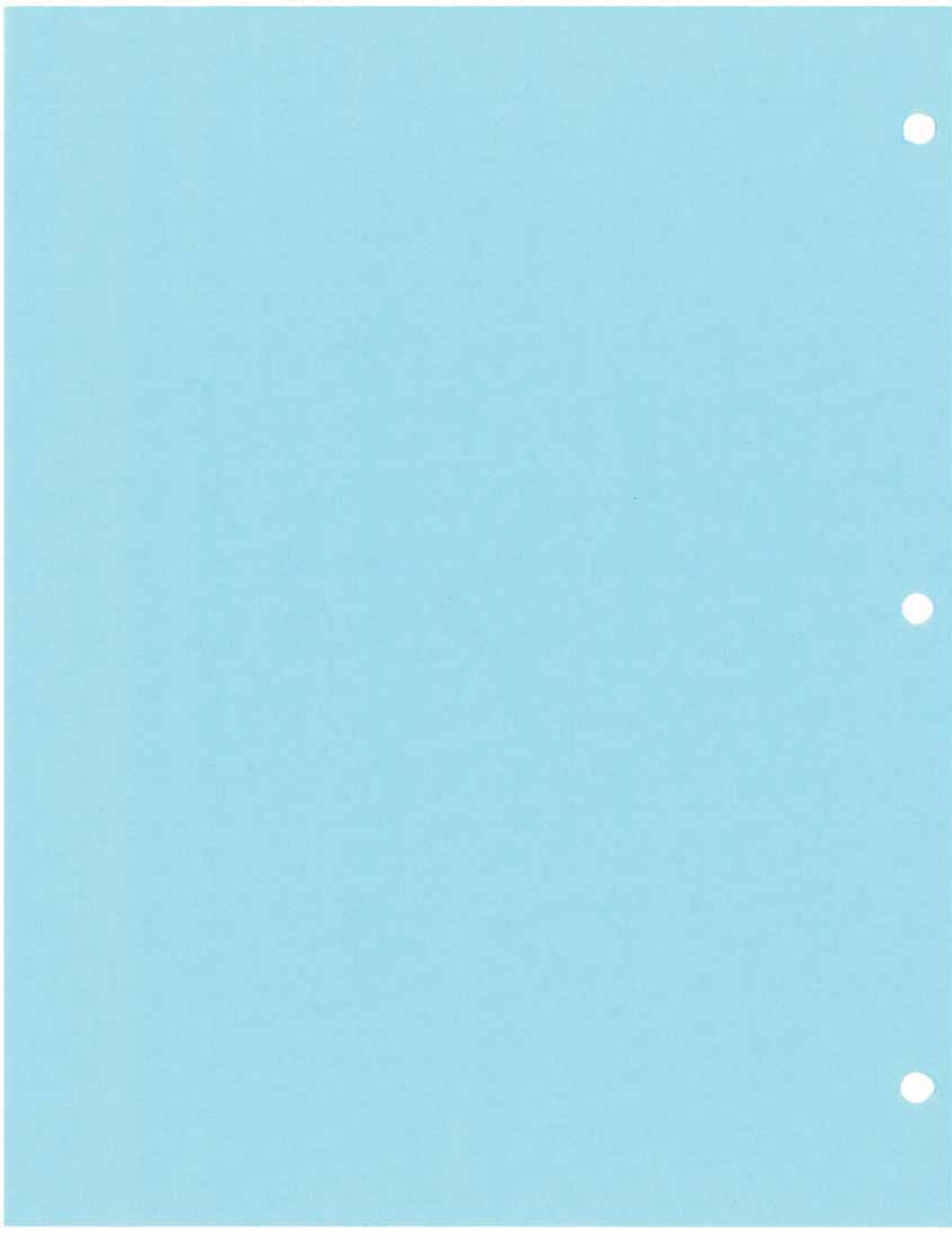
LABORATORY CONTROL SAMPLE CONSTITUENT	SPIKE VALUE	SPIKE AMT	% RECOVERY
1,2-Dichlorobenzene	52.2	50.0	104%
1,3-Dichlorobenzene	54.3	50.0	109%
1,4-Dichlorobenzene	54.6	50.0	109%
Acrolein	333.	250	133%
Methyl Iodide	49.8	50.0	99.6%
Bromoethane	53.8	50.0	108%
Acrylonitrile	57.6	50.0	115%
1,1-Dichloropropene	59.6	50.0	119%
Dibromomethane	56.0	50.0	112%
1,1,1,2-Tetrachloroethane	57.0	50.0	114%
1,2-Dibromo-3-chloropropane	62.5	50.0	125%
1,2,3-Trichloropropane	56.0	50.0	112%
trans-1,4-Dichloro-2-butene	55.8	50.0	112%
1,3,5-Trimethylbenzene	54.6	50.0	109%
1,2,4-Trimethylbenzene	54.7	50.0	109%
Hexachlorobutadiene	47.7	50.0	95.4%
Ethylene Dibromide	53.3	50.0	107%
Bromochloromethane	54.7	50.0	109%
2,2-Dichloropropane	63.0	50.0	126%
1,3-Dichloropropane	58.5	50.0	117%
Isopropylbenzene	55.7	50.0	111%
n-Propylbenzene	55.5	50.0	111%
Bromobenzene	52.5	50.0	105%
2-Chlorotoluene	55.1	50.0	110%
4-Chlorotoluene	53.6	50.0	107%
tert-Butylbenzene	54.0	50.0	108%
sec-Butylbenzene	53.7	50.0	107%
4-Isopropyltoluene	56.6	50.0	113%
n-Butylbenzene	55.6	50.0	111%
1,2,4-Trichlorobenzene	58.0	50.0	116%
Naphthalene	59.5	50.0	119%
1,2,3-Trichlorobenzene	58.2	50.0	116%

Lab Control Surrogate Recovery

d4-1,2-Dichloroethane	99.4%
d8-Toluene	97.2%
Bromofluorobenzene	102%
d4-1,2-Dichlorobenzene	98.1%

Reported in ug/L





FIELD ACTIVITY LOG

PROJECT Scaupal Rubber COMPLETED BY Danell
 JOB NO. SCROO-02417-300 APPROVED BY _____
 DAY & DATE 10 May 2000 SHEET _____ OF _____

DESCRIPTION OF FIELD ACTIVITY:

TIME	DESCRIPTION
0915	Danell Anderson (DA) on site at scaupal checked in with Rob Anderson
0920	DA Start well gauging
1030	Completion of well gauging - Setup at MW-16 for sampling
1040	Calibrate pH/sc meter 74 of PH 1000 SC Purge and field perimeters at MW-16 - No bolts in well cover
1055	Sample taken at MW-16
1110	Moved to MW-13 Purge and field perimeters
1130	Sample MW-13 Dup taken at this well MW-113-0500 at 1200
1200	Setup at MW-12 Purge and field perimeters (3 bolts)
1230	Sample taken at MW-12
1240	In checking with personnel at machine shop I found they had moved the storage container back so that it covers MW-11 Making it impossible at this time to sample the well.
1330	Moved to MW-15 Purge and field perimeters
1400	Sample taken at MW-15
1420	Moved over to Scaupal yard - MW-14 covered with a pallet had to get it removed - checked MW-14 attempted again to remove the cap but it still moves the entire well casing - well cover is also in bad condition No gauging or sampling at this well.
1440	Moved to MW-14 Purge and field perimeters
1500	Sample taken MW-14
1510	DA leaves site - travel to Labs (ARI) delivery of samples.

VISITORS ON SITE:

CHANGES FROM PLANS OR IMPORTANT DECISIONS:

WEATHER CONDITIONS:

IMPORTANT TELEPHONE CALLS:

PERSONNEL ON SITE:

GROUNDWATER SAMPLING LOG

PROJECT NAME SCOUGAL RUBBER
 PROJECT NO. SCROO-02417-300
 DATE 10 May 2000

WELL NO. MW-14
 SAMPLED BY J. Smith

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>7.05</u> (wl.prot.-ft)
DEPTH OF WELL	(ft) <u>19.30</u>
WELL DIAMETER	(inches) <u>2</u>
FEET OF WATER	<u>12.25</u>
CASING VOLUME*	(gal) <u>2</u>
PURGE VOLUME	(gal) <u>6</u>
PRODUCT THICK	(ft)
WELL CONDITION	<u>OK</u>
WEATHER	<u>overcast</u>

	PURGE		DATA
START PURGE TIME:	<u>1440</u>		
VOL. PURGED (gal)			
TIME	<u>1450</u>	<u>1455</u>	<u>1457</u>
F RATE			
pH (units)	<u>6.92</u>	<u>6.22</u>	<u>6.19</u>
CONDUCTIVITY	<u>473</u>	<u>450</u>	<u>456</u>
(umhos/cm)			
TEMP. (C)	<u>14.2</u>	<u>14.0</u>	<u>13.9</u>
WATER COLOR	<u>clear</u>	<u>clear</u>	<u>clear</u>
PURGE AND SAMPLE EQUIPT:	<u>HDPB</u>		

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-14-0500</u>	<u>1500</u>		<u>4000</u>	<u>3</u>	<u>HCL</u>

ADDITIONAL INFORMATION:
 TOC=Top of well casing
 wl.prot.=top of well protector
 *r volume= $\pi r^2 h(ft) \times 7.48 gal/ft^3$

GROUNDWATER SAMPLING LOG

PROJECT NAME SCOUGAL RUBBER
 PROJECT NO. SCROO-02417-300
 DATE 10 May 2000

WELL NO. MW-15
 SAMPLED BY Samuel

WELL	INFORMATION	
DEPTH TO WATER	(TOC-ft)	6.53
	(wl.prot.-ft)	
DEPTH OF WELL	(ft)	19.20
WELL DIAMETER	(inches)	
FEET OF WATER		12.67
CASING VOLUME*	(gal)	2.07
PURGE VOLUME	(gal)	6.20
PRODUCT THICK	(ft)	
WELL CONDITION	<u>OK</u>	
WEATHER	<u>overcast</u>	

	PURGE		DATA	
START PURGE TIME:	1335			
VOL. PURGED (gal)	2.2	2	2	
TIME	1341	1348	1352	
FLOW RATE				
pH (units)	6.70	6.52	6.45	
CONDUCTIVITY	458	460	456	
(umhos/cm)				
TEMP. (C)	13.3	13.3	13.4	
WATER COLOR				

PURGE AND SAMPLE EQUIP: HDPE

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-15-0560</u>	<u>1400</u>		<u>40</u>	<u>3</u>	<u>HCL</u>

ADDITIONAL INFORMATION:

TOC=Top of well casing
 wl.prot.=top of well protector
 *casing volume= $\pi r^2 h(ft) \times 7.48 gal/ft^3$

GROUNDWATER SAMPLING LOG

PROJECT NAME SCOUGAL RUBBER
 PROJECT NO. SCROO-02417-300
 DATE 10 May 2008

WELL NO. MW-12
 SAMPLED BY Janell

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>5.50</u> (wl.prot.-ft)
DEPTH OF WELL	(ft) <u>19.50</u>
WELL DIAMETER	(inches) <u>4</u>
FEET OF WATER	<u>14.00</u>
CASING VOLUME*	(gal) <u>9.10</u>
PURGE VOLUME	(gal) <u>27.3</u>
PRODUCT THICK	(ft)
WELL CONDITION	<u>ok but cover has no bolts</u>
WEATHER	<u>overcast</u>

	PURGE		DATA	
START PURGE TIME:	<u>1200</u>			<u>Total</u>
VOL. PURGED (gal)	<u>9.5</u>	<u>9.5</u>	<u>9</u>	<u>28</u>
TIME	<u>1212</u>	<u>1218</u>	<u>1224</u>	
F' RATE				
pH (units)	<u>6.18</u>	<u>6.34</u>	<u>6.41</u>	
CONDUCTIVITY	<u>640</u>	<u>624</u>	<u>600</u>	
(umhos/cm)				
TEMP. (C)	<u>13.2</u>	<u>13.5</u>	<u>13.5</u>	
WATER COLOR	<u>orange tint</u>	<u>orange tint</u>	<u>orange tint</u>	
PURGE AND SAMPLE EQUIPT:	<u>HDPE</u>			

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-12-0500</u>	<u>1230</u>		<u>40 mL</u>	<u>3</u>	<u>HCL</u>

ADDITIONAL INFORMATION:
 TOC=Top of well casing
 wl.prot.=top of well protector
 *c volume= $\pi r^2 h \times 7.48 \text{ gal/ft}^3$

GROUNDWATER SAMPLING LOG

PROJECT NAME SCOUGAL RUBBER
 PROJECT NO. SCROO-02417-300
 DATE 16 May 2000

WELL NO. MW-13
 SAMPLED BY Jansel

WELL	INFORMATION	
DEPTH TO WATER	(TOC-ft)	6.28
	(wl.prot.-ft)	
DEPTH OF WELL	(ft)	19.80
WELL DIAMETER	(inches)	2"
FEET OF WATER		13.52
CASING VOLUME*	(gal)	2.20
PURGE VOLUME	(gal)	6.61
PRODUCT THICK	(ft)	
WELL CONDITION		OK
WEATHER		overcast

dup MW-113-0500 @ 1200

	PURGE		DATA
START PURGE TIME:	1110		
VOL. PURGED (gal)	2.2	2.2	2.2
TIME	1117	1122	11.26
FLOW RATE			
pH (units)	6.50	6.10	6.08
CONDUCTIVITY	360	387	402
(umhos/cm)			
TEMP. (C)	13.0	13.1	13.0
WATER COLOR	clear	clear	clear
PURGE AND SAMPLE EQUIPT:	HDPPE		

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
MW-13-0500	1130		40 ml	3	HCC
MW-113-0500	1200		40 ml	3	

ADDITIONAL INFORMATION:

TOC=Top of well casing

wl.prot.=top of well protector

*casing volume= $\pi r^2 h \times 7.48 \text{ gal/ft}^3$

GROUNDWATER SAMPLING LOG

PROJECT NAME SCOUGAL RUBBER
 PROJECT NO. SCROO-02417-300
 DATE 10 May 2000

WELL NO. MW-16
 SAMPLED BY *J. Carroll*

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) 6.31 (wl.prot.-ft)
DEPTH OF WELL	(ft) 19.40
WELL DIAMETER	(inches) 24
FEET OF WATER	13.09
CASING VOLUME*	(gal) 2.13
PURGE VOLUME	(gal) 6.40
PRODUCT THICK	(ft)
WELL CONDITION	No bolts in cover
WEATHER	overcast

	PURGE	DATA
START PURGE TIME:	1030	
VOL. PURGED (gal)	2.2	2.0
TIME	1040	1054
FLOW RATE		
ph (units)	5.90	6.05
CONDUCTIVITY	102	142
(umhos/cm)		150
TEMP. (C)	13.0	13.2
WATER COLOR	orange	orange
PURGE AND SAMPLE EQUIP:	HDP5	

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
MW-16-0500	1055		Yanul	3	HCL

ADDITIONAL INFORMATION:

TOC=Top of well casing
 wl.prot.=top of well protector
 * volume = $\pi r^2 h \times 7.48 \text{ gal/ft}^3$



Analytical Resources, Incorporated

Analytical Chemists and Consultants

23 May 2000

Dean Kinney
ThermoRetec, Inc.
1011 S.W. Klickitat Way
Suite 207
Seattle, WA 98134

**RE: Client Project: SCR00-02417-300, Scougal Rubber
ARI Project: BQ01**

Dear Dean:

Please find enclosed the original Chain-of-Custody record (COC) and the final results for the samples from the project referenced above. Six water samples and one trip blank were received on May 10, 2000. The samples were received in good condition and there were no discrepancies in the paperwork. The samples were analyzed for VOAs as requested.

No problems were encountered during the analysis.

A copy of these reports will be kept on file with ARI. Should you have any questions or problems please feel free to call me at any time.

Sincerely,

ANALYTICAL RESOURCES, INC.

A handwritten signature in cursive script that reads "Mark Harris".

Mark Harris
Project Manager
206/389-6150
<mark@arilabs.com>

Enclosures

cc: file BQ01

MDH/mdh

00-1088 to 00-7087 BQ01

CHAIN OF CUSTODY RECORD

9310

PROJECT NAME: SCOGAN Rubber

SAMPLERS: 300

RECEIVING LABORATORY: *Danell Anderson*

ARI

SEND RESULTS TO:

NO. OF CONTAINERS

LAB I.D. NO.	DATE	TIME	SAMPLE NO.	NO. OF CONTAINERS	REMARKS
	10 May	1055	MW-16-0500	3	X
	1130		MW-13-0500	3	X
	1230		MW-12-0500	3	X
	1400		MW-15-0500	3	X
	1500		MW-14-0500	3	X
	1200		MW-113-0500	3	X
			TRIP BLANK	2	X

8260 full scan

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time
<i>Danell Anderson</i>	10 May 15	<i>Mike Sel</i>	
<i>Danell Anderson</i>			
<i>Danell Anderson</i>			
<i>Danell Anderson</i>			
<i>Danell Anderson</i>			
<i>Danell Anderson</i>			
<i>Danell Anderson</i>			
<i>Danell Anderson</i>			
<i>Danell Anderson</i>			
<i>Danell Anderson</i>			

Relinquished by: (Signature)	Date / Time	Relinquished by: (Signature)	Date / Time
		<i>Steph/1515</i>	

RETEC
 REMEDIATION
 TECHNOLOGIES INC
 1011 S.W. Klickitat Way
 Suite 207
 Seattle, WA 98134
 (206) 624-9349

WHITE COPY - ReTeC

YELLOW COPY - Laboratory

PINK COPY - Sampler

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS

Page 1 of 2

Sample No: Method Blank

Lab Sample ID: 051200MB QC Report No: BQ01-ThermoRetec
LIMS ID: 00-7088 Project: Scougal Rubber
Matrix: Water SCR00-02417
Data Release Authorized: \sqrt{W} Date Sampled: NA
Reported: 05/22/00 Date Received: NA

Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 05/12/00 09:25 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	0.2 U
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	1.0 U
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.2 U
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	0.2 U
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	0.2 U
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.2 U
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS

Page 2 of 2

Sample No: Method Blank

Lab Sample ID: 051200MB QC Report No: BQ01-ThermoRetec
 LIMS ID: 00-7088 Project: Scougal Rubber
 Matrix: Water SCR00-02417
 Data Release Authorized: *NW* Date Sampled: NA
 Reported: 05/22/00 Date Received: NA

Instrument: FINN3 Sample Amount: 20.0 mL
 Date Analyzed: 05/12/00 09:25 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
594-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	91.8%
d8-Toluene	98.8%
Bromofluorobenzene	92.5%
d4-1,2-Dichlorobenzene	101%

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS
Page 1 of 2

Sample No: Method Blank

Lab Sample ID: 051500MB QC Report No: BQ01-ThermoRetec
LIMS ID: 00-7093 Project: Scougal Rubber
Matrix: Water SCR00-02417
Data Release Authorized: *MW* Date Sampled: NA
Reported: 05/22/00 Date Received: NAInstrument: NT3 Sample Amount: 5.00 mL
Date Analyzed: 05/15/00 16:43 Purge Volume: 5.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	1.0 U
74-83-9	Bromomethane	1.0 U
75-01-4	Vinyl Chloride	1.0 U
75-00-3	Chloroethane	1.0 U
75-09-2	Methylene Chloride	2.0 U
67-64-1	Acetone	5.0 U
75-15-0	Carbon Disulfide	1.0 U
75-35-4	1,1-Dichloroethene	1.0 U
75-34-3	1,1-Dichloroethane	1.0 U
156-60-5	trans-1,2-Dichloroethene	1.0 U
156-59-2	cis-1,2-Dichloroethene	1.0 U
67-66-3	Chloroform	1.0 U
107-06-2	1,2-Dichloroethane	1.0 U
78-93-3	2-Butanone	5.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	1.0 U
108-05-4	Vinyl Acetate	5.0 U
75-27-4	Bromodichloromethane	1.0 U
78-87-5	1,2-Dichloropropane	1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0 U
79-01-6	Trichloroethene	1.0 U
124-48-1	Dibromochloromethane	1.0 U
79-00-5	1,1,2-Trichloroethane	1.0 U
71-43-2	Benzene	1.0 U
10061-02-6	trans-1,3-Dichloropropene	1.0 U
110-75-8	2-Chloroethylvinylether	5.0 U
75-25-2	Bromoform	1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0 U
591-78-6	2-Hexanone	5.0 U
127-18-4	Tetrachloroethene	1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U
108-88-3	Toluene	1.0 U
108-90-7	Chlorobenzene	1.0 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	1.0 U
75-69-4	Trichlorofluoromethane	1.0 U
76-13-1	1,1,2-Trichlorotrifluoroethane	2.0 U
1330-20-7	m,p-Xylene	1.0 U

Sample No: Method Blank

Lab Sample ID: 051500MB QC Report No: BQ01-ThermoRetec
LIMS ID: 00-7093 Project: Scougal Rubber
Matrix: Water SCR00-02417
Data Release Authorized: (mw) Date Sampled: NA
Reported: 05/22/00 Date Received: NA

Instrument: NT3 Sample Amount: 5.00 mL
Date Analyzed: 05/15/00 16:43 Purge Volume: 5.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	1.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
107-02-8	Acrolein	50 U
74-88-4	Methyl Iodide	1.0 U
74-96-4	Bromoethane	2.0 U
107-13-1	Acrylonitrile	5.0 U
563-58-6	1,1-Dichloropropene	1.0 U
74-95-3	Dibromomethane	1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	5.0 U
96-18-4	1,2,3-Trichloropropane	3.0 U
110-57-6	trans-1,4-Dichloro-2-butene	5.0 U
108-67-8	1,3,5-Trimethylbenzene	1.0 U
95-63-6	1,2,4-Trimethylbenzene	1.0 U
87-68-3	Hexachlorobutadiene	5.0 U
106-93-4	Ethylene Dibromide	1.0 U
74-97-5	Bromochloromethane	1.0 U
594-20-7	2,2-Dichloropropane	1.0 U
142-28-9	1,3-Dichloropropane	1.0 U
98-82-8	Isopropylbenzene	1.0 U
103-65-1	n-Propylbenzene	1.0 U
108-86-1	Bromobenzene	1.0 U
95-49-8	2-Chlorotoluene	1.0 U
106-43-4	4-Chlorotoluene	1.0 U
98-06-6	tert-Butylbenzene	1.0 U
135-98-8	sec-Butylbenzene	1.0 U
99-87-6	4-Isopropyltoluene	1.0 U
104-51-8	n-Butylbenzene	1.0 U
120-82-1	1,2,4-Trichlorobenzene	5.0 U
91-20-3	Naphthalene	5.0 U
87-61-6	1,2,3-Trichlorobenzene	5.0 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	88.7%
d8-Toluene	100%
Bromofluorobenzene	91.1%
d4-1,2-Dichlorobenzene	101%

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Volatiles by Purge & Trap GC/MS

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Sample No: Method Blank

Lab Sample ID: 051700MB QC Report No: BQ01-ThermoRetec
 LIMS ID: 00-7089 Project: Scougal Rubber
 Matrix: Water SCR00-02417
 Data Release Authorized: *WJ* Date Sampled: NA
 Reported: 05/22/00 Date Received: NA

Instrument: NT3 Sample Amount: 5.00 mL
 Date Analyzed: 05/17/00 11:57 Purge Volume: 5.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	1.0 U
74-83-9	Bromomethane	1.0 U
75-01-4	Vinyl Chloride	1.0 U
75-00-3	Chloroethane	1.0 U
75-09-2	Methylene Chloride	2.0 U
67-64-1	Acetone	5.0 U
75-15-0	Carbon Disulfide	1.0 U
75-35-4	1,1-Dichloroethene	1.0 U
75-34-3	1,1-Dichloroethane	1.0 U
156-60-5	trans-1,2-Dichloroethene	1.0 U
156-59-2	cis-1,2-Dichloroethene	1.0 U
67-66-3	Chloroform	1.0 U
107-06-2	1,2-Dichloroethane	1.0 U
78-93-3	2-Butanone	5.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	1.0 U
108-05-4	Vinyl Acetate	5.0 U
75-27-4	Bromodichloromethane	1.0 U
78-87-5	1,2-Dichloropropane	1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0 U
79-01-6	Trichloroethene	1.0 U
124-48-1	Dibromochloromethane	1.0 U
79-00-5	1,1,2-Trichloroethane	1.0 U
71-43-2	Benzene	1.0 U
10061-02-6	trans-1,3-Dichloropropene	1.0 U
110-75-8	2-Chloroethylvinylether	5.0 U
75-25-2	Bromoform	1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0 U
591-78-6	2-Hexanone	5.0 U
127-18-4	Tetrachloroethene	1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U
108-88-3	Toluene	1.0 U
108-90-7	Chlorobenzene	1.0 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	1.0 U
75-69-4	Trichlorofluoromethane	1.0 U
76-13-1	1,1,2-Trichlorotrifluoroethane	2.0 U
1330-20-7	m,p-Xylene	1.0 U

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Volatiles by Purge & Trap GC/MS

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Sample No: Method Blank

Lab Sample ID: 051700MB QC Report No: BQ01-ThermoRetec
 LIMS ID: 00-7089 Project: Scougal Rubber
 Matrix: Water SCR00-02417
 Data Release Authorized: *MW* Date Sampled: NA
 Reported: 05/22/00 Date Received: NA

Instrument: NT3 Sample Amount: 5.00 mL
 Date Analyzed: 05/17/00 11:57 Purge Volume: 5.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	1.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
107-02-8	Acrolein	50 U
74-88-4	Methyl Iodide	1.0 U
74-96-4	Bromoethane	2.0 U
107-13-1	Acrylonitrile	5.0 U
563-58-6	1,1-Dichloropropene	1.0 U
74-95-3	Dibromomethane	1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	5.0 U
96-18-4	1,2,3-Trichloropropane	3.0 U
110-57-6	trans-1,4-Dichloro-2-butene	5.0 U
108-67-8	1,3,5-Trimethylbenzene	1.0 U
95-63-6	1,2,4-Trimethylbenzene	1.0 U
87-68-3	Hexachlorobutadiene	5.0 U
106-93-4	Ethylene Dibromide	1.0 U
74-97-5	Bromochloromethane	1.0 U
594-20-7	2,2-Dichloropropane	1.0 U
142-28-9	1,3-Dichloropropane	1.0 U
98-82-8	Isopropylbenzene	1.0 U
103-65-1	n-Propylbenzene	1.0 U
108-86-1	Bromobenzene	1.0 U
95-49-8	2-Chlorotoluene	1.0 U
106-43-4	4-Chlorotoluene	1.0 U
98-06-6	tert-Butylbenzene	1.0 U
135-98-8	sec-Butylbenzene	1.0 U
99-87-6	4-Isopropyltoluene	1.0 U
104-51-8	n-Butylbenzene	1.0 U
120-82-1	1,2,4-Trichlorobenzene	5.0 U
91-20-3	Naphthalene	5.0 U
87-61-6	1,2,3-Trichlorobenzene	5.0 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	96.7%
d8-Toluene	96.3%
Bromofluorobenzene	98.1%
d4-1,2-Dichlorobenzene	101%

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Volatiles by Purge & Trap GC/MS

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Sample No: MW-16-0500

Lab Sample ID: BQ01A QC Report No: BQ01-ThermoRetec
LIMS ID: 00-7088 Project: Scougal Rubber
Matrix: Water SCR00-02417
Data Release Authorized: *WV* Date Sampled: 05/10/00
Reported: 05/22/00 Date Received: 05/10/00

Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 05/12/00 11:28 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	0.4
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	2.5
67-64-1	Acetone	1.8
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.2 U
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	1.0
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	0.2 U
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.2 U
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

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Volatiles by Purge & Trap GC/MS
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Sample No: MW-16-0500

Lab Sample ID: BQ01A QC Report No: BQ01-ThermoRetec
LIMS ID: 00-7088 Project: Scougal Rubber
Matrix: Water SCR00-02417
Data Release Authorized: *MW* Date Sampled: 05/10/00
Reported: 05/22/00 Date Received: 05/10/00

Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 05/12/00 11:28 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
594-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	91.8%
d8-Toluene	99.0%
Bromofluorobenzene	90.5%
d4-1,2-Dichlorobenzene	108%

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Volatiles by Purge & Trap GC/MS

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Sample No: MW-13-0500

Lab Sample ID: BQ01B QC Report No: BQ01-ThermoRetec
LIMS ID: 00-7089 Project: Scougal Rubber
Matrix: Water SCR00-02417
Data Release Authorized: *WV* Date Sampled: 05/10/00
Reported: 05/22/00 Date Received: 05/10/00

Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 05/12/00 11:54 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	1.9
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	1.8
67-64-1	Acetone	1.8
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.3
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	2.1
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	16 E
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.3
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

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Volatiles by Purge & Trap GC/MS

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Sample No: MW-13-0500

Lab Sample ID: BQ01B

QC Report No: BQ01-ThermoRetec

LIMS ID: 00-7089

Project: Scougal Rubber

Matrix: Water

SCR00-02417

Data Release Authorized: *WJ*

Date Sampled: 05/10/00

Reported: 05/22/00

Date Received: 05/10/00

Instrument: FINN3

Sample Amount: 20.0 mL

Date Analyzed: 05/12/00 11:54

Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
594-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	93.8%
d8-Toluene	95.5%
Bromofluorobenzene	90.2%
d4-1,2-Dichlorobenzene	102%

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Volatiles by Purge & Trap GC/MS

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Sample No: MW-13-0500

DILUTION

Lab Sample ID: BQ01B-DL QC Report No: BQ01-ThermoRetec
LIMS ID: 00-7089 Project: Scougal Rubber
Matrix: Water SCR00-02417
Data Release Authorized: *MW* Date Sampled: 05/10/00
Reported: 05/22/00 Date Received: 05/10/00

Instrument: NT3 Sample Amount: 5.00 mL
Date Analyzed: 05/17/00 18:02 Purge Volume: 5.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	1.0 U
74-83-9	Bromomethane	1.0 U
75-01-4	Vinyl Chloride	2.1
75-00-3	Chloroethane	1.0 U
75-09-2	Methylene Chloride	2.3
67-64-1	Acetone	5.0 U
75-15-0	Carbon Disulfide	1.0 U
75-35-4	1,1-Dichloroethene	1.0 U
75-34-3	1,1-Dichloroethane	1.0 U
156-60-5	trans-1,2-Dichloroethene	1.0 U
156-59-2	cis-1,2-Dichloroethene	1.5
67-66-3	Chloroform	1.0 U
107-06-2	1,2-Dichloroethane	1.0 U
78-93-3	2-Butanone	5.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	1.0 U
108-05-4	Vinyl Acetate	5.0 U
75-27-4	Bromodichloromethane	1.0 U
78-87-5	1,2-Dichloropropane	1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0 U
79-01-6	Trichloroethene	18
124-48-1	Dibromochloromethane	1.0 U
79-00-5	1,1,2-Trichloroethane	1.0 U
71-43-2	Benzene	1.0 U
10061-02-6	trans-1,3-Dichloropropene	1.0 U
110-75-8	2-Chloroethylvinylether	5.0 U
75-25-2	Bromoform	1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0 U
591-78-6	2-Hexanone	5.0 U
127-18-4	Tetrachloroethene	1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U
108-88-3	Toluene	1.0 U
108-90-7	Chlorobenzene	1.0 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	1.0 U
75-69-4	Trichlorofluoromethane	1.0 U
76-13-1	1,1,2-Trichlorotrifluoroethane	2.0 U
1330-20-7	m,p-Xylene	1.0 U

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Volatiles by Purge & Trap GC/MS

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Sample No: MW-13-0500

DILUTION

Lab Sample ID: BQ01B-DL QC Report No: BQ01-ThermoRetec
LIMS ID: 00-7089 Project: Scougal Rubber
Matrix: Water SCR00-02417
Data Release Authorized: \\\w\w Date Sampled: 05/10/00
Reported: 05/22/00 Date Received: 05/10/00

Instrument: NT3 Sample Amount: 5.00 mL
Date Analyzed: 05/17/00 18:02 Purge Volume: 5.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	1.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
107-02-8	Acrolein	50 U
74-88-4	Methyl Iodide	1.0 U
74-96-4	Bromoethane	2.0 U
107-13-1	Acrylonitrile	5.0 U
563-58-6	1,1-Dichloropropene	1.0 U
74-95-3	Dibromomethane	1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	5.0 U
96-18-4	1,2,3-Trichloropropane	3.0 U
110-57-6	trans-1,4-Dichloro-2-butene	5.0 U
108-67-8	1,3,5-Trimethylbenzene	1.0 U
95-63-6	1,2,4-Trimethylbenzene	1.0 U
87-68-3	Hexachlorobutadiene	5.0 U
106-93-4	Ethylene Dibromide	1.0 U
74-97-5	Bromochloromethane	1.0 U
594-20-7	2,2-Dichloropropane	1.0 U
142-28-9	1,3-Dichloropropane	1.0 U
98-82-8	Isopropylbenzene	1.0 U
103-65-1	n-Propylbenzene	1.0 U
108-86-1	Bromobenzene	1.0 U
95-49-8	2-Chlorotoluene	1.0 U
106-43-4	4-Chlorotoluene	1.0 U
98-06-6	tert-Butylbenzene	1.0 U
135-98-8	sec-Butylbenzene	1.0 U
99-87-6	4-Isopropyltoluene	1.0 U
104-51-8	n-Butylbenzene	1.0 U
120-82-1	1,2,4-Trichlorobenzene	5.0 U
91-20-3	Naphthalene	5.0 U
87-61-6	1,2,3-Trichlorobenzene	5.0 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	99.5%
d8-Toluene	96.3%
Bromofluorobenzene	97.7%
d4-1,2-Dichlorobenzene	102%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS

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Sample No: MW-12-0500

Lab Sample ID: BQ01C

QC Report No: BQ01-ThermoRetec

LIMS ID: 00-7090

Project: Scougal Rubber

Matrix: Water

SCR00-02417

Data Release Authorized: *W*

Date Sampled: 05/10/00

Reported: 05/22/00

Date Received: 05/10/00

Instrument: FINN3

Sample Amount: 20.0 mL

Date Analyzed: 05/12/00 12:19

Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	2.0
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	1.1
67-64-1	Acetone	2.9
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.4
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	2.1
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	0.2 U
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.2 U
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS

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Sample No: MW-12-0500

Lab Sample ID: BQ01C

QC Report No: BQ01-ThermoRetec

LIMS ID: 00-7090

Project: Scougal Rubber

Matrix: Water

SCR00-02417

Data Release Authorized: *W*

Date Sampled: 05/10/00

Reported: 05/22/00

Date Received: 05/10/00

Instrument: FINN3

Sample Amount: 20.0 mL

Date Analyzed: 05/12/00 12:19

Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
594-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	89.5%
d8-Toluene	97.5%
Bromofluorobenzene	88.8%
d4-1,2-Dichlorobenzene	102%

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS
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Sample No: MW-15-0500

Lab Sample ID: BQ01D QC Report No: BQ01-ThermoRetec
LIMS ID: 00-7091 Project: Scougal Rubber
Matrix: Water SCR00-02417
Data Release Authorized: *WJ* Date Sampled: 05/10/00
Reported: 05/22/00 Date Received: 05/10/00

Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 05/12/00 12:45 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	0.2 U
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	1.7
67-64-1	Acetone	1.2
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.2 U
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	0.2 U
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	0.2 U
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.2 U
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS

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Sample No: MW-15-0500

Lab Sample ID: BQ01D

QC Report No: BQ01-ThermoRetec

LIMS ID: 00-7091

Project: Scougal Rubber

Matrix: Water

SCR00-02417

Data Release Authorized: *WVJ*

Date Sampled: 05/10/00

Reported: 05/22/00

Date Received: 05/10/00

Instrument: FINN3

Sample Amount: 20.0 mL

Date Analyzed: 05/12/00 12:45

Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
594-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	96.2%
d8-Toluene	99.8%
Bromofluorobenzene	91.0%
d4-1,2-Dichlorobenzene	102%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS

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Sample No: MW-14-0500

Lab Sample ID: BQ01E

QC Report No: BQ01-ThermoRetec

LIMS ID: 00-7092

Project: Scougal Rubber

Matrix: Water

SCR00-02417

Data Release Authorized: MW

Date Sampled: 05/10/00

Reported: 05/22/00

Date Received: 05/10/00

Instrument: FINN3

Sample Amount: 20.0 mL

Date Analyzed: 05/12/00 13:11

Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	71 E
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.6
67-64-1	Acetone	2.4
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.9
75-34-3	1,1-Dichloroethane	1.5
156-60-5	trans-1,2-Dichloroethene	0.7
156-59-2	cis-1,2-Dichloroethene	35 E
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	27 E
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.4
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	4.1
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS

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Sample No: MW-14-0500

Lab Sample ID: BQ01E

QC Report No: BQ01-ThermoRetec

LIMS ID: 00-7092

Project: Scougal Rubber

Matrix: Water

SCR00-02417

Data Release Authorized: *WVW*

Date Sampled: 05/10/00

Reported: 05/22/00

Date Received: 05/10/00

Instrument: FINN3

Sample Amount: 20.0 mL

Date Analyzed: 05/12/00 13:11

Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
594-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	93.0%
d8-Toluene	100%
Bromofluorobenzene	93.5%
d4-1,2-Dichlorobenzene	103%

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS
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Sample No: MW-14-0500
DILUTION

Lab Sample ID: BQ01E-DL QC Report No: BQ01-ThermoRetec
LIMS ID: 00-7092 Project: Scougal Rubber
Matrix: Water SCR00-02417
Data Release Authorized: *frw* Date Sampled: 05/10/00
Reported: 05/22/00 Date Received: 05/10/00

Instrument: NT3 Sample Amount: 5.00 mL
Date Analyzed: 05/17/00 18:29 Purge Volume: 5.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	1.0 U
74-83-9	Bromomethane	1.0 U
75-01-4	Vinyl Chloride	140
75-00-3	Chloroethane	1.0 U
75-09-2	Methylene Chloride	2.0 U
67-64-1	Acetone	5.0 U
75-15-0	Carbon Disulfide	1.0 U
75-35-4	1,1-Dichloroethene	1.0 U
75-34-3	1,1-Dichloroethane	1.6
156-60-5	trans-1,2-Dichloroethene	1.0 U
156-59-2	cis-1,2-Dichloroethene	31
67-66-3	Chloroform	1.0 U
107-06-2	1,2-Dichloroethane	1.0 U
78-93-3	2-Butanone	5.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	1.0 U
108-05-4	Vinyl Acetate	5.0 U
75-27-4	Bromodichloromethane	1.0 U
78-87-5	1,2-Dichloropropane	1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0 U
79-01-6	Trichloroethene	24
124-48-1	Dibromochloromethane	1.0 U
79-00-5	1,1,2-Trichloroethane	1.0 U
71-43-2	Benzene	1.0 U
10061-02-6	trans-1,3-Dichloropropene	1.0 U
110-75-8	2-Chloroethylvinylether	5.0 U
75-25-2	Bromoform	1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0 U
591-78-6	2-Hexanone	5.0 U
127-18-4	Tetrachloroethene	3.6
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U
108-88-3	Toluene	1.0 U
108-90-7	Chlorobenzene	1.0 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	1.0 U
75-69-4	Trichlorofluoromethane	1.0 U
76-13-1	1,1,2-Trichlorotrifluoroethane	2.0 U
1330-20-7	m,p-Xylene	1.0 U

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS
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Sample No: MW-14-0500
DILUTION

Lab Sample ID: BQ01E-DL QC Report No: BQ01-ThermoRetec
LIMS ID: 00-7092 Project: Scougal Rubber
Matrix: Water SCR00-02417
Data Release Authorized: *NW* Date Sampled: 05/10/00
Reported: 05/22/00 Date Received: 05/10/00

Instrument: NT3 Sample Amount: 5.00 mL
Date Analyzed: 05/17/00 18:29 Purge Volume: 5.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	1.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
107-02-8	Acrolein	50 U
74-88-4	Methyl Iodide	1.0 U
74-96-4	Bromoethane	2.0 U
107-13-1	Acrylonitrile	5.0 U
563-58-6	1,1-Dichloropropene	1.0 U
74-95-3	Dibromomethane	1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	5.0 U
96-18-4	1,2,3-Trichloropropane	3.0 U
110-57-6	trans-1,4-Dichloro-2-butene	5.0 U
108-67-8	1,3,5-Trimethylbenzene	1.0 U
95-63-6	1,2,4-Trimethylbenzene	1.0 U
87-68-3	Hexachlorobutadiene	5.0 U
106-93-4	Ethylene Dibromide	1.0 U
74-97-5	Bromochloromethane	1.0 U
594-20-7	2,2-Dichloropropane	1.0 U
142-28-9	1,3-Dichloropropane	1.0 U
98-82-8	Isopropylbenzene	1.0 U
103-65-1	n-Propylbenzene	1.0 U
108-86-1	Bromobenzene	1.0 U
95-49-8	2-Chlorotoluene	1.0 U
106-43-4	4-Chlorotoluene	1.0 U
98-06-6	tert-Butylbenzene	1.0 U
135-98-8	sec-Butylbenzene	1.0 U
99-87-6	4-Isopropyltoluene	1.0 U
104-51-8	n-Butylbenzene	1.0 U
120-82-1	1,2,4-Trichlorobenzene	5.0 U
91-20-3	Naphthalene	5.0 U
87-61-6	1,2,3-Trichlorobenzene	5.0 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	97.0%
d8-Toluene	100%
Bromofluorobenzene	100%
d4-1,2-Dichlorobenzene	101%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS

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Sample No: MW-113-0500

Lab Sample ID: BQ01F

QC Report No: BQ01-ThermoRetec

LIMS ID: 00-7093

Project: Scougal Rubber

Matrix: Water

SCR00-02417

Data Release Authorized: *mm*

Date Sampled: 05/10/00

Reported: 05/22/00

Date Received: 05/10/00

Instrument: FINN3

Sample Amount: 20.0 mL

Date Analyzed: 05/12/00 13:36

Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	0.7
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	2.2
67-64-1	Acetone	1.3
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.2 U
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	1.2
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.3
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	27 E
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.4
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

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Volatiles by Purge & Trap GC/MS
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Sample No: MW-113-0500

Lab Sample ID: BQ01F QC Report No: BQ01-ThermoRetec
LIMS ID: 00-7093 Project: Scougal Rubber
Matrix: Water SCR00-02417
Data Release Authorized: *W* Date Sampled: 05/10/00
Reported: 05/22/00 Date Received: 05/10/00

Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 05/12/00 13:36 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
594-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	95.5%
d8-Toluene	97.8%
Bromofluorobenzene	90.5%
d4-1,2-Dichlorobenzene	103%

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Volatiles by Purge & Trap GC/MS
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Sample No: MW-113-0500
DILUTION

Lab Sample ID: BQ01F-DL QC Report No: BQ01-ThermoRetec
LIMS ID: 00-7093 Project: Scougal Rubber
Matrix: Water SCR00-02417
Data Release Authorized: *MV* Date Sampled: 05/10/00
Reported: 05/22/00 Date Received: 05/10/00

Instrument: NT3 Sample Amount: 5.00 mL
Date Analyzed: 05/16/00 02:45 Purge Volume: 5.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	1.0 U
74-83-9	Bromomethane	1.0 U
75-01-4	Vinyl Chloride	1.0
75-00-3	Chloroethane	1.0 U
75-09-2	Methylene Chloride	2.0 U
67-64-1	Acetone	5.0 U
75-15-0	Carbon Disulfide	1.0 U
75-35-4	1,1-Dichloroethene	1.0 U
75-34-3	1,1-Dichloroethane	1.0 U
156-60-5	trans-1,2-Dichloroethene	1.0 U
156-59-2	cis-1,2-Dichloroethene	1.0 U
67-66-3	Chloroform	1.0 U
107-06-2	1,2-Dichloroethane	1.0 U
78-93-3	2-Butanone	5.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	1.0 U
108-05-4	Vinyl Acetate	5.0 U
75-27-4	Bromodichloromethane	1.0 U
78-87-5	1,2-Dichloropropane	1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0 U
79-01-6	Trichloroethene	22
124-48-1	Dibromochloromethane	1.0 U
79-00-5	1,1,2-Trichloroethane	1.0 U
71-43-2	Benzene	1.0 U
10061-02-6	trans-1,3-Dichloropropene	1.0 U
110-75-8	2-Chloroethylvinylether	5.0 U
75-25-2	Bromoform	1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0 U
591-78-6	2-Hexanone	5.0 U
127-18-4	Tetrachloroethene	1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U
108-88-3	Toluene	1.0 U
108-90-7	Chlorobenzene	1.0 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	1.0 U
75-69-4	Trichlorofluoromethane	1.0 U
76-13-1	1,1,2-Trichlorotrifluoroethane	2.0 U
1330-20-7	m,p-Xylene	1.0 U

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Volatiles by Purge & Trap GC/MS
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Sample No: MW-113-0500
DILUTION

Lab Sample ID: BQ01F-DL QC Report No: BQ01-ThermoRetec
LIMS ID: 00-7093 Project: Scougal Rubber
Matrix: Water SCR00-02417
Data Release Authorized: ffr Date Sampled: 05/10/00
Reported: 05/22/00 Date Received: 05/10/00

Instrument: NT3 Sample Amount: 5.00 mL
Date Analyzed: 05/16/00 02:45 Purge Volume: 5.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	1.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
107-02-8	Acrolein	50 U
74-88-4	Methyl Iodide	1.0 U
74-96-4	Bromoethane	2.0 U
107-13-1	Acrylonitrile	5.0 U
563-58-6	1,1-Dichloropropene	1.0 U
74-95-3	Dibromomethane	1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	5.0 U
96-18-4	1,2,3-Trichloropropane	3.0 U
110-57-6	trans-1,4-Dichloro-2-butene	5.0 U
108-67-8	1,3,5-Trimethylbenzene	1.0 U
95-63-6	1,2,4-Trimethylbenzene	1.0 U
87-68-3	Hexachlorobutadiene	5.0 U
106-93-4	Ethylene Dibromide	1.0 U
74-97-5	Bromochloromethane	1.0 U
594-20-7	2,2-Dichloropropane	1.0 U
142-28-9	1,3-Dichloropropane	1.0 U
98-82-8	Isopropylbenzene	1.0 U
103-65-1	n-Propylbenzene	1.0 U
108-86-1	Bromobenzene	1.0 U
95-49-8	2-Chlorotoluene	1.0 U
106-43-4	4-Chlorotoluene	1.0 U
98-06-6	tert-Butylbenzene	1.0 U
135-98-8	sec-Butylbenzene	1.0 U
99-87-6	4-Isopropyltoluene	1.0 U
104-51-8	n-Butylbenzene	1.0 U
120-82-1	1,2,4-Trichlorobenzene	5.0 U
91-20-3	Naphthalene	5.0 U
87-61-6	1,2,3-Trichlorobenzene	5.0 U

Volatile Surrogate Recovery


d4-1,2-Dichloroethane	70.5%
d8-Toluene	94.7%
Bromofluorobenzene	87.8%
d4-1,2-Dichlorobenzene	102%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS

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Sample No: Trip Blank

Lab Sample ID: BQ01G QC Report No: BQ01-ThermoRetec
LIMS ID: 00-7094 Project: Scougal Rubber
Matrix: Water SCR00-02417
Data Release Authorized:  Date Sampled: 05/10/00
Reported: 05/22/00 Date Received: 05/10/00

Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 05/12/00 14:02 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	0.2 U
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.5
67-64-1	Acetone	1.0 U
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.2 U
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	0.2 U
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	0.2 U
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.2 U
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS

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Sample No: Trip Blank

Lab Sample ID: BQ01G QC Report No: BQ01-ThermoRetec
LIMS ID: 00-7094 Project: Scougal Rubber
Matrix: Water SCR00-02417
Data Release Authorized: *MWJ* Date Sampled: 05/10/00
Reported: 05/22/00 Date Received: 05/10/00

Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 05/12/00 14:02 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
594-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	98.2%
d8-Toluene	100%
Bromofluorobenzene	90.5%
d4-1,2-Dichlorobenzene	103%

ORGANICS ANALYSIS DATA SHEET
 Volatiles by Purge & Trap GC/MS
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Lab Sample ID: BQ01SB QC Report No: BQ01-ThermoRetec
 LIMS ID: 00-7088 Project: Scougal Rubber
 Matrix: Water SCR00-02417
 Data Release Authorized: *WV* Date Received: 05/10/00
 Reported: 05/22/00
 Date Analyzed: 05/12/00
 Instrument: FINN3

LABORATORY CONTROL SAMPLE CONSTITUENT	SPIKE VALUE	SPIKE AMT	% RECOVERY
Chloromethane	3.82	4.0	95.5%
Bromomethane	4.20	4.0	105%
Vinyl Chloride	3.79	4.0	94.8%
Chloroethane	3.94	4.0	98.5%
Methylene Chloride	3.58	4.0	89.5%
Acetone	27.1	20.0	136%
Carbon Disulfide	3.57	4.0	89.2%
1,1-Dichloroethene	3.51	4.0	87.8%
1,1-Dichloroethane	3.42	4.0	85.5%
trans-1,2-Dichloroethene	3.51	4.0	87.8%
cis-1,2-Dichloroethene	3.68	4.0	92.0%
Chloroform	3.58	4.0	89.5%
1,2-Dichloroethane	3.84	4.0	96.0%
2-Butanone	22.1	20.0	110%
1,1,1-Trichloroethane	3.65	4.0	91.2%
Carbon Tetrachloride	3.63	4.0	90.8%
Vinyl Acetate	3.80	4.0	95.0%
Bromodichloromethane	3.67	4.0	91.8%
1,2-Dichloropropane	4.05	4.0	101%
cis-1,3-Dichloropropene	3.52	4.0	88.0%
Trichloroethene	3.75	4.0	93.8%
Dibromochloromethane	3.48	4.0	87.0%
1,1,2-Trichloroethane	3.88	4.0	97.0%
Benzene	4.00	4.0	100%
trans-1,3-Dichloropropene	3.43	4.0	85.8%
2-Chloroethylvinylether	3.84	4.0	96.0%
Bromoform	3.60	4.0	90.0%
4-Methyl-2-Pentanone (MIBK)	20.2	20.0	101%
2-Hexanone	21.8	20.0	109%
Tetrachloroethene	3.82	4.0	95.5%
1,1,2,2-Tetrachloroethane	3.73	4.0	93.2%
Toluene	3.91	4.0	97.8%
Chlorobenzene	3.59	4.0	89.8%
Ethylbenzene	3.71	4.0	92.8%
Styrene	3.73	4.0	93.2%
Trichlorofluoromethane	3.57	4.0	89.2%
1,1,2-Trichlorotrifluoroethane	3.83	4.0	95.8%
m,p-Xylene	7.32	8.0	91.5%
O-Xylene	3.70	4.0	92.5%

Reported in ug/L

ORGANICS ANALYSIS DATA SHEET
 Volatiles by Purge & Trap GC/MS
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Lab Sample ID: BQ01SB QC Report No: BQ01-ThermoRetec
 LIMS ID: 00-7088 Project: Scougal Rubber
 Matrix: Water SCR00-02417
 Data Release Authorized: \\\w\w Date Received: 05/10/00
 Reported: 05/22/00
 Date Analyzed: 05/12/00
 Instrument: FINN3

LABORATORY CONTROL SAMPLE CONSTITUENT	SPIKE VALUE	SPIKE AMT	% RECOVERY
1,2-Dichlorobenzene	3.65	4.0	91.2%
1,3-Dichlorobenzene	3.87	4.0	96.8%
1,4-Dichlorobenzene	3.98	4.0	99.5%
Acrolein	14.8	20.0	74.0%
Methyl Iodide	4.24	4.0	106%
Bromoethane	3.65	4.0	91.2%
Acrylonitrile	3.62	4.0	90.5%
1,1-Dichloropropene	3.96	4.0	99.0%
Dibromomethane	3.67	4.0	91.8%
1,1,1,2-Tetrachloroethane	3.66	4.0	91.5%
1,2-Dibromo-3-chloropropane	3.31	4.0	82.8%
1,2,3-Trichloropropane	3.87	4.0	96.8%
trans-1,4-Dichloro-2-butene	4.00	4.0	100%
1,3,5-Trimethylbenzene	3.67	4.0	91.8%
1,2,4-Trimethylbenzene	3.61	4.0	90.2%
Hexachlorobutadiene	3.67	4.0	91.8%
Ethylene Dibromide	3.85	4.0	96.2%
Bromochloromethane	3.46	4.0	86.5%
2,2-Dichloropropane	3.55	4.0	88.8%
1,3-Dichloropropane	3.77	4.0	94.2%
Isopropylbenzene	3.84	4.0	96.0%
n-Propylbenzene	3.80	4.0	95.0%
Bromobenzene	3.72	4.0	93.0%
2-Chlorotoluene	4.32	4.0	108%
4-Chlorotoluene	3.61	4.0	90.2%
tert-Butylbenzene	4.25	4.0	106%
sec-Butylbenzene	3.67	4.0	91.8%
4-Isopropyltoluene	3.90	4.0	97.5%
n-Butylbenzene	3.48	4.0	87.0%
1,2,4-Trichlorobenzene	3.83	4.0	95.8%
Naphthalene	4.01	4.0	100%
1,2,3-Trichlorobenzene	4.15	4.0	104%

Lab Control Surrogate Recovery

d4-1,2-Dichloroethane	89.0%
d8-Toluene	101%
Bromofluorobenzene	96.2%
d4-1,2-Dichlorobenzene	92.8%

Reported in ug/L

ORGANICS ANALYSIS DATA SHEET
 Volatiles by Purge & Trap GC/MS
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Lab Sample ID: BQ01SB QC Report No: BQ01-ThermoRetec
 LIMS ID: 00-7093 Project: Scougal Rubber
 Matrix: Water SCR00-02417
 Data Release Authorized: *MW* Date Received: 05/10/00
 Reported: 05/22/00
 Date Analyzed: 05/15/00
 Instrument: NT3

LABORATORY CONTROL SAMPLE CONSTITUENT	SPIKE VALUE	SPIKE AMT	% RECOVERY
Chloromethane	33.2	50.0	66.4%
Bromomethane	45.3	50.0	90.6%
Vinyl Chloride	35.8	50.0	71.6%
Chloroethane	40.2	50.0	80.4%
Methylene Chloride	41.0	50.0	82.0%
Acetone	228.	250	91.2%
Carbon Disulfide	40.3	50.0	80.6%
1,1-Dichloroethene	41.2	50.0	82.4%
1,1-Dichloroethane	41.4	50.0	82.8%
trans-1,2-Dichloroethene	42.6	50.0	85.2%
cis-1,2-Dichloroethene	44.8	50.0	89.6%
Chloroform	43.8	50.0	87.6%
1,2-Dichloroethane	49.9	50.0	99.8%
2-Butanone	265.	250	106%
1,1,1-Trichloroethane	46.2	50.0	92.4%
Carbon Tetrachloride	50.5	50.0	101%
Vinyl Acetate	56.0	50.0	112%
Bromodichloromethane	51.5	50.0	103%
1,2-Dichloropropane	49.6	50.0	99.2%
cis-1,3-Dichloropropene	46.7	50.0	93.4%
Trichloroethene	46.3	50.0	92.6%
Dibromochloromethane	50.3	50.0	101%
1,1,2-Trichloroethane	50.1	50.0	100%
Benzene	45.7	50.0	91.4%
trans-1,3-Dichloropropene	46.8	50.0	93.6%
2-Chloroethylvinylether	55.3	50.0	111%
Bromoform	49.9	50.0	99.8%
4-Methyl-2-Pentanone (MIBK)	280.	250	112%
2-Hexanone	261.	250	104%
Tetrachloroethene	50.9	50.0	102%
1,1,2,2-Tetrachloroethane	51.0	50.0	102%
Toluene	49.4	50.0	98.8%
Chlorobenzene	48.0	50.0	96.0%
Ethylbenzene	46.7	50.0	93.4%
Styrene	46.8	50.0	93.6%
Trichlorofluoromethane	40.4	50.0	80.8%
1,1,2-Trichlorotrifluoroethane	45.4	50.0	90.8%
m,p-Xylene	95.1	100	95.1%
O-Xylene	47.2	50.0	94.4%

Reported in ug/L

ORGANICS ANALYSIS DATA SHEET
 Volatiles by Purge & Trap GC/MS
 Page 2 of 2



Lab Sample ID: BQ01SB QC Report No: BQ01-ThermoRetec
 LIMS ID: 00-7093 Project: Scougal Rubber
 Matrix: Water SCR00-02417
 Data Release Authorized: *MW* Date Received: 05/10/00
 Reported: 05/22/00
 Date Analyzed: 05/15/00
 Instrument: NT3

LABORATORY CONTROL SAMPLE CONSTITUENT	SPIKE VALUE	SPIKE AMT	% RECOVERY
1,2-Dichlorobenzene	48.8	50.0	97.6%
1,3-Dichlorobenzene	49.3	50.0	98.6%
1,4-Dichlorobenzene	49.8	50.0	99.6%
Acrolein	312.	250	125%
Methyl Iodide	48.5	50.0	97.0%
Bromoethane	42.9	50.0	85.8%
Acrylonitrile	45.1	50.0	90.2%
1,1-Dichloropropene	47.3	50.0	94.6%
Dibromomethane	49.7	50.0	99.4%
1,1,1,2-Tetrachloroethane	52.1	50.0	104%
1,2-Dibromo-3-chloropropane	50.9	50.0	102%
1,2,3-Trichloropropane	51.0	50.0	102%
trans-1,4-Dichloro-2-butene	54.1	50.0	108%
1,3,5-Trimethylbenzene	49.8	50.0	99.6%
1,2,4-Trimethylbenzene	49.8	50.0	99.6%
Hexachlorobutadiene	50.7	50.0	101%
Ethylene Dibromide	50.0	50.0	100%
Bromochloromethane	43.4	50.0	86.8%
2,2-Dichloropropane	45.8	50.0	91.6%
1,3-Dichloropropane	50.4	50.0	101%
Isopropylbenzene	52.1	50.0	104%
n-Propylbenzene	50.4	50.0	101%
Bromobenzene	50.7	50.0	101%
2-Chlorotoluene	51.0	50.0	102%
4-Chlorotoluene	48.7	50.0	97.4%
tert-Butylbenzene	50.3	50.0	101%
sec-Butylbenzene	49.7	50.0	99.4%
4-Isopropyltoluene	50.4	50.0	101%
n-Butylbenzene	49.3	50.0	98.6%
1,2,4-Trichlorobenzene	49.8	50.0	99.6%
Naphthalene	50.6	50.0	101%
1,2,3-Trichlorobenzene	50.4	50.0	101%

Lab Control Surrogate Recovery

d4-1,2-Dichloroethane	93.4%
d8-Toluene	102%
Bromofluorobenzene	93.3%
d4-1,2-Dichlorobenzene	98.8%

Reported in ug/L

ORGANICS ANALYSIS DATA SHEET
 Volatiles by Purge & Trap GC/MS
 Page 1 of 2



Lab Sample ID: BQ01SB QC Report No: BQ01-ThermoRetec
 LIMS ID: 00-7089 Project: Scougal Rubber
 Matrix: Water SCR00-02417
 Data Release Authorized: YWJ Date Received: 05/10/00
 Reported: 05/22/00
 Date Analyzed: 05/17/00
 Instrument: NT3

LABORATORY CONTROL SAMPLE CONSTITUENT	SPIKE VALUE	SPIKE AMT	% RECOVERY
Chloromethane	24.9	50.0	49.8%
Bromomethane	38.3	50.0	76.6%
Vinyl Chloride	29.4	50.0	58.8%
Chloroethane	39.4	50.0	78.8%
Methylene Chloride	46.7	50.0	93.4%
Acetone	250.	250	100%
Carbon Disulfide	41.5	50.0	83.0%
1,1-Dichloroethene	41.1	50.0	82.2%
1,1-Dichloroethane	46.2	50.0	92.4%
trans-1,2-Dichloroethene	45.1	50.0	90.2%
cis-1,2-Dichloroethene	48.8	50.0	97.6%
Chloroform	48.9	50.0	97.8%
1,2-Dichloroethane	44.1	50.0	88.2%
2-Butanone	237.	250	94.8%
1,1,1-Trichloroethane	49.1	50.0	98.2%
Carbon Tetrachloride	46.5	50.0	93.0%
Vinyl Acetate	52.0	50.0	104%
Bromodichloromethane	46.4	50.0	92.8%
1,2-Dichloropropane	50.2	50.0	100%
cis-1,3-Dichloropropene	44.7	50.0	89.4%
Trichloroethene	48.4	50.0	96.8%
Dibromochloromethane	47.6	50.0	95.2%
1,1,2-Trichloroethane	45.6	50.0	91.2%
Benzene	47.6	50.0	95.2%
trans-1,3-Dichloropropene	43.8	50.0	87.6%
2-Chloroethylvinylether	45.4	50.0	90.8%
Bromoform	47.6	50.0	95.2%
4-Methyl-2-Pentanone (MIBK)	225.	250	90.0%
2-Hexanone	237.	250	94.8%
Tetrachloroethene	46.8	50.0	93.6%
1,1,2,2-Tetrachloroethane	47.8	50.0	95.6%
Toluene	44.8	50.0	89.6%
Chlorobenzene	47.6	50.0	95.2%
Ethylbenzene	47.3	50.0	94.6%
Styrene	48.9	50.0	97.8%
Trichlorofluoromethane	40.3	50.0	80.6%
1,1,2-Trichlorotrifluoroethane	49.1	50.0	98.2%
m,p-Xylene	97.4	100	97.4%
O-Xylene	48.7	50.0	97.4%

Reported in ug/L

ORGANICS ANALYSIS DATA SHEET
 Volatiles by Purge & Trap GC/MS
 Page 2 of 2



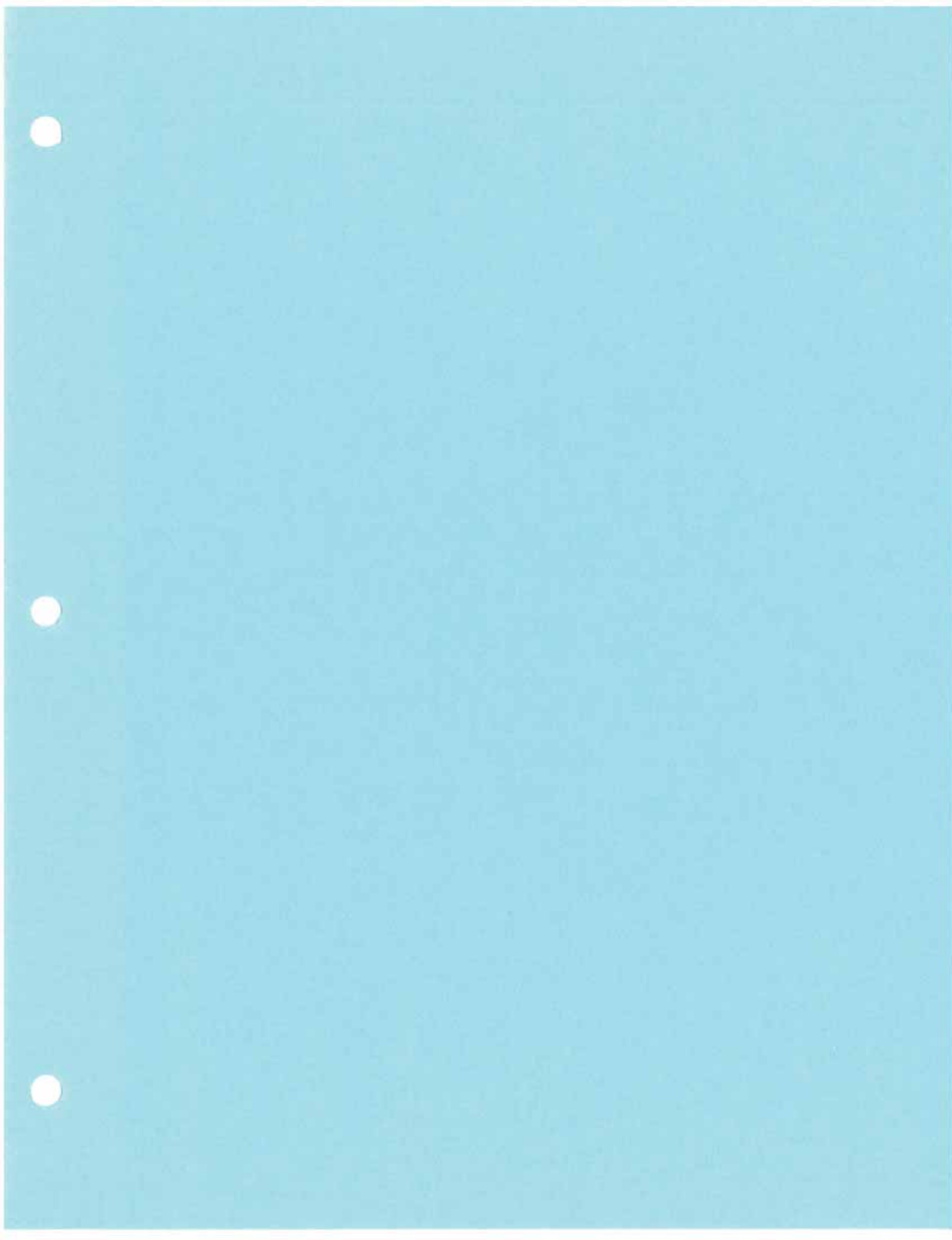
Lab Sample ID: BQ01SB QC Report No: BQ01-ThermoRetec
 LIMS ID: 00-7089 Project: Scougal Rubber
 Matrix: Water SCR00-02417
 Data Release Authorized: *MW* Date Received: 05/10/00
 Reported: 05/22/00
 Date Analyzed: 05/17/00
 Instrument: NT3

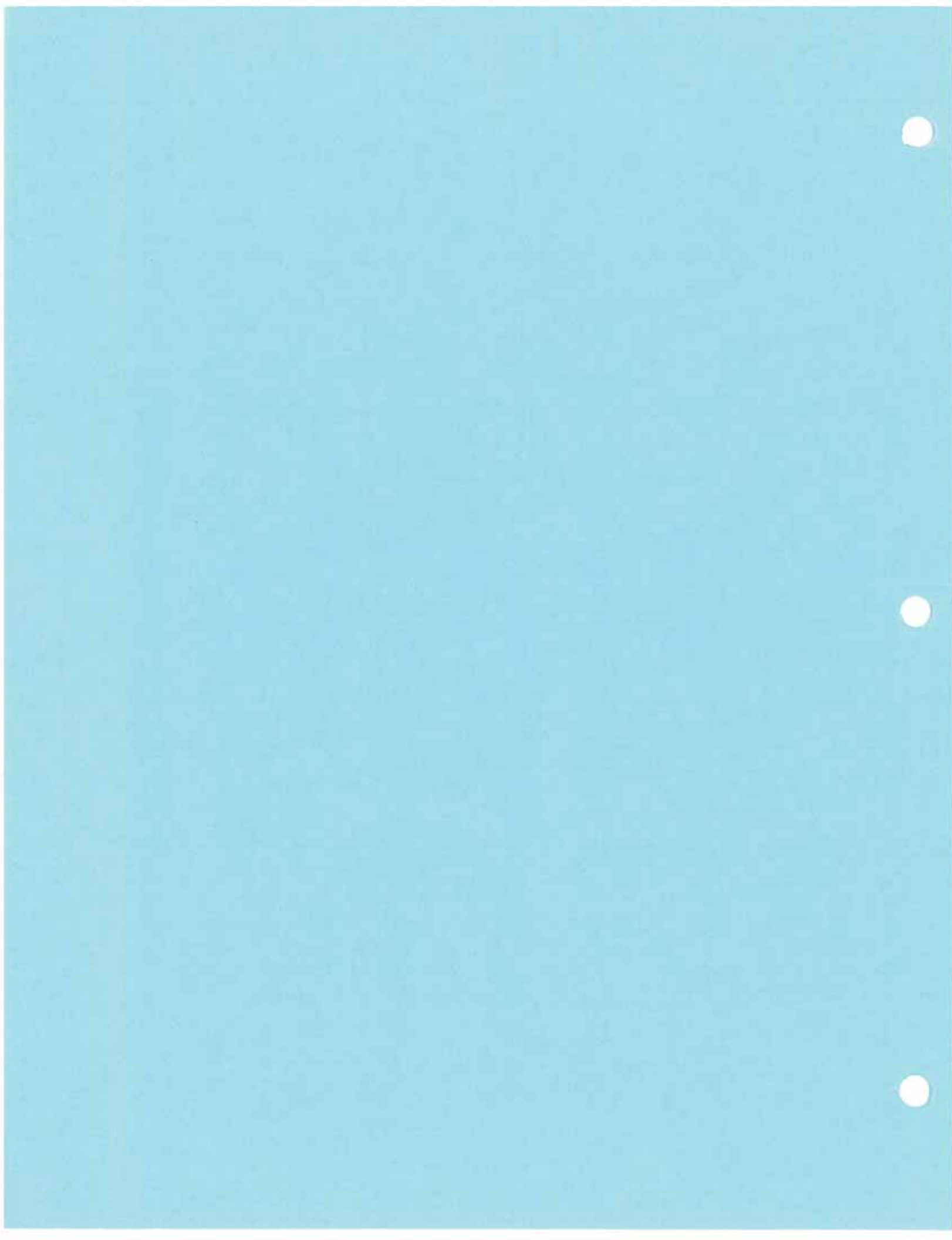
LABORATORY CONTROL SAMPLE CONSTITUENT	SPIKE VALUE	SPIKE AMT	% RECOVERY
1,2-Dichlorobenzene	47.5	50.0	95.0%
1,3-Dichlorobenzene	48.0	50.0	96.0%
1,4-Dichlorobenzene	48.6	50.0	97.2%
Acrolein	290.	250	116%
Methyl Iodide	43.0	50.0	86.0%
Bromoethane	47.6	50.0	95.2%
Acrylonitrile	50.6	50.0	101%
1,1-Dichloropropene	50.0	50.0	100%
Dibromomethane	44.8	50.0	89.6%
1,1,1,2-Tetrachloroethane	46.9	50.0	93.8%
1,2-Dibromo-3-chloropropane	47.2	50.0	94.4%
1,2,3-Trichloropropane	47.0	50.0	94.0%
trans-1,4-Dichloro-2-butene	49.0	50.0	98.0%
1,3,5-Trimethylbenzene	47.8	50.0	95.6%
1,2,4-Trimethylbenzene	48.0	50.0	96.0%
Hexachlorobutadiene	50.0	50.0	100%
Ethylene Dibromide	45.3	50.0	90.6%
Bromochloromethane	48.9	50.0	97.8%
2,2-Dichloropropane	48.6	50.0	97.2%
1,3-Dichloropropane	47.6	50.0	95.2%
Isopropylbenzene	47.9	50.0	95.8%
n-Propylbenzene	47.4	50.0	94.8%
Bromobenzene	47.6	50.0	95.2%
2-Chlorotoluene	46.8	50.0	93.6%
4-Chlorotoluene	47.8	50.0	95.6%
tert-Butylbenzene	47.7	50.0	95.4%
sec-Butylbenzene	48.1	50.0	96.2%
4-Isopropyltoluene	48.8	50.0	97.6%
n-Butylbenzene	48.1	50.0	96.2%
1,2,4-Trichlorobenzene	48.5	50.0	97.0%
Naphthalene	47.5	50.0	95.0%
1,2,3-Trichlorobenzene	48.1	50.0	96.2%

Lab Control Surrogate Recovery

d4-1,2-Dichloroethane	101%
d8-Toluene	95.9%
Bromofluorobenzene	102%
d4-1,2-Dichlorobenzene	98.4%

Reported in ug/L





FIELD ACTIVITY LOG

PROJECT Souagal Rubber COMPLETED BY Darrell
 JOB NO: SCR00-02417-300 APPROVED BY _____
 DAY & DATE 11 Jan 2000 SHEET 1 OF _____

 FIELD ACTIVITY SUBJECT:
 DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

TIME	
0945	Darrell Anderson ^(DA) on site at machine shop yard to start well gauging - talk to yard foreman and checked well for access - Foreman inform me they were going to place a container in front of MW-11-
1010	Detach water level at MW-11 and start purge so it would be done when container in place
1040	Sample taken at MW-11
1050	DA continues with well gauging - I was unable to remove the cap on MW-4 when you try to remove it the entire well casing moves, and would pull out of the ground - No water level on MW-4 MW-14 and OW-10 are both covered by yard junk. DA talks to foreman he said he would get it removed from well right after lunch. -
1150	DA returns to storage for more buckets
1315	DA starts Purge at MW-16 field parameters
1340	Sample taken at MW-16
	move to MW-13 Purge + field parameters
1415	Sample MW-13 - Dup taken MW-113-100 @ 1430

VISITORS ON SITE:

CHANGES FROM PLANS, SPECIFICATIONS, SPECIAL ORDERS AND IMPORTANT DECISIONS

WEATHER CONDITIONS:

IMPORTANT TELEPHONE CALLS:

PERSONNEL ON SITE:

(FIELD ENGINEER)

FIELD ACTIVITY LOG

 PROJECT Scaevola Rubber COMPLETED BY James

 JOB NO: SCR00 02417-300 APPROVED BY _____

 DAY & DATE 11 Jan 2000 SHEET 2 OF _____

 FIELD ACTIVITY SUBJECT:
 DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

TIME	
1425	Purge and field parameters at MW-12
1500	Sample at MW-12 Field Blocks 1510
1515	Move out of shop yard to MW-15 on the street
1600	Sample taken at MW-15
	move back into Scaevola yard well as unmoved
1630	Sample taken at MW-14 gauge OW-10
	DA completes sampling and leaves site

VISITORS ON SITE:	CHANGES FROM PLANS, SPECIFICATIONS, SPECIAL ORDERS AND IMPORTANT DECISIONS
WEATHER CONDITIONS:	IMPORTANT TELEPHONE CALLS:
PERSONNEL ON SITE: <div style="text-align: right;">(FIELD ENGINEER)</div>	

GROUNDWATER SAMPLING LOG

PROJECT NAME SCOUGAL RUBBER
 PROJECT NO. SCROO-02417-300
 DATE 11 Jan 2000

WELL NO. MW-11
 SAMPLED BY Janet

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>5.65</u> (wl.prot.-ft)
DEPTH OF WELL	(ft) <u>19.5</u>
WELL DIAMETER	(inches) <u>4 1/2"</u>
FEET OF WATER	<u>13.85</u>
CASING VOLUME*	(gal) <u>9.00</u>
PURGE VOLUME	(gal) <u>27.0</u>
PRODUCT THICK	(ft)
WELL CONDITION	<u>OK</u>
WEATHER	<u>35 Rain</u>

	PURGE		DATA	
START PURGE TIME:	<u>1010</u>			
VOL. PURGED (gal)	<u>10</u>	<u>9</u>	<u>9</u>	
TIME				
PURGE RATE				
(units)	<u>6.44</u>	<u>6.51</u>	<u>6.26</u>	
CONDUCTIVITY	<u>529</u>	<u>532</u>	<u>536</u>	
(umhos/cm)				
TEMP. (C)	<u>11.6</u>	<u>11.7</u>	<u>11.9</u>	
WATER COLOR	<u>clear</u>	<u>clear</u>	<u>clear</u>	
PURGE AND SAMPLE EQUIPT:				

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-11-100</u>	<u>1040</u>				

ADDITIONAL INFORMATION:

TOC=Top of well casing

wl.prot.=top of well protector

* casing volume= $\pi r^2 h \times 7.48 \text{ gal/ft}^3$

GROUNDWATER SAMPLING LOG

PROJECT NAME SCOUGAL RUBBER
 PROJECT NO. SCROO-02417-300
 DATE 11 Jan 2009

WELL NO. mw-12
 SAMPLED BY Janell

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>5.52</u> (wl.prot.-ft)
DEPTH OF WELL	(ft) <u>19.50</u>
WELL DIAMETER	(inches) <u>4</u>
FEET OF WATER	<u>13.98</u>
CASING VOLUME*	(gal) <u>9.09</u>
PURGE VOLUME	(gal) <u>27.5</u>
PRODUCT THICK	(ft)
WELL CONDITION	<u>No bolts</u>
WEATHER	<u>30 Rain</u>

FB 15W

	PURGE		DATA
START PURGE TIME:			
VOL. PURGED (gal)	<u>10</u>	<u>9</u>	<u>9</u>
TIME			
FLOW RATE	<u>5.62</u>	<u>5.82</u>	<u>5.90</u>
pH (units)	<u>456</u>	<u>583</u>	<u>587</u>
CONDUCTIVITY			
(umhos/cm)			
TEMP. (C)	<u>13.2</u>	<u>13.5</u>	<u>13.6</u>
WATER COLOR	<u>Brown</u>	<u>Brown</u>	<u>LT Brown</u>
PURGE AND SAMPLE EQUIPT:			

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-12-100</u>	<u>1500</u>				

ADDITIONAL INFORMATION:

TOC=Top of well casing

wl.prot.=top of well protector

*casing volume= $\pi r^2 h \times 7.48 \text{ gal/ft}^3$

GROUNDWATER SAMPLING LOG

PROJECT NAME BNSF-SKYKOM
 PROJECT NO. BN05004018
 DATE 11 Jan 2000

WELL NO. MW-13
 SAMPLED BY _____

*Dup sample MW-113-100
 @ 1430*

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>6.23</u> (wl.prot.-ft)
DEPTH OF WELL	(ft) <u>19.80</u>
WELL DIAMETER	(inches) <u>2</u>
FEET OF WATER	<u>13.57</u>
CASING VOLUME*	(gal) <u>2.2</u>
PURGE VOLUME	(gal) <u>7</u>
PRODUCT THICK	(ft)
WELL CONDITION	<u>OK</u>
WEATHER	<u>35 Rain</u>

	PURGE	DATA
START PURGE TIME:	<u>1355</u>	
VOL. PURGED (gal)	<u>2.5</u>	<u>2</u>
TIME		
FLOW RATE		
... (units)	<u>5.72</u>	<u>5.57</u> <u>5.62</u>
CONDUCTIVITY	<u>334</u>	<u>353</u> <u>349</u>
(umhos/cm)		
TEMP. (C)	<u>13.4</u>	<u>13.4</u> <u>13.4</u>
WATER COLOR	<u>clear</u>	<u>clear</u> <u>clear</u>
PURGE AND SAMPLE EQUIPT:		

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-13-100</u>	<u>1415</u>				

ADDITIONAL INFORMATION:

TOC=Top of well casing

wl.prot.=top of well protector

casing volume = $\pi \times \frac{d^2}{4} \times h \times 7.48 \text{ gal/ft}^3$

GROUNDWATER SAMPLING LOG

PROJECT NAME SCOUGAL RUBBER
 PROJECT NO. SCROO-02417-300
 DATE 11 Jan 2000

WELL NO. MW-14
 SAMPLED BY Danillo

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>6.92</u> (wl.prot.-ft)
DEPTH OF WELL	(ft) <u>19.3</u>
WELL DIAMETER	(inches) <u>2</u>
FEET OF WATER	<u>12.33</u>
CASING VOLUME*	(gal) <u>2</u>
PURGE VOLUME	(gal) <u>4</u>
PRODUCT THICK	(ft)
WELL CONDITION	
WEATHER	

	PURGE		DATA
START PURGE TIME:			
VOL. PURGED (gal)	<u>2</u>	<u>2</u>	<u>2</u>
TIME			
FLOW RATE			
pH (units)	<u>6.17</u>	<u>6.13</u>	<u>6.15</u>
CONDUCTIVITY	<u>420</u>	<u>450</u>	<u>460</u>
(umhos/cm)			
TEMP. (C)	<u>13.5</u>	<u>13.7</u>	<u>13.7</u>
WATER COLOR			

PURGE AND SAMPLE EQUIPT:

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-14-100</u>	<u>1630</u>				

ADDITIONAL INFORMATION:

TOC=Top of well casing

wl.prot.=top of well protector

*casing volume= $\pi r^2 h \times 7.48 \text{ gal/ft}^3$

GROUNDWATER SAMPLING LOG

PROJECT NAME SCOUGAL RUBBER
 PROJECT NO. SCROO-02417-300
 DATE 11 Jan 2000

WELL NO. MW-15
 SAMPLED BY Danell

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>6.50</u> (wl.prot.-ft)
DEPTH OF WELL	(ft) <u>19.20</u>
WELL DIAMETER	(inches) <u>2</u>
FEET OF WATER	<u>12.70</u>
CASING VOLUME*	(gal) <u>2.07</u>
PURGE VOLUME	(gal) <u>6.2</u>
PRODUCT THICK	(ft)
WELL CONDITION	<u>OK</u>
WEATHER	<u>30° Rain</u>

	PURGE	DATA
START PURGE TIME:		
VOL. PURGED (gal)	<u>3</u>	<u>2</u>
TIME		
PURGE RATE		
Flow Rate (gpm)	<u>6.10</u>	<u>6.10</u> ^{DATA} <u>6.12</u>
CONDUCTIVITY	<u>368</u>	<u>425</u> <u>437</u>
(umhos/cm)		
TEMP. (C)	<u>13.6</u>	<u>13.9</u> <u>13.9</u>
WATER COLOR	<u>LT Brown</u>	<u>LT Brown</u>
PURGE AND SAMPLE EQUIPT:	<u>HDPPE</u>	

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-15-100</u>	<u>1600</u>				

ADDITIONAL INFORMATION:

TOC=Top of well casing

wl.prot.=top of well protector

*Casing volume = $\pi \times \frac{d^2}{4} \times h \times 7.48 \text{ gal/ft}^3$

GROUNDWATER SAMPLING LOG

PROJECT NAME SCOUGAL RUBBER
 PROJECT NO. SCROO-02417-300
 DATE 11 Jan 2000

WELL NO. MW-16
 SAMPLED BY slawell

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>6.20</u> (wl.prot.-ft)
DEPTH OF WELL	(ft) <u>19.40</u>
WELL DIAMETER	(inches) <u>2"</u>
FEET OF WATER	<u>13.20</u>
CASING VOLUME*	(gal) <u>2.15</u>
PURGE VOLUME	(gal) <u>6.5</u>
PRODUCT THICK	(ft)
WELL CONDITION	<u>No Balts</u>
WEATHER	<u>35 Rain</u>

	PURGE		DATA	
START PURGE TIME:	<u>1315</u>			
VOL. PURGED (gal)	<u>2.5</u>	<u>2</u>	<u>2</u>	
TIME				
FLOW RATE				
pH (units)	<u>6.43</u>	<u>5.95</u>	<u>5.89</u>	
CONDUCTIVITY	<u>108</u>	<u>152</u>	<u>167</u>	
(umhos/cm)				
TEMP. (C)	<u>13.4</u>	<u>13.0</u>	<u>13.2</u>	
WATER COLOR				
PURGE AND SAMPLE EQUIP:				

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-16-100</u>	<u>1340</u>				

ADDITIONAL INFORMATION:

TOC=Top of well casing

wl.prot.=top of well protector

*casing volume= $\pi \times \frac{d^2}{4} \times h \times 7.48 \text{ gal/ft}^3$

GROUNDWATER SAMPLING LOG

PROJECT NAME SCOUGAL RUBBER
 PROJECT NO. SCROO-02417-300
 DATE 11 Jan 2000

WELL NO. NW-4
 SAMPLED BY Daniel

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) (wl.prot.-ft)
DEPTH OF WELL	(ft)
WELL DIAMETER	(inches)
FEET OF WATER	
CASING VOLUME*	(gal)
PURGE VOLUME	(gal)
PRODUCT THICK	(ft)
WELL CONDITION	
WEATHER	

I was unable to open the well when you try to remove the cap the ~~entire~~ entire well casing moves.

*No Sample
 No DTW*

	PURGE	DATA
START PURGE TIME:		
VOL. PURGED (gal)		
TIME		
FLOW RATE		
pH (units)		
CONDUCTIVITY		
(umhos/cm)		
TEMP. (C)		
WATER COLOR		

PURGE AND SAMPLE EQUIPT:

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE

ADDITIONAL INFORMATION:

TOC=Top of well casing

wl.prot.=top of well protector

*casing volume= $\pi r^2 h$ (ft)x7.48gal/ft³



Analytical Resources, Incorporated
Analytical Chemists and Consultants

17 January 2000

Dean Kinney
ThermoRetec, Inc.
1011 S.W. Klickitat Way
Suite 207
Seattle, WA 98134

RE: Client Project: Scougal Rubber
ARI Project: BE73

Dear Dean:

Please find enclosed the original Chain-of-Custody records (COC) and the final results for the samples from the project referenced above. Eight water samples and one trip blank were received on January 12, 2000. The samples were received in good condition and there were no discrepancies in the paperwork. The samples were analyzed for VOAs.

No problems were encountered during the analysis.

A copy of these reports will be kept on file with ARI. Should you have any questions or problems please feel free to call me at any time.

Sincerely,

ANALYTICAL RESOURCES, INC.

A handwritten signature in black ink that reads "Mark D. Harris".

Mark Harris
Project Manager
206/340-2866, ext. 113
e-mail <mark@arilabs.com>

Enclosures

cc: file BE73

kg

Chain of Custody Record & Laboratory Analysis Request

Analytical Resources, Incorporated
 Analytical Chemist and Consultants
 400 Ninth Avenue North
 Seattle, WA 98109-4708
 (206) 621-6490
 (206) 621-7523 (Fax)



Date: _____ of _____
 Page _____ of _____
 Number of coolers: 5.0
 Cooler Temp: 5.0

Sample ID	Date	Time	Matx	No Cont	Lab ID	Analysis Required			Notes/Comments
1	MW-11-100	11Jan	1040	3					Low detection for TCE & VC
2	MW-12-100		1500	3					00-232 (3598)
3	MW-13-100		1415	3					00-240 (3598)
4	MW-14-100		1630	3					
5	MW-15-100		1600	3					
6									
7									

ARI Client:	Thermo Retax	Phone#:
Client Contact:	Dean Kinney	
Client Project ID:	Seawall Rubber	
Samplers:	Darrell Anderson	
ARI Project No:	Relinquished by: (Signature)	Relinquished by: (Signature)
T.A.T. Requested:	Printed Name: Darrell Anderson	Printed Name:
Comments/Special Instructions:	Company: Thermo	Company:
	Date: 12 Jan	Date:
	Time: 1000	Time:
	Received by: (Signature)	Received by: (Signature)
	Printed Name: ZACH SANDER	Printed Name:
	Company: ARI	Company:
	Date: 1/12/05	Date:
	Time: 1000	Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following Standard Operating Procedures and our Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI releases ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or any other agreement between ARI and the client.

Char of Custody Record & Laboratory Analysis Request

Analytical Resources Incorporated
 Analytical Chemist at Consultants
 400 Ninth Avenue North
 Seattle, WA 98109-4708
 (206) 621-6490
 (206) 621-7523 (Fax)



Date: 12 Jan 2000
 Page 2 of 2
 Number of coolers: 1
 Cooler Temp: _____

ARI Client: <u>Thermo Retee</u>		Phone#:			
Client Contact: <u>Sean Kuning</u>					
Client Project ID: <u>Seaweed Rubber</u>					
Samplers: <u>Darrell Andrus</u>					
Sample ID	Date	Time	Matx	No Cont	Lab ID
1	MW-16-100	11 Jan		3	8260
2	MW-113-100	1430		3	X
3	Fb-1-100	1510		3	X
4	TRIP Blank			2	X
5					
6					
7					

Analysis Required		Notes/Comments	
Full Scan			

ARI Project No:	Relinquished by: <u>Darrell Andrus</u> (Signature)	Relinquished by: _____ (Signature)
T.A.T. Requested:	Printed Name: <u>Darrell Andrus</u>	Printed Name: _____
Comments/Special Instructions:	Company: <u>Thermo</u>	Company: _____
	Date: <u>12 Jan</u> Time: <u>1000</u>	Date: _____ Time: _____
	Received by: _____ (Signature)	Received by: _____ (Signature)
	Printed Name: <u>[Signature]</u>	Printed Name: _____
	Company: <u>ARI</u>	Company: _____
	Date: <u>1/12/00</u> Time: <u>1000</u>	Date: _____ Time: _____

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**ORGANIC COMPOUND
DATA REPORTING QUALIFIERS**

- U Indicates the compound was undetected at the reported concentration. (Same as ND).
- J Indicates an estimated concentration when the value is less than the calculated reporting limit.
- D Indicates the surrogate/spike(s) was not detected, due to dilution of extract.
- NR Indicates the surrogate recovery cannot be reported due to matrix interference.
- E Indicates a value above the linear range of the detector. Sample dilution required.
- S Indicates no value reported due to saturation of the detector. Sample dilution required.
- NA Indicates compound not analyzed for.
- M Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match.
- B Indicates possible/probable blank contamination. Flagged when the analyte is detected in the blank as well as the sample.
- Y Indicates raised reporting limit due to background interference or to activity on the instrument. Compound is still not detected at or above the raised level.

Sample No: Method Blank

Lab Sample ID: 011300MB QC Report No: BE73-ThermoRetec
LIMS ID: 00-240 Project: Scougal Rubber
Matrix: Water
Data Release Authorized: *MS* Date Sampled: NA
Reported: 01/17/00 Date Received: NA

Instrument: NT3 Sample Amount: 20.0 mL
Date Analyzed: 01/13/00 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	0.2 U
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	1.0 U
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.2 U
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	0.2 U
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	0.2 U
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.2 U
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

Sample No: Method Blank

Lab Sample ID: 011300MB QC Report No: BE73-ThermoRetec
LIMS ID: 00-240 Project: Scougal Rubber
Matrix: Water
Data Release Authorized: *AB* Date Sampled: NA
Reported: 01/17/00 Date Received: NA

Instrument: NT3 Sample Amount: 20.0 mL
Date Analyzed: 01/13/00 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
594-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	105%
d8-Toluene	101%
Bromofluorobenzene	97.0%
d4-1,2-Dichlorobenzene	99.5%

Sample No: MW-11-100

Lab Sample ID: BE73A QC Report No: BE73-ThermoRetec
LIMS ID: 00-232 Project: Scougal Rubber
Matrix: Water
Data Release Authorized: *AMB* Date Sampled: 01/11/00
Reported: 01/17/00 Date Received: 01/12/00

Instrument: NT3 Sample Amount: 20.0 mL
Date Analyzed: 01/13/00 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	0.2 U
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	1.0 U
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.2 U
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	0.6
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 J
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	9.4
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.2 J
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS
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Sample No: MW-11-100

Lab Sample ID: BE73A QC Report No: BE73-ThermoRetec
LIMS ID: 00-232 Project: Scougal Rubber
Matrix: Water
Data Release Authorized: *MA* Date Sampled: 01/11/00
Reported: 01/17/00 Date Received: 01/12/00

Instrument: NT3 Sample Amount: 20.0 mL
Date Analyzed: 01/13/00 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
594-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	100%
d8-Toluene	103%
Bromofluorobenzene	95.8%
d4-1,2-Dichlorobenzene	103%

Sample No: MW-12-100

Lab Sample ID: BE73B QC Report No: BE73-ThermoRetec
LIMS ID: 00-233 Project: Scougal Rubber
Matrix: Water
Data Release Authorized: *MS* Date Sampled: 01/11/00
Reported: 01/17/00 Date Received: 01/12/00

Instrument: NT3 Sample Amount: 20.0 mL
Date Analyzed: 01/13/00 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	0.2 U
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	1.0 U
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.3
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	2.0
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	0.2 U
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.2 U
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

Sample No: MW-12-100

Lab Sample ID: BE73B QC Report No: BE73-ThermoRetec
LIMS ID: 00-233 Project: Scougal Rubber
Matrix: Water
Data Release Authorized: *BM* Date Sampled: 01/11/00
Reported: 01/17/00 Date Received: 01/12/00

Instrument: NT3 Sample Amount: 20.0 mL
Date Analyzed: 01/13/00 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
594-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	99.5%
d8-Toluene	99.5%
Bromofluorobenzene	96.0%
d4-1,2-Dichlorobenzene	102%

Sample No: MW-13-100

Lab Sample ID: BE73C QC Report No: BE73-ThermoRetec
LIMS ID: 00-234 Project: Scougal Rubber
Matrix: Water
Data Release Authorized: *MS* Date Sampled: 01/11/00
Reported: 01/17/00 Date Received: 01/12/00

Instrument: NT3 Sample Amount: 20.0 mL
Date Analyzed: 01/13/00 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	0.2 U
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	1.0 U
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.2 U
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	0.7
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.4
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	15
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.3
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

Sample No: MW-13-100

Lab Sample ID: BE73C QC Report No: BE73-ThermoRetec
LIMS ID: 00-234 Project: Scougal Rubber
Matrix: Water
Data Release Authorized: *AM* Date Sampled: 01/11/00
Reported: 01/17/00 Date Received: 01/12/00

Instrument: NT3 Sample Amount: 20.0 mL
Date Analyzed: 01/13/00 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
594-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	95.8%
d8-Toluene	100%
Bromofluorobenzene	95.8%
d4-1,2-Dichlorobenzene	104%

Sample No: MW-14-100

Lab Sample ID: BE73D QC Report No: BE73-ThermoRetec
LIMS ID: 00-235 Project: Scougal Rubber
Matrix: Water
Data Release Authorized: *MS* Date Sampled: 01/11/00
Reported: 01/17/00 Date Received: 01/12/00

Instrument: NT3 Sample Amount: 20.0 mL
Date Analyzed: 01/13/00 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	52 E
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	1.0 U
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.7
75-34-3	1,1-Dichloroethane	1.8
156-60-5	trans-1,2-Dichloroethene	0.7
156-59-2	cis-1,2-Dichloroethene	27 E
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 J
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	24 E
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 J
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	3.5
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

Sample No: MW-14-100

Lab Sample ID: BE73D QC Report No: BE73-ThermoRetec
LIMS ID: 00-235 Project: Scougal Rubber
Matrix: Water
Data Release Authorized: *MS* Date Sampled: 01/11/00
Reported: 01/17/00 Date Received: 01/12/00

Instrument: NT3 Sample Amount: 20.0 mL
Date Analyzed: 01/13/00 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 J
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
594-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	99.0%
d8-Toluene	98.5%
Bromofluorobenzene	95.0%
d4-1,2-Dichlorobenzene	99.8%


Sample No: MW-14-100
DILUTION

Lab Sample ID: BE73D-DL QC Report No: BE73-ThermoRetec
LIMS ID: 00-235 Project: Scougal Rubber
Matrix: Water
Data Release Authorized: *[Signature]* Date Sampled: 01/11/00
Reported: 01/17/00 Date Received: 01/12/00

Instrument: NT3 Sample Amount: 2.22 mL
Date Analyzed: 01/13/00 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	1.8 U
74-83-9	Bromomethane	1.8 U
75-01-4	Vinyl Chloride	58
75-00-3	Chloroethane	1.8 U
75-09-2	Methylene Chloride	2.7 U
67-64-1	Acetone	9.0 U
75-15-0	Carbon Disulfide	1.8 U
75-35-4	1,1-Dichloroethene	1.8 U
75-34-3	1,1-Dichloroethane	2.2
156-60-5	trans-1,2-Dichloroethene	1.8 U
156-59-2	cis-1,2-Dichloroethene	31
67-66-3	Chloroform	1.8 U
107-06-2	1,2-Dichloroethane	1.8 U
78-93-3	2-Butanone	9.0 U
71-55-6	1,1,1-Trichloroethane	1.8 U
56-23-5	Carbon Tetrachloride	1.8 U
108-05-4	Vinyl Acetate	1.8 U
75-27-4	Bromodichloromethane	1.8 U
78-87-5	1,2-Dichloropropane	1.8 U
10061-01-5	cis-1,3-Dichloropropene	1.8 U
79-01-6	Trichloroethene	27
124-48-1	Dibromochloromethane	1.8 U
79-00-5	1,1,2-Trichloroethane	1.8 U
71-43-2	Benzene	1.8 U
10061-02-6	trans-1,3-Dichloropropene	1.8 U
110-75-8	2-Chloroethylvinylether	4.5 U
75-25-2	Bromoform	4.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	9.0 U
591-78-6	2-Hexanone	9.0 U
127-18-4	Tetrachloroethene	4.0
79-34-5	1,1,2,2-Tetrachloroethane	1.8 U
108-88-3	Toluene	1.8 U
108-90-7	Chlorobenzene	1.8 U
100-41-4	Ethylbenzene	1.8 U
100-42-5	Styrene	1.8 U
75-69-4	Trichlorofluoromethane	1.8 U
76-13-1	1,1,2-Trichlorotrifluoroethane	1.8 U
1330-20-7	m,p-Xylene	3.6 U

Sample No: MW-14-100
DILUTION

Lab Sample ID: BE73D-DL QC Report No: BE73-ThermoRetec
LIMS ID: 00-235 Project: Scougal Rubber
Matrix: Water
Data Release Authorized:  Date Sampled: 01/11/00
Reported: 01/17/00 Date Received: 01/12/00

Instrument: NT3 Sample Amount: 2.22 mL
Date Analyzed: 01/13/00 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	1.8 U
95-50-1	1,2-Dichlorobenzene	1.8 U
541-73-1	1,3-Dichlorobenzene	1.8 U
106-46-7	1,4-Dichlorobenzene	1.8 U
107-02-8	Acrolein	45 U
74-88-4	Methyl Iodide	1.8 U
74-96-4	Bromoethane	1.8 U
107-13-1	Acrylonitrile	9.0 U
563-58-6	1,1-Dichloropropene	1.8 U
74-95-3	Dibromomethane	1.8 U
630-20-6	1,1,1,2-Tetrachloroethane	1.8 U
96-12-8	1,2-Dibromo-3-chloropropane	9.0 U
96-18-4	1,2,3-Trichloropropane	4.5 U
110-57-6	trans-1,4-Dichloro-2-butene	9.0 U
108-67-8	1,3,5-Trimethylbenzene	1.8 U
95-63-6	1,2,4-Trimethylbenzene	1.8 U
87-68-3	Hexachlorobutadiene	4.5 U
106-93-4	Ethylene Dibromide	1.8 U
74-97-5	Bromochloromethane	1.8 U
594-20-7	2,2-Dichloropropane	1.8 U
142-28-9	1,3-Dichloropropane	1.8 U
98-82-8	Isopropylbenzene	1.8 U
103-65-1	n-Propylbenzene	1.8 U
108-86-1	Bromobenzene	1.8 U
95-49-8	2-Chlorotoluene	1.8 U
106-43-4	4-Chlorotoluene	1.8 U
98-06-6	tert-Butylbenzene	1.8 U
135-98-8	sec-Butylbenzene	1.8 U
99-87-6	4-Isopropyltoluene	1.8 U
104-51-8	n-Butylbenzene	1.8 U
120-82-1	1,2,4-Trichlorobenzene	4.5 U
91-20-3	Naphthalene	4.5 U
87-61-6	1,2,3-Trichlorobenzene	4.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	99.2%
d8-Toluene	98.0%
Bromofluorobenzene	95.8%
d4-1,2-Dichlorobenzene	101%

Sample No: MW-15-100

Lab Sample ID: BE73E QC Report No: BE73-ThermoRetec
LIMS ID: 00-236 Project: Scougal Rubber
Matrix: Water
Data Release Authorized: *AK* Date Sampled: 01/11/00
Reported: 01/17/00 Date Received: 01/12/00

Instrument: NT3 Sample Amount: 20.0 mL
Date Analyzed: 01/13/00 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	0.2 U
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	1.0 U
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.2 U
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	0.2 U
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	0.2 U
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.2 U
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

Sample No: MW-15-100

Lab Sample ID: BE73E QC Report No: BE73-ThermoRetec
LIMS ID: 00-236 Project: Scougal Rubber
Matrix: Water
Data Release Authorized: *MS* Date Sampled: 01/11/00
Reported: 01/17/00 Date Received: 01/12/00

Instrument: NT3 Sample Amount: 20.0 mL
Date Analyzed: 01/13/00 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
594-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	101%
d8-Toluene	99.5%
Bromofluorobenzene	97.2%
d4-1,2-Dichlorobenzene	102%

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Volatiles by Purge & Trap GC/MS

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Sample No: MW-16-100

Lab Sample ID: BE73F

QC Report No: BE73-ThermoRetec

LIMS ID: 00-237

Project: Scougal Rubber

Matrix: Water

Data Release Authorized: *MS*

Date Sampled: 01/11/00

Reported: 01/17/00

Date Received: 01/12/00

Instrument: NT3

Sample Amount: 20.0 mL

Date Analyzed: 01/13/00

Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	0.2 U
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	1.0 U
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.2 U
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	1.0
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	0.2 U
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 J
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.2 U
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

Sample No: MW-16-100

Lab Sample ID: BE73F QC Report No: BE73-ThermoRetec
LIMS ID: 00-237 Project: Scougal Rubber
Matrix: Water
Data Release Authorized: *AS* Date Sampled: 01/11/00
Reported: 01/17/00 Date Received: 01/12/00

Instrument: NT3 Sample Amount: 20.0 mL
Date Analyzed: 01/13/00 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
594-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	101%
d8-Toluene	101%
Bromofluorobenzene	93.2%
d4-1,2-Dichlorobenzene	102%

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Sample No: MW-113-100



Lab Sample ID: BE73G QC Report No: BE73-ThermoRetec
LIMS ID: 00-238 Project: Scougal Rubber
Matrix: Water
Data Release Authorized: *MS* Date Sampled: 01/11/00
Reported: 01/17/00 Date Received: 01/12/00

Instrument: NT3 Sample Amount: 20.0 mL
Date Analyzed: 01/13/00 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	0.2 U
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	1.0 U
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.2 J
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	0.8
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.4
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	14
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.3
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

Sample No: MW-113-100

Lab Sample ID: BE73G QC Report No: BE73-ThermoRetec
LIMS ID: 00-238 Project: Scougal Rubber
Matrix: Water
Data Release Authorized: *AP* Date Sampled: 01/11/00
Reported: 01/17/00 Date Received: 01/12/00

Instrument: NT3 Sample Amount: 20.0 mL
Date Analyzed: 01/13/00 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
594-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	99.2%
d8-Toluene	97.2%
Bromofluorobenzene	95.0%
d4-1,2-Dichlorobenzene	102%

Sample No: Fb-1-100

Lab Sample ID: BE73H QC Report No: BE73-ThermoRetec
LIMS ID: 00-239 Project: Scougal Rubber
Matrix: Water
Data Release Authorized: *AP* Date Sampled: 01/11/00
Reported: 01/17/00 Date Received: 01/12/00

Instrument: NT3 Sample Amount: 20.0 mL
Date Analyzed: 01/13/00 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	0.2 U
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	3.2
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.2 U
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	0.2 U
67-66-3	Chloroform	9.5
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.3
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	0.2 U
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.2 U
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.5
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	1.0

Sample No: Fb-1-100

Lab Sample ID: BE73H QC Report No: BE73-ThermoRetec
LIMS ID: 00-239 Project: Scougal Rubber
Matrix: Water
Data Release Authorized: *AB* Date Sampled: 01/11/00
Reported: 01/17/00 Date Received: 01/12/00

Instrument: NT3 Sample Amount: 20.0 mL
Date Analyzed: 01/13/00 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
594-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	102%
d8-Toluene	99.5%
Bromofluorobenzene	96.0%
d4-1,2-Dichlorobenzene	100%

Sample No: Trip Blank

Lab Sample ID: BE73I QC Report No: BE73-ThermoRetec
LIMS ID: 00-240 Project: Scougal Rubber
Matrix: Water
Data Release Authorized: *MM* Date Sampled: 01/06/00
Reported: 01/17/00 Date Received: 01/12/00

Instrument: NT3 Sample Amount: 20.0 mL
Date Analyzed: 01/13/00 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	0.2 U
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	1.0 U
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.2 U
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	0.2 U
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	0.2 U
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.2 U
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

Sample No: Trip Blank

Lab Sample ID: BE73I QC Report No: BE73-ThermoRetec
LIMS ID: 00-240 Project: Scougal Rubber
Matrix: Water
Data Release Authorized: *AMS* Date Sampled: 01/06/00
Reported: 01/17/00 Date Received: 01/12/00

Instrument: NT3 Sample Amount: 20.0 mL
Date Analyzed: 01/13/00 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
594-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	97.8%
d8-Toluene	99.5%
Bromofluorobenzene	92.5%
d4-1,2-Dichlorobenzene	102%

ORGANICS ANALYSIS DATA SHEET
 Volatiles by Purge & Trap GC/MS
 Page 1 of 2



Lab Sample ID: BE73SB QC Report No: BE73-ThermoRetec
 LIMS ID: 00-240 Project: Scougal Rubber
 Matrix: Water
 Data Release Authorized: *MP* Date Received: 01/12/00
 Reported: 01/17/00
 Date Analyzed: 01/13/00
 Instrument: NT3

LABORATORY CONTROL SAMPLE CONSTITUENT	SPIKE VALUE	SPIKE AMT	% RECOVERY
Chloromethane	4.01	4.0	100%
Bromomethane	3.92	4.0	98.0%
Vinyl Chloride	4.00	4.0	100%
Chloroethane	4.00	4.0	100%
Methylene Chloride	4.28	4.0	107%
Acetone	20.8	20.0	104%
Carbon Disulfide	4.02	4.0	100%
1,1-Dichloroethene	4.04	4.0	101%
1,1-Dichloroethane	4.03	4.0	101%
trans-1,2-Dichloroethene	4.01	4.0	100%
cis-1,2-Dichloroethene	4.09	4.0	102%
Chloroform	4.06	4.0	102%
1,2-Dichloroethane	4.14	4.0	104%
2-Butanone	21.2	20.0	106%
1,1,1-Trichloroethane	3.97	4.0	99.2%
Carbon Tetrachloride	4.09	4.0	102%
Vinyl Acetate	4.28	4.0	107%
Bromodichloromethane	4.06	4.0	102%
1,2-Dichloropropane	4.09	4.0	102%
cis-1,3-Dichloropropene	4.14	4.0	104%
Trichloroethene	3.97	4.0	99.2%
Dibromochloromethane	3.91	4.0	97.8%
1,1,2-Trichloroethane	4.25	4.0	106%
Benzene	4.11	4.0	103%
trans-1,3-Dichloropropene	4.31	4.0	108%
2-Chloroethylvinylether	4.28	4.0	107%
Bromoform	4.11	4.0	103%
4-Methyl-2-Pentanone (MIBK)	21.2	20.0	106%
2-Hexanone	20.5	20.0	102%
Tetrachloroethene	4.01	4.0	100%
1,1,2,2-Tetrachloroethane	4.10	4.0	102%
Toluene	4.05	4.0	101%
Chlorobenzene	4.06	4.0	102%
Ethylbenzene	4.05	4.0	101%
Styrene	4.08	4.0	102%
Trichlorofluoromethane	3.97	4.0	99.2%
1,1,2-Trichlorotrifluoroethane	3.99	4.0	99.8%
m,p-Xylene	8.14	8.0	102%
O-Xylene	4.16	4.0	104%

Reported in ug/L

ORGANICS ANALYSIS DATA SHEET
 Volatiles by Purge & Trap GC/MS
 Page 2 of 2



Lab Sample ID: BE73SB QC Report No: BE73-ThermoRetec
 LIMS ID: 00-240 Project: Scougal Rubber
 Matrix: Water
 Data Release Authorized: *[Signature]* Date Received: 01/12/00
 Reported: 01/17/00
 Date Analyzed: 01/13/00
 Instrument: NT3

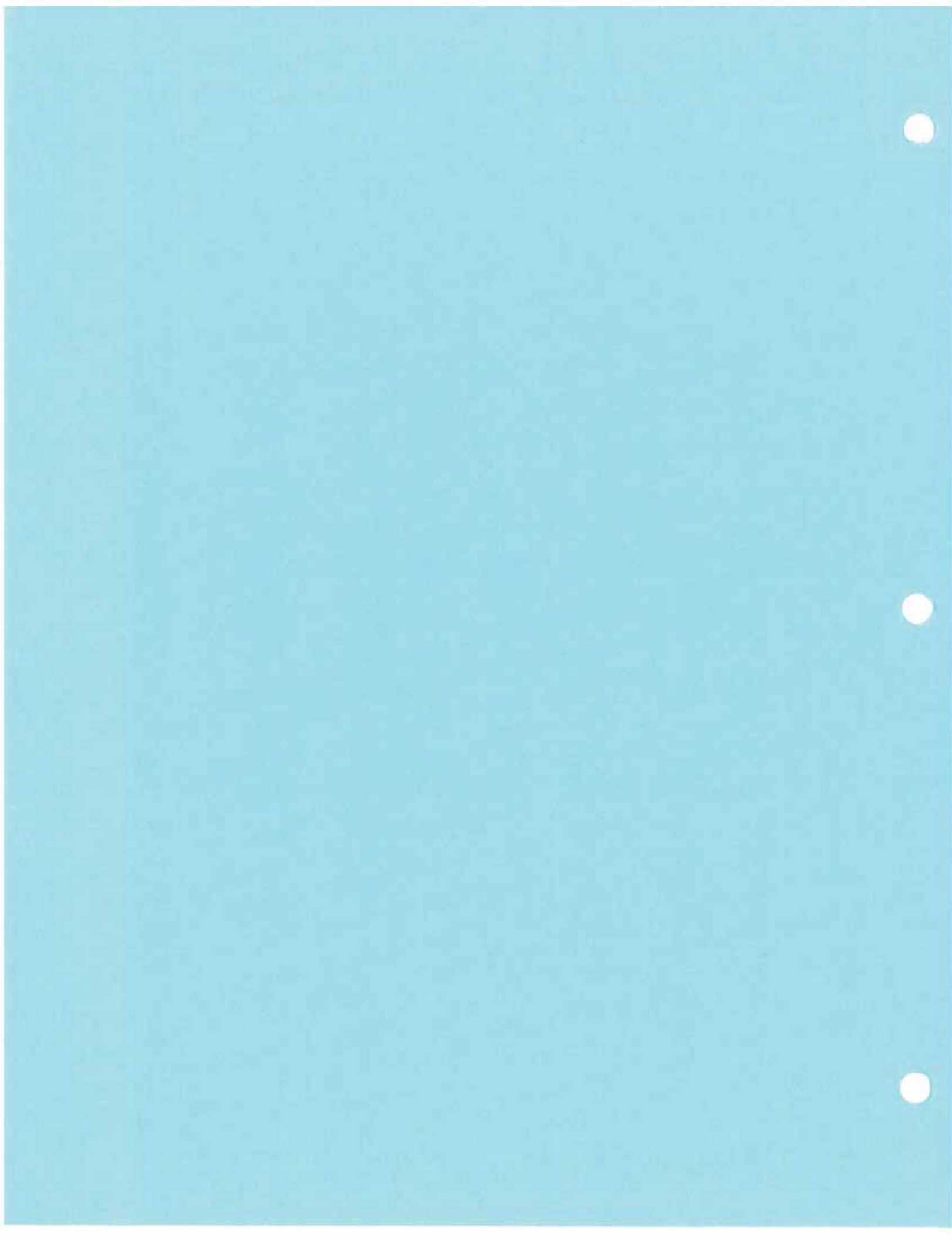
LABORATORY CONTROL SAMPLE CONSTITUENT	SPIKE VALUE	SPIKE AMT	% RECOVERY
1,2-Dichlorobenzene	4.13	4.0	103%
1,3-Dichlorobenzene	4.03	4.0	101%
1,4-Dichlorobenzene	4.03	4.0	101%
Acrolein	18.9	20.0	94.5%
Methyl Iodide	4.00	4.0	100%
Bromoethane	4.09	4.0	102%
Acrylonitrile	3.98	4.0	99.5%
1,1-Dichloropropene	4.09	4.0	102%
Dibromomethane	4.19	4.0	105%
1,1,1,2-Tetrachloroethane	3.99	4.0	99.8%
1,2-Dibromo-3-chloropropane	4.34	4.0	108%
1,2,3-Trichloropropane	4.30	4.0	108%
trans-1,4-Dichloro-2-butene	3.85	4.0	96.2%
1,3,5-Trimethylbenzene	3.94	4.0	98.5%
1,2,4-Trimethylbenzene	4.14	4.0	104%
Hexachlorobutadiene	3.96	4.0	99.0%
Ethylene Dibromide	4.16	4.0	104%
Bromochloromethane	4.19	4.0	105%
2,2-Dichloropropane	4.07	4.0	102%
1,3-Dichloropropane	4.08	4.0	102%
Isopropylbenzene	3.97	4.0	99.2%
n-Propylbenzene	4.02	4.0	100%
Bromobenzene	4.11	4.0	103%
2-Chlorotoluene	3.91	4.0	97.8%
4-Chlorotoluene	4.39	4.0	110%
tert-Butylbenzene	4.12	4.0	103%
sec-Butylbenzene	4.02	4.0	100%
4-Isopropyltoluene	3.96	4.0	99.0%
n-Butylbenzene	3.95	4.0	98.8%
1,2,4-Trichlorobenzene	4.13	4.0	103%
Naphthalene	4.40	4.0	110%
1,2,3-Trichlorobenzene	4.59	4.0	115%

Lab Control Surrogate Recovery

d4-1,2-Dichloroethane	100%
d8-Toluene	102%
Bromofluorobenzene	98.0%
d4-1,2-Dichlorobenzene	104%

Reported in ug/L







Analytical Resources, Incorporated
Analytical Chemists and Consultants

14 September 1999

Dean Kinney
ThermoRetec, Inc.
1011 S.W. Klickitat Way
Suite 207
Seattle, WA 98134

RE: Client Project: 1-2417-300
ARI Project: #AS11

Dear Dean:

Please find enclosed the original Chain-of-Custody records (COC) and the final results for the samples from the project referenced above. Eight water samples and one trip blank were received on September 2, 1999. The samples were received in good condition and there were no discrepancies in the paperwork. The samples were analyzed for VOAs.

No problems were encountered during the analysis.

A copy of these reports will be kept on file with ARI. Should you have any questions or problems please feel free to call me at any time.

Sincerely,

ANALYTICAL RESOURCES, INC.

A handwritten signature in black ink that reads "Mark Harris".

Mark Harris
Project Manager
206/340-2866, ext. 113
e-mail <mark@arilabs.com>

Enclosures

cc: file AS11

kg

Chain of Custody Record & Laboratory Analysis Request

Analytical Resources, Incorporated
 Analytical Chemist and Consultants
 400 Ninth Avenue North
 Seattle, WA 98109-4708
 (206) 621-6490
 (206) 621-7523 (Fax)



Date: 1 Sep 99
 Page 1 of 2
 Number of coolers: 1
 Cooler Temp: 5

ARI Client: <u>Thermo Ritec</u>		Phone#:			
Client Contact: <u>Deane Kunny</u>					
Client Project ID: <u>1-2417-300</u>					
Samplers: <u>Darrell Anderson</u>					
Sample ID	Date	Time	Matx	No Cont	Lab ID
1	MW-11-999	1 Sep 99	1340		
2	MW-12-999	1245			
3	MW-13-999	1435			
4	MW-14-999	1500			
5	MW-15-999	1515			
6					
7					

Analysis Required		Notes/Comments
* Fuel Scan	X	* Low detection limits
* TCE	X	
* Vinyl Chloride	X	99-13135 to
	X	99-13143
	X	AS11
	X	
	X	
	X	
	X	

ARI Project No:	Relinquished by: (Signature) <u>Darrell Anderson</u>	Relinquished by: (Signature)
T.A.T. Requested:	Printed Name: <u>Darrell Anderson</u>	Printed Name:
Comments/Special Instructions:	Company: <u>Thermo Ritec</u>	Company:
	Date: <u>2 Sep 99</u> Time: <u>1300</u>	Date: Time:
	Received by: (Signature) <u>[Signature]</u>	Received by: (Signature)
	Printed Name: <u>[Name]</u>	Printed Name:
	Company: <u>ARI</u>	Company:
	Date: <u>9.2.99</u> Time: <u>1345</u>	Date: Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following Standard Operating Procedures and our Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI releases ARI from liability in excess thereof, not withstanding any provision to the contrary in any order or contract.

Chain of Custody Record & Laboratory Analysis Request

Analytical Resources Incorporated
 Analytical Chemist and Consultants
 400 Ninth Avenue North
 Seattle, WA 98109-4708
 (206) 621-6490
 (206) 621-7523 (Fax)



Date: 1 Sep 99 of 2
 Page 2 of 2
 Number of coolers: 1
 Cooler Temp: 5

ARI Client: <u>Thermo Retec</u>		Phone#: _____			
Client Contact: <u>Deon Kuning</u>					
Client Project ID: <u>1-2417-300</u>					
Samplers: <u>Dorrell Anderson</u>					
Sample ID	Date	Time	Matx	No Cont	Lab ID
1	<u>1 Sep 99</u>	<u>1200</u>			
2	<u>1</u>	<u>1540</u>			
3	<u>1</u>	<u>1510</u>			
4	<u>7/30/99</u>				
5					
6					
7					

Analysis Required		Notes/Comments
<input checked="" type="checkbox"/> Full Screen *	<input checked="" type="checkbox"/> Vial checked	<u>*low detection limits</u>
<input checked="" type="checkbox"/> 8260	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	

ARI Project No:	Relinquished by: (Signature) <u>Dorrell Anderson</u>	Relinquished by: (Signature)
T.A.T. Requested:	Printed Name: <u>Dorrell Anderson</u>	Printed Name:
Comments/Special Instructions:	Company: <u>Thermo Retec</u>	Company:
	Date: <u>2 Sep 99</u> Time: <u>1300</u>	Date: _____ Time: _____
	Received by: (Signature) <u>[Signature]</u>	Received by: (Signature)
	Printed Name: <u>Deon Kuning</u>	Printed Name:
	Company: <u>ARI</u>	Company:
	Date: <u>9.2.99</u> Time: <u>1300</u>	Date: _____ Time: _____

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following Standard Operating Procedures and our Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI releases ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the client.



**ORGANIC COMPOUND
DATA REPORTING QUALIFIERS**

- U Indicates the compound was undetected at the reported concentration. (Same as ND).
- J Indicates an estimated concentration when the value is less than the calculated reporting limit.
- D Indicates the surrogate/spike(s) was not detected, due to dilution of extract.
- NR Indicates the surrogate recovery cannot be reported due to matrix interference.
- E Indicates a value above the linear range of the detector. Sample dilution required.
- S Indicates no value reported due to saturation of the detector. Sample dilution required.
- NA Indicates compound not analyzed for.
- M Indicates an estimated value of analyte found and confirmed by analyst but with low spectral match.
- B Indicates possible/probable blank contamination. Flagged when the analyte is detected in the blank as well as the sample.
- Y Indicates raised reporting limit due to background interference or to activity on the instrument. Compound is still not detected at or above the raised level.

Sample No: Method Blank

Lab Sample ID: 090499MB QC Report No: AS11-ThermoRetec
LIMS ID: 99-13143 Project: 1-2417-300
Matrix: Water
Data Release Authorized: *(M)* Date Sampled: NA
Reported: 09/09/99 Date Received: NA

Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 09/04/99 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	0.2 U
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	1.0 U
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.2 U
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	0.2 U
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	0.2 U
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.2 U
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

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Sample No: Method Blank

Lab Sample ID: 090499MB QC Report No: AS11-ThermoRetec
LIMS ID: 99-13143 Project: 1-2417-300
Matrix: Water
Data Release Authorized: *WJ* Date Sampled: NA
Reported: 09/09/99 Date Received: NA

Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 09/04/99 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
590-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	98.5%
d8-Toluene	93.5%
Bromofluorobenzene	91.0%
d4-1,2-Dichlorobenzene	102%

Sample No: Method Blank

Lab Sample ID: 090599MB QC Report No: AS11-ThermoRetec
LIMS ID: 99-13138 Project: 1-2417-300
Matrix: Water
Data Release Authorized: *Ymw* Date Sampled: NA
Reported: 09/09/99 Date Received: NA

Instrument: FINN1 Sample Amount: 5.00 mL
Date Analyzed: 09/05/99 Purge Volume: 5.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	1.0 U
74-83-9	Bromomethane	1.0 U
75-01-4	Vinyl Chloride	1.0 U
75-00-3	Chloroethane	1.0 U
75-09-2	Methylene Chloride	2.0 U
67-64-1	Acetone	5.0 U
75-15-0	Carbon Disulfide	1.0 U
75-35-4	1,1-Dichloroethene	1.0 U
75-34-3	1,1-Dichloroethane	1.0 U
156-60-5	trans-1,2-Dichloroethene	1.0 U
156-59-2	cis-1,2-Dichloroethene	1.0 U
67-66-3	Chloroform	1.0 U
107-06-2	1,2-Dichloroethane	1.0 U
78-93-3	2-Butanone	5.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	1.0 U
108-05-4	Vinyl Acetate	5.0 U
75-27-4	Bromodichloromethane	1.0 U
78-87-5	1,2-Dichloropropane	1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0 U
79-01-6	Trichloroethene	1.0 U
124-48-1	Dibromochloromethane	1.0 U
79-00-5	1,1,2-Trichloroethane	1.0 U
71-43-2	Benzene	1.0 U
10061-02-6	trans-1,3-Dichloropropene	1.0 U
110-75-8	2-Chloroethylvinylether	5.0 U
75-25-2	Bromoform	1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0 U
591-78-6	2-Hexanone	5.0 U
127-18-4	Tetrachloroethene	1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U
108-88-3	Toluene	1.0 U
108-90-7	Chlorobenzene	1.0 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	1.0 U
75-69-4	Trichlorofluoromethane	1.0 U
76-13-1	1,1,2-Trichlorotrifluoroethane	2.0 U
1330-20-7	m,p-Xylene	1.0 U

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Sample No: Method Blank

Lab Sample ID: 090599MB

QC Report No: AS11-ThermoRetec

LIMS ID: 99-13138

Project: 1-2417-300

Matrix: Water

Data Release Authorized: *mw*

Date Sampled: NA

Reported: 09/09/99

Date Received: NA

Instrument: FINN1

Sample Amount: 5.00 mL

Date Analyzed: 09/05/99

Purge Volume: 5.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	1.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
107-02-8	Acrolein	50 U
74-88-4	Methyl Iodide	1.0 U
74-96-4	Bromoethane	2.0 U
107-13-1	Acrylonitrile	5.0 U
563-58-6	1,1-Dichloropropene	1.0 U
74-95-3	Dibromomethane	1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	5.0 U
96-18-4	1,2,3-Trichloropropane	3.0 U
110-57-6	trans-1,4-Dichloro-2-butene	5.0 U
108-67-8	1,3,5-Trimethylbenzene	1.0 U
95-63-6	1,2,4-Trimethylbenzene	1.0 U
87-68-3	Hexachlorobutadiene	5.0 U
106-93-4	Ethylene Dibromide	1.0 U
74-97-5	Bromochloromethane	1.0 U
590-20-7	2,2-Dichloropropane	1.0 U
142-28-9	1,3-Dichloropropane	1.0 U
98-82-8	Isopropylbenzene	1.0 U
103-65-1	n-Propylbenzene	1.0 U
108-86-1	Bromobenzene	1.0 U
95-49-8	2-Chlorotoluene	1.0 U
106-43-4	4-Chlorotoluene	1.0 U
98-06-6	tert-Butylbenzene	1.0 U
135-98-8	sec-Butylbenzene	1.0 U
99-87-6	4-Isopropyltoluene	1.0 U
104-51-8	n-Butylbenzene	1.0 U
120-82-1	1,2,4-Trichlorobenzene	5.0 U
91-20-3	Naphthalene	5.0 U
87-61-6	1,2,3-Trichlorobenzene	5.0 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	102%
d8-Toluene	101%
Bromofluorobenzene	94.9%
d4-1,2-Dichlorobenzene	108%

Sample No: MW-11-999

Lab Sample ID: AS11A QC Report No: AS11-ThermoRetec
LIMS ID: 99-13135 Project: 1-2417-300
Matrix: Water
Data Release Authorized: *MW* Date Sampled: 09/01/99
Reported: 09/09/99 Date Received: 09/02/99

Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 09/04/99 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	0.2 U
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	1.2
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.2 U
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	0.3
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	5.0
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.2 U
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

Sample No: MW-11-999

Lab Sample ID: AS11A QC Report No: AS11-ThermoRetec
LIMS ID: 99-13135 Project: 1-2417-300
Matrix: Water
Data Release Authorized: *mw* Date Sampled: 09/01/99
Reported: 09/09/99 Date Received: 09/02/99

Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 09/04/99 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
590-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	102%
d8-Toluene	95.5%
Bromofluorobenzene	88.5%
d4-1,2-Dichlorobenzene	102%

Sample No: MW-12-999

Lab Sample ID: AS11B QC Report No: AS11-ThermoRetec
LIMS ID: 99-13136 Project: 1-2417-300
Matrix: Water
Data Release Authorized: Date Sampled: 09/01/99
Reported: 09/09/99 Date Received: 09/02/99

Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 09/04/99 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	0.9
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	1.1
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.3
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	1.7
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	0.2 U
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.2 U
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

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Sample No: MW-12-999

Lab Sample ID: AS11B

QC Report No: AS11-ThermoRetec

LIMS ID: 99-13136

Project: 1-2417-300

Matrix: Water

Data Release Authorized: *WV*

Date Sampled: 09/01/99

Reported: 09/09/99

Date Received: 09/02/99

Instrument: FINN3

Sample Amount: 20.0 mL

Date Analyzed: 09/04/99

Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
590-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	99.0%
d8-Toluene	94.5%
Bromofluorobenzene	89.5%
d4-1,2-Dichlorobenzene	102%

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Volatiles by Purge & Trap GC/MS
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Sample No: MW-13-999

Lab Sample ID: AS11C QC Report No: AS11-ThermoRetec
LIMS ID: 99-13137 Project: 1-2417-300
Matrix: Water
Data Release Authorized: *mw* Date Sampled: 09/01/99
Reported: 09/09/99 Date Received: 09/02/99

Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 09/04/99 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	1.1
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	1.0 U
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.4
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	2.4
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	2.9
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	3.2
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.2 U
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

Sample No: MW-13-999

Lab Sample ID: AS11C QC Report No: AS11-ThermoRetec
LIMS ID: 99-13137 Project: 1-2417-300
Matrix: Water
Data Release Authorized: *DMW* Date Sampled: 09/01/99
Reported: 09/09/99 Date Received: 09/02/99

Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 09/04/99 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
590-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	101%
d8-Toluene	96.0%
Bromofluorobenzene	87.0%
d4-1,2-Dichlorobenzene	101%

Sample No: MW-14-999

Lab Sample ID: AS11D QC Report No: AS11-ThermoRetec
LIMS ID: 99-13138 Project: 1-2417-300
Matrix: Water
Data Release Authorized: *mw* Date Sampled: 09/01/99
Reported: 09/09/99 Date Received: 09/02/99

Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 09/05/99 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	31 E
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	3.1
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.6
75-34-3	1,1-Dichloroethane	1.8
156-60-5	trans-1,2-Dichloroethene	0.8
156-59-2	cis-1,2-Dichloroethene	35 E
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	21 E
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	3.6
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

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Sample No: MW-14-999

Lab Sample ID: AS11D QC Report No: AS11-ThermoRetec
LIMS ID: 99-13138 Project: 1-2417-300
Matrix: Water
Data Release Authorized: *mw* Date Sampled: 09/01/99
Reported: 09/09/99 Date Received: 09/02/99

Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 09/05/99 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
590-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	97.5%
d8-Toluene	95.5%
Bromofluorobenzene	93.5%
d4-1,2-Dichlorobenzene	104%

Sample No: MW-14-999

DILUTION

Lab Sample ID: AS11D-DL QC Report No: AS11-ThermoRetec
LIMS ID: 99-13138 Project: 1-2417-300
Matrix: Water
Data Release Authorized: *W* Date Sampled: 09/01/99
Reported: 09/09/99 Date Received: 09/02/99

Instrument: FINN1 Sample Amount: 5.00 mL
Date Analyzed: 09/05/99 Purge Volume: 5.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	1.0 U
74-83-9	Bromomethane	1.0 U
75-01-4	Vinyl Chloride	34
75-00-3	Chloroethane	1.0 U
75-09-2	Methylene Chloride	2.0 U
67-64-1	Acetone	5.0 U
75-15-0	Carbon Disulfide	1.0 U
75-35-4	1,1-Dichloroethene	1.0 U
75-34-3	1,1-Dichloroethane	1.6
156-60-5	trans-1,2-Dichloroethene	1.0 U
156-59-2	cis-1,2-Dichloroethene	31
67-66-3	Chloroform	1.0 U
107-06-2	1,2-Dichloroethane	1.0 U
78-93-3	2-Butanone	5.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	1.0 U
108-05-4	Vinyl Acetate	5.0 U
75-27-4	Bromodichloromethane	1.0 U
78-87-5	1,2-Dichloropropane	1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0 U
79-01-6	Trichloroethene	18
124-48-1	Dibromochloromethane	1.0 U
79-00-5	1,1,2-Trichloroethane	1.0 U
71-43-2	Benzene	1.0 U
10061-02-6	trans-1,3-Dichloropropene	1.0 U
110-75-8	2-Chloroethylvinylether	5.0 U
75-25-2	Bromoform	1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0 U
591-78-6	2-Hexanone	5.0 U
127-18-4	Tetrachloroethene	3.1
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U
108-88-3	Toluene	1.0 U
108-90-7	Chlorobenzene	1.0 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	1.0 U
75-69-4	Trichlorofluoromethane	1.0 U
76-13-1	1,1,2-Trichlorotrifluoroethane	2.0 U
1330-20-7	m,p-Xylene	1.0 U

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Sample No: MW-14-999

DILUTION

Lab Sample ID: AS11D-DL QC Report No: AS11-ThermoRetec
LIMS ID: 99-13138 Project: 1-2417-300
Matrix: Water
Data Release Authorized: *mw* Date Sampled: 09/01/99
Reported: 09/09/99 Date Received: 09/02/99

Instrument: FINN1 Sample Amount: 5.00 mL
Date Analyzed: 09/05/99 Purge Volume: 5.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	1.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
107-02-8	Acrolein	50 U
74-88-4	Methyl Iodide	1.0 U
74-96-4	Bromoethane	2.0 U
107-13-1	Acrylonitrile	5.0 U
563-58-6	1,1-Dichloropropene	1.0 U
74-95-3	Dibromomethane	1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	5.0 U
96-18-4	1,2,3-Trichloropropane	3.0 U
110-57-6	trans-1,4-Dichloro-2-butene	5.0 U
108-67-8	1,3,5-Trimethylbenzene	1.0 U
95-63-6	1,2,4-Trimethylbenzene	1.0 U
87-68-3	Hexachlorobutadiene	5.0 U
106-93-4	Ethylene Dibromide	1.0 U
74-97-5	Bromochloromethane	1.0 U
590-20-7	2,2-Dichloropropane	1.0 U
142-28-9	1,3-Dichloropropane	1.0 U
98-82-8	Isopropylbenzene	1.0 U
103-65-1	n-Propylbenzene	1.0 U
108-86-1	Bromobenzene	1.0 U
95-49-8	2-Chlorotoluene	1.0 U
106-43-4	4-Chlorotoluene	1.0 U
98-06-6	tert-Butylbenzene	1.0 U
135-98-8	sec-Butylbenzene	1.0 U
99-87-6	4-Isopropyltoluene	1.0 U
104-51-8	n-Butylbenzene	1.0 U
120-82-1	1,2,4-Trichlorobenzene	5.0 U
91-20-3	Naphthalene	5.0 U
87-61-6	1,2,3-Trichlorobenzene	5.0 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	102%
d8-Toluene	98.8%
Bromofluorobenzene	93.8%
d4-1,2-Dichlorobenzene	105%

Sample No: MW-15-999

Lab Sample ID: AS11E QC Report No: AS11-ThermoRetec
LIMS ID: 99-13139 Project: 1-2417-300
Matrix: Water
Data Release Authorized: *WV* Date Sampled: 09/01/99
Reported: 09/09/99 Date Received: 09/02/99

Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 09/04/99 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	0.2 U
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	3.1
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.2 U
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	0.2 U
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	0.2 U
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.2 U
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

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Sample No: MW-15-999

Lab Sample ID: AS11E

QC Report No: AS11-ThermoRetec

LIMS ID: 99-13139

Project: 1-2417-300

Matrix: Water

Data Release Authorized: *WV*

Date Sampled: 09/01/99

Reported: 09/09/99

Date Received: 09/02/99

Instrument: FINN3

Sample Amount: 20.0 mL

Date Analyzed: 09/04/99

Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
590-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	107%
d8-Toluene	97.5%
Bromofluorobenzene	88.5%
d4-1,2-Dichlorobenzene	105%

Sample No: MW-16-999

Lab Sample ID: AS11F QC Report No: AS11-ThermoRetec
LIMS ID: 99-13140 Project: 1-2417-300
Matrix: Water
Data Release Authorized: *AW* Date Sampled: 09/01/99
Reported: 09/09/99 Date Received: 09/02/99

Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 09/04/99 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	0.2 U
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	2.4
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.2 U
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	0.2 U
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	0.2 U
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.2 U
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

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Sample No: MW-16-999

Lab Sample ID: AS11F QC Report No: AS11-ThermoRetec
LIMS ID: 99-13140 Project: 1-2417-300
Matrix: Water
Data Release Authorized: *mw* Date Sampled: 09/01/99
Reported: 09/09/99 Date Received: 09/02/99


Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 09/04/99 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
590-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	100%
d8-Toluene	97.5%
Bromofluorobenzene	87.0%
d4-1,2-Dichlorobenzene	102%

Sample No: MW-114-999

Lab Sample ID: AS11G QC Report No: AS11-ThermoRetec
LIMS ID: 99-13141 Project: 1-2417-300
Matrix: Water
Data Release Authorized:  Date Sampled: 09/01/99
Reported: 09/09/99 Date Received: 09/02/99

Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 09/05/99 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	30 E
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	2.5
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.6
75-34-3	1,1-Dichloroethane	1.8
156-60-5	trans-1,2-Dichloroethene	0.8
156-59-2	cis-1,2-Dichloroethene	36 E
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	20 E
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	3.3
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

Sample No: MW-114-999

Lab Sample ID: AS11G QC Report No: AS11-ThermoRetec
LIMS ID: 99-13141 Project: 1-2417-300
Matrix: Water
Data Release Authorized: *MW* Date Sampled: 09/01/99
Reported: 09/09/99 Date Received: 09/02/99

Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 09/05/99 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
590-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	97.5%
d8-Toluene	93.0%
Bromofluorobenzene	90.0%
d4-1,2-Dichlorobenzene	103%

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS
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Sample No: MW-114-999

DILUTION

Lab Sample ID: AS11G-DL QC Report No: AS11-ThermoRetec
LIMS ID: 99-13141 Project: 1-2417-300
Matrix: Water
Data Release Authorized: *m* Date Sampled: 09/01/99
Reported: 09/09/99 Date Received: 09/02/99

Instrument: FINN1 Sample Amount: 5.00 mL
Date Analyzed: 09/05/99 Purge Volume: 5.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	1.0 U
74-83-9	Bromomethane	1.0 U
75-01-4	Vinyl Chloride	36
75-00-3	Chloroethane	1.0 U
75-09-2	Methylene Chloride	2.0 U
67-64-1	Acetone	5.0 U
75-15-0	Carbon Disulfide	1.0 U
75-35-4	1,1-Dichloroethene	1.0 U
75-34-3	1,1-Dichloroethane	1.7
156-60-5	trans-1,2-Dichloroethene	1.0 U
156-59-2	cis-1,2-Dichloroethene	32
67-66-3	Chloroform	1.0 U
107-06-2	1,2-Dichloroethane	1.0 U
78-93-3	2-Butanone	5.0 U
71-55-6	1,1,1-Trichloroethane	1.0 U
56-23-5	Carbon Tetrachloride	1.0 U
108-05-4	Vinyl Acetate	5.0 U
75-27-4	Bromodichloromethane	1.0 U
78-87-5	1,2-Dichloropropane	1.0 U
10061-01-5	cis-1,3-Dichloropropene	1.0 U
79-01-6	Trichloroethene	18
124-48-1	Dibromochloromethane	1.0 U
79-00-5	1,1,2-Trichloroethane	1.0 U
71-43-2	Benzene	1.0 U
10061-02-6	trans-1,3-Dichloropropene	1.0 U
110-75-8	2-Chloroethylvinylether	5.0 U
75-25-2	Bromoform	1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0 U
591-78-6	2-Hexanone	5.0 U
127-18-4	Tetrachloroethene	2.9
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U
108-88-3	Toluene	1.0 U
108-90-7	Chlorobenzene	1.0 U
100-41-4	Ethylbenzene	1.0 U
100-42-5	Styrene	1.0 U
75-69-4	Trichlorofluoromethane	1.0 U
76-13-1	1,1,2-Trichlorotrifluoroethane	2.0 U
1330-20-7	m,p-Xylene	1.0 U

Sample No: MW-114-999

DILUTION

Lab Sample ID: AS11G-DL QC Report No: AS11-ThermoRetec
LIMS ID: 99-13141 Project: 1-2417-300
Matrix: Water
Data Release Authorized: *W* Date Sampled: 09/01/99
Reported: 09/09/99 Date Received: 09/02/99

Instrument: FINN1 Sample Amount: 5.00 mL
Date Analyzed: 09/05/99 Purge Volume: 5.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	1.0 U
95-50-1	1,2-Dichlorobenzene	1.0 U
541-73-1	1,3-Dichlorobenzene	1.0 U
106-46-7	1,4-Dichlorobenzene	1.0 U
107-02-8	Acrolein	50 U
74-88-4	Methyl Iodide	1.0 U
74-96-4	Bromoethane	2.0 U
107-13-1	Acrylonitrile	5.0 U
563-58-6	1,1-Dichloropropene	1.0 U
74-95-3	Dibromomethane	1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	5.0 U
96-18-4	1,2,3-Trichloropropane	3.0 U
110-57-6	trans-1,4-Dichloro-2-butene	5.0 U
108-67-8	1,3,5-Trimethylbenzene	1.0 U
95-63-6	1,2,4-Trimethylbenzene	1.0 U
87-68-3	Hexachlorobutadiene	5.0 U
106-93-4	Ethylene Dibromide	1.0 U
74-97-5	Bromochloromethane	1.0 U
590-20-7	2,2-Dichloropropane	1.0 U
142-28-9	1,3-Dichloropropane	1.0 U
98-82-8	Isopropylbenzene	1.0 U
103-65-1	n-Propylbenzene	1.0 U
108-86-1	Bromobenzene	1.0 U
95-49-8	2-Chlorotoluene	1.0 U
106-43-4	4-Chlorotoluene	1.0 U
98-06-6	tert-Butylbenzene	1.0 U
135-98-8	sec-Butylbenzene	1.0 U
99-87-6	4-Isopropyltoluene	1.0 U
104-51-8	n-Butylbenzene	1.0 U
120-82-1	1,2,4-Trichlorobenzene	5.0 U
91-20-3	Naphthalene	5.0 U
87-61-6	1,2,3-Trichlorobenzene	5.0 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	103%
d8-Toluene	98.2%
Bromofluorobenzene	91.9%
d4-1,2-Dichlorobenzene	104%

Sample No: FB-1-999

Lab Sample ID: AS11H QC Report No: AS11-ThermoRetec
LIMS ID: 99-13142 Project: 1-2417-300
Matrix: Water
Data Release Authorized: *W* Date Sampled: 09/01/99
Reported: 09/09/99 Date Received: 09/02/99

Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 09/04/99 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	0.2 U
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	4.1
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.2 U
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	0.2 U
67-66-3	Chloroform	0.3
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	0.2 U
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.2 U
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

Sample No: FB-1-999

Lab Sample ID: AS11H QC Report No: AS11-ThermoRetec
LIMS ID: 99-13142 Project: 1-2417-300
Matrix: Water
Data Release Authorized: *m* Date Sampled: 09/01/99
Reported: 09/09/99 Date Received: 09/02/99

Instrument: FINN3 Sample Amount: 20.0 mL
Date Analyzed: 09/04/99 Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
590-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	106%
d8-Toluene	99.5%
Bromofluorobenzene	90.5%
d4-1,2-Dichlorobenzene	106%

Sample No: Trip Blank

Lab Sample ID: AS11I

QC Report No: AS11-ThermoRetec

LIMS ID: 99-13143

Project: 1-2417-300

Matrix: Water

Data Release Authorized: *MW*

Date Sampled: 07/30/99

Reported: 09/09/99

Date Received: 09/02/99

Instrument: FINN3

Sample Amount: 20.0 mL

Date Analyzed: 09/04/99

Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
74-87-3	Chloromethane	0.2 U
74-83-9	Bromomethane	0.2 U
75-01-4	Vinyl Chloride	0.2 U
75-00-3	Chloroethane	0.2 U
75-09-2	Methylene Chloride	0.3 U
67-64-1	Acetone	1.0 U
75-15-0	Carbon Disulfide	0.2 U
75-35-4	1,1-Dichloroethene	0.2 U
75-34-3	1,1-Dichloroethane	0.2 U
156-60-5	trans-1,2-Dichloroethene	0.2 U
156-59-2	cis-1,2-Dichloroethene	0.2 U
67-66-3	Chloroform	0.2 U
107-06-2	1,2-Dichloroethane	0.2 U
78-93-3	2-Butanone	1.0 U
71-55-6	1,1,1-Trichloroethane	0.2 U
56-23-5	Carbon Tetrachloride	0.2 U
108-05-4	Vinyl Acetate	0.2 U
75-27-4	Bromodichloromethane	0.2 U
78-87-5	1,2-Dichloropropane	0.2 U
10061-01-5	cis-1,3-Dichloropropene	0.2 U
79-01-6	Trichloroethene	0.2 U
124-48-1	Dibromochloromethane	0.2 U
79-00-5	1,1,2-Trichloroethane	0.2 U
71-43-2	Benzene	0.2 U
10061-02-6	trans-1,3-Dichloropropene	0.2 U
110-75-8	2-Chloroethylvinylether	0.5 U
75-25-2	Bromoform	0.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	1.0 U
591-78-6	2-Hexanone	1.0 U
127-18-4	Tetrachloroethene	0.2 U
79-34-5	1,1,2,2-Tetrachloroethane	0.2 U
108-88-3	Toluene	0.2 U
108-90-7	Chlorobenzene	0.2 U
100-41-4	Ethylbenzene	0.2 U
100-42-5	Styrene	0.2 U
75-69-4	Trichlorofluoromethane	0.2 U
76-13-1	1,1,2-Trichlorotrifluoroethane	0.2 U
1330-20-7	m,p-Xylene	0.4 U

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Volatiles by Purge & Trap GC/MS

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Sample No: Trip Blank

Lab Sample ID: AS11I

QC Report No: AS11-ThermoRetec

LIMS ID: 99-13143

Project: 1-2417-300

Matrix: Water

Data Release Authorized: *M*

Date Sampled: 07/30/99

Reported: 09/09/99

Date Received: 09/02/99

Instrument: FINN3

Sample Amount: 20.0 mL

Date Analyzed: 09/04/99

Purge Volume: 20.0 mL

CAS Number	Analyte	ug/L
95-47-6	o-Xylene	0.2 U
95-50-1	1,2-Dichlorobenzene	0.2 U
541-73-1	1,3-Dichlorobenzene	0.2 U
106-46-7	1,4-Dichlorobenzene	0.2 U
107-02-8	Acrolein	5.0 U
74-88-4	Methyl Iodide	0.2 U
74-96-4	Bromoethane	0.2 U
107-13-1	Acrylonitrile	1.0 U
563-58-6	1,1-Dichloropropene	0.2 U
74-95-3	Dibromomethane	0.2 U
630-20-6	1,1,1,2-Tetrachloroethane	0.2 U
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U
96-18-4	1,2,3-Trichloropropane	0.5 U
110-57-6	trans-1,4-Dichloro-2-butene	1.0 U
108-67-8	1,3,5-Trimethylbenzene	0.2 U
95-63-6	1,2,4-Trimethylbenzene	0.2 U
87-68-3	Hexachlorobutadiene	0.5 U
106-93-4	Ethylene Dibromide	0.2 U
74-97-5	Bromochloromethane	0.2 U
590-20-7	2,2-Dichloropropane	0.2 U
142-28-9	1,3-Dichloropropane	0.2 U
98-82-8	Isopropylbenzene	0.2 U
103-65-1	n-Propylbenzene	0.2 U
108-86-1	Bromobenzene	0.2 U
95-49-8	2-Chlorotoluene	0.2 U
106-43-4	4-Chlorotoluene	0.2 U
98-06-6	tert-Butylbenzene	0.2 U
135-98-8	sec-Butylbenzene	0.2 U
99-87-6	4-Isopropyltoluene	0.2 U
104-51-8	n-Butylbenzene	0.2 U
120-82-1	1,2,4-Trichlorobenzene	0.5 U
91-20-3	Naphthalene	0.5 U
87-61-6	1,2,3-Trichlorobenzene	0.5 U

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	101%
d8-Toluene	98.0%
Bromofluorobenzene	88.5%
d4-1,2-Dichlorobenzene	100%


ORGANICS ANALYSIS DATA SHEET
 Volatiles by Purge & Trap GC/MS
 Page 1 of 2



Lab Sample ID: AS11SB QC Report No: AS11-ThermoRetec
 LIMS ID: 99-13143 Project:
 Matrix: Water 1-2417-300
 Data Release Authorized: *MW* Date Received: 09/02/99
 Reported: 09/09/99
 Date Analyzed: 09/04/99
 Instrument: FINN3

LABORATORY CONTROL SAMPLE CONSTITUENT	SPIKE VALUE	SPIKE AMT	% RECOVERY
Chloromethane	2.01	2.0	100%
Bromomethane	1.98	2.0	99.0%
Vinyl Chloride	1.86	2.0	93.0%
Chloroethane	1.98	2.0	99.0%
Methylene Chloride	2.04	2.0	102%
Acetone	9.58	10.0	95.8%
Carbon Disulfide	1.97	2.0	98.5%
1,1-Dichloroethene	2.13	2.0	106%
1,1-Dichloroethane	2.00	2.0	100%
trans-1,2-Dichloroethene	2.01	2.0	100%
cis-1,2-Dichloroethene	1.99	2.0	99.5%
Chloroform	2.00	2.0	100%
1,2-Dichloroethane	1.96	2.0	98.0%
2-Butanone	9.26	10.0	92.6%
1,1,1-Trichloroethane	2.04	2.0	102%
Carbon Tetrachloride	2.02	2.0	101%
Vinyl Acetate	1.89	2.0	94.5%
Bromodichloromethane	1.87	2.0	93.5%
1,2-Dichloropropane	1.89	2.0	94.5%
cis-1,3-Dichloropropene	1.97	2.0	98.5%
Trichloroethene	1.93	2.0	96.5%
Dibromochloromethane	1.97	2.0	98.5%
1,1,2-Trichloroethane	1.85	2.0	92.5%
Benzene	1.97	2.0	98.5%
trans-1,3-Dichloropropene	1.95	2.0	97.5%
2-Chloroethylvinylether	1.86	2.0	93.0%
Bromoform	1.80	2.0	90.0%
4-Methyl-2-Pentanone (MIBK)	8.89	10.0	88.9%
2-Hexanone	9.38	10.0	93.8%
Tetrachloroethene	2.01	2.0	100%
1,1,2,2-Tetrachloroethane	1.87	2.0	93.5%
Toluene	1.92	2.0	96.0%
Chlorobenzene	2.00	2.0	100%
Ethylbenzene	1.96	2.0	98.0%
Styrene	1.96	2.0	98.0%
Trichlorofluoromethane	2.02	2.0	101%
1,1,2-Trichlorotrifluoroethane	2.03	2.0	102%
m,p-Xylene	3.96	4.0	99.0%
O-Xylene	1.97	2.0	98.5%

Reported in ug/L

Lab Sample ID: AS11SB QC Report No: AS11-ThermoRetec
 LIMS ID: 99-13143 Project:
 Matrix: Water 1-2417-300
 Data Release Authorized:  Date Received: 09/02/99
 Reported: 09/09/99
 Date Analyzed: 09/04/99
 Instrument: FINN3

LABORATORY CONTROL SAMPLE CONSTITUENT	SPIKE VALUE	SPIKE AMT	% RECOVERY
1,2-Dichlorobenzene	1.99	2.0	99.5%
1,3-Dichlorobenzene	1.94	2.0	97.0%
1,4-Dichlorobenzene	1.98	2.0	99.0%
Acrolein	9.16	10.0	91.6%
Methyl Iodide	1.95	2.0	97.5%
Bromoethane	1.95	2.0	97.5%
Acrylonitrile	1.96	2.0	98.0%
1,1-Dichloropropene	2.01	2.0	100%
Dibromomethane	1.97	2.0	98.5%
1,1,1,2-Tetrachloroethane	1.98	2.0	99.0%
1,2-Dibromo-3-chloropropane	1.62	2.0	81.0%
1,2,3-Trichloropropane	1.91	2.0	95.5%
trans-1,4-Dichloro-2-butene	2.07	2.0	104%
1,3,5-Trimethylbenzene	1.95	2.0	97.5%
1,2,4-Trimethylbenzene	1.98	2.0	99.0%
Hexachlorobutadiene	1.89	2.0	94.5%
Ethylene Dibromide	1.94	2.0	97.0%
Bromochloromethane	2.03	2.0	102%
2,2-Dichloropropane	2.00	2.0	100%
1,3-Dichloropropane	2.01	2.0	100%
Isopropylbenzene	2.04	2.0	102%
n-Propylbenzene	1.99	2.0	99.5%
Bromobenzene	1.98	2.0	99.0%
2-Chlorotoluene	2.29	2.0	114%
4-Chlorotoluene	1.72	2.0	86.0%
tert-Butylbenzene	1.94	2.0	97.0%
sec-Butylbenzene	1.95	2.0	97.5%
4-Isopropyltoluene	1.95	2.0	97.5%
n-Butylbenzene	1.98	2.0	99.0%
1,2,4-Trichlorobenzene	1.92	2.0	96.0%
Naphthalene	1.83	2.0	91.5%
1,2,3-Trichlorobenzene	1.91	2.0	95.5%

Lab Control Surrogate Recovery

d4-1,2-Dichloroethane	98.0%
d8-Toluene	97.5%
Bromofluorobenzene	96.0%
d4-1,2-Dichlorobenzene	99.0%

Reported in ug/L

Lab Sample ID: AS11SB QC Report No: AS11-ThermoRetec
 LIMS ID: 99-13138 Project:
 Matrix: Water 1-2417-300
 Data Release Authorized: *fw* Date Received: 09/02/99
 Reported: 09/09/99
 Date Analyzed: 09/05/99
 Instrument: FINN1

LABORATORY CONTROL SAMPLE CONSTITUENT	SPIKE VALUE	SPIKE AMT	% RECOVERY
Chloromethane	55.0	50.0	110%
Bromomethane	56.2	50.0	112%
Vinyl Chloride	53.7	50.0	107%
Chloroethane	47.6	50.0	95.2%
Methylene Chloride	53.3	50.0	107%
Acetone	306.	250	122%
Carbon Disulfide	61.7	50.0	123%
1,1-Dichloroethene	51.4	50.0	103%
1,1-Dichloroethane	52.3	50.0	105%
trans-1,2-Dichloroethene	51.6	50.0	103%
cis-1,2-Dichloroethene	55.7	50.0	111%
Chloroform	53.0	50.0	106%
1,2-Dichloroethane	51.3	50.0	103%
2-Butanone	284.	250	114%
1,1,1-Trichloroethane	53.7	50.0	107%
Carbon Tetrachloride	49.9	50.0	99.8%
Vinyl Acetate	66.1	50.0	132%
Bromodichloromethane	49.9	50.0	99.8%
1,2-Dichloropropane	51.2	50.0	102%
cis-1,3-Dichloropropene	48.9	50.0	97.8%
Trichloroethene	50.8	50.0	102%
Dibromochloromethane	51.9	50.0	104%
1,1,2-Trichloroethane	50.7	50.0	101%
Benzene	51.3	50.0	103%
trans-1,3-Dichloropropene	48.3	50.0	96.6%
2-Chloroethylvinylether	53.6	50.0	107%
Bromoform	51.5	50.0	103%
4-Methyl-2-Pentanone (MIBK)	261.	250	104%
2-Hexanone	264.	250	106%
Tetrachloroethene	51.0	50.0	102%
1,1,2,2-Tetrachloroethane	52.7	50.0	105%
Toluene	49.6	50.0	99.2%
Chlorobenzene	50.4	50.0	101%
Ethylbenzene	50.7	50.0	101%
Styrene	52.3	50.0	105%
Trichlorofluoromethane	51.4	50.0	103%
1,1,2-Trichlorotrifluoroethane	57.4	50.0	115%
m,p-Xylene	101.	100	101%
O-Xylene	49.6	50.0	99.2%

Reported in ug/L

ORGANICS ANALYSIS DATA SHEET
 Volatiles by Purge & Trap GC/MS
 Page 2 of 2



Lab Sample ID: AS11SB QC Report No: AS11-ThermoRetec
 LIMS ID: 99-13138 Project:
 Matrix: Water 1-2417-300
 Data Release Authorized: *[Signature]* Date Received: 09/02/99
 Reported: 09/09/99
 Date Analyzed: 09/05/99
 Instrument: FINN1

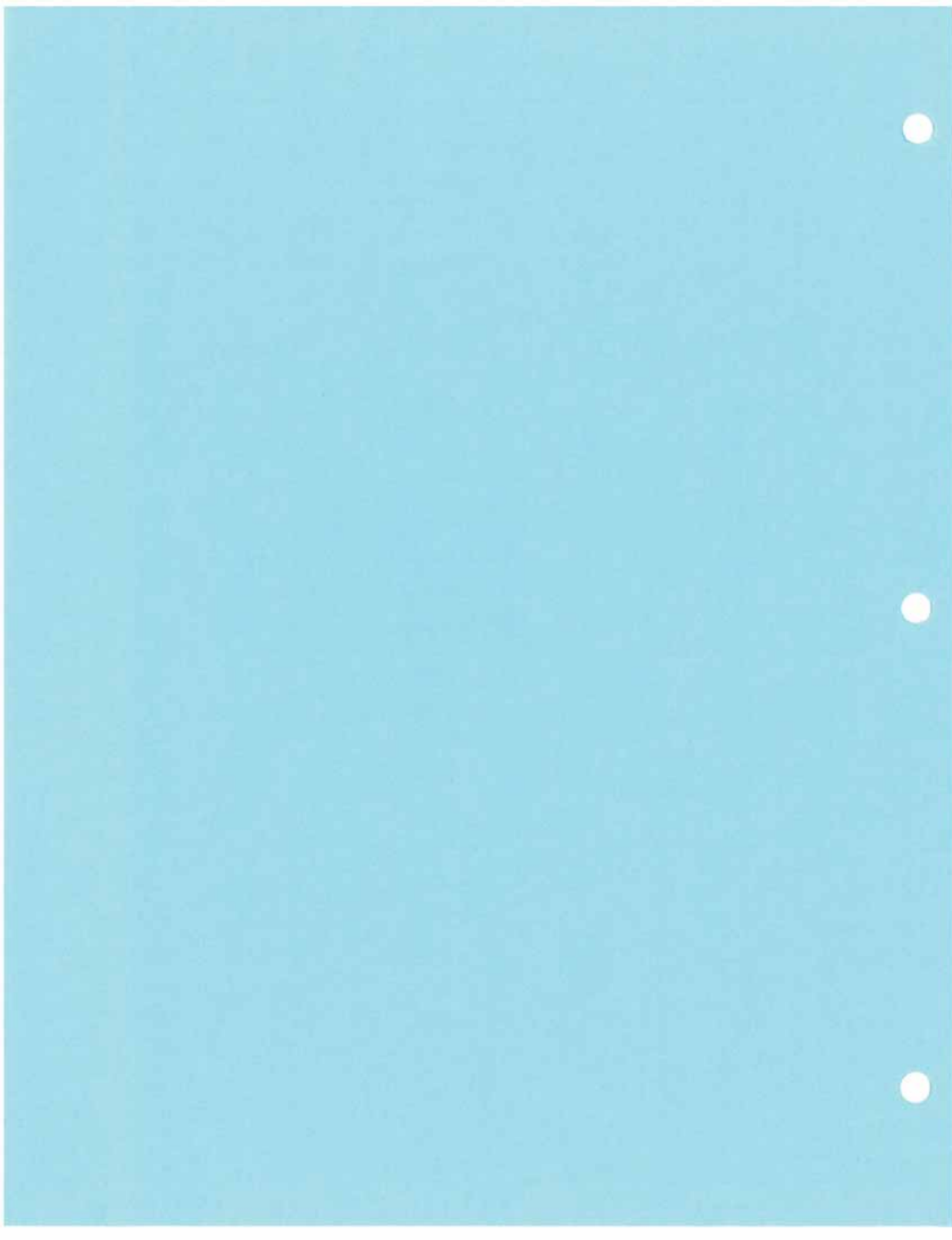
LABORATORY CONTROL SAMPLE CONSTITUENT	SPIKE VALUE	SPIKE AMT	% RECOVERY
1,2-Dichlorobenzene	51.7	50.0	103%
1,3-Dichlorobenzene	51.1	50.0	102%
1,4-Dichlorobenzene	51.8	50.0	104%
Acrolein	262.	250	105%
Methyl Iodide	61.0	50.0	122%
Bromoethane	60.1	50.0	120%
Acrylonitrile	53.5	50.0	107%
1,1-Dichloropropene	49.6	50.0	99.2%
Dibromomethane	49.6	50.0	99.2%
1,1,1,2-Tetrachloroethane	52.6	50.0	105%
1,2-Dibromo-3-chloropropane	56.1	50.0	112%
1,2,3-Trichloropropane	50.3	50.0	101%
trans-1,4-Dichloro-2-butene	55.0	50.0	110%
1,3,5-Trimethylbenzene	52.3	50.0	105%
1,2,4-Trimethylbenzene	51.9	50.0	104%
Hexachlorobutadiene	55.0	50.0	110%
Ethylene Dibromide	51.8	50.0	104%
Bromochloromethane	52.6	50.0	105%
2,2-Dichloropropane	54.1	50.0	108%
1,3-Dichloropropane	51.6	50.0	103%
Isopropylbenzene	50.6	50.0	101%
n-Propylbenzene	51.5	50.0	103%
Bromobenzene	52.6	50.0	105%
2-Chlorotoluene	52.1	50.0	104%
4-Chlorotoluene	50.8	50.0	102%
tert-Butylbenzene	51.8	50.0	104%
sec-Butylbenzene	54.4	50.0	109%
4-Isopropyltoluene	52.7	50.0	105%
n-Butylbenzene	52.6	50.0	105%
1,2,4-Trichlorobenzene	52.7	50.0	105%
Naphthalene	52.4	50.0	105%
1,2,3-Trichlorobenzene	52.1	50.0	104%

Lab Control Surrogate Recovery

d4-1,2-Dichloroethane	103%
d8-Toluene	97.5%
Bromofluorobenzene	99.0%
d4-1,2-Dichlorobenzene	102%

Reported in ug/L







WELL GAUGING LOG

PROJECT: Scougal Rubber
PROJECT NO: 1-2417-300
GAUGED BY: D. Kinney

WELL NUMBER	DATE	TIME	DEPTH TO WATER		REMARKS	
			CASING	WELL PROT.		
MW-2	11/20/97	0810	7.82	—		
MW-4		0818	NM	—	Couldn't get cap off	
MW-5		0852	6.92	—		
MW-6		0911	5.55	—		
MW-7		0848	4.03	—		
MW-8		0903	4.41	—		
PW-9		0838	8.86	9.86		
OW-10		0834	6.11	—		
MW-11		0908	NM	—	Couldn't get to it - under equipment	
MW-12		0924	5.56	—		
MW-13		0919	6.35	—		
MW-14		0828	7.12	—		
MW-15		0856	6.62	—		
MW-16		↓	0915	6.39	—	

GROUNDWATER SAMPLING LOG

PROJECT NAM Scougal Rubber
 PROJECT NO. 1-2417-300
 DATE 11/20/97

WELL NO. MW-12
 SAMPLED BY DWK

WELL INFORMATION		
DEPTH TO WATER	(TOC-ft)	5.56
	(wl.prot.-ft)	
DEPTH OF WELL	(ft)	19.5
WELL DIAMETER	(inches)	4
FEET OF WATER		13.94
CASING VOLUME*	(gal)	9.1
PURGE VOLUME	(gal)	27.2
PRODUCT THICK	(ft)	-
WELL CONDITION	Bolts missing	
WEATHER	Raining, 55 °F	

PURGE DATA					
START PURGE TIME:	0933				
VOLUME PURGED (gal)	15.0	20.0	25.0	27.25	
TIME	0940	0943	0946	0950	
FLOW RATE					
pH (units) (units)	Not	working	→		
CONDUCTIVITY (umhos/cm)	570	865	783	804	
TEMPERATURE (deg C)	14.5	15.3	14.8	14.9	
WATER COLOR	Clear	→			
PURGE AND SAMPLE EQUIPT:	Polyethylene Bailer				

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
MW-12	0955	Method 624 TCE & VC only	40 mL vial	3	HCl

ADDITIONAL INFORMATION:
 TOC=Top of well casing
 wl.prot.=top of well protector
 *casing volume= $\pi r^2 h \times 7.48 \text{ gal/ft}^3$

GROUNDWATER SAMPLING LOG

PROJECT NAM Scougal Rubber
 PROJECT NO. 1-2417-300
 DATE 11/24/97

WELL NO. MW-13
 SAMPLED BY DWK

WELL INFORMATION		
DEPTH TO WATER	(TOC-ft)	6.35
	(wLprot.-ft)	
DEPTH OF WELL	(ft)	19.8
WELL DIAMETER	(inches)	2
FEET OF WATER		13.45
CASING VOLUME*	(gal)	2.15
PURGE VOLUME	(gal)	6.5
PRODUCT THICK	(ft)	
WELL CONDITION		OK
WEATHER		Raining, 55 °F

PURGE DATA					
START PURGE TIME:	1006				
VOLUME PURGED (gal)	4.0	6.0	6.5		
TIME	1012	1015	1017		
FLOW RATE					
pH (units) (units)	NOT WORKING →				
CONDUCTIVITY (umhos/cm)	831	855	870		
TEMPERATURE (deg C)	15.4	16.0	15.9		
WATER COLOR	BRN →				
PURGE AND SAMPLE EQUIPT:	Polyethylene Bailer				

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
MW-13	1025	Method 624 TCE & VC only	40 mL vial	3	HCl

ADDITIONAL INFORMATION:

TOC=Top of well casing
 wLprot.=top of well protector
 *casing volume= $\pi r^2 h(ft) \times 7.48 gal/ft^3$

GROUNDWATER SAMPLING LOG

PROJECT NAM Scougal Rubber
 PROJECT NO. 1-2417-300
 DATE 11/20/97

WELL NO. MW-14
 SAMPLED BY DWK

WELL INFORMATION		
DEPTH TO WATER	(TOC-ft)	7.2
	(wLprot.-ft)	
DEPTH OF WELL	(ft)	19.3
WELL DIAMETER	(inches)	2
FEET OF WATER		12.18
CASING VOLUME*	(gal)	1.95
PURGE VOLUME	(gal)	5.8
PRODUCT THICK	(ft)	-
WELL CONDITION		ok
WEATHER		Raining, 55 °F

PURGE DATA					
START PURGE TIME:	1052				
VOLUME PURGED (gal)	4.0	5.0	6.0		
TIME	1056	1057	1059		
FLOW RATE					
pH (units) (units)	NOT WORKING →				
CONDUCTIVITY (umhos/cm)	502	505	506		
TEMPERATURE (deg C)	15.5	15.9	16.0		
WATER COLOR	BRN →				
PURGE AND SAMPLE EQUIPT:	Polyethylene Bailor				

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
MW-14	11 00	Method 624 TCE & VC only	40 mL vial	3	HCl

ADDITIONAL INFORMATION:
 TOC=Top of well casing
 wLprot.=top of well protector
 *casing volume= $\pi r^2 h$ (ft)x7.48gal/ft

Sound Analytical Services, Inc.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 Pacific Hwy East • Tacoma, WA 98424

(253) 922-2310 • FAX (253) 922-5047

e-mail: SoundL@aol.com



TRANSMITTAL MEMORANDUM

DATE: December 9, 1997

TO: Dean Kinney
Retec
1011 S.W. Klickitat Way
Seattle, WA 98134

PROJECT: 1-2417-300 Scougal Rubber

REPORT NUMBER: 68943

Enclosed are the test results for three samples received at Sound Analytical Services on November 20, 1997.

The report consists of this transmittal memo, analytical results, quality control reports, a copy of the chain-of-custody, a list of data qualifiers and analytical narrative when applicable, and a copy of any requested raw data.

Should there be any questions regarding this report, please contact me at (253) 922-2310.

Sincerely,


for Darla Powell
Project Manager

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-12
Lab ID:	68943-01
Date Received:	11/20/97
Date Prepared:	12/3/97
Date Analyzed:	12/3/97
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	110		95	110
Toluene-d8	99		88	105
4-Bromofluorobenzene	100		96	122

Analyte	Result (ug/L)	PQL	Flags
Vinyl Chloride	1.1	0.2	
Trichloroethene	ND	0.2	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-13
Lab ID:	68943-02
Date Received:	11/20/97
Date Prepared:	12/3/97
Date Analyzed:	12/3/97
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	96		95	110
Toluene-d8	98		88	105
4-Bromofluorobenzene	96		96	122

Analyte	Result (ug/L)	PQL	Flags
Vinyl Chloride	3.4	0.2	
Trichloroethene	30	10	D

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-14
Lab ID:	68943-03
Date Received:	11/20/97
Date Prepared:	12/3/97
Date Analyzed:	12/3/97
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	108		95	110
Toluene-d8	100		88	105
4-Bromofluorobenzene	96		96	122

Analyte	Result (ug/L)	PQL	Flags
Vinyl Chloride	100	10	D
Trichloroethene	57	10	D

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - ITS033
Date Received:	-
Date Prepared:	12/3/97
Date Analyzed:	12/3/97
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	97		95	110
Toluene-d8	100		88	105
4-Bromofluorobenzene	101		96	122

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	0.4	
Vinyl Chloride	ND	0.2	
Bromomethane	ND	0.4	
Chloroethane	ND	0.4	
Trichlorofluoromethane	ND	0.4	
1,1-Dichloroethene	ND	0.4	
Methylene Chloride	ND	0.4	
trans-1,2-Dichloroethene	ND	0.4	
1,1-Dichloroethane	ND	0.4	
cis-1,2-Dichloroethene	ND	0.4	
Chloroform	ND	0.4	
1,1,1-Trichloroethane	ND	0.4	
Carbon Tetrachloride	ND	0.4	
Benzene	ND	0.4	
1,2-Dichloroethane	ND	0.4	
Trichloroethene	ND	0.2	
1,2-Dichloropropane	ND	0.4	
Bromodichloromethane	ND	0.4	
2-Chloroethyl Vinyl Ether	ND	2	
cis-1,3-Dichloropropene	ND	0.4	
Toluene	ND	0.4	
trans-1,3-Dichloropropene	ND	0.4	
1,1,2-Trichloroethane	ND	0.4	
Tetrachloroethene	ND	0.4	
Dibromochloromethane	ND	0.4	
Chlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for ITS033 continued...

Analyte	Result (ug/L)	PQL	Flags
Ethylbenzene	ND	0.4	
Bromoform	ND	0.4	
1,1,2,2-Tetrachloroethane	ND	0.4	
1,3-Dichlorobenzene	ND	0.4	
1,4-Dichlorobenzene	ND	0.4	
1,2-Dichlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Blank Spike/Blank Spike Duplicate Report

Lab ID:	ITS033
Date Prepared:	12/3/97
Date Analyzed:	12/3/97
QC Batch ID:	ITS033

Volatile Organics by USEPA Method 624

Compound Name	Blank Result (ug/L)	Spike Amount (ug/L)	BS Result (ug/L)	BS % Rec.	BSD Result (ug/L)	BSD % Rec.	RPD	Flag
Chloromethane	0	1	1.62	162	1.58	158	2.5	
Vinyl Chloride	0	1	1.14	114	1.09	109	4.5	
Bromomethane	0	1	1.13	113	1.14	114	0.88	
Chloroethane	0	1	1.17	117	1.05	105	11	
Trichlorofluoromethane	0	1	1.01	101	0.963	96.3	4.8	
1,1-Dichloroethene	0	1	0.976	97.6	1.02	102	4.4	
Methylene Chloride	0	1	1.03	103	1.05	105	1.9	
trans-1,2-Dichloroethene	0	1	0.985	98.5	0.999	99.9	1.4	
1,1-Dichloroethane	0	1	0.869	86.9	0.816	81.6	6.3	
cis-1,2-Dichloroethene	0	1	0.939	93.9	0.956	95.6	1.8	
Chloroform	0	1	1.07	107	1.06	106	0.94	
1,1,1-Trichloroethane	0	1	0.884	88.4	0.858	85.8	3	
Carbon Tetrachloride	0	1	0.881	88.1	0.839	83.9	4.9	
Benzene	0	1	1	100	1.01	101	1	
1,2-Dichloroethane	0	1	0.948	94.8	1.03	103	8.3	
Trichloroethene	0	1	0.959	95.9	0.991	99.1	3.3	
1,2-Dichloropropane	0	1	0.979	97.9	1.03	103	5.1	
Bromodichloromethane	0	1	0.868	86.8	0.914	91.4	5.2	
2-Chloroethyl Vinyl Ether	0	1	0.899	89.9	0.931	93.1	3.5	
cis-1,3-Dichloropropene	0	1	0.783	78.3	0.799	79.9	2	
Toluene	0	1	0.959	95.9	0.997	99.7	3.9	
trans-1,3-Dichloropropene	0	1	0.699	69.9	0.713	71.3	2	
1,1,2-Trichloroethane	0	1	0.93	93	0.966	96.6	3.8	
Tetrachloroethene	0	1	0.965	96.5	0.964	96.4	0.1	
Dibromochloromethane	0	1	0.868	86.8	0.932	93.2	7.1	
Chlorobenzene	0	1	0.954	95.4	0.936	93.6	1.9	
Ethylbenzene	0	1	0.928	92.8	0.916	91.6	1.3	
Bromoform	0	1	0.838	83.8	0.908	90.8	8	
1,1,1,2-Tetrachloroethane	0	1	0.918	91.8	0.961	96.1	4.6	
1,3-Dichlorobenzene	0	1	0.931	93.1	0.893	89.3	4.2	
1,4-Dichlorobenzene	0	1	0.911	91.1	0.911	91.1	0	
1,2-Dichlorobenzene	0	1	0.905	90.5	0.918	91.8	1.4	

SOUND ANALYTICAL SERVICES, INC.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE: (253) 922-2310 - FAX: (253) 922-5047

DATA QUALIFIERS AND ABBREVIATIONS

- B1: This analyte was detected in the associated method blank. The analyte concentration was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank).
- B2: This analyte was detected in the associated method blank. The analyte concentration in the sample was determined to be significantly higher than the method blank (greater than ten times the concentration reported in the blank).
- C: Additional confirmation performed.
- D: The reported result for this analyte is calculated based on a secondary dilution factor.
- E: The concentration of this analyte exceeded the instrument calibration range.
- J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.
- MCL: Maximum Contaminant Level
- MDL: Method Detection Limit
- N: See analytical narrative.
- D: Not Detected
- PQL: Practical Quantitation Limit
- X1: Contaminant does not appear to be "typical" product. Elution pattern suggests it may be _____.
- X2: Contaminant does not appear to be "typical" product. Further testing is suggested for identification.
- X3: Identification and quantification of peaks was complicated by matrix interference; GC/MS confirmation is recommended.
- X4: RPD for duplicates outside advisory QC limits. Sample was re-analyzed with similar results.
- X4a: RPD for duplicates outside advisory QC limits due to analyte concentration near the method practical quantitation limit/detection limit.
- X5: Matrix spike was diluted out during analysis.
- X6: Recovery of matrix spike was outside advisory QC limits. Sample was re-analyzed with similar results.
- X7: Recovery of matrix spike outside advisory QC limits. Matrix interference is indicated by blank spike recovery data.
- X7a: Recovery and/or RPD values for MS/MSD outside advisory QC limits due to high contaminant levels.
- X8: Surrogate was diluted out during analysis.
- X9: Surrogate recovery outside advisory QC limits due to matrix composition.

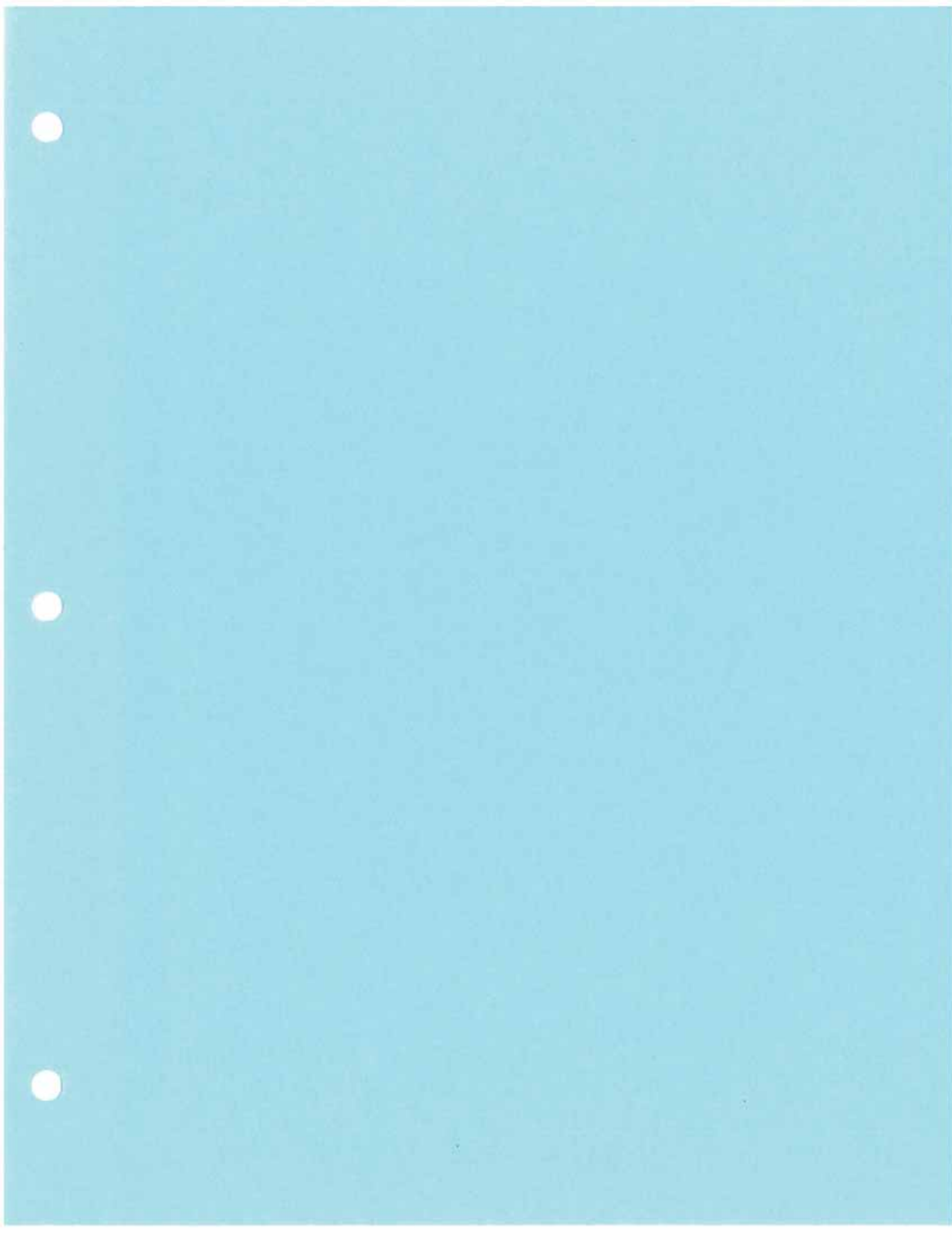
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CHAIN OF CUSTODY RECORD

PROJ. NO. 1-2417-300		PROJECT NAME Seagold Rubber		SEND RESULTS TO: Dean Kinney	
SAMPLERS: D. Kinney					
RECEIVING LABORATORY: Sound Analytical					
LAB I.D. NO.	DATE	TIME	SAMPLE NO.	NO. OF CONTAINERS	REMARKS
08043-1	11/20/97	0955	MW-17	3	0.20 ppb detection
2	↓	1025	MW-18	3	limit for vinyl chloride
3	↓	1100	MW-19	3	0.10 TCE
Relinquished by: (Signature) <i>Site 2 Kinney</i>		Date / Time 11/20/97 11:40		Received by: (Signature)	
Relinquished by: (Signature)		Date / Time		Relinquished by: (Signature)	
Received for Laboratory by: (Signature) <i>S. Gary</i>		Date / Time		Date / Time 11/20/97 1140	

RETEC
 REMEDIATION TECHNOLOGIES
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 Seattle, WA 98134
 (206) 624-9349

Shipper Information



the model, the sensitivity of the model to the choice of the initial conditions is examined. For this purpose, the model is run with the same initial conditions as in the previous section, but with different values of the parameters α and β . The results are shown in Fig. 10. The model is highly sensitive to the choice of the parameters α and β . The model is most sensitive to the choice of the parameter α . The model is less sensitive to the choice of the parameter β . The model is most sensitive to the choice of the parameter α when the parameter β is small. The model is less sensitive to the choice of the parameter α when the parameter β is large. The model is most sensitive to the choice of the parameter α when the parameter β is small and the parameter α is large. The model is less sensitive to the choice of the parameter α when the parameter β is large and the parameter α is small.

The model is also sensitive to the choice of the initial conditions. The model is most sensitive to the choice of the initial conditions when the parameters α and β are small. The model is less sensitive to the choice of the initial conditions when the parameters α and β are large.

The model is also sensitive to the choice of the time step. The model is most sensitive to the choice of the time step when the parameters α and β are small. The model is less sensitive to the choice of the time step when the parameters α and β are large.

The model is also sensitive to the choice of the spatial resolution. The model is most sensitive to the choice of the spatial resolution when the parameters α and β are small. The model is less sensitive to the choice of the spatial resolution when the parameters α and β are large.

The model is also sensitive to the choice of the boundary conditions. The model is most sensitive to the choice of the boundary conditions when the parameters α and β are small. The model is less sensitive to the choice of the boundary conditions when the parameters α and β are large.

The model is also sensitive to the choice of the physical parameters. The model is most sensitive to the choice of the physical parameters when the parameters α and β are small. The model is less sensitive to the choice of the physical parameters when the parameters α and β are large.

The model is also sensitive to the choice of the numerical scheme. The model is most sensitive to the choice of the numerical scheme when the parameters α and β are small. The model is less sensitive to the choice of the numerical scheme when the parameters α and β are large.

WELL GAUGING LOG

PROJECT: Scongai Rubber
 PROJECT NO 1-2417
 GAUGED BY: Di Kinney

WELL NUMBER	DATE	TIME	DEPTH TO WATER		REMARKS
			CASING	WELL PROT.	
MW-1	7/15/97	-	-	-	Abandoned
MW-2		0907	7.51	-	
MW-3		-	-	-	
MW-4		0909	6.35	-	
MW-5		0858	6.57	-	
MW-6		0843	5.23	-	
MW-7		0833	3.81	-	
MW-8		0839	4.21	-	Water over PVC cap
PW-9		0911	8.58	9.57	
OW-10		0913	5.84	-	
MW-11		0902	5.51	-	
MW-12		0846	5.26	-	
MW-13		0849	6.06	-	
MW-14		0916	6.82	-	
MW-15		0828	6.30	-	
MW-16		↓	0854	6.07	-



FIELD ACTIVITY LOG

PROJECT Seagal Rubber

COMPLETED BY D. Kinney

JOB NO. 1-2417-300

APPROVED BY _____

DAY & DATE Tues, July 15th, 1997

SHEET 1 OF 2

FIELD ACTIVITY SUBJECT: Water Level Measurements & Groundwater Sampling
DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

TIME	
0810	Arrived onsite & checked in at office - Rob Anderson not in yet; went to start water level measurements (WL's)
0828	Started WL's
0916	Finished site wide WL's
0925	Setup to gw sample
0950	Calibrated pH/conductivity meter (YSI model 3502)
1002	Started purging MW-11
1030	Sampled MW-11 for netted 624 (See gw sampling forms)
1035	Went to dump the purge water
1055	Returned to Mechanist's property & started purging MW-13
1105	Sampled MW-13 (same as MW-11)
1117	Started purging MW-16
1130	Sampled MW-16 (same as MW-11)
1140	Went to dump purge water
1156	Started purging MW-12
1220	Sampled MW-12 (same as MW-11)
1230	Took field blank - poured distilled water directly into the sample vials - labeled MW-25
1240	Went to dump purge water
1253	Started purging MW-15
1305	Sampled MW-15 (same as MW-11)
1310	Dumped purge water

VISITORS ON SITE:
None

CHANGES FROM PLANS, SPECIFICATIONS, SPECIAL ORDERS AND IMPORTANT DECISIONS
None

WEATHER CONDITIONS:
Cloudy, 60-70 °F

IMPORTANT TELEPHONE CALLS:
None

PERSONNEL ON SITE: Dean Kinney

(FIELD ENGINEER)

FIELD ACTIVITY LOG

PROJECT Southern Rubber

COMPLETED BY D. Kinney

JOB NO. 1-2917

APPROVED BY _____

DAY & DATE Tues July 15th, 1997

SHEET 2 OF 2

FIELD ACTIVITY SUBJECT: GW sampling
 DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

TIME	
1314	Started purging OW-10 ; bailed well dry at ~ 4.0 gals
1329	Started purging MW-14
1340	Sampled MW-14 for method 624 ; took duplicate sample & labeled MW-20
1350	Sampled OW-10 (same as MW-14)
1400	Put equipment away
1420	Left site

VISITORS ON SITE:
None

CHANGES FROM PLANS, SPECIFICATIONS, SPECIAL ORDERS AND IMPORTANT DECISIONS
None

WEATHER CONDITIONS:
Cloudy, 65-70

IMPORTANT TELEPHONE CALLS:
None

PERSONNEL ON SITE: Dean Kinney
 (FIELD ENGINEER)



GROUNDWATER SAMPLING LOG

PROJECT NAM Scougal Rubber
PROJECT NO. 1-2417-300
DATE 07/15/97

WELL NO. DW-10
SAMPLED BY DWL

WELL INFORMATION		
DEPTH TO WATER	(TOC-ft)	5.84
	(wl.prot.-ft)	
DEPTH OF WELL	(ft)	24.0
WELL DIAMETER	(inches)	2
FEET OF WATER		18.16
CASING VOLUME*	(gal)	2.91
PURGE VOLUME	(gal)	8.7
PRODUCT THICK	(ft)	-
WELL CONDITION		OK
WEATHER		Cloudy, 70°F

PURGE DATA					
START PURGE TIME:	1314				
VOLUME PURGED (gal)	4.0				
TIME	1323				
FLOW RATE					
pH (units) (units)	Bailed				
CONDUCTIVITY (umhos/cm)	Dry				
TEMPERATURE (deg C)					
WATER COLOR					
PURGE AND SAMPLE EQUIPT:	Polyethylene Bailer				

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
DW-10	1350	Method 624	40 mL vial	2	HCl
		Full Scan			

ADDITIONAL INFORMATION:
TOC=Top of well casing
wl.prot.=top of well protector
*casing volume= $\pi r^2 h$ (ft)x7.48gal/ft³



GROUNDWATER SAMPLING LOG

PROJECT NAM Scougal Rubber
 PROJECT NO. 1-2417-300
 DATE 07/15/97

WELL NO. MW-11
 SAMPLED BY DWK

WELL INFORMATION		
DEPTH TO WATER	(TOC-ft)	5.51
	(wLprot.-ft)	
DEPTH OF WELL	(ft)	19.5
WELL DIAMETER	(inches)	4
FEET OF WATER		13.99
CASING VOLUME*	(gal)	9.37
PURGE VOLUME	(gal)	28.
PRODUCT THICK	(ft)	-
WELL CONDITION		OK
WEATHER		Cloudy, 60°F

PURGE DATA					
START PURGE TIME:	1002				
VOLUME PURGED (gal)	15.0	28.0	25.0	28.0	
TIME	1012	1017	1021	1024	
FLOW RATE					
pH (units) (units)	6.50	6.16	5.90	5.81	
CONDUCTIVITY (umhos/cm)	883	693	694	678	
TEMPERATURE (deg C)	16.3	16.3	16.1	16.0	
WATER COLOR	Clear →				
PURGE AND SAMPLE EQUIPT:	Polyethylene Bailor				

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
MW-11	1030	Method 624	40 mL vial	2	HCl
		Full Scan			

ADDITIONAL INFORMATION:

TOC=Top of well casing

wLprot.=top of well protector

*casing volume= $\pi r^2 h(f) \times 7.48 \text{ gal/ft}^3$



GROUNDWATER SAMPLING LOG

PROJECT NAM Scougal Rubber
 PROJECT NO. 1-2417-300
 DATE 07/15/97

WELL NO. MW-12
 SAMPLED BY DWK

WELL INFORMATION		
DEPTH TO WATER	(TOC-ft)	5.26
	(wl.prot.-ft)	
DEPTH OF WELL	(ft)	19.5
WELL DIAMETER	(inches)	4
FEET OF WATER		14.24
CASING VOLUME*	(gal)	9.54
PURGE VOLUME	(gal)	28.6
PRODUCT THICK	(ft)	—
WELL CONDITION		ok
WEATHER		Cloudy, 65°F

PURGE DATA					
START PURGE TIME:	1156				
VOLUME PURGED (gal)	15.0	20.0	25.0	29.0	
TIME	1204	1207	1213	1216	
FLOW RATE					
pH (units)	5.69	5.60	5.57	5.49	
CONDUCTIVITY (umhos/cm)	1,240	1,188	1,162	1,162	
TEMPERATURE (deg C)	16.5	15.6	15.6	15.4	
WATER COLOR	BRN				→
PURGE AND SAMPLE EQUIPT:	Polyethylene Bailer				

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
MW-12	1220	Method 624	40 mL vial	2	HCl
		Full Scan			

ADDITIONAL INFORMATION:
 TOC=Top of well casing
 wl.prot.=top of well protector
 *casing volume= $\pi r^2 h(f) \times 7.48 \text{ gal/ft}^3$



GROUNDWATER SAMPLING LOG

PROJECT NAM Scougal Rubber
 PROJECT NO. 1-2417-300
 DATE 07/17/97

WELL NO. MW-13
 SAMPLED BY DWK

WELL INFORMATION		
DEPTH TO WATER	(TOC-ft)	6.06
	(wl.prot.-ft)	
DEPTH OF WELL	(ft)	19.8
WELL DIAMETER	(inches)	2
FEET OF WATER		13.74
CASING VOLUME*	(gal)	2.10
PURGE VOLUME	(gal)	6.6
PRODUCT THICK	(ft)	-
WELL CONDITION		OK
WEATHER		cloudy, 65°F

PURGE DATA					
START PURGE TIME:	1055				
VOLUME PURGED (gal)	4.0	6.0	6.75		
TIME	1059	1102	1104		
FLOW RATE					
pH (units)	6.20	5.86	5.79		
CONDUCTIVITY (umhos/cm)	1010	746	751		
TEMPERATURE (deg C)	15.6	16.2	16.3		
WATER COLOR	BRN				
PURGE AND SAMPLE EQUIPT:	Polyethylene Bailor				

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
MW-13	1105	Method 624	40 mL vial	2	HCl
		Full Scan			

ADDITIONAL INFORMATION:

TOC=Top of well casing
 wl.prot.=top of well protector
 *casing volume= $\pi r^2 h \times 7.48 \text{ gal/ft}^3$



GROUNDWATER SAMPLING LOG

PROJECT NAM Scougal Rubber
 PROJECT NO. 1-2417-300
 DATE 07/15/97

WELL NO. MW-14
 SAMPLED BY DWK

WELL INFORMATION		
DEPTH TO WATER	(TOC-ft)	6.82
	(wl.prot.-ft)	
DEPTH OF WELL	(ft)	19.3
WELL DIAMETER	(inches)	2
FEET OF WATER		12.48
CASING VOLUME*	(gal)	1.00
PURGE VOLUME	(gal)	6.0
PRODUCT THICK	(ft)	-
WELL CONDITION		ok
WEATHER		Cloudy, 70°F

PURGE DATA					
START PURGE TIME:	1329				
VOLUME PURGED (gal)	4.0	5.0	6.0		
TIME	1332	1334	133		
FLOW RATE					
pH (units)	6.77	6.49	6.41		
CONDUCTIVITY (umhos/cm)	625	568	555		
TEMPERATURE (deg C)	15.9	15.8	15.8		
WATER COLOR	BRN →				
PURGE AND SAMPLE EQUIPT:	Polyethylene Bailer				

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
MW-14	1340	Method 624	40 mL vial	2	HCl
		Full Scan			

ADDITIONAL INFORMATION:

TOC=Top of well casing

wl.prot.=top of well protector

*casing volume= $\pi r^2 h$ (ft)x7.48gal/ft³



GROUNDWATER SAMPLING LOG

PROJECT NAM Scougal Rubber
PROJECT NO. 1-2417-300
DATE 07/15/97

WELL NO. Dup of MW-14
SAMPLED BY DNR

WELL INFORMATION	
DEPTH TO WATER	(TOC-ft)
	(wl.prot.-ft)
DEPTH OF WELL	(ft) Dup of
WELL DIAMETER	(inches) MW-14
FEET OF WATER	
CASING VOLUME*	(gal)
PURGE VOLUME	(gal)
PRODUCT THICK	(ft)
WELL CONDITION	
WEATHER	

PURGE DATA				
START PURGE TIME:				
VOLUME PURGED (gal)				
TIME		Dup of		
FLOW RATE		MW-14		
pH (units) (units)				
CONDUCTIVITY (umhos/cm)				
TEMPERATURE (deg C)				
WATER COLOR				
PURGE AND SAMPLE EQUIPT:	Polyethylene Bailer			

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
MW-20	1345	Method 624 Full Scan	40 mL vial	2	HCl

ADDITIONAL INFORMATION:
TOC=Top of well casing
wl.prot.=top of well protector
*casing volume= $r^2h(ft) \times 7.48gal/ft$



GROUNDWATER SAMPLING LOG

PROJECT NAM Scougal Rubber
PROJECT NO. 1-2417-300
DATE 07/15/97

WELL NO. MW-15
SAMPLED BY DWK

WELL INFORMATION		
DEPTH TO WATER	(TOC-ft)	6130
	(wLprot.-ft)	
DEPTH OF WELL	(ft)	19.2
WELL DIAMETER	(inches)	2
FEET OF WATER		12.9
CASING VOLUME*	(gal)	2.06
PURGE VOLUME	(gal)	6.2
PRODUCT THICK	(ft)	-
WELL CONDITION		ok
WEATHER		Cloudy, 70°F

PURGE DATA					
START PURGE TIME:	1253				
VOLUME PURGED (gal)	4.0	5.0	6.25		
TIME	1257	1259	1302		
FLOW RATE					
pH (units) (units)	6.51	6.05	6.01		
CONDUCTIVITY (umhos/cm)	774	600	548		
TEMPERATURE (deg C)	16.5	16.6	16.5		
WATER COLOR	BRN/red →				
PURGE AND SAMPLE EQUIPT:	Polyethylene Bailer				

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
MW-15	1305	Method 624 Full Scan	40 mL vial	2	HCl

ADDITIONAL INFORMATION:

TOC=Top of well casing
wLprot.=top of well protector
*casing volume= $\pi r^2 h(f) \times 7.48 \text{ gal/ft}^3$

Lots of sediment



GROUNDWATER SAMPLING LOG

PROJECT NAM Scougal Rubber
 PROJECT NO. 1-2417-300
 DATE 07/17/97

WELL NO. MW-16
 SAMPLED BY DWK

WELL INFORMATION		
DEPTH TO WATER	(TOC-ft)	6.07
	(wl.prot.-ft)	
DEPTH OF WELL	(ft)	19.4
WELL DIAMETER	(inches)	2
FEET OF WATER		13.33
CASING VOLUME*	(gal)	213
PURGE VOLUME	(gal)	6.4
PRODUCT THICK	(ft)	-
WELL CONDITION		OK
WEATHER		Cloudy, 65°F

PURGE DATA					
START PURGE TIME:	1117				
VOLUME PURGED (gal)	5.0	6.0	6.5		
TIME	1122	1125	1127		
FLOW RATE					
pH (units)	(units)	6.26	6.02	5.97	
CONDUCTIVITY	(umhos/cm)	255	168	158	
TEMPERATURE	(deg C)	15.6	15.3	15.3	
WATER COLOR		BRN			
PURGE AND SAMPLE EQUIPT:	Polyethylene Bailor				

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
MW-16	1130	Method 624	40 mL vial	2	HCl
		Full Scan			

ADDITIONAL INFORMATION:

TOC=Top of well casing
 wl.prot.=top of well protector
 *casing volume= $\pi r^2 h$ (ft)x7.48gal/ft



GROUNDWATER SAMPLING LOG

Field Blank Labeled

PROJECT NAM Scougal Rubber
PROJECT NO. 1-2417-300
DATE 07/11/97

WELL NO. MW-25
SAMPLED BY DWK

WELL INFORMATION	
DEPTH TO WATER	(TOC-ft)
	(wl.prot.-ft)
DEPTH OF WELL	(ft)
WELL DIAMETER	(inches)
FEET OF WATER	
CASING VOLUME*	(gal)
PURGE VOLUME	(gal)
PRODUCT THICK	(ft)
WELL CONDITION	
WEATHER	Cloudy, 65°F

PURGE DATA				
START PURGE TIME:				
VOLUME PURGED (gal)				
TIME				
FLOW RATE				
pH (units)	(units)			
CONDUCTIVITY	(umhos/cm)			
TEMPERATURE	(deg C)			
WATER COLOR				
PURGE AND SAMPLE EQUIPT:	Polyethylene Bailer None			

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
MW-25	1230	Method 624	40 mL vial	2	HCl
		Full Scan			

ADDITIONAL INFORMATION:

- TOC=Top of well casing
- wl.prot.=top of well protector
- *casing volume= $\pi r^2 h$ (ft)x7.48gal/ft

SOUND ANALYTICAL SERVICES, INC.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (253)922-2310 - FAX (253)922-5047

TRANSMITTAL MEMORANDUM

DATE: July 30, 1997

TO: Dean Kinney
Retec

PROJECT: 1-2417-300 Scougal Rubber

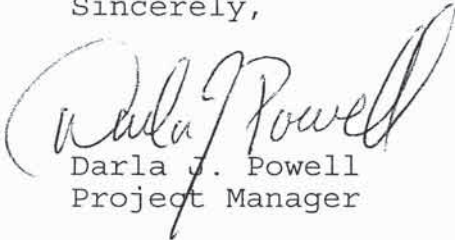
REPORT NUMBER: 66102

Enclosed are the test results for nine samples received at Sound Analytical Services on July 15, 1997.

The report consists of this transmittal memo, analytical results, quality control reports, a copy of the chain-of-custody, a list of data qualifiers when applicable, and a copy of any requested raw data.

Should there be any questions regarding this report, please contact me at (253) 922-2310.

Sincerely,



Darla J. Powell
Project Manager

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-11
Lab ID:	66102-01
Date Received:	7/15/97
Date Prepared:	7/28/97
Date Analyzed:	7/28/97
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	103		80	120
Toluene-d8	97		80	120
4-Bromofluorobenzene	106		80	120

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	0.4	
Vinyl Chloride	ND	0.4	
Bromomethane	ND	0.4	
Chloroethane	ND	0.4	
Trichlorofluoromethane	ND	0.4	
1,1-Dichloroethene	ND	0.4	
Methylene Chloride	ND	0.4	
trans-1,2-Dichloroethene	ND	0.4	
1,1-Dichloroethane	ND	0.4	
cis-1,2-Dichloroethene	0.82	0.4	
Chloroform	ND	0.4	
1,1,1-Trichloroethane	ND	0.4	
Carbon Tetrachloride	ND	0.4	
Benzene	ND	0.4	
1,2-Dichloroethane	ND	0.4	
Trichloroethene	9.9	10	JD
1,2-Dichloropropane	ND	0.4	
Bromodichloromethane	ND	0.4	
2-Chloroethyl Vinyl Ether	ND	2	
cis-1,3-Dichloropropene	ND	0.4	
Toluene	ND	0.4	
trans-1,3-Dichloropropene	ND	0.4	
1,1,2-Trichloroethane	ND	0.4	
Tetrachloroethene	ND	0.4	
Dibromochloromethane	ND	0.4	
Chlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for 66102-01 continued...

Analyte	Result (ug/L)	PQL	Flags
Ethylbenzene	ND	0.4	
Bromoform	ND	0.4	
1,1,2,2-Tetrachloroethane	ND	0.4	
1,3-Dichlorobenzene	ND	0.4	
1,4-Dichlorobenzene	ND	0.4	
1,2-Dichlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-13
Lab ID:	66102-02
Date Received:	7/15/97
Date Prepared:	7/28/97
Date Analyzed:	7/28/97
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	101		80	120
Toluene-d8	103		80	120
4-Bromofluorobenzene	108		80	120

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	0.4	
Vinyl Chloride	0.49	0.4	
Bromomethane	ND	0.4	
Chloroethane	ND	0.4	
Trichlorofluoromethane	ND	0.4	
1,1-Dichloroethene	ND	0.4	
Methylene Chloride	ND	0.4	
trans-1,2-Dichloroethene	ND	0.4	
1,1-Dichloroethane	0.24	0.4	J
cis-1,2-Dichloroethene	1.1	0.4	
Chloroform	ND	0.4	
1,1,1-Trichloroethane	0.33	0.4	J
Carbon Tetrachloride	ND	0.4	
Benzene	ND	0.4	
1,2-Dichloroethane	ND	0.4	
Trichloroethene	18	10	D
1,2-Dichloropropane	ND	0.4	
Bromodichloromethane	ND	0.4	
2-Chloroethyl Vinyl Ether	ND	2	
cis-1,3-Dichloropropene	ND	0.4	
Toluene	ND	0.4	
trans-1,3-Dichloropropene	ND	0.4	
1,1,2-Trichloroethane	ND	0.4	
Tetrachloroethene	0.39	0.4	J
Dibromochloromethane	ND	0.4	
Chlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for 66102-02 continued...

Analyte	Result (ug/L)	PQL	Flags
Ethylbenzene	ND	0.4	
Bromoform	ND	0.4	
1,1,2,2-Tetrachloroethane	ND	0.4	
1,3-Dichlorobenzene	ND	0.4	
1,4-Dichlorobenzene	ND	0.4	
1,2-Dichlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-16
Lab ID:	66102-03
Date Received:	7/15/97
Date Prepared:	7/28/97
Date Analyzed:	7/28/97
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	103		80	120
Toluene-d8	99		80	120
4-Bromofluorobenzene	113		80	120

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	0.4	
Vinyl Chloride	0.32	0.4	J
Bromomethane	ND	0.4	
Chloroethane	ND	0.4	
Trichlorofluoromethane	ND	0.4	
1,1-Dichloroethene	ND	0.4	
Methylene Chloride	ND	0.4	
trans-1,2-Dichloroethene	ND	0.4	
1,1-Dichloroethane	ND	0.4	
cis-1,2-Dichloroethene	1.6	0.4	
Chloroform	ND	0.4	
1,1,1-Trichloroethane	ND	0.4	
Carbon Tetrachloride	ND	0.4	
Benzene	0.34	0.4	J
1,2-Dichloroethane	ND	0.4	
Trichloroethene	ND	0.4	
1,2-Dichloropropane	ND	0.4	
Bromodichloromethane	ND	0.4	
2-Chloroethyl Vinyl Ether	ND	2	
cis-1,3-Dichloropropene	ND	0.4	
Toluene	ND	0.4	
trans-1,3-Dichloropropene	ND	0.4	
1,1,2-Trichloroethane	ND	0.4	
Tetrachloroethene	ND	0.4	
Dibromochloromethane	ND	0.4	
Chlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for 66102-03 continued...

Analyte	Result (ug/L)	PQL	Flags
Ethylbenzene	ND	0.4	
Bromoform	ND	0.4	
1,1,2,2-Tetrachloroethane	ND	0.4	
1,3-Dichlorobenzene	ND	0.4	
1,4-Dichlorobenzene	ND	0.4	
1,2-Dichlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-12
Lab ID:	66102-04
Date Received:	7/15/97
Date Prepared:	7/28/97
Date Analyzed:	7/28/97
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	105		80	120
Toluene-d8	100		80	120
4-Bromofluorobenzene	112		80	120

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	0.4	
Vinyl Chloride	4	0.4	
Bromomethane	ND	0.4	
Chloroethane	ND	0.4	
Trichlorofluoromethane	ND	0.4	
1,1-Dichloroethene	ND	0.4	
Methylene Chloride	ND	0.4	
trans-1,2-Dichloroethene	ND	0.4	
1,1-Dichloroethane	0.45	0.4	
cis-1,2-Dichloroethene	2.6	0.4	
Chloroform	ND	0.4	
1,1,1-Trichloroethane	ND	0.4	
Carbon Tetrachloride	ND	0.4	
Benzene	ND	0.4	
1,2-Dichloroethane	ND	0.4	
Trichloroethene	ND	0.4	
1,2-Dichloropropane	ND	0.4	
Bromodichloromethane	ND	0.4	
2-Chloroethyl Vinyl Ether	ND	2	
cis-1,3-Dichloropropene	ND	0.4	
Toluene	ND	0.4	
trans-1,3-Dichloropropene	ND	0.4	
1,1,2-Trichloroethane	ND	0.4	
Tetrachloroethene	ND	0.4	
Dibromochloromethane	ND	0.4	
Chlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for 66102-04 continued...

Analyte	Result (ug/L)	PQL	Flags
Ethylbenzene	ND	0.4	
Bromoform	ND	0.4	
1,1,2,2-Tetrachloroethane	ND	0.4	
1,3-Dichlorobenzene	ND	0.4	
1,4-Dichlorobenzene	ND	0.4	
1,2-Dichlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-25
Lab ID:	66102-05
Date Received:	7/15/97
Date Prepared:	7/28/97
Date Analyzed:	7/28/97
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	102		80	120
Toluene-d8	98		80	120
4-Bromofluorobenzene	110		80	120

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	0.4	
Vinyl Chloride	ND	0.4	
Bromomethane	ND	0.4	
Chloroethane	ND	0.4	
Trichlorofluoromethane	ND	0.4	
1,1-Dichloroethene	ND	0.4	
Methylene Chloride	ND	0.4	
trans-1,2-Dichloroethene	ND	0.4	
1,1-Dichloroethane	ND	0.4	
cis-1,2-Dichloroethene	ND	0.4	
Chloroform	6.2	0.4	
1,1,1-Trichloroethane	ND	0.4	
Carbon Tetrachloride	ND	0.4	
Benzene	ND	0.4	
1,2-Dichloroethane	ND	0.4	
Trichloroethene	ND	0.4	
1,2-Dichloropropane	ND	0.4	
Bromodichloromethane	0.3	0.4	J
2-Chloroethyl Vinyl Ether	ND	2	
cis-1,3-Dichloropropene	ND	0.4	
Toluene	ND	0.4	
trans-1,3-Dichloropropene	ND	0.4	
1,1,2-Trichloroethane	ND	0.4	
Tetrachloroethene	ND	0.4	
Dibromochloromethane	ND	0.4	
Chlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for 66102-05 continued...

Analyte	Result (ug/L)	PQL	Flags
Ethylbenzene	ND	0.4	
Bromoform	ND	0.4	
1,1,2,2-Tetrachloroethane	ND	0.4	
1,3-Dichlorobenzene	ND	0.4	
1,4-Dichlorobenzene	ND	0.4	
1,2-Dichlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-15
Lab ID:	66102-06
Date Received:	7/15/97
Date Prepared:	7/28/97
Date Analyzed:	7/28/97
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	103		80	120
Toluene-d8	100		80	120
4-Bromofluorobenzene	107		80	120

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	0.4	
Vinyl Chloride	ND	0.4	
Bromomethane	ND	0.4	
Chloroethane	ND	0.4	
Trichlorofluoromethane	ND	0.4	
1,1-Dichloroethene	ND	0.4	
Methylene Chloride	ND	0.4	
trans-1,2-Dichloroethene	ND	0.4	
1,1-Dichloroethane	ND	0.4	
cis-1,2-Dichloroethene	ND	0.4	
Chloroform	ND	0.4	
1,1,1-Trichloroethane	ND	0.4	
Carbon Tetrachloride	ND	0.4	
Benzene	ND	0.4	
1,2-Dichloroethane	ND	0.4	
Trichloroethene	ND	0.4	
1,2-Dichloropropane	ND	0.4	
Bromodichloromethane	ND	0.4	
2-Chloroethyl Vinyl Ether	ND	2	
cis-1,3-Dichloropropene	ND	0.4	
Toluene	ND	0.4	
trans-1,3-Dichloropropene	ND	0.4	
1,1,2-Trichloroethane	ND	0.4	
Tetrachloroethene	ND	0.4	
Dibromochloromethane	ND	0.4	
Chlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for 66102-06 continued...

Analyte	Result (ug/L)	PQL	Flags
Ethylbenzene	ND	0.4	
Bromoform	ND	0.4	
1,1,2,2-Tetrachloroethane	ND	0.4	
1,3-Dichlorobenzene	ND	0.4	
1,4-Dichlorobenzene	ND	0.4	
1,2-Dichlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-14
Lab ID:	66102-07
Date Received:	7/15/97
Date Prepared:	7/28/97
Date Analyzed:	7/28/97
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	106		80	120
Toluene-d8	100		80	120
4-Bromofluorobenzene	108		80	120

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	0.4	
Vinyl Chloride	73	10	D
Bromomethane	ND	0.4	
Chloroethane	0.31	0.4	J
Trichlorofluoromethane	ND	0.4	
1,1-Dichloroethene	1.4	0.4	
Methylene Chloride	0.21	0.4	J
trans-1,2-Dichloroethene	1.8	0.4	
1,1-Dichloroethane	1.9	0.4	
cis-1,2-Dichloroethene	86	10	D
Chloroform	ND	0.4	
1,1,1-Trichloroethane	ND	0.4	
Carbon Tetrachloride	ND	0.4	
Benzene	0.44	0.4	
1,2-Dichloroethane	ND	0.4	
Trichloroethene	44	10	D
1,2-Dichloropropane	ND	0.4	
Bromodichloromethane	ND	0.4	
2-Chloroethyl Vinyl Ether	ND	2	
cis-1,3-Dichloropropene	ND	0.4	
Toluene	0.59	0.4	
trans-1,3-Dichloropropene	ND	0.4	
1,1,2-Trichloroethane	ND	0.4	
Tetrachloroethene	4.1	0.4	
Dibromochloromethane	ND	0.4	
Chlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for 66102-07 continued...

Analyte	Result (ug/L)	PQL	Flags
Ethylbenzene	ND	0.4	
Bromoform	ND	0.4	
1,1,2,2-Tetrachloroethane	ND	0.4	
1,3-Dichlorobenzene	ND	0.4	
1,4-Dichlorobenzene	ND	0.4	
1,2-Dichlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-20
Lab ID:	66102-08
Date Received:	7/15/97
Date Prepared:	7/28/97
Date Analyzed:	7/28/97
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	105		80	120
Toluene-d8	101		80	120
4-Bromofluorobenzene	108		80	120

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	0.4	
Vinyl Chloride	75	10	D
Bromomethane	ND	0.4	
Chloroethane	ND	0.4	
Trichlorofluoromethane	ND	0.4	
1,1-Dichloroethene	1.4	0.4	
Methylene Chloride	ND	0.4	
trans-1,2-Dichloroethene	1.6	0.4	
1,1-Dichloroethane	1.8	0.4	
cis-1,2-Dichloroethene	85	10	D
Chloroform	ND	0.4	
1,1,1-Trichloroethane	ND	0.4	
Carbon Tetrachloride	ND	0.4	
Benzene	0.43	0.4	
1,2-Dichloroethane	ND	0.4	
Trichloroethene	43	10	D
1,2-Dichloropropane	ND	0.4	
Bromodichloromethane	ND	0.4	
2-Chloroethyl Vinyl Ether	ND	2	
cis-1,3-Dichloropropene	ND	0.4	
Toluene	0.6	0.4	
trans-1,3-Dichloropropene	ND	0.4	
1,1,2-Trichloroethane	ND	0.4	
Tetrachloroethene	4.2	0.4	
Dibromochloromethane	ND	0.4	
Chlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for 66102-08 continued...

Analyte	Result (ug/L)	PQL	Flags
Ethylbenzene	ND	0.4	
Bromoform	ND	0.4	
1,1,2,2-Tetrachloroethane	ND	0.4	
1,3-Dichlorobenzene	ND	0.4	
1,4-Dichlorobenzene	ND	0.4	
1,2-Dichlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-10
Lab ID:	66102-09
Date Received:	7/15/97
Date Prepared:	7/28/97
Date Analyzed:	7/28/97
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	103		80	120
Toluene-d8	100		80	120
4-Bromofluorobenzene	107		80	120

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	0.36	0.4	J
Vinyl Chloride	0.37	0.4	J
Bromomethane	ND	0.4	
Chloroethane	ND	0.4	
Trichlorofluoromethane	ND	0.4	
1,1-Dichloroethene	ND	0.4	
Methylene Chloride	ND	0.4	
trans-1,2-Dichloroethene	ND	0.4	
1,1-Dichloroethane	ND	0.4	
cis-1,2-Dichloroethene	3.4	0.4	
Chloroform	ND	0.4	
1,1,1-Trichloroethane	ND	0.4	
Carbon Tetrachloride	ND	0.4	
Benzene	1.6	0.4	
1,2-Dichloroethane	ND	0.4	
Trichloroethene	17	10	D
1,2-Dichloropropane	ND	0.4	
Bromodichloromethane	ND	0.4	
2-Chloroethyl Vinyl Ether	ND	2	
cis-1,3-Dichloropropene	ND	0.4	
Toluene	ND	0.4	
trans-1,3-Dichloropropene	ND	0.4	
1,1,2-Trichloroethane	ND	0.4	
Tetrachloroethene	0.32	0.4	J
Dibromochloromethane	ND	0.4	
Chlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for 66102-09 continued...

Analyte	Result (ug/L)	PQL	Flags
Ethylbenzene	ND	0.4	
Bromoform	ND	0.4	
1,1,2,2-Tetrachloroethane	ND	0.4	
1,3-Dichlorobenzene	ND	0.4	
1,4-Dichlorobenzene	ND	0.4	
1,2-Dichlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - VOL351
Date Received:	-
Date Prepared:	7/28/97
Date Analyzed:	7/28/97
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	98		80	120
Toluene-d8	103		80	120
4-Bromofluorobenzene	107		80	120

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	0.4	
Vinyl Chloride	ND	0.4	
Bromomethane	ND	0.4	
Chloroethane	ND	0.4	
Trichlorofluoromethane	ND	0.4	
1,1-Dichloroethene	ND	0.4	
Methylene Chloride	ND	0.4	
trans-1,2-Dichloroethene	ND	0.4	
1,1-Dichloroethane	ND	0.4	
cis-1,2-Dichloroethene	ND	0.4	
Chloroform	ND	0.4	
1,1,1-Trichloroethane	ND	0.4	
Carbon Tetrachloride	ND	0.4	
Benzene	ND	0.4	
1,2-Dichloroethane	ND	0.4	
Trichloroethene	ND	0.4	
1,2-Dichloropropane	ND	0.4	
Bromodichloromethane	ND	0.4	
2-Chloroethyl Vinyl Ether	ND	2	
cis-1,3-Dichloropropene	ND	0.4	
Toluene	ND	0.4	
trans-1,3-Dichloropropene	ND	0.4	
1,1,2-Trichloroethane	ND	0.4	
Tetrachloroethene	ND	0.4	
Dibromochloromethane	ND	0.4	
Chlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for VOL351 continued...

Analyte	Result (ug/L)	PQL	Flags
Ethylbenzene	ND	0.4	
Bromoform	ND	0.4	
1,1,2,2-Tetrachloroethane	ND	0.4	
1,3-Dichlorobenzene	ND	0.4	
1,4-Dichlorobenzene	ND	0.4	
1,2-Dichlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Blank Spike/Blank Spike Duplicate Report

Lab ID:	VOL351
Date Prepared:	7/28/97
Date Analyzed:	7/28/97
QC Batch ID:	VOL351

Volatile Organics by USEPA Method 624

Compound Name	Blank Result (ug/L)	Spike Amount (ug/L)	BS Result (ug/L)	BS % Rec.	BSD Result (ug/L)	BSD % Rec.	RPD	Flag
Chloromethane	0	1	1.18	118	1.09	109	7.9	
Vinyl Chloride	0	1	1.29	129	1.27	127	1.6	
Bromomethane	0	1	0.886	88.6	1.1	110	22	
Chloroethane	0	1	0.956	95.6	1.13	113	17	
Trichlorofluoromethane	0	1	1.09	109	1.1	110	0.91	
1,1-Dichloroethene	0	1	1.08	108	1.06	106	1.9	
Methylene Chloride	0	1	2.02	202	2.26	226	11	
trans-1,2-Dichloroethene	0	1	1.14	114	1.15	115	0.87	
1,1-Dichloroethane	0	1	1.09	109	1.09	109	0	
cis-1,2-Dichloroethene	0	1	1.11	111	1.1	110	0.9	
Chloroform	0	1	1.13	113	1.12	112	0.89	
1,1,1-Trichloroethane	0	1	1.14	114	1.14	114	0	
Carbon Tetrachloride	0	1	1.1	110	1.11	111	0.9	
Benzene	0	1	1.1	110	1.13	113	2.7	
1,2-Dichloroethane	0	1	1.17	117	1.2	120	2.5	
Trichloroethene	0	1	1.16	116	1.17	117	0.86	
1,2-Dichloropropane	0	1	1.18	118	1.18	118	0	
Bromodichloromethane	0	1	1.11	111	1.14	114	2.7	
2-Chloroethyl Vinyl Ether	0	1	0.774	77.4	0.8	80	3.3	
cis-1,3-Dichloropropene	0	1	1.05	105	1.09	109	3.7	
Toluene	0	1	1.12	112	1.15	115	2.6	
trans-1,3-Dichloropropene	0	1	0.846	84.6	0.873	87.3	3.1	
1,1,2-Trichloroethane	0	1	1.28	128	1.28	128	0	
Tetrachloroethene	0	1	1.15	115	1.15	115	0	
Dibromochloromethane	0	1	1.1	110	1.15	115	4.4	
Chlorobenzene	0	1	1.33	133	1.33	133	0	
Ethylbenzene	0	1	1.32	132	1.36	136	3	
Bromoform	0	1	1.35	135	1.39	139	2.9	
1,1,2,2-Tetrachloroethane	0	1	1.21	121	1.21	121	0	
1,3-Dichlorobenzene	0	1	1.32	132	1.32	132	0	
1,4-Dichlorobenzene	0	1	1.15	115	1.18	118	2.6	
1,2-Dichlorobenzene	0	1	1.16	116	1.17	117	0.86	

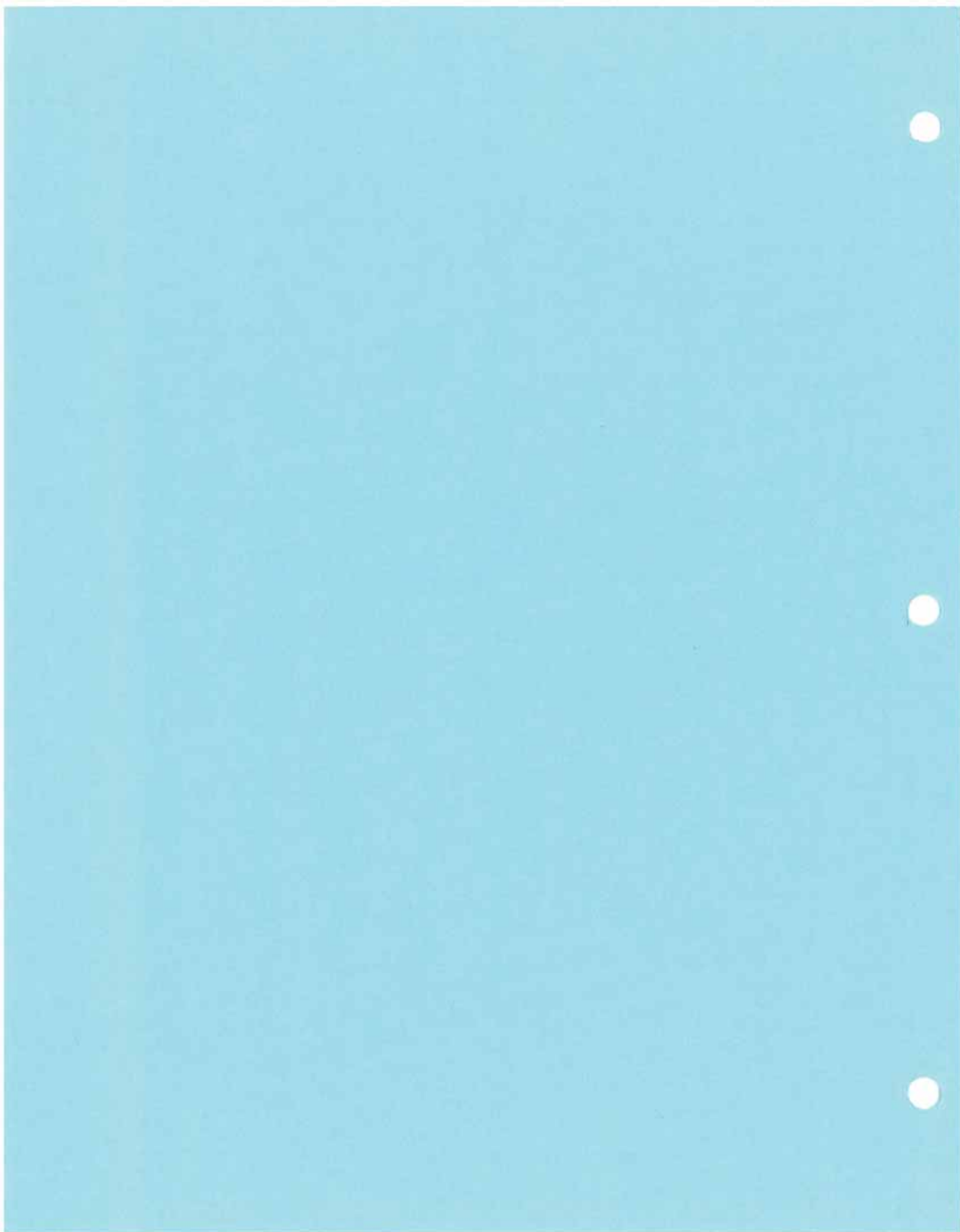
SOUND ANALYTICAL SERVICES, INC.

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 • TELEPHONE 206-922-2310 • FAX 206-922-5047

DATA QUALIFIERS AND ABBREVIATIONS

- B1: This analyte was detected in the associated method blank. The analyte concentration was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank).
- B2: This analyte was detected in the associated method blank. The analyte concentration in the sample was determined to be significantly higher than the method blank (greater than ten times the concentration reported in the blank).
- C: Additional confirmation performed.
- D: The reported result for this analyte is calculated based on a secondary dilution factor.
- E: The concentration of this analyte exceeded the instrument calibration range.
- J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.
- MCL: Maximum Contaminant Level
- MDL: Method Detection Limit
- N: See analytical narrative.
- ND: Not Detected
- PQL: Practical Quantitation Limit
- X1: Contaminant does not appear to be "typical" product. Elution pattern suggests it may be _____.
- X2: Contaminant does not appear to be "typical" product. Further testing is suggested for identification.
- X3: Identification and quantification of peaks was complicated by matrix interference; GC/MS confirmation is recommended.
- X4: RPD for duplicates outside advisory QC limits. Sample was re-analyzed with similar results.
- X4a: RPD for duplicates outside advisory QC limits due to analyte concentration near the method practical quantitation limit/detection limit.
- X5: Matrix spike was diluted out during analysis.
- X6: Recovery of matrix spike was outside advisory QC limits. Sample was re-analyzed with similar results.
- X7: Recovery of matrix spike outside advisory QC limits. Matrix interference is indicated by blank spike recovery data.
- X7a: Recovery and/or RPD values for MS/MSD outside advisory QC limits due to high contaminant levels.
- X8: Surrogate was diluted out during analysis.
- X9: Surrogate recovery outside advisory QC limits due to matrix composition.





SOUND ANALYTICAL SERVICES, INC.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

TRANSMITTAL MEMORANDUM

DATE: April 15, 1997

TO: Grant Hainsworth
Retec

PROJECT: 1-2417-300 Scougal Rubber

REPORT NUMBER: 63772

Enclosed are the test results for one sample received at Sound Analytical Services on April 2, 1997.

The report consists of this transmittal memo, analytical results, quality control reports, a copy of the chain-of-custody, a list of data qualifiers when applicable, and a copy of any requested raw data.

Should there be any questions regarding this report, please contact me at (206) 922-2310.

Sincerely,


Darla Powell
Project Manager

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-14
Lab ID:	63772-01
Date Received:	4/2/97
Date Prepared:	4/14/97
Date Analyzed:	4/14/97
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	107		80	120
Toluene-d8	94		80	120
4-Bromofluorobenzene	101		80	120

Analyte	Result (ug/L)	PQL	Flags
Vinyl Chloride	73	4	
Trichloroethene	30	4	

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - VOL160
Date Received:	-
Date Prepared:	4/14/97
Date Analyzed:	4/14/97
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	101		80	120
Toluene-d8	93		80	120
4-Bromofluorobenzene	102		80	120

Analyte	Result (ug/L)	PQL	Flags
Vinyl Chloride	ND	0.2	
Trichloroethene	ND	0.2	

SOUND ANALYTICAL SERVICES, INC.

Blank Spike/Blank Spike Duplicate Report

Lab ID: VOL160
Date Prepared: 4/14/97
Date Analyzed: 4/14/97
QC Batch ID: VOL160

Volatile Organics by USEPA Method 624

Compound Name	Blank Result (ug/L)	Spike Amount (ug/L)	BS Result (ug/L)	BS % Rec.	BSD Result (ug/L)	BSD % Rec.	RPD	Flag
Vinyl Chloride	0	1	1.22	122	1.33	133	8.6	
Trichloroethene	0	1	0.983	98.3	0.89	89	9.9	

SOUND ANALYTICAL SERVICES, INC.

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DATA QUALIFIERS AND ABBREVIATIONS

- B1: This analyte was detected in the associated method blank. The analyte concentration was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank).
- B2: This analyte was detected in the associated method blank. The analyte concentration in the sample was determined to be significantly higher than the method blank (greater than ten times the concentration reported in the blank).
- C: Additional confirmation performed.
- D: The reported result for this analyte is calculated based on a secondary dilution factor.
- E: The concentration of this analyte exceeded the instrument calibration range.
- J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.
- MCL: Maximum Contaminant Level
- MDL: Method Detection Limit
- N: See analytical narrative.
- ND: Not Detected
- PQL: Practical Quantitation Limit
- X1: Contaminant does not appear to be "typical" product. Elution pattern suggests it may be _____.
- X2: Contaminant does not appear to be "typical" product. Further testing is suggested for identification.
- X3: Identification and quantification of peaks was complicated by matrix interference; GC/MS confirmation is recommended.
- X4: RPD for duplicates outside advisory QC limits. Sample was re-analyzed with similar results.
- X4a: RPD for duplicates outside advisory QC limits due to analyte concentration near the method practical quantitation limit/detection limit.
- X5: Matrix spike was diluted out during analysis.
- X6: Recovery of matrix spike was outside advisory QC limits. Sample was re-analyzed with similar results.
- X7: Recovery of matrix spike outside advisory QC limits. Matrix interference is indicated by blank spike recovery data.
- X7a: Recovery and/or RPD values for MS/MSD outside advisory QC limits due to high contaminant levels.
- 8: Surrogate was diluted out during analysis.
- X9: Surrogate recovery outside advisory QC limits due to matrix composition.

8445

CHAIN OF CUSTODY RECORD

PROJ. NO. 1-2417-300	PROJECT NAME Seougal Rubber
SAMPLERS: D. Kinney	
RECEIVING LABORATORY: Sound Analytical	

LAB I.D. NO.	DATE	TIME	SAMPLE NO.	NO. OF CONTAINERS	REMARKS
03772	4/1/97	1375	MW-14	3	0.2 ppb detection limit for vinyl chloride & TCE

SEND RESULTS TO:
Grant Hainsworth

Method 624
for vinyl chloride & TCE

Relinquished by: (Signature) D. Kinney	Date / Time 9/2/97 1030	Received by: (Signature) Carrier	Date / Time	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature) Mary Lou... Date / Time 4/2/97 2:00	Date / Time	Relinquished by: (Signature)	Date / Time	Received by: (Signature)

Shipper Information

M6L





WELL GAUGING LOG

PROJECT: Seougal Rubber
PROJECT NO 1-2417-300
GAUGED BY: DK/SBC

WELL NUMBER	DATE	TIME	DEPTH TO WATER		REMARKS
			CASING	WELL PROT.	
MW-1	—	—	NA	—	
MW-2	Feb 26, 1997	1356	7.09	/	
MW-3	—	—	NA	—	
MW-4	Feb 26 1997	1404	5.98	—	
MW-5	Feb 26 1997	1414 1419	6.15	—	
MW-6	Feb 26 1997	1432	4.85	—	
MW-7	Feb 26 1997	14:21	3.32	—	
MW-8	Feb 26 1997	14:29	3.69	—	
PW-9	Feb 26 1997	14:10	8.12	—	
OW-10	Feb 26 1997	14 08	5.49	—	
MW-11	Feb 26 1997	14 45	5.18	—	
MW-12	Feb 26 1997	14 40	4.82	—	
MW-13	Feb 27 1997	1438	5.74	—	
MW-14	Feb 26 1997	1406	6.40	/	
MW-15	Feb 26 1997	1446	5.87	—	
MW-16	Feb 26 1997	1435	5.61	—	



GROUNDWATER SAMPLING LOG

PROJECT NAM Scougal Rubber
PROJECT NO. 1-2417-300
DATE 2/26/97

WELL NO. 11
SAMPLED BY *Novik/SBC*

WELL INFORMATION		
DEPTH TO WATER	(TOC-ft)	5.18
	(wl.prot.-ft)	
DEPTH OF WELL	(ft)	19.5
WELL DIAMETER	(inches)	4
FEET OF WATER		14.32
CASING VOLUME*	(gal)	9.3
PURGE VOLUME	(gal)	28
PRODUCT THICK	(ft)	-
WELL CONDITION		OK
WEATHER		Cloudy 50°F

PURGE DATA					
START PURGE TIME:	1506				
VOLUME PURGED (gal)	15	20	25	28	
TIME	15:14	15:18	15:20	15:22	
FLOW RATE					
pH (units) (units)	4.65	4.62	4.45	4.72 4.72	
CONDUCTIVITY (umhos/cm)	599	536	622	9519	
TEMPERATURE (deg C)	10.2	10.4	10.8	10.7	
WATER COLOR	Clear →				
PURGE AND SAMPLE EQUIPT:	Polyethylene Bailer				

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
MW-11	1525	Method 624 TCE & VC only	40 mL vial	3	HCl

ADDITIONAL INFORMATION:

TOC=Top of well casing
wl.prot.=top of well protector
*casing volume= $\pi r^2 h$ (ft)x7.48gal/ft³





GROUNDWATER SAMPLING LOG

PROJECT NAM Scougal Rubber
 PROJECT NO. 1-2417-300
 DATE 2/26/97

WELL NO. 13
 SAMPLED BY DWK/KBC

WELL INFORMATION		
DEPTH TO WATER	(TOC-ft)	5.74
	(wl.prot.-ft)	
DEPTH OF WELL	(ft)	19.8
WELL DIAMETER	(inches)	2
FEET OF WATER		14.06
CASING VOLUME*	(gal)	2.25
PURGE VOLUME	(gal)	6.75
PRODUCT THICK	(ft)	-
WELL CONDITION		OK
WEATHER		Cloudy, 50°F

PURGE DATA					
START PURGE TIME:	1541				
VOLUME PURGED (gal)	5.0	6.0	6.75		
TIME	1551	1554	1550		
FLOW RATE					
l (units)	(units)	4.75	4.45	4.48	
CONDUCTIVITY (umhos/cm)		171	170	160	
TEMPERATURE (deg C)		11.3	11.4	11.4	
WATER COLOR	Clear →				
PURGE AND SAMPLE EQUIPT:	Polyethylene Bailor				

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
MW - 13	1.600	Method 624 TCE & VC only	40 mL vial	3	HCl

ADDITIONAL INFORMATION:

TOC=Top of well casing

wl.prot.=top of well protector

*casing volume= $\pi r^2 h$ (ft)x7.48gal/ft³



GROUNDWATER SAMPLING LOG

PROJECT NAM Scougal Rubber
PROJECT NO. 1-2417-300
DATE 2/26/97

WELL NO. 16
SAMPLED BY ANK/KBC

WELL INFORMATION		
DEPTH TO WATER	(TOC-ft)	5.61
	(wl.prot.-ft)	
DEPTH OF WELL	(ft)	19.4
WELL DIAMETER	(inches)	2
FEET OF WATER		13.79
CASING VOLUME*	(gal)	2.21
PURGE VOLUME	(gal)	6.6
PRODUCT THICK	(ft)	—
WELL CONDITION		ok
WEATHER		

PURGE DATA					
START PURGE TIME:	1607				
VOLUME PURGED (gal)	5.0	6.0	6.75		
TIME	1613	1616	1618		
FLOW RATE					
pH (units) (units)	5.59	5.73	5.77		
CONDUCTIVITY (umhos/cm)	116	99	99		
TEMPERATURE (deg C)	10.8	10.8	10.9		
WATER COLOR	Red/Brown/Red?				
PURGE AND SAMPLE EQUIPT:	Polyethylene Bailer				

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
MW-16	1620	Method 624 Full Scan	40 mL vial	3	HCl

ADDITIONAL INFORMATION:
TOC=Top of well casing
wl.prot.=top of well protector
*casing volume= $\pi r^2 h(ft) \times 7.48 gal/ft^3$



GROUNDWATER SAMPLING LOG

PROJECT NAM Scougal Rubber
PROJECT NO. 1-2417-300
DATE 2/26/77

Dup of
WELL NO. 16
SAMPLED BY DMK/SBC

WELL INFORMATION	
DEPTH TO WATER	(TOC-ft)
	(wLprot.-ft)
DEPTH OF WELL	(ft) Dup of
WELL DIAMETER	(inches)
FEET OF WATER	16
CASING VOLUME*	(gal)
PURGE VOLUME	(gal)
PRODUCT THICK	(ft)
WELL CONDITION	
WEATHER	

PURGE DATA				
START PURGE TIME:				
VOLUME PURGED (gal)				
TIME	Dup of			
FLOW RATE				
H (units) (units)	16			
CONDUCTIVITY (umhos/cm)				
TEMPERATURE (deg C)				
WATER COLOR				
PURGE AND SAMPLE EQUIPT:	Polyethylene Bailer			

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
MW-20	1630	Method 624	40 mL vial	3	HCl
		Full Scan			

ADDITIONAL INFORMATION:
TOC=Top of well casing
wl.prot.=top of well protector
*casing volume= $\pi r^2 h$ (ft)x7.48gal/ft



GROUNDWATER SAMPLING LOG

PROJECT NAM Scougal Rubber
PROJECT NO. 1-2417-300
DATE 2/26/97

Field
WELL NO. Blank
SAMPLED BY DWK/SBC

WELL INFORMATION	
DEPTH TO WATER	(TOC-ft)
	(wl.prot.-ft)
DEPTH OF WELL	(ft)
WELL DIAMETER	(inches)
FEET OF WATER	
CASING VOLUME*	(gal)
PURGE VOLUME	(gal)
PRODUCT THICK	(ft)
WELL CONDITION	
WEATHER	Raining, 45 OF

PURGE DATA					
START PURGE TIME:					
VOLUME PURGED (gal)					
TIME					
FLOW RATE					
pH (units) (units)					
CONDUCTIVITY (umhos/cm)					
TEMPERATURE (deg C)					
WATER COLOR					
PURGE AND SAMPLE EQUIPT:	Polyethylene Bailer				

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
MW-30	1655	Method 624	40 mL vial	3	HCl
		Full Scan			

ADDITIONAL INFORMATION:
TOC=Top of well casing
wl.prot.=top of well protector
*casing volume= $\pi r^2 h$ (ft)x7.48gal/ft³



GROUNDWATER SAMPLING LOG

PROJECT NAM Scougal Rubber
PROJECT NO. 1-2417-300
DATE 2/26/97

WELL NO. 12
SAMPLED BY DWK/SBC

WELL INFORMATION		
DEPTH TO WATER	(TOC-ft)	4.82
	(wl.prot.-ft)	
DEPTH OF WELL	(ft)	19.5
WELL DIAMETER	(inches)	4
FEET OF WATER		14.68
CASING VOLUME*	(gal)	9.5
PURGE VOLUME	(gal)	28.6
PRODUCT THICK	(ft)	-
WELL CONDITION		ok
WEATHER		Raining

PURGE DATA					
START PURGE TIME:	1651				
VOLUME PURGED (gal)	15	20	25	29	29
TIME	1700	1702	1704	17	1706
FLOW RATE					
pH (units)	5.88	5.82	5.94		5.96
CONDUCTIVITY (umhos/cm)	805 815	808	829 829		811
TEMPERATURE (deg C)	10.4	10.9	10.7		11.0
WATER COLOR	red/brown /rust	red/brown /rust			clear
PURGE AND SAMPLE EQUIPT:	Polyethylene Bailer				

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
MW-12	1710	Method 624	40 mL vial	3	HCl
		Full Scan			

ADDITIONAL INFORMATION:

TOC=Top of well casing
wl.prot.=top of well protector
*casing volume= $\pi r^2 h$ (ft)x7.48gal/ft³





GROUNDWATER SAMPLING LOG

PROJECT NAM Scougal Rubber
PROJECT NO. 1-2417-300
DATE 2/26/97

WELL NO. 15
SAMPLED BY DWK/SBC

WELL INFORMATION		
DEPTH TO WATER	(TOC-ft)	5.87
	(wl.prot.-ft)	
DEPTH OF WELL	(ft)	19.2
WELL DIAMETER	(inches)	2
FEET OF WATER		13.33
CASING VOLUME*	(gal)	2.13
PURGE VOLUME	(gal)	6.4
PRODUCT THICK	(ft)	-
WELL CONDITION		OK
WEATHER		Raining, 45°F

PURGE DATA					
START PURGE TIME:	1721				
VOLUME PURGED (gal)	4.5	6.0	6.5		
TIME	1726	1729	1730		
FLOW RATE					
pH (units)	5.88	6.03	6.06		
CONDUCTIVITY (umhos/cm)	280	280	275		
TEMPERATURE (deg C)	9.9	9.8	10.4		
WATER COLOR	Red/brown tint	Red/brown	→		
PURGE AND SAMPLE EQUIPT:	Polyethylene Bailer				

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
MW-15	1735	Method 624	40 mL vial	3	HCl
1735 (circled)		Full Scan			

ADDITIONAL INFORMATION:

TOC=Top of well casing
wl.prot.=top of well protector
*casing volume= $\pi r^2 h$ (ft)x7.48gal/ft



GROUNDWATER SAMPLING LOG

PROJECT NAM Scougal Rubber
PROJECT NO. 1-2417-300
DATE 2/26/97

WELL NO. 4
SAMPLED BY DWK/SBC

WELL INFORMATION		
DEPTH TO WATER	(TOC-ft)	5.98
	(wl.prot.-ft)	
DEPTH OF WELL	(ft)	9.8
WELL DIAMETER	(inches)	2
FEET OF WATER		3.82
CASING VOLUME*	(gal)	9.61
PURGE VOLUME	(gal)	1.8
PRODUCT THICK	(ft)	-
WELL CONDITION	Pad & protective cover damaged	
WEATHER	of-	

PURGE DATA					
START PURGE TIME:	1745				
VOLUME PURGED (gal)	1.8	1.5	1.8		
TIME	1748	1749	1747		
FLOW RATE					
H (units) (units)	6.49	6.51	6.51		
CONDUCTIVITY (umhos/cm)	276	264	258		
TEMPERATURE (deg C)	9.4	9.7	9.8		
WATER COLOR	black	→			
PURGE AND SAMPLE EQUIPT:	Polyethylene Bailer				

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
MW-4	1750	Method 624 TCE & VC only	40 mL vial	3	HCl

ADDITIONAL INFORMATION:
TOC=Top of well casing
wl.prot.=top of well protector
*casing volume= $\pi r^2 h(f) \times 7.48 \text{ gal/ft}$



GROUNDWATER SAMPLING LOG

PROJECT NAM Scougal Rubber
PROJECT NO. 1-2417-300
DATE 2/26/97

WELL NO. 14
SAMPLED BY DWK/FBC

WELL INFORMATION		
DEPTH TO WATER	(TOC-ft)	6.40
	(wl.prot.-ft)	
DEPTH OF WELL	(ft)	19.3
WELL DIAMETER	(inches)	2
FEET OF WATER		12.9
CASING VOLUME*	(gal)	2.1
PURGE VOLUME	(gal)	6.2
PRODUCT THICK	(ft)	-
WELL CONDITION		ok
WEATHER		☀

PURGE DATA					
START PURGE TIME:	1758				
VOLUME PURGED (gal)	4.2	5.0	6.25		
TIME	1803	1805	1807		
FLOW RATE					
pH (units) (units)	3.90	3.81	3.81		
CONDUCTIVITY (umhos/cm)	536	523	501		
TEMPERATURE (deg C)	11.5	11.6	12.1		
WATER COLOR	1000				
PURGE AND SAMPLE EQUIPT:	Polyethylene Bailer				

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
MW-14	1810	Method 624 TCE & VC only	40 mL vial	3	HCl

ADDITIONAL INFORMATION:

TOC=Top of well casing
wl.prot.=top of well protector
*casing volume= $\pi r^2 h$ (ft)x7.48gal/ft

SOUND ANALYTICAL SERVICES, INC.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

TRANSMITTAL MEMORANDUM

DATE: March 4, 1997

TO: Grant Hainsworth
Retec

PROJECT: 1-2417-300 Scougal Rubber

REPORT NUMBER: 63032

Enclosed are the test results for nine samples received at Sound Analytical Services on February 27, 1997.

The report consists of this transmittal memo, analytical results, quality control reports, a copy of the chain-of-custody, a list of data qualifiers when applicable, and a copy of any requested raw data.

Should there be any questions regarding this report, please contact me at (206) 922-2310.

Sincerely,



Katie Downie
Project Manager

KD:tm

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-11
Lab ID:	63032-01
Date Received:	2/27/97
Date Prepared:	2/28/97
Date Analyzed:	2/28/97
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	105		80	120
Toluene-d8	102		80	120
4-Bromofluorobenzene	106		80	120

Analyte	Result (ug/L)	PQL	Flags
Vinyl Chloride	ND	0.2	
Trichloroethene	1.1	0.2	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-13
Lab ID:	63032-02
Date Received:	2/27/97
Date Prepared:	2/28/97
Date Analyzed:	2/28/97
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	108		80	120
Toluene-d8	102		80	120
4-Bromofluorobenzene	106		80	120

Analyte	Result (ug/L)	PQL	Flags
Vinyl Chloride	ND	0.2	
Trichloroethene	1.9	0.2	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-16
Lab ID:	63032-03
Date Received:	2/27/97
Date Prepared:	2/28/97
Date Analyzed:	2/28/97
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	106		80	120
Toluene-d8	104		80	120
4-Bromofluorobenzene	109		80	120

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	0.4	
Vinyl Chloride	ND	0.2	
Bromomethane	ND	0.4	
Chloroethane	ND	0.4	
Trichlorofluoromethane	ND	0.4	
1,1-Dichloroethene	ND	0.4	
Methylene Chloride	ND	0.4	
trans-1,2-Dichloroethene	ND	0.4	
1,1-Dichloroethane	ND	0.4	
cis-1,2-Dichloroethene	ND	0.4	
Chloroform	ND	0.4	
1,1,1-Trichloroethane	ND	0.4	
Carbon Tetrachloride	ND	0.4	
Benzene	ND	0.4	
1,2-Dichloroethane	ND	0.4	
Trichloroethene	ND	0.2	
1,2-Dichloropropane	ND	0.4	
Bromodichloromethane	ND	0.4	
2-Chloroethyl Vinyl Ether	ND	2	
cis-1,3-Dichloropropene	ND	0.4	
Toluene	ND	0.4	
trans-1,3-Dichloropropene	ND	0.4	
1,1,2-Trichloroethane	ND	0.4	
Tetrachloroethene	ND	0.4	
Dibromochloromethane	ND	0.4	
Chlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for 63032-03 continued...

Analyte	Result (ug/L)	PQL	Flags
Ethylbenzene	ND	0.4	
Bromoform	ND	0.4	
1,1,2,2-Tetrachloroethane	ND	0.4	
1,3-Dichlorobenzene	ND	0.4	
1,4-Dichlorobenzene	ND	0.4	
1,2-Dichlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-20
Lab ID:	63032-04
Date Received:	2/27/97
Date Prepared:	2/28/97
Date Analyzed:	2/28/97
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	105		80	120
Toluene-d8	105		80	120
4-Bromofluorobenzene	106		80	120

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	0.4	
Vinyl Chloride	ND	0.2	
Bromomethane	ND	0.4	
Chloroethane	ND	0.4	
Trichlorofluoromethane	ND	0.4	
1,1-Dichloroethene	ND	0.4	
Methylene Chloride	ND	0.4	
trans-1,2-Dichloroethene	ND	0.4	
1,1-Dichloroethane	ND	0.4	
cis-1,2-Dichloroethene	ND	0.4	
Chloroform	ND	0.4	
1,1,1-Trichloroethane	ND	0.4	
Carbon Tetrachloride	ND	0.4	
Benzene	ND	0.4	
1,2-Dichloroethane	ND	0.4	
Trichloroethene	ND	0.2	
1,2-Dichloropropane	ND	0.4	
Bromodichloromethane	ND	0.4	
2-Chloroethyl Vinyl Ether	ND	2	
cis-1,3-Dichloropropene	ND	0.4	
Toluene	ND	0.4	
trans-1,3-Dichloropropene	ND	0.4	
1,1,2-Trichloroethane	ND	0.4	
Tetrachloroethene	ND	0.4	
Dibromochloromethane	ND	0.4	
Chlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for 63032-04 continued...

Analyte	Result (ug/L)	PQL	Flags
Ethylbenzene	ND	0.4	
Bromoform	ND	0.4	
1,1,2,2-Tetrachloroethane	ND	0.4	
1,3-Dichlorobenzene	ND	0.4	
1,4-Dichlorobenzene	ND	0.4	
1,2-Dichlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-30
Lab ID:	63032-05
Date Received:	2/27/97
Date Prepared:	2/28/97
Date Analyzed:	2/28/97
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	105		80	120
Toluene-d8	106		80	120
4-Bromofluorobenzene	103		80	120

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	0.64	0.4	
Vinyl Chloride	ND	0.2	
Bromomethane	ND	0.4	
Chloroethane	ND	0.4	
Trichlorofluoromethane	ND	0.4	
1,1-Dichloroethene	ND	0.4	
Methylene Chloride	ND	0.4	
trans-1,2-Dichloroethene	ND	0.4	
1,1-Dichloroethane	ND	0.4	
cis-1,2-Dichloroethene	ND	0.4	
Chloroform	0.24	0.4	J
1,1,1-Trichloroethane	ND	0.4	
Carbon Tetrachloride	ND	0.4	
Benzene	ND	0.4	
1,2-Dichloroethane	ND	0.4	
Trichloroethene	ND	0.2	
1,2-Dichloropropane	ND	0.4	
Bromodichloromethane	ND	0.4	
2-Chloroethyl Vinyl Ether	ND	2	
cis-1,3-Dichloropropene	ND	0.4	
Toluene	0.41	0.4	
trans-1,3-Dichloropropene	ND	0.4	
1,1,2-Trichloroethane	ND	0.4	
Tetrachloroethene	ND	0.4	
Dibromochloromethane	ND	0.4	
Chlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for 63032-05 continued...

Analyte	Result (ug/L)	PQL	Flags
Ethylbenzene	ND	0.4	
Bromoform	ND	0.4	
1,1,2,2-Tetrachloroethane	ND	0.4	
1,3-Dichlorobenzene	ND	0.4	
1,4-Dichlorobenzene	ND	0.4	
1,2-Dichlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-12
Lab ID:	63032-06
Date Received:	2/27/97
Date Prepared:	2/28/97
Date Analyzed:	2/28/97
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	100		80	120
Toluene-d8	99		80	120
4-Bromofluorobenzene	103		80	120

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	0.4	
Vinyl Chloride	0.26	0.2	
Bromomethane	ND	0.4	
Chloroethane	ND	0.4	
Trichlorofluoromethane	ND	0.4	
1,1-Dichloroethene	ND	0.4	
Methylene Chloride	ND	0.4	
trans-1,2-Dichloroethene	ND	0.4	
1,1-Dichloroethane	ND	0.4	
cis-1,2-Dichloroethene	0.76	0.4	
Chloroform	ND	0.4	
1,1,1-Trichloroethane	ND	0.4	
Carbon Tetrachloride	ND	0.4	
Benzene	ND	0.4	
1,2-Dichloroethane	ND	0.4	
Trichloroethene	ND	0.2	
1,2-Dichloropropane	ND	0.4	
Bromodichloromethane	ND	0.4	
2-Chloroethyl Vinyl Ether	ND	2	
cis-1,3-Dichloropropene	ND	0.4	
Toluene	ND	0.4	
trans-1,3-Dichloropropene	ND	0.4	
1,1,2-Trichloroethane	ND	0.4	
Tetrachloroethene	ND	0.4	
Dibromochloromethane	ND	0.4	
Chlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for 63032-06 continued...

Analyte	Result (ug/L)	PQL	Flags
Ethylbenzene	ND	0.4	
Bromoform	ND	0.4	
1,1,2,2-Tetrachloroethane	ND	0.4	
1,3-Dichlorobenzene	ND	0.4	
1,4-Dichlorobenzene	ND	0.4	
1,2-Dichlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-15
Lab ID:	63032-07
Date Received:	2/27/97
Date Prepared:	2/28/97
Date Analyzed:	2/28/97
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	106		80	120
Toluene-d8	106		80	120
4-Bromofluorobenzene	105		80	120

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	0.4	
Vinyl Chloride	ND	0.2	
Bromomethane	ND	0.4	
Chloroethane	ND	0.4	
Trichlorofluoromethane	ND	0.4	
1,1-Dichloroethene	ND	0.4	
Methylene Chloride	ND	0.4	
trans-1,2-Dichloroethene	ND	0.4	
1,1-Dichloroethane	ND	0.4	
cis-1,2-Dichloroethene	ND	0.4	
Chloroform	ND	0.4	
1,1,1-Trichloroethane	ND	0.4	
Carbon Tetrachloride	ND	0.4	
Benzene	ND	0.4	
1,2-Dichloroethane	ND	0.4	
Trichloroethene	ND	0.2	
1,2-Dichloropropane	ND	0.4	
Bromodichloromethane	ND	0.4	
2-Chloroethyl Vinyl Ether	ND	2	
cis-1,3-Dichloropropene	ND	0.4	
Toluene	ND	0.4	
trans-1,3-Dichloropropene	ND	0.4	
1,1,2-Trichloroethane	ND	0.4	
Tetrachloroethene	ND	0.4	
Dibromochloromethane	ND	0.4	
Chlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for 63032-07 continued...

Analyte	Result (ug/L)	PQL	Flags
Ethylbenzene	ND	0.4	
Bromoform	ND	0.4	
1,1,2,2-Tetrachloroethane	ND	0.4	
1,3-Dichlorobenzene	ND	0.4	
1,4-Dichlorobenzene	ND	0.4	
1,2-Dichlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-4
Lab ID:	63032-08
Date Received:	2/27/97
Date Prepared:	2/28/97
Date Analyzed:	2/28/97
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	106		80	120
Toluene-d8	106		80	120
4-Bromofluorobenzene	109		80	120

Analyte	Result (ug/L)	PQL	Flags
Vinyl Chloride	ND	0.2	
Trichloroethene	8.5	0.2	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-14
Lab ID:	63032-09
Date Received:	2/27/97
Date Prepared:	2/28/97
Date Analyzed:	2/28/97
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	104		80	120
Toluene-d8	104		80	120
4-Bromofluorobenzene	105		80	120

Analyte	Result (ug/L)	PQL	Flags
Vinyl Chloride	12	1	D
Trichloroethene	2.1	0.2	

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - VOL87
Date Received:	-
Date Prepared:	2/28/97
Date Analyzed:	2/28/97
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	103		80	120
Toluene-d8	101		80	120
4-Bromofluorobenzene	104		80	120

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	0.4	
Vinyl Chloride	ND	0.2	
Bromomethane	ND	0.4	
Chloroethane	ND	0.4	
Trichlorofluoromethane	ND	0.4	
1,1-Dichloroethene	ND	0.4	
Methylene Chloride	ND	0.4	
trans-1,2-Dichloroethene	ND	0.4	
1,1-Dichloroethane	ND	0.4	
cis-1,2-Dichloroethene	ND	0.4	
Chloroform	ND	0.4	
1,1,1-Trichloroethane	ND	0.4	
Carbon Tetrachloride	ND	0.4	
Benzene	ND	0.4	
1,2-Dichloroethane	ND	0.4	
Trichloroethene	ND	0.2	
1,2-Dichloropropane	ND	0.4	
Bromodichloromethane	ND	0.4	
2-Chloroethyl Vinyl Ether	ND	2	
cis-1,3-Dichloropropene	ND	0.4	
Toluene	ND	0.4	
trans-1,3-Dichloropropene	ND	0.4	
1,1,2-Trichloroethane	ND	0.4	
Tetrachloroethene	ND	0.4	
Dibromochloromethane	ND	0.4	
Chlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for VOL87 continued...

Analyte	Result (ug/L)	PQL	Flags
Ethylbenzene	ND	0.4	
Bromoform	ND	0.4	
1,1,2,2-Tetrachloroethane	ND	0.4	
1,3-Dichlorobenzene	ND	0.4	
1,4-Dichlorobenzene	ND	0.4	
1,2-Dichlorobenzene	ND	0.4	

SOUND ANALYTICAL SERVICES, INC.

Blank Spike/Blank Spike Duplicate Report

Lab ID:	VOL87
Date Prepared:	2/28/97
Date Analyzed:	2/28/97
QC Batch ID:	VOL87

Volatile Organics by USEPA Method 624

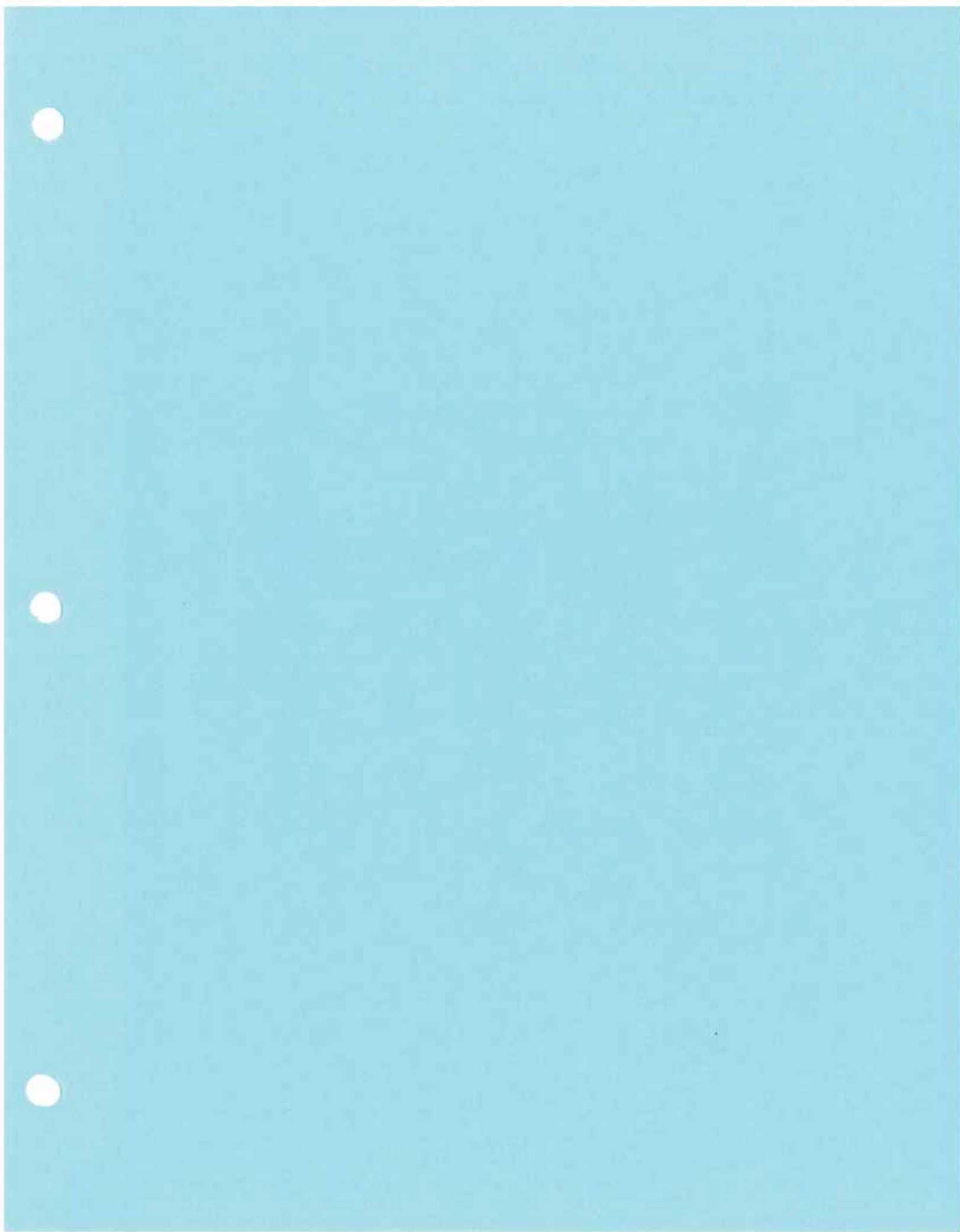
Compound Name	Blank Result (ug/L)	Spike Amount (ug/L)	BS Result (ug/L)	BS % Rec.	BSD Result (ug/L)	BSD % Rec.	RPD	Flag
Chloromethane	0	1	0.749	74.9	0.823	82.3	9.4	
Vinyl Chloride	0	1	0.787	78.7	0.809	80.9	2.8	
Bromomethane	0	1	0.894	89.4	0.905	90.5	1.2	
Chloroethane	0	1	0.999	99.9	0.895	89.5	11	
Trichlorofluoromethane	0	1	1.04	104	0.943	94.3	9.8	
1,1-Dichloroethene	0	1	1.07	107	1.06	106	0.94	
Methylene Chloride	0	1	1.14	114	1.12	112	1.8	
trans-1,2-Dichloroethene	0	1	0.956	95.6	0.958	95.8	0.21	
1,1-Dichloroethane	0	1	0.952	95.2	0.955	95.5	0.31	
cis-1,2-Dichloroethene	0	1	0.91	91	0.952	95.2	4.5	
Chloroform	0	1	0.879	87.9	0.87	87	1	
1,1,1-Trichloroethane	0	1	0.883	88.3	0.849	84.9	3.9	
Carbon Tetrachloride	0	1	0.864	86.4	0.874	87.4	1.2	
Benzene	0	1	0.911	91.1	0.934	93.4	2.5	
1,2-Dichloroethane	0	1	0.879	87.9	0.871	87.1	0.91	
Trichloroethene	0	1	0.976	97.6	0.957	95.7	2	
1,2-Dichloropropane	0	1	0.947	94.7	0.893	89.3	5.9	
Bromodichloromethane	0	1	0.901	90.1	0.886	88.6	1.7	
2-Chloroethyl Vinyl Ether	0	1	1.23	123	1.14	114	7.6	
cis-1,3-Dichloropropene	0	1	1.1	110	1.02	102	7.5	
Toluene	0	1	0.975	97.5	0.901	90.1	7.9	
trans-1,3-Dichloropropene	0	1	1.1	110	1.08	108	1.8	
1,1,2-Trichloroethane	0	1	0.889	88.9	0.829	82.9	7	
Tetrachloroethene	0	1	0.991	99.1	0.941	94.1	5.2	
Dibromochloromethane	0	1	0.882	88.2	0.812	81.2	8.3	
Chlorobenzene	0	1	0.948	94.8	0.906	90.6	4.5	
Ethylbenzene	0	1	0.931	93.1	0.877	87.7	6	
Bromoform	0	1	0.866	86.6	0.84	84	3	
1,1,2,2-Tetrachloroethane	0	1	0.934	93.4	0.889	88.9	4.9	
1,3-Dichlorobenzene	0	1	0.891	89.1	0.868	86.8	2.6	
1,4-Dichlorobenzene	0	1	0.885	88.5	0.852	85.2	3.8	
1,2-Dichlorobenzene	0	1	0.828	82.8	0.829	82.9	0.12	

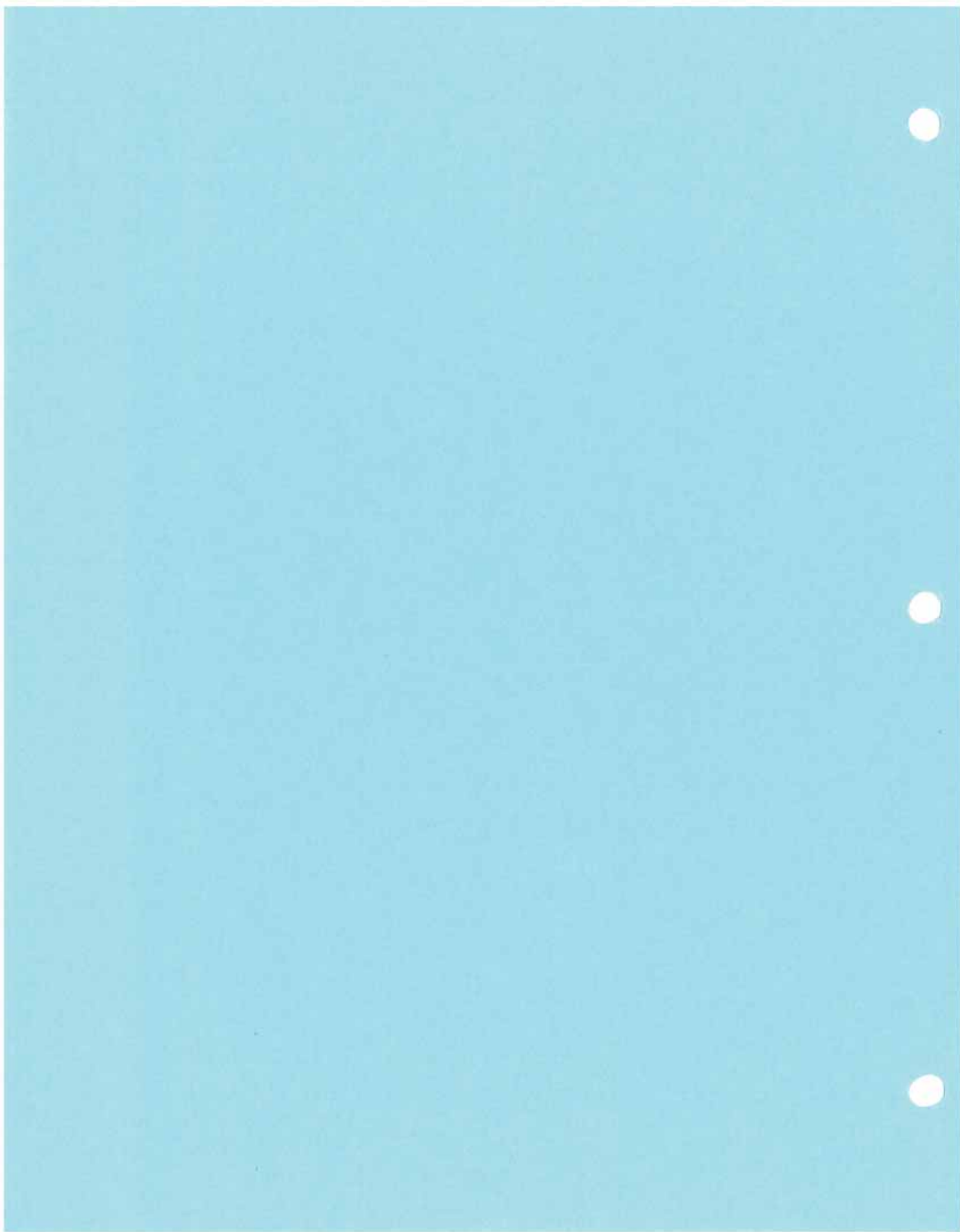
SOUND ANALYTICAL SERVICES, INC.

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 • TELEPHONE 206-922-2310 • FAX 206-922-5047

DATA QUALIFIERS AND ABBREVIATIONS

- B1: This analyte was detected in the associated method blank. The analyte concentration was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank).
- B2: This analyte was detected in the associated method blank. The analyte concentration in the sample was determined to be significantly higher than the method blank (greater than ten times the concentration reported in the blank).
- C: Additional confirmation performed.
- D: The reported result for this analyte is calculated based on a secondary dilution factor.
- E: The concentration of this analyte exceeded the instrument calibration range.
- J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.
- MCL: Maximum Contaminant Level
- MDL: Method Detection Limit
- N: See analytical narrative.
- ND: Not Detected
- PQL: Practical Quantitation Limit
- X1: Contaminant does not appear to be "typical" product. Elution pattern suggests it may be _____.
- X2: Contaminant does not appear to be "typical" product. Further testing is suggested for identification.
- X3: Identification and quantification of peaks was complicated by matrix interference; GC/MS confirmation is recommended.
- X4: RPD for duplicates outside advisory QC limits. Sample was re-analyzed with similar results.
- X4a: RPD for duplicates outside advisory QC limits due to analyte concentration near the method practical quantitation limit/detection limit.
- X5: Matrix spike was diluted out during analysis.
- X6: Recovery of matrix spike was outside advisory QC limits. Sample was re-analyzed with similar results.
- X7: Recovery of matrix spike outside advisory QC limits. Matrix interference is indicated by blank spike recovery data.
- X7a: Recovery and/or RPD values for MS/MSD outside advisory QC limits due to high contaminant levels.
- X8: Surrogate was diluted out during analysis.
- X9: Surrogate recovery outside advisory QC limits due to matrix composition.





SOUND ANALYTICAL SERVICES, INC.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

TRANSMITTAL MEMORANDUM

DATE: October 18, 1996

TO: Grant Hainsworth
Retec

PROJECT: 1-1686 Scougal Rubber

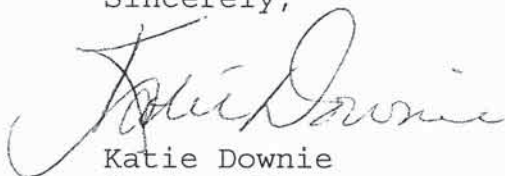
REPORT NUMBER: 60061

Enclosed are the test results for one sample received at Sound Analytical Services on October 8, 1996.

The report consists of this transmittal memo, analytical results, quality control reports, a copy of the chain-of-custody, a list of data qualifiers when applicable, and a copy of any requested raw data.

Should there be any questions regarding this report, please contact me at (206) 922-2310.

Sincerely,



Katie Downie
Project Manager

KD:tm

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-14
Lab ID:	60061-01
Date Received:	10/8/96
Date Prepared:	10/16/96
Date Analyzed:	10/17/96
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	88		70	115
Toluene-d8	89		76	103
4-Bromofluorobenzene	93		73	109

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	230	80	D
Trichloroethene	100	4	

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - T5758
Date Received:	-
Date Prepared:	10/16/96
Date Analyzed:	10/17/96
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	89		70	115
Toluene-d8	87		76	103
4-Bromofluorobenzene	86		73	109

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	ND	0.2	
Trichloroethene	ND	0.2	

SOUND ANALYTICAL SERVICES, INC.

Blank Spike Report

Lab ID: T5758
Date Prepared: 10/16/96
Date Analyzed: 10/16/96
QC Batch ID: T5758

Volatile Organics by USEPA Method 624

Parameter Name	Blank Result (ug/L)	Spike Amount (ug/L)	BS Result (ug/L)	BS % Rec.	Flag
Vinyl chloride	0	1	1.4	145	
Trichloroethene	0	1	1.3	133	

GROUNDWATER SAMPLING LOG
ARCO Los Angeles Refinery

PROJECT NAME Scougal Rubber
 PROJECT NO. _____
 DATE 10/4/96

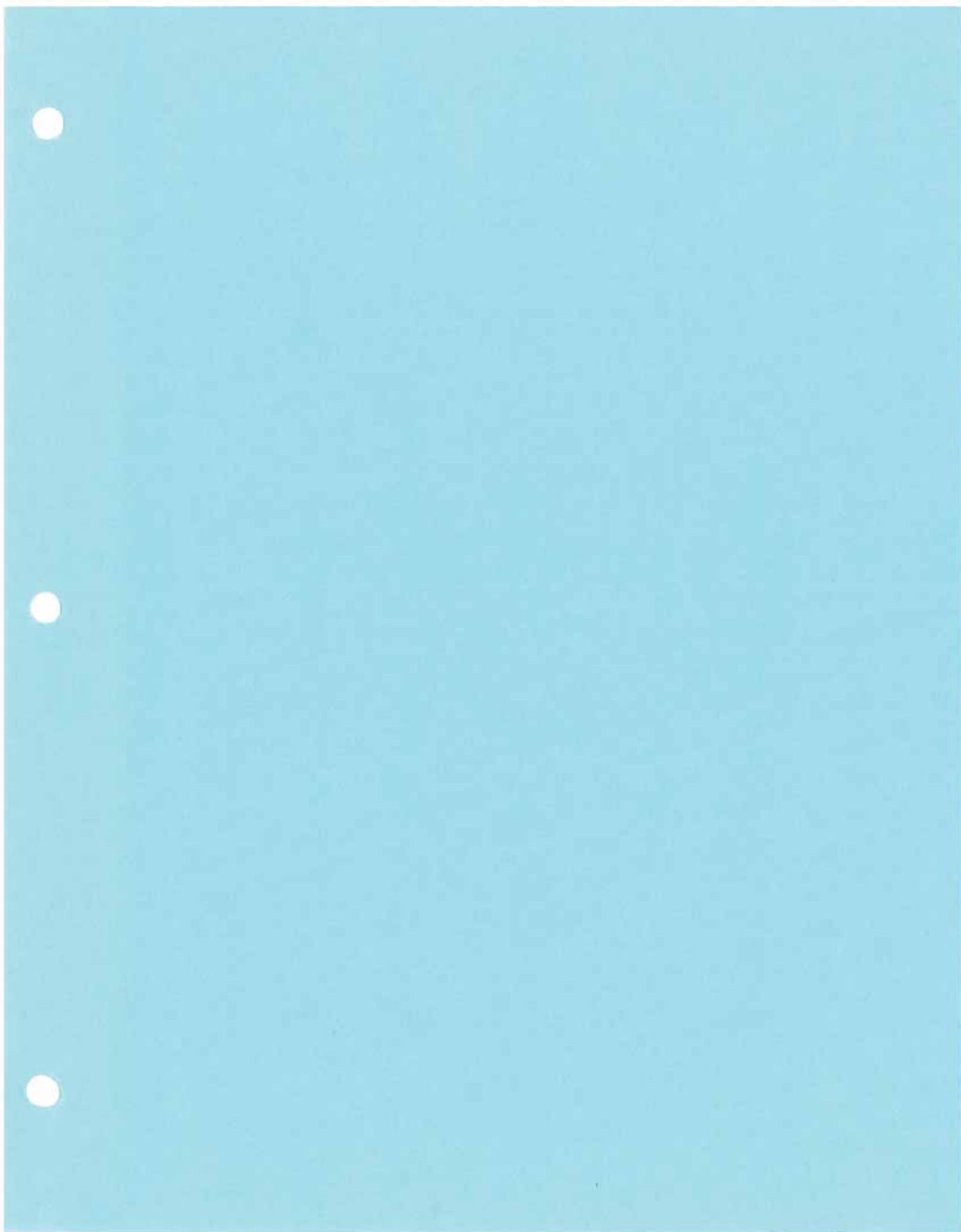
WELL NO. mw-14
 SAMPLED BY STL
 TIME (START) 09:35

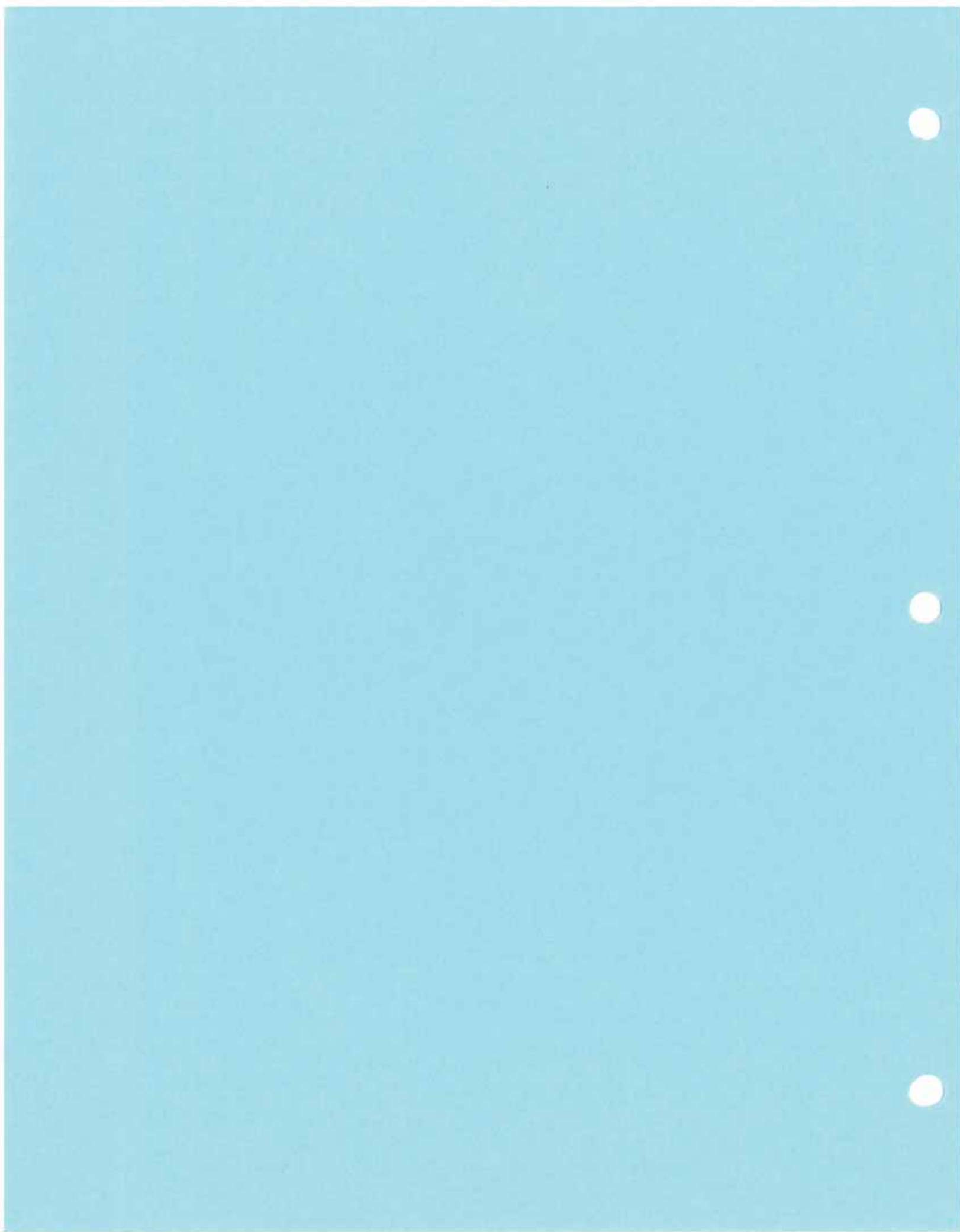
WELL INFORMATION	
DEPTH TO WATER (ft)	7.55
DEPTH OF WELL (ft)	19.3
FEET OF WATER (ft)	11.75
CASING ID (in)	2"
PURGE METHOD	Bailer
EVACUATED VOLUME (gal)	6 gal
CASING VOLUME (gal)	1.88 gal

PURGE DATA						
Start Purge Time	Volume Purged (gal)	pH	Conductivity (umhos/cm)	Temperature (°C)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
0940	4.0	5.10	699	16.0	cf B rown	
947	5.0	5.24	697	15.9	"	"
0951	6.0	5.18	695	16.0	"	"

SAMPLING INFORMATION						
Sample Number	Sample Time	Analysis	Container	# Bottles	Preservative	Comments
mw14	0953	method 624 TCE - VC	40ml vial	3	HCL	

COMMENTS 60°F cloudy







FIELD ACTIVITY LOG

PROJECT Sougal Rubber COMPLETED BY D. Kinney
 JOB NO. 1-1686 APPROVED BY _____
 DAY & DATE Wed Aug 14th, 1996 SHEET 1 OF _____

FIELD ACTIVITY SUBJECT: GW sampling / WL measurements
 DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

TIME	DESCRIPTION
1315	Arrived onsite
1330	Setup to do water levels (WL's)
1500	Finished WL's
1505	Setup to GW sample, calibrated VSI model 3500 pH / Conduct / Temp meter to pH 4 & 7 standards
1514	Started purging MW-4
1520	Sampled MW-4 (See groundwater sampling forms)
1527	Started purging MW-14
1545	Sampled MW-14
1550	Started purging MW-11
1610	Sampled MW-11
1619	Started purging MW-13
1640	Sampled MW-13; Took duplicate, labeled: MW-20
1650	Put equipment away
1705	Left site

VISITORS ON SITE: <u>None</u>	CHANGES FROM PLANS, SPECIFICATIONS, SPECIAL ORDERS AND IMPORTANT DECISIONS <u>None</u>
WEATHER CONDITIONS: <u>Clear, 80-85°f</u>	IMPORTANT TELEPHONE CALLS: <u>None</u>
PERSONNEL ON SITE: <u>Dean Kinney, Shaun Lough</u> (FIELD ENGINEER)	



WELL GAUGING LOG

PROJECT: Sougal Rubber

PROJECT NO 1-1686-

GAUGED BY: D. Kinney

WELL NUMBER	DATE	TIME	DEPTH TO WATER		REMARKS
			CASING	WELL PROT.	
MW-1	8/14/96	-	-	-	Well Abandoned
MW-2		1358	7.95	8.13	
MW-3		-	-	-	
MW-4		1400	6.79	-	
MW-5		1425	7.03	7.37	
MW-6		1439	5.59	5.98	
MW-7		1429	4.23	4.54	
MW-8		1435	7.64	-	
PW-9		1416	9.02	10.01	
OW-10		1414	6.29	7.01	
MW-11		1450	6.00	6.32	
MW-12		1442	5.72	6.08	
MW-13		1446	6.57	6.95	
MW-14		1411	7.30	7.67	
MW-15		1420	6.78	7.47	
MW-16	✓	1452	6.57	6.73	

GROUNDWATER SAMPLING LOG

PROJECT NAME Scougal Rubber
 PROJECT NO. 1-1686-
 DATE 8/14/96

WELL NO. MW-4
 SAMPLED BY DWIC/SL

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>6.79</u>
	(wl.prot. -ft)
DEPTH OF WELL	(ft) <u>9.8</u>
WELL DIAMETER	(inches) <u>2</u>
FEET OF WATER	<u>3.01</u>
CASING VOLUME*	(gal) <u>0.48</u>
PURGE VOLUME	(gal) <u>1.4</u>
PRODUCT THICK.	(ft) <u>—</u>
WELL CONDITION	<u>Pad damaged</u>
WEATHER	<u>clear, 80 °F</u>

	PURGE	DATA		
START PURGE TIME:	<u>1514</u>			
VOL. PURGED (gal)	<u>0.5</u>	<u>1.0</u>	<u>1.5</u>	
TIME	<u>1515</u>	<u>1517</u>	<u>1519</u>	
FLOW RATE				
pH (units)	<u>5.92</u>	<u>5.85</u>	<u>5.81</u>	
CONDUCTIVITY (umhos/cm)	<u>433</u>	<u>418</u>	<u>416</u>	
TEMP. (C)	<u>18.9</u>	<u>18.7</u>	<u>18.5</u>	
WATER COLOR	<u>BRN</u>	<u>Lt BRN</u>	<u>→</u>	
PURGE AND SAMPLE EQUIP:	<u>Polyethylene Bailer</u>			

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-4</u>	<u>1520</u>	<u>Method 624</u>	<u>40ml Vial</u>	<u>2</u>	<u>HCl</u>
		<u>(Vc, 2TCE)</u>			

ADDITIONAL INFORMATION:

TOC = Top of well casing

wl.prot. = top of well protector

*casing volume = r^2h (in ft) x 7.48 gal/ft 0.16 0.67

GROUNDWATER SAMPLING LOG

PROJECT NAME Stougal Rubber
 PROJECT NO. 1-1686-
 DATE 8/14/96

WELL NO. MW-11
 SAMPLED BY DWK

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>2.00</u>
	(wl.prot.-ft) <u>6.32</u>
DEPTH OF WELL	(ft) <u>19.5</u>
WELL DIAMETER	(inches) <u>4</u>
FEET OF WATER	<u>13.5</u>
CASING VOLUME*	(gal) <u>9.05</u>
PURGE VOLUME	(gal) <u>27</u>
PRODUCT THICK.	(ft) <u>-</u>
WELL CONDITION	<u>OK</u>
WEATHER	<u>Clear, 80 °F</u>

PURGE DATA				
START PURGE TIME:	<u>15:50</u>			
VOL. PURGED (gal)	<u>15:57</u>	<u>16:01</u>	<u>16:04</u>	<u>16:05</u>
TIME	<u>15.0</u>	<u>20.0</u>	<u>25.0</u>	<u>27.0</u>
FLOW RATE				
pH (units)	<u>3.94</u>	<u>3.99</u>	<u>3.91</u>	<u>3.89</u>
CONDUCTIVITY (umhos/cm)	<u>1076</u>	<u>992</u>	<u>1002</u>	<u>1008</u>
TEMP. (C)	<u>17.9</u>	<u>17.6</u>	<u>17.0</u>	<u>17.0</u>
WATER COLOR	<u>Clear</u>			
PURGE AND SAMPLE EQUIPT:	<u>Polyethylene Bailer</u>			

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-11</u>	<u>16:10</u>	<u>method 624</u> <u>(P.L. & TCE)</u>	<u>40ml vial</u>	<u>2</u>	<u>HCl</u>

ADDITIONAL INFORMATION:

TOC = Top of well casing

wl.prot. = top of well protector

*casing volume = r^2h (in ft) x 7.48 gal/ft

GROUNDWATER SAMPLING LOG

PROJECT NAME Soungal Rubber
 PROJECT NO. 1-1686-
 DATE 8/14/96

WELL NO. MW-13
 SAMPLED BY DWK

WELL	INFORMATION	
DEPTH TO WATER	(TOC-ft)	6.57
	(wl.prot.-ft)	6.95
DEPTH OF WELL	(ft)	19.8
WELL DIAMETER	(inches)	2
FEET OF WATER		13.23
CASING VOLUME*	(gal)	2.12
PURGE VOLUME	(gal)	6.4
PRODUCT THICK.	(ft)	—
WELL CONDITION		ok
WEATHER		Clear, 90°F

PURGE DATA					
START PURGE TIME:	16:19				
VOL. PURGED (gal)	5.0	6.0	6.5	7.0	
TIME	16:29	16:31	16:32	16:35	
FLOW RATE					
pH (units)	3.71	3.65	3.65	3.69	
CONDUCTIVITY (umhos/cm)	1815	2370	2750	2300	
TEMP. (C)	17.0	16.8	16.8	16.7	
WATER COLOR	Clear				
PURGE AND SAMPLE EQUIPT:	Polyethylene Bailer				

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
MW-13	16:40	Methal GZP (TCE & VC)	40ml vial	2	HCl

ADDITIONAL INFORMATION:

TOC = Top of well casing

wl.prot. = top of well protector

*casing volume = $r^2h(\text{in ft}) \times 7.48 \text{ gal/ft}$

GROUNDWATER SAMPLING LOG

PROJECT NAME Srongal Rubber
 PROJECT NO. 1-1686
 DATE 8/14/96

Dup of

WELL NO. MW-13
 SAMPLED BY DW/K

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) (wl.prot. -ft)
DEPTH OF WELL	(ft)
WELL DIAMETER	(inches) <i>Dup</i>
FEET OF WATER	
CASING VOLUME*	(gal) <i>MW-13</i>
PURGE VOLUME	(gal)
PRODUCT THICK.	(ft)
WELL CONDITION	
WEATHER	

PURGE		DATA			
START PURGE TIME:					
VOL. PURGED (gal)					
TIME					
FLOW RATE		<i>Dup of</i>			
pH (units)					
CONDUCTIVITY (umhos/cm)		<i>MW-13</i>			
TEMP. (C)					
WATER COLOR					
PURGE AND SAMPLE EQUIPT:					

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<i>MW-20</i>	<i>16:50</i>	<i>Method 624 (TCE + VC)</i>	<i>40ml vial</i>	<i>2</i>	<i>HCl</i>

ADDITIONAL INFORMATION:

- TOC = Top of well casing
- wl.prot. = top of well protector
- *casing volume = $r^2h(\text{in ft}) \times 7.48 \text{ gal/ft}$

GROUNDWATER SAMPLING LOG

PROJECT NAME Soungal Rubber
 PROJECT NO. 1-1686
 DATE 8/14/96

WELL NO. MW-14
 SAMPLED BY DWIK

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>7.30</u>
	(wl.prot.-ft) <u>7.67</u>
DEPTH OF WELL	(ft) <u>19.3</u>
WELL DIAMETER	(inches) <u>2</u>
FEET OF WATER	<u>12.00</u>
CASING VOLUME*	(gal) <u>1,92</u>
PURGE VOLUME	(gal) <u>5.8</u>
PRODUCT THICK.	(ft) <u>-</u>
WELL CONDITION	<u>OK</u>
WEATHER	<u>Clear, 80 °F</u>

	PURGE	DATA		
START PURGE TIME:	<u>1527</u>			
VOL PURGED (gal)	<u>4.0</u>	<u>5.0</u>	<u>6.0</u>	
TIME	<u>1535</u>	<u>1537</u>	<u>1539</u>	
FLOW RATE				
pH (units)	<u>3.22</u>	<u>3.20</u>	<u>3.21</u>	
CONDUCTIVITY (umhos/cm)	<u>1,025</u>	<u>1,025</u>	<u>985</u>	
TEMP. (C)	<u>17.2</u>	<u>16.7</u>	<u>16.7</u>	
WATER COLOR	<u>BRN</u>			
PURGE AND SAMPLE EQUIP:	<u>Polyethylene Bailor</u>			

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-14</u>	<u>1545</u>	<u>Method 624 (TCE & VC)</u>	<u>40ml - Vial</u>	<u>2</u>	<u>HCl</u>

ADDITIONAL INFORMATION:

TOC = Top of well casing

wl.prot. = top of well protector

*casing volume = $r^2h(\text{in ft}) \times 7.48 \text{ gal/ft}$

SOUND ANALYTICAL SERVICES, INC.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

TRANSMITTAL MEMORANDUM

DATE: August 29, 1996

TO: Grant Hainsworth
Retec

PROJECT: 1-1686- Scougal Rubber

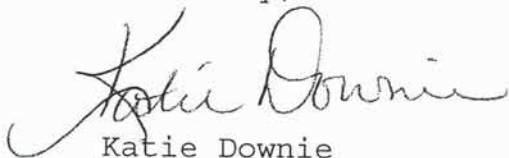
REPORT NUMBER: 58761

Enclosed are the test results for five samples received at Sound Analytical Services on August 15, 1996.

The report consists of this transmittal memo, analytical results, quality control reports, a copy of the chain-of-custody, a list of data qualifiers when applicable, and a copy of any requested raw data.

Should there be any questions regarding this report, please contact me at (206) 922-2310.

Sincerely,



Katie Downie
Project Manager

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-4
Lab ID:	58761-01
Date Received:	8/15/96
Date Prepared:	8/23/96
Date Analyzed:	8/23/96
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	92		88	118
Toluene-d8	85		83	111
4-Bromofluorobenzene	90		86	112

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	ND	0.2	
Trichloroethene	14	0.2	E

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-4 - dilution
Lab ID:	58761L01
Date Received:	-
Date Prepared:	8/28/96
Date Analyzed:	8/28/96
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	91		88	118
Toluene-d8	93		83	111
4-Bromofluorobenzene	94		86	112

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	ND	2	
Trichloroethene	13	2	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-11
Lab ID:	58761-02
Date Received:	8/15/96
Date Prepared:	8/23/96
Date Analyzed:	8/23/96
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	93		88	118
Toluene-d8	84		83	111
4-Bromofluorobenzene	90		86	112

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	ND	0.2	
Trichloroethene	2.2	0.2	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-13
Lab ID:	58761-03
Date Received:	8/15/96
Date Prepared:	8/23/96
Date Analyzed:	8/23/96
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	87	N	88	118
Toluene-d8	91		83	111
4-Bromofluorobenzene	90		86	112

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	ND	0.2	
Trichloroethene	5.6	0.2	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-20
Lab ID:	58761-04
Date Received:	8/15/96
Date Prepared:	8/23/96
Date Analyzed:	8/23/96
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	89		88	118
Toluene-d8	92		83	111
4-Bromofluorobenzene	91		86	112

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	ND	0.2	
Trichloroethene	5.8	0.2	E

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-20 - dilution
Lab ID:	58761L04
Date Received:	-
Date Prepared:	8/28/96
Date Analyzed:	8/28/96
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	94		88	118
Toluene-d8	96		83	111
4-Bromofluorobenzene	88		86	112

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	ND	2	
Trichloroethene	6.6	2	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-14
Lab ID:	58761-05
Date Received:	8/15/96
Date Prepared:	8/23/96
Date Analyzed:	8/24/96
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	92		88	118
Toluene-d8	76	N	83	111
4-Bromofluorobenzene	88		86	112

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	160	0.2	E
Trichloroethene	130	0.2	E

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-14 - dilution
Lab ID:	58761L05
Date Received:	-
Date Prepared:	8/28/96
Date Analyzed:	8/28/96
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	95		88	118
Toluene-d8	94		83	111
4-Bromofluorobenzene	86		86	112

Analyte	Result	PQL	Flags
	(ug/L)		
Vinyl chloride	300	20	
Trichloroethene	130	20	

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - T5118
Date Received:	-
Date Prepared:	8/23/96
Date Analyzed:	8/23/96
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	95		88	118
Toluene-d8	93		83	111
4-Bromofluorobenzene	92		86	112

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	ND	0.2	
Trichloroethene	ND	0.2	

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - T5177
Date Received:	-
Date Prepared:	8/28/96
Date Analyzed:	8/28/96
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	93		88	118
Toluene-d8	90		83	111
4-Bromofluorobenzene	89		86	112

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	ND	0.2	
Trichloroethene	ND	0.2	

SOUND ANALYTICAL SERVICES, INC.

Blank Spike/Blank Spike Duplicate Report

Lab ID: T5118
Date Prepared: 8/23/96
Date Analyzed: 8/23/96
QC Batch ID: T5118

Volatile Organics by USEPA Method 624

Compound Name	Blank Result (ug/L)	Spike Amount (ug/L)	BS Result (ug/L)	BS % Rec.	BSD Result (ug/L)	BSD % Rec.	RPD	Flag
Vinyl Chloride	0	1	0.668	66.8	0.704	70.4	5.2	
Trichloroethene	0	1	0.806	80.6	0.839	83.9	4	

SOUND ANALYTICAL SERVICES, INC.

Blank Spike/Blank Spike Duplicate Report

Lab ID: T5177
Date Prepared: 8/28/96
Date Analyzed: 8/28/96
QC Batch ID: T5177

Volatile Organics by USEPA Method 624

Compound Name	Blank Result (ug/L)	Spike Amount (ug/L)	BS Result (ug/L)	BS % Rec.	BSD Result (ug/L)	BSD % Rec.	RPD	Flag
Vinyl chloride	0	1	0.98	98	0.957	95.7	2.4	
Trichloroethene	0	1	1.03	103	0.968	96.8	6.2	

10143

CHAIN OF CUSTODY RECORD

PROJ. NO. 1-1686-
 PROJECT NAME Scougal Rubber

SAMPLERS: D. Kinney

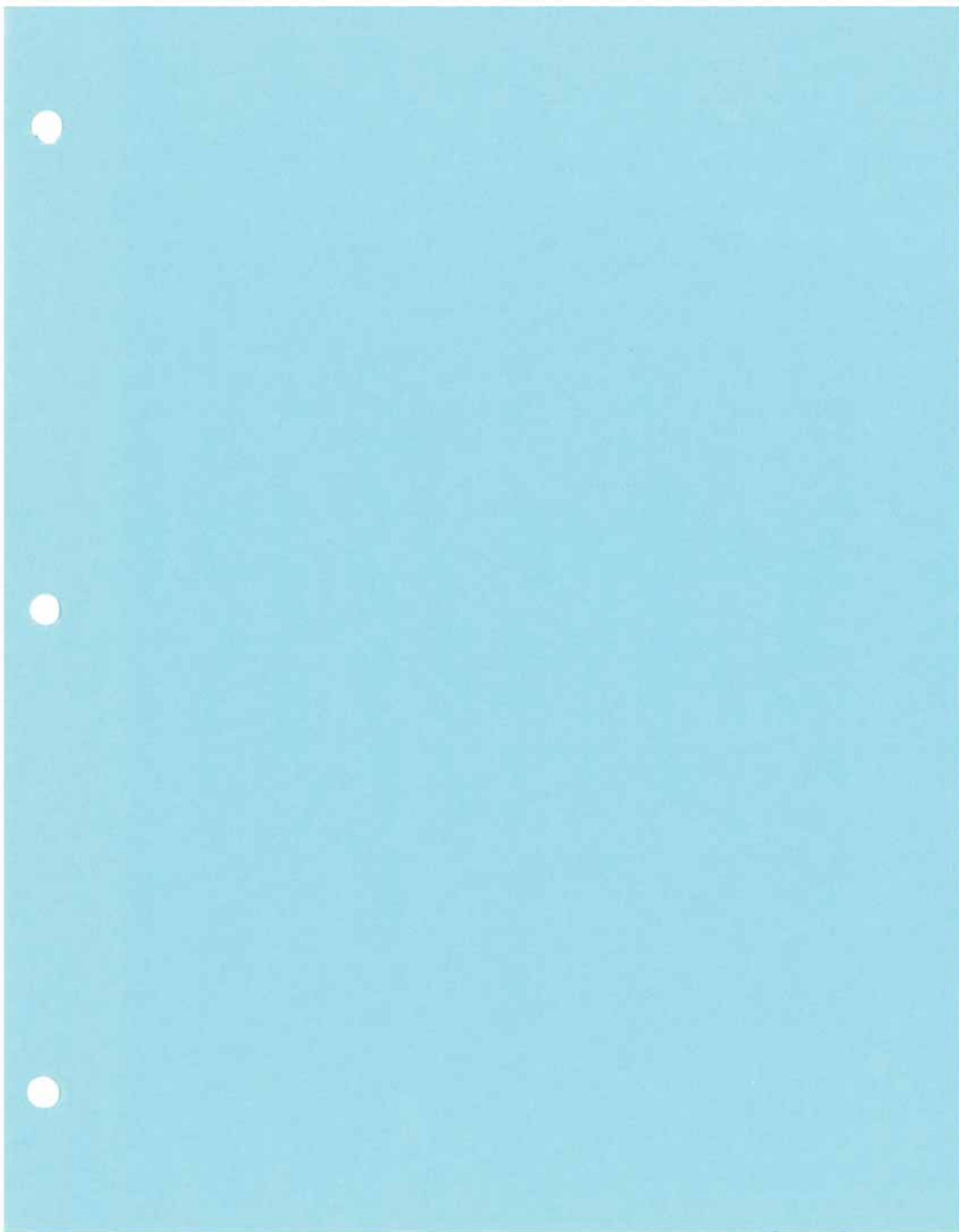
RECEIVING LABORATORY: Sound Analytical

LAB I.D. NO.	DATE	TIME	SAMPLE NO.	NO. OF CONTAINERS	REMARKS	SEND RESULTS TO:
58761-1	8/14/96	1520	MW-4	2	Method * 624 (TCE)	Grant Hainsworth
2	1610	MW-11	2	X	Low level detection limits for TCE	
3	1640	MW-13	2	X	a Vinyl Chloride	
4	1650	MW-20	2	X	0.2 ppb	
5	1545	MW-14	2	X		

SEND RESULTS TO: Grant Hainsworth

Relinquished by: (Signature) *D. Kinney* Date / Time 8/15/96 09:00
 Received by: (Signature) *Cowier*
 Relinquished by: (Signature) *D. Kinney* Date / Time 8/15/96 2:15
 Received for Laboratory by: (Signature) *D. Kinney*

RELI TEC
 REMEDIATION TECHNOLOGIES INC
 1011 S.W. Klickitat Way
 Suite 207
 Seattle, WA 98134
 (206) 624-9349



the 1990s, the number of people in the world who are under 15 years of age is expected to increase from 1.1 billion to 1.5 billion.

There are a number of reasons why the number of people in the world is increasing. One of the main reasons is that the number of people who are surviving to old age is increasing. This is due to a number of factors, including improved medical care and a decline in the death rate.

Another reason why the number of people in the world is increasing is that the number of people who are having children is increasing. This is due to a number of factors, including a decline in the age at which people are having children and a decline in the number of children who are dying.

There are a number of other factors that are contributing to the increase in the number of people in the world, including a decline in the death rate and a decline in the number of people who are having children.

The increase in the number of people in the world is a major challenge for the world's resources. There are a number of ways in which the world's resources can be managed more effectively, including by reducing the number of people who are having children and by improving the quality of life for all people.

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FIELD ACTIVITY LOG

PROJECT Scougal Rubber

COMPLETED BY D. Kinney

JOB NO. 1-2417-300

APPROVED BY _____

DAY & DATE Thurs May 9th, 1996

SHEET 1 OF _____

FIELD ACTIVITY SUBJECT: Water Level Measurements & Groundwater Sampling
DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

TIME	DESCRIPTION
0902	Arrived onsite, talked to Rob & setup to do water levels (WL's)
0914	Started WL's
1025	Completed WL's
1031	Started setting up to sample
1035	Calibrated YSI model 3500 pH/conduct. meter w/497 stds.
1123	Started purging MW-13
1140	Sampled MW-13
1159	Started purging MW-12
1225	Sampled MW-12
1234	Started purging MW-16
1245	Sampled MW-16 took duplicate sample, labeled: MW-20 (1255)
1305	Took field blank; labeled: MW-21 (at well MW-16)
1308	Started purging MW-11
1330	Sampled MW-11
1335	Moved back to Scougal Property
1344	Started purging MW-14
1400	Sampled MW-14
1409	Started purging MW-4
1420	Sampled MW-4
1431	Started purging MW-15

VISITORS ON SITE:
None

CHANGES FROM PLANS, SPECIFICATIONS, SPECIAL ORDERS AND IMPORTANT DECISIONS
None

WEATHER CONDITIONS:
P. Cloudy, 60 - 65 °F

IMPORTANT TELEPHONE CALLS:
None

PERSONNEL ON SITE: Dean Kinney

(FIELD ENGINEER)

FIELD ACTIVITY LOG

PROJECT Sougal Rubber
JOB NO. 1-2417-300
DAY & DATE Thurs. May 9th, 1996

COMPLETED BY D. Kinney
APPROVED BY _____
SHEET 2 OF 2

FIELD ACTIVITY SUBJECT:
DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

TIME	DESCRIPTION
1445	Sampled MW-15
1450	Dumped purge water @ carried equipment back to truck
1505	Left site

VISITORS ON SITE: <p style="text-align: center;">None</p>	CHANGES FROM PLANS, SPECIFICATIONS, SPECIAL ORDERS AND IMPORTANT DECISIONS <p style="text-align: center;">None</p>
WEATHER CONDITIONS: <p style="text-align: center;">P. Cloudy, 60-65°F</p>	IMPORTANT TELEPHONE CALLS: <p style="text-align: center;">None</p>

PERSONNEL ON SITE:

(FIELD ENGINEER)

GROUNDWATER SAMPLING LOG

PROJECT NAME Scoring Rubber
 PROJECT NO. 1-2417-300
 DATE 5/9/96

WELL NO. MW-4
 SAMPLED BY DWK

WELL INFORMATION	
DEPTH TO WATER	(TOC-ft) <u>6.11</u>
	(wl.prot.-ft) <u>6.42</u>
DEPTH OF WELL	(ft) <u>9.8</u>
WELL DIAMETER	(inches) <u>2</u>
FEET OF WATER	<u>3.69</u>
CASING VOLUME*	(gal) <u>0.59</u>
PURGE VOLUME	(gal) <u>1.8</u>
PRODUCT THICK.	(ft) <u>-</u>
WELL CONDITION	<u>Part of well monument damaged</u>
WEATHER	<u>P. Cloudy, 65 °F</u>

PURGE DATA	
START PURGE TIME:	<u>1409</u>
VOL PURGED (gal)	<u>1.0 1.5 2.0</u>
TIME	<u>1410 1412 1413</u>
FLOW RATE	
pH (units)	<u>6.56 6.33 6.26</u>
CONDUCTIVITY (umhos/cm)	<u>430 400 403</u>
TEMP. (C)	<u>13.5 13.5 13.5</u>
WATER COLOR	<u>1+ BRN</u>
PURGE AND SAMPLE EQUIPT: <u>Polyethylene Bailor</u>	

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-4</u>	<u>1420</u>	<u>674</u>	<u>40ml vial</u>	<u>3</u>	<u>HCl</u>

ADDITIONAL INFORMATION:

TOC = Top of well casing

wl.prot. = top of well protector

*casing volume = r²h(in ft) x 7.48 gal/ft

GROUNDWATER SAMPLING LOG

PROJECT NAME Southern Rubber
 PROJECT NO. 1-2417-300
 DATE 5/9/96

WELL NO. MW-14
 SAMPLED BY DWR

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>6.60</u>
	(wl.prot.-ft) <u>6.97</u>
DEPTH OF WELL	(ft) <u>19.3</u>
WELL DIAMETER	(inches) <u>2</u>
FEET OF WATER	<u>12.7</u>
CASING VOLUME*	(gal) <u>2.03</u>
PURGE VOLUME	(gal) <u>6.1</u>
PRODUCT THICK.	(ft) <u>-</u>
WELL CONDITION	<u>ok</u>
WEATHER	<u>P. Cloudy, 65° F</u>

PURGE		DATA			
START PURGE TIME: <u>1344</u>					
VOL PURGED (gal)	<u>4.0</u>	<u>5.0</u>	<u>6.1</u>		
TIME	<u>1349</u>	<u>1352</u>	<u>1355</u>		
FLOW RATE					
pH (units)	<u>6.30</u>	<u>5.88</u>	<u>5.90</u>		
CONDUCTIVITY (umhos/cm)	<u>379</u>	<u>384</u>	<u>388</u>		
TEMP. (C)	<u>14.6</u>	<u>14.6</u>	<u>14.7</u>		
WATER COLOR	<u>BRN</u>				
PURGE AND SAMPLE EQUIPT: <u>Polyethylene Bailor</u>					

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESER-VATIVE
<u>MW-14</u>	<u>1400</u>	<u>674</u>	<u>40ml vial</u>	<u>3</u>	<u>HCl</u>

ADDITIONAL INFORMATION:

TOC = Top of well casing

wl.prot. = top of well protector

*casing volume = r^2h (in ft) x 7.48 gal/ft

GROUNDWATER SAMPLING LOG

PROJECT NAME Sougal Rubber
 PROJECT NO. 1-2417-300
 DATE 5/9/96

WELL NO. MW-11
 SAMPLED BY DINK

WELL	INFORMATION	
DEPTH TO WATER	(TOC-ft)	5.28
	(wl.prot.-ft)	5.67
DEPTH OF WELL	(ft)	19.8
WELL DIAMETER	(inches)	4
FEET OF WATER		14.52
CASING VOLUME*	(gal)	9.68
PURGE VOLUME	(gal)	29
PRODUCT THICK.	(ft)	-
WELL CONDITION		OK
WEATHER	Partly cloudy, 65°F	

PURGE		DATA			
START PURGE TIME:	1308				
VOL PURGED (gal)	10	20	25	30	
TIME	1312	1316	1322	1326	
FLOW RATE					
pH (units)	6.32	6.03	5.93	5.96	
CONDUCTIVITY (umhos/cm)	496	528	535	491	
TEMP. (C)	13.3	13.4	13.0	12.9	
WATER COLOR	Clear				
PURGE AND SAMPLE EQUIPT:	Polyethylene Bailor				

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESER-VATIVE
MW-11	1330	624	40ml/val	3	HCl

ADDITIONAL INFORMATION:

TOC = Top of well casing

wl.prot. = top of well protector

*casing volume = $r^2h(\text{in ft}) \times 7.48 \text{ gal/ft}$

GROUNDWATER SAMPLING LOG

PROJECT NAME Synopal Rubber
 PROJECT NO. 1-2417-300
 DATE 5/9/96

WELL NO. MW-12
 SAMPLED BY DWK

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>5.06</u>
	(wl.prot. -ft) <u>15.40</u>
DEPTH OF WELL	(ft) <u>19.5</u>
WELL DIAMETER	(inches) <u>4</u>
FEET OF WATER	<u>14.44</u>
CASING VOLUME*	(gal) <u>9.63</u>
PURGE VOLUME	(gal) <u>28.9</u>
PRODUCT THICK.	(ft) <u>-</u>
WELL CONDITION	<u>ok</u>
WEATHER	<u>P. Cloudy, 60°F</u>

PURGE		DATA			
START PURGE TIME: <u>1150</u>					
VOL PURGED (gal)	<u>10</u>	<u>20</u>	<u>25</u>	<u>30</u>	
TIME	<u>1204</u>	<u>1208</u>	<u>1216</u>	<u>1220</u>	
FLOW RATE					
pH (units)	<u>5.87</u>	<u>5.97</u>	<u>6.03</u>	<u>6.06</u>	
CONDUCTIVITY (umhos/cm)	<u>811</u>	<u>657</u>	<u>641</u>	<u>611</u>	
TEMP. (C)	<u>13.2</u>	<u>13.8</u>	<u>13.9</u>	<u>14.0</u>	
WATER COLOR	<u>Reddish BRN</u>				
PURGE AND SAMPLE EQUIPT: <u>Polyethylene Bailer</u>					

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-12</u>	<u>1225</u>	<u>624</u>	<u>40ml vial</u>	<u>3</u>	<u>HCl</u>

ADDITIONAL INFORMATION:

TOC = Top of well casing

wl.prot. = top of well protector

*casing volume = $r^2h(\text{in ft}) \times 7.48 \text{ gal/ft}$

GROUNDWATER SAMPLING LOG

PROJECT NAME Scougal Rubber
 PROJECT NO. 1-247-300
 DATE 5/9/96

WELL NO. MW-13
 SAMPLED BY DWIC

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>5.88</u>
	(wl.prot.-ft) <u>6.26</u>
DEPTH OF WELL	(ft) <u>19.8</u>
WELL DIAMETER	(inches) <u>2</u>
FEET OF WATER	<u>13.92</u>
CASING VOLUME*	(gal) <u>2.23</u>
PURGE VOLUME	(gal) <u>6.7</u>
PRODUCT THICK.	(ft) <u>-</u>
WELL CONDITION	<u>ok</u>
WEATHER	<u>P. Cloudy, 60 °F</u>

PURGE		DATA	
START PURGE TIME:	<u>1123</u>		
VOL. PURGED (gal)	<u>4.0</u>	<u>6.0</u>	<u>7.0</u>
TIME	<u>1128</u>	<u>1123</u>	<u>1135</u>
FLOW RATE			
pH (units)	<u>4.16</u>	<u>4.08</u>	<u>4.09</u>
CONDUCTIVITY (umhos/cm)	<u>1335</u>	<u>1296</u>	<u>1295</u>
TEMP. (C)	<u>13.6</u>	<u>13.3</u>	<u>13.1</u>
WATER COLOR	<u>LT BRN</u>		
PURGE AND SAMPLE EQUIPT: <u>Polyethylene Barber</u>			

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-13</u>	<u>1140</u>	<u>629</u>	<u>40ml vial</u>	<u>3</u>	<u>HCl</u>

ADDITIONAL INFORMATION:

TOC = Top of well casing
 wl.prot. = top of well protector
 *casing volume = $r^2h(\text{in ft}) \times 7.48 \text{ gal/ft}$

GROUNDWATER SAMPLING LOG

PROJECT NAME Sougal Rubber
 PROJECT NO. 1-2417-3022
 DATE 5/1/76

WELL NO. MW-15
 SAMPLED BY DWK

WELL	INFORMATION	
DEPTH TO WATER	(TOC-ft)	6.09
	(wl.prot.-ft)	6.79
DEPTH OF WELL	(ft)	19.2
WELL DIAMETER	(inches)	2
FEET OF WATER		13.11
CASING VOLUME*	(gal)	2.10
PURGE VOLUME	(gal)	6.3
PRODUCT THICK.	(ft)	-
WELL CONDITION		ok
WEATHER		P, Cloudy, 65°F

	PURGE			DATA	
START PURGE TIME:	14:31				
VOL PURGED (gal)	5.0	6.0	6.5		
TIME	14:36	14:38	14:39		
FLOW RATE					
pH (units)	13.4	13.3	13.3		
CONDUCTIVITY (umhos/cm)	432	422	423		
TEMP. (C)	6.71	6.47	6.40		
WATER COLOR	Reddish/BRN				
PURGE AND SAMPLE EQUIPT:	Polyethylene Bailar				

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESER-VATIVE
MW-15	14:45	624	40ml vial	3	HCl

ADDITIONAL INFORMATION:

TOC = Top of well casing

wl.prot. = top of well protector

*casing volume = $r^2h(\text{in ft}) \times 7.48 \text{ gal/ft}$

GROUNDWATER SAMPLING LOG

PROJECT NAMES Stouard Rubber
 PROJECT NO. 1-9417-300
 DATE 5/9/96

WELL NO. MW-16
 SAMPLED BY Dnk

WELL INFORMATION	
DEPTH TO WATER	(TOC-ft) <u>6.86</u>
	(wl.prot.-ft) <u>6.09</u>
DEPTH OF WELL	(ft) <u>19.4</u>
WELL DIAMETER	(inches) <u>2</u>
FEET OF WATER	<u>13.54</u>
CASING VOLUME*	(gal) <u>2.17</u>
PURGE VOLUME	(gal) <u>6.5</u>
PRODUCT THICK.	(ft) <u>0</u>
WELL CONDITION	<u>Well cover bolts not as good</u>
WEATHER	<u>P. Cloudy, 60°F</u>

PURGE DATA	
START PURGE TIME:	<u>1234</u>
VOL PURGED (gal)	<u>5.0</u> <u>6.0</u> <u>6.5</u>
TIME	<u>1239</u> <u>1241</u> <u>1242</u>
FLOW RATE	
pH (units)	<u>6.41</u> <u>6.08</u> <u>6.00</u>
CONDUCTIVITY (umhos/cm)	<u>112</u> <u>100</u> <u>99</u>
TEMP. (C)	<u>13.6</u> <u>13.6</u> <u>13.5</u>
WATER COLOR	<u>Reddish Bkn</u>
PURGE AND SAMPLE EQUIP:	<u>Polyethylene Bailor</u>

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-16</u>	<u>1245</u>	<u>624</u>	<u>40ml vial</u>	<u>3</u>	<u>HCl</u>

ADDITIONAL INFORMATION:

TOC = Top of well casing

wl.prot. = top of well protector

*casing volume = r²h (in ft) x 7.48 gal/ft

GROUNDWATER SAMPLING LOG

PROJECT NAME Scoural Rubber
 PROJECT NO. 1-2477-300
 DATE 5/9/96

WELL NO. Dup of MW-16
 SAMPLED BY Dink

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft)
	(wl.prot. -ft)
DEPTH OF WELL	(ft)
WELL DIAMETER	(inches) <u>2</u>
FEET OF WATER	
CASING VOLUME*	(gal) <u>Same</u>
PURGE VOLUME	(gal) <u>as</u>
PRODUCT THICK.	(ft) <u>MW-16</u>
WELL CONDITION	
WEATHER	

PURGE		DATA			
START PURGE TIME:					
VOL. PURGED (gal)		<u>Same as</u>			
TIME					
FLOW RATE					
pH (units)		<u>MW-16</u>			
CONDUCTIVITY (umhos/cm)					
TEMP. (C)					
WATER COLOR					
PURGE AND SAMPLE EQUIPT: <u>Polyethylene Bailer</u>					

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESER-VATIVE
<u>MW-20</u>	<u>1255</u>	<u>674</u>	<u>40ml/vial</u>	<u>3</u>	<u>HCl</u>

ADDITIONAL INFORMATION:

TOC = Top of well casing

wl.prot. = top of well protector

*casing volume = r^2h (in ft) x 7.48 gal/ft

GROUNDWATER SAMPLING LOG

PROJECT NAME Sougal Rubber
 PROJECT NO. 1-0917-300
 DATE 5/2/96

WELL NO. Field Blank
 SAMPLED BY DWK

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft)
	(wl.prot. -ft)
DEPTH OF WELL	(ft)
WELL DIAMETER	(inches)
FEET OF WATER	
CASING VOLUME*	(gal)
PURGE VOLUME	(gal)
PRODUCT THICK.	(ft)
WELL CONDITION	
WEATHER	<u>P. Cloudy, 60 °F</u>

PURGE		DATA			
START PURGE TIME:					
VOL. PURGED (gal)					
TIME					
FLOW RATE					
pH (units)					
CONDUCTIVITY (umhos/cm)					
TEMP. (C)					
WATER COLOR					
PURGE AND SAMPLE EQUIPT: <u>None</u>					

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESER-VATIVE
<u>Mn-21</u>	<u>1305</u>	<u>624</u>	<u>40ml/vial</u>	<u>3</u>	<u>HCl</u>

ADDITIONAL INFORMATION:

TOC = Top of well casing

wl.prot. = top of well protector

*casing volume = $r^2h(\text{in ft}) \times 7.48 \text{ gal/ft}$

SOUND ANALYTICAL SERVICES, INC.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

TRANSMITTAL MEMORANDUM

DATE: May 23, 1996

TO: Grant Hainsworth
Retec

PROJECT: 1-2417-300 Scougal Rubber

REPORT NUMBER: 56581

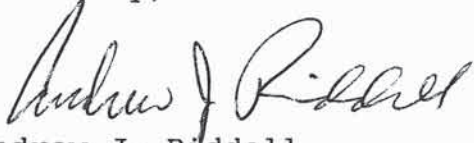
Enclosed are the test results for nine samples received at Sound Analytical Services on May 10, 1996.

The report consists of this transmittal memo, analytical results, quality control reports, a copy of the chain-of-custody, a list of data qualifiers when applicable, and a copy of any requested raw data.

Analytical Narrative: Samples 56581-2 and 56581-3 had acetone detected above the calibrated limit range. there was insufficient sample remaining to run a dilution.

Should there be any questions regarding this report, please contact me at (206) 922-2310.

Sincerely,



Andrew J. Riddell
Project Manager

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-12
Lab ID:	56581-01
Date Received:	5/10/96
Date Prepared:	5/20/96
Date Analyzed:	5/20/96
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	104		88	118
Toluene-d8	94		83	111
4-Bromofluorobenzene	103		86	112

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	0.2	
Vinyl chloride	2.5	0.2	
Bromomethane	ND	0.2	
Chloroethane	0.27	0.2	
Trichlorofluoromethane	ND	0.2	
1,1-Dichloroethene	ND	0.1	
Acetone	ND	0.1	
Vinyl Acetate	ND	0.1	
Methylene chloride	ND	0.1	
cis-1,2-Dichloroethene	0.72	0.1	
Acrylonitrile	ND	1	
Acrolein	ND	1	
1,1-Dichloroethane	0.41	0.1	
trans-1,2-Dichloroethene	ND	0.1	
2-Butanone	ND	0.1	
Chloroform	ND	0.1	
1,1,1-Trichloroethane	ND	0.1	
Carbon Tetrachloride	ND	0.1	
Benzene	ND	0.1	
1,2-Dichloroethane	ND	0.1	
Trichloroethene	ND	0.1	
1,2-Dichloropropane	ND	0.1	
Bromodichloromethane	ND	0.1	
2-Chloroethylvinylether	ND	0.5	
cis-1,3-Dichloropropene	ND	0.1	
4-Methyl-2-pentanone	ND	0.1	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for 56581-01 continued...

Analyte	Result (ug/L)	PQL	Flags
Toluene	ND	0.1	
trans-1,3-Dichloropropene	ND	0.1	
1,1,2-Trichloroethane	ND	0.1	
Tetrachloroethene	ND	0.1	
Dibromochloromethane	ND	0.1	
Chlorobenzene	ND	0.1	
Ethylbenzene	ND	0.1	
m,p-Xylene	ND	0.1	
o-Xylene	ND	0.1	
Styrene	ND	0.1	
Bromoform	ND	0.1	
1,1,2,2-Tetrachloroethane	ND	0.1	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-16
Lab ID:	56581-02
Date Received:	5/10/96
Date Prepared:	5/21/96
Date Analyzed:	5/21/96
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	105		88	118
Toluene-d8	84		83	111
4-Bromofluorobenzene	100		86	112

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	0.36	0.2	
Vinyl chloride	ND	0.2	
Bromomethane	ND	0.2	
Chloroethane	0.49	0.2	
Trichlorofluoromethane	0.21	0.2	
1,1-Dichloroethene	ND	0.1	
Acetone	6.9	0.1	E
Vinyl Acetate	ND	0.1	
Methylene chloride	0.21	0.1	
cis-1,2-Dichloroethene	ND	0.1	
Acrylonitrile	ND	1	
Acrolein	ND	1	
1,1-Dichloroethane	ND	0.1	
trans-1,2-Dichloroethene	ND	0.1	
2-Butanone	1.5	0.1	
Chloroform	ND	0.1	
1,1,1-Trichloroethane	0.44	0.1	
Carbon Tetrachloride	ND	0.1	
Benzene	ND	0.1	
1,2-Dichloroethane	ND	0.1	
Trichloroethene	ND	0.1	
1,2-Dichloropropane	ND	0.1	
Bromodichloromethane	ND	0.1	
2-Chloroethylvinylether	ND	0.5	
cis-1,3-Dichloropropene	ND	0.1	
4-Methyl-2-pentanone	ND	0.1	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for 56581-02 continued...

Analyte	Result (ug/L)	PQL	Flags
Toluene	ND	0.1	
trans-1,3-Dichloropropene	ND	0.1	
1,1,2-Trichloroethane	ND	0.1	
Tetrachloroethene	ND	0.1	
Dibromochloromethane	ND	0.1	
Chlorobenzene	ND	0.1	
Ethylbenzene	ND	0.1	
m,p-Xylene	ND	0.1	
o-Xylene	ND	0.1	
Styrene	ND	0.1	
Bromoform	ND	0.1	
1,1,2,2-Tetrachloroethane	ND	0.1	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-20
Lab ID:	56581-03
Date Received:	5/10/96
Date Prepared:	5/21/96
Date Analyzed:	5/21/96
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	107		88	118
Toluene-d8	90		83	111
4-Bromofluorobenzene	100		86	112

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	0.39	0.2	
Vinyl chloride	ND	0.2	
Bromomethane	ND	0.2	
Chloroethane	0.53	0.2	
Trichlorofluoromethane	ND	0.2	
1,1-Dichloroethene	ND	0.1	
Acetone	6.5	0.1	E
Vinyl Acetate	ND	0.1	
Methylene chloride	ND	0.1	
cis-1,2-Dichloroethene	ND	0.1	
Acrylonitrile	ND	1	
Acrolein	ND	1	
1,1-Dichloroethane	ND	0.1	
trans-1,2-Dichloroethene	ND	0.1	
2-Butanone	ND	0.1	
Chloroform	ND	0.1	
1,1,1-Trichloroethane	0.39	0.1	
Carbon Tetrachloride	ND	0.1	
Benzene	ND	0.1	
1,2-Dichloroethane	ND	0.1	
Trichloroethene	ND	0.1	
1,2-Dichloropropane	ND	0.1	
Bromodichloromethane	ND	0.1	
2-Chloroethylvinylether	ND	0.5	
cis-1,3-Dichloropropene	ND	0.1	
4-Methyl-2-pentanone	ND	0.1	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for 56581-03 continued...

Analyte	Result (ug/L)	PQL	Flags
Toluene	ND	0.1	
trans-1,3-Dichloropropene	ND	0.1	
1,1,2-Trichloroethane	ND	0.1	
Tetrachloroethene	ND	0.1	
Dibromochloromethane	ND	0.1	
Chlorobenzene	ND	0.1	
Ethylbenzene	ND	0.1	
m,p-Xylene	ND	0.1	
o-Xylene	ND	0.1	
Styrene	ND	0.1	
Bromoform	ND	0.1	
1,1,2,2-Tetrachloroethane	ND	0.1	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-21
Lab ID:	56581-04
Date Received:	5/10/96
Date Prepared:	5/20/96
Date Analyzed:	5/20/96
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	105		88	118
Toluene-d8	93		83	111
4-Bromofluorobenzene	102		86	112

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	0.2	
Vinyl chloride	ND	0.2	
Bromomethane	ND	0.2	
Chloroethane	ND	0.2	
Trichlorofluoromethane	ND	0.2	
1,1-Dichloroethene	ND	0.1	
Acetone	ND	0.1	
Vinyl Acetate	ND	0.1	
Methylene chloride	ND	0.1	
cis-1,2-Dichloroethene	ND	0.1	
Acrylonitrile	ND	1	
Acrolein	ND	1	
1,1-Dichloroethane	ND	0.1	
trans-1,2-Dichloroethene	ND	0.1	
2-Butanone	ND	0.1	
Chloroform	0.28	0.1	
1,1,1-Trichloroethane	ND	0.1	
Carbon Tetrachloride	ND	0.1	
Benzene	ND	0.1	
1,2-Dichloroethane	ND	0.1	
Trichloroethene	ND	0.1	
1,2-Dichloropropane	ND	0.1	
Bromodichloromethane	ND	0.1	
2-Chloroethylvinylether	ND	0.5	
cis-1,3-Dichloropropene	ND	0.1	
4-Methyl-2-pentanone	ND	0.1	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for 56581-04 continued...

Analyte	Result (ug/L)	PQL	Flags
Toluene	ND	0.1	
trans-1,3-Dichloropropene	ND	0.1	
1,1,2-Trichloroethane	ND	0.1	
Tetrachloroethene	ND	0.1	
Dibromochloromethane	ND	0.1	
Chlorobenzene	ND	0.1	
Ethylbenzene	ND	0.1	
m,p-Xylene	ND	0.1	
o-Xylene	ND	0.1	
Styrene	ND	0.1	
Bromoform	ND	0.1	
1,1,2,2-Tetrachloroethane	ND	0.1	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-15
Lab ID:	56581-05
Date Received:	5/10/96
Date Prepared:	5/20/96
Date Analyzed:	5/20/96
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	103		88	118
Toluene-d8	92		83	111
4-Bromofluorobenzene	101		86	112

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	0.2	
Vinyl chloride	ND	0.2	
Bromomethane	ND	0.2	
Chloroethane	ND	0.2	
Trichlorofluoromethane	ND	0.2	
1,1-Dichloroethene	ND	0.1	
Acetone	ND	0.1	
Vinyl Acetate	ND	0.1	
Methylene chloride	ND	0.1	
cis-1,2-Dichloroethene	ND	0.1	
Acrylonitrile	ND	1	
Acrolein	ND	1	
1,1-Dichloroethane	ND	0.1	
trans-1,2-Dichloroethene	ND	0.1	
2-Butanone	ND	0.1	
Chloroform	ND	0.1	
1,1,1-Trichloroethane	ND	0.1	
Carbon Tetrachloride	ND	0.1	
Benzene	ND	0.1	
1,2-Dichloroethane	ND	0.1	
Trichloroethene	ND	0.1	
1,2-Dichloropropane	0.36	0.1	
Bromodichloromethane	ND	0.1	
2-Chloroethylvinylether	ND	0.5	
cis-1,3-Dichloropropene	ND	0.1	
4-Methyl-2-pentanone	ND	0.1	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for 56581-05 continued...

Analyte	Result (ug/L)	PQL	Flags
Toluene	ND	0.1	
trans-1,3-Dichloropropene	ND	0.1	
1,1,2-Trichloroethane	ND	0.1	
Tetrachloroethene	ND	0.1	
Dibromochloromethane	ND	0.1	
Chlorobenzene	ND	0.1	
Ethylbenzene	ND	0.1	
m,p-Xylene	ND	0.1	
o-Xylene	ND	0.1	
Styrene	ND	0.1	
Bromoform	ND	0.1	
1,1,2,2-Tetrachloroethane	ND	0.1	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-11
Lab ID:	56581-06
Date Received:	5/10/96
Date Prepared:	5/20/96
Date Analyzed:	5/20/96
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	103		88	118
Toluene-d8	93		83	111
4-Bromofluorobenzene	101		86	112

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	ND	0.2	
Trichloroethene	4.2	0.1	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-14
Lab ID:	56581-07
Date Received:	5/10/96
Date Prepared:	5/20/96
Date Analyzed:	5/20/96
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	109		88	118
Toluene-d8	89		83	111
4-Bromofluorobenzene	103		86	112

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	15	0.2	D
Trichloroethene	28	0.1	D

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-4
Lab ID:	56581-08
Date Received:	5/10/96
Date Prepared:	5/21/96
Date Analyzed:	5/21/96
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	103		88	118
Toluene-d8	91		83	111
4-Bromofluorobenzene	100		86	112

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	ND	0.2	
Trichloroethene	14	0.1	D

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-13
Lab ID:	56581-09
Date Received:	5/10/96
Date Prepared:	5/20/96
Date Analyzed:	5/20/96
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	104		88	118
Toluene-d8	91		83	111
4-Bromofluorobenzene	100		86	112

Analyte	Result	PQL	Flags
	(ug/L)		
Vinyl chloride	ND	0.2	
Trichloroethene	20	0.1	D

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - T4406
Date Received:	-
Date Prepared:	5/20/96
Date Analyzed:	5/20/96
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	99		88	118
Toluene-d8	92		83	111
4-Bromofluorobenzene	101		86	112

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	0.2	
Vinyl chloride	ND	0.2	
Bromomethane	ND	0.2	
Chloroethane	ND	0.2	
Trichlorofluoromethane	ND	0.2	
1,1-Dichloroethene	ND	0.1	
Acetone	ND	0.1	
Vinyl Acetate	ND	0.1	
Methylene chloride	ND	0.1	
cis-1,2-Dichloroethene	ND	0.1	
Acrylonitrile	ND	1	
Acrolein	ND	1	
1,1-Dichloroethane	ND	0.1	
trans-1,2-Dichloroethene	ND	0.1	
2-Butanone	ND	0.1	
Chloroform	ND	0.1	
1,1,1-Trichloroethane	ND	0.1	
Carbon Tetrachloride	ND	0.1	
Benzene	ND	0.1	
1,2-Dichloroethane	ND	0.1	
Trichloroethene	ND	0.1	
1,2-Dichloropropane	ND	0.1	
Bromodichloromethane	ND	0.1	
2-Chloroethylvinylether	ND	0.5	
cis-1,3-Dichloropropene	ND	0.1	
4-Methyl-2-pentanone	ND	0.1	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for T4406 continued...

Analyte	Result (ug/L)	PQL	Flags
Toluene	ND	0.1	
trans-1,3-Dichloropropene	ND	0.1	
1,1,2-Trichloroethane	ND	0.1	
Tetrachloroethene	ND	0.1	
Dibromochloromethane	ND	0.1	
Chlorobenzene	ND	0.1	
Ethylbenzene	ND	0.1	
m,p-Xylene	ND	0.1	
o-Xylene	ND	0.1	
Styrene	ND	0.1	
Bromoform	ND	0.1	
1,1,2,2-Tetrachloroethane	ND	0.1	

SOUND ANALYTICAL SERVICES, INC.

Blank Spike/Blank Spike Duplicate Report

Lab ID: T4406
Date Prepared: 5/20/96
Date Analyzed: 5/20/96
QC Batch ID: T4406

Volatile Organics by USEPA Method 624

Compound Name	Blank Result (ug/L)	Spike Amount (ug/L)	BS Result (ug/L)	BS % Rec.	BSD Result (ug/L)	BSD % Rec.	RPD	Flag
1,1-Dichloroethene	0	1	1.26	126	1.24	124	1.6	
Benzene	0	1	1.12	112	1.12	112	0	
Trichloroethene	0	1	1.16	116	1.18	118	1.7	
Toluene	0	1	1.05	105	1.07	107	1.9	
Chlorobenzene	0	1	1.12	112	1.15	115	2.6	

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - T4425
Date Received:	-
Date Prepared:	5/21/96
Date Analyzed:	5/21/96
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	102		88	118
Toluene-d8	96		83	111
4-Bromofluorobenzene	101		86	112

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	0.2	
Vinyl chloride	ND	0.2	
Bromomethane	ND	0.2	
Chloroethane	ND	0.2	
Trichlorofluoromethane	ND	0.2	
1,1-Dichloroethene	ND	0.1	
Acetone	ND	0.1	
Vinyl Acetate	ND	0.1	
Methylene chloride	ND	0.1	
cis-1,2-Dichloroethene	ND	0.1	
Acrylonitrile	ND	1	
Acrolein	ND	1	
1,1-Dichloroethane	ND	0.1	
trans-1,2-Dichloroethene	ND	0.1	
2-Butanone	ND	0.1	
Chloroform	ND	0.1	
1,1,1-Trichloroethane	ND	0.1	
Carbon Tetrachloride	ND	0.1	
Benzene	ND	0.1	
1,2-Dichloroethane	ND	0.1	
Trichloroethene	ND	0.1	
1,2-Dichloropropane	ND	0.1	
Bromodichloromethane	ND	0.1	
2-Chloroethylvinylether	ND	0.5	
cis-1,3-Dichloropropene	ND	0.1	
4-Methyl-2-pentanone	ND	0.1	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for T4425 continued...

Analyte	Result (ug/L)	PQL	Flags
Toluene	ND	0.1	
trans-1,3-Dichloropropene	ND	0.1	
1,1,2-Trichloroethane	ND	0.1	
Tetrachloroethene	ND	0.1	
Dibromochloromethane	ND	0.1	
Chlorobenzene	ND	0.1	
Ethylbenzene	ND	0.1	
m,p-Xylene	ND	0.1	
o-Xylene	ND	0.1	
Styrene	ND	0.1	
Bromoform	ND	0.1	
1,1,2,2-Tetrachloroethane	ND	0.1	

SOUND ANALYTICAL SERVICES, INC.

Blank Spike/Blank Spike Duplicate Report

Lab ID: T4425
Date Prepared: 5/21/96
Date Analyzed: 5/21/96
QC Batch ID: T4425

Volatile Organics by USEPA Method 624

Compound Name	Blank Result (ug/L)	Spike Amount (ug/L)	BS Result (ug/L)	BS % Rec.	BSD Result (ug/L)	BSD % Rec.	RPD	Flag
1,1-Dichloroethene	0	1	1.09	109	1.14	114	4.5	
Benzene	0	1	1.1	110	1.17	117	6.2	
Trichloroethene	0	1	1.17	117	1.23	123	5	
Toluene	0	1	1.11	111	1.12	112	0.9	
Chlorobenzene	0	1	1.16	116	1.22	122	5	

SOUND ANALYTICAL SERVICES, INC.

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 • TELEPHONE 206-922-2310 • FAX 206-922-5047

DATA QUALIFIERS AND ABBREVIATIONS

- B1: This analyte was detected in the associated method blank. The analyte concentration was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank).
- B2: This analyte was detected in the associated method blank. The analyte concentration in the sample was determined to be significantly higher than the method blank (greater than ten times the concentration reported in the blank).
- C: Additional confirmation performed.
- D: The reported result for this analyte is calculated based on a secondary dilution factor.
- E: The concentration of this analyte exceeded the instrument calibration range.
- J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.
- MCL: Maximum Contaminant Level
- MDL: Method Detection Limit
- N: See analytical narrative.
- ND: Not Detected
- PQL: Practical Quantitation Limit
- X1: Contaminant does not appear to be "typical" product. Elution pattern suggests it may be _____.
- X2: Contaminant does not appear to be "typical" product. Further testing is suggested for identification.
- X3: Identification and quantification of peaks was complicated by matrix interference; GC/MS confirmation is recommended.
- X4: RPD for duplicates outside advisory QC limits. Sample was re-analyzed with similar results.
- X4a: RPD for duplicates outside advisory QC limits due to analyte concentration near the method practical quantitation limit/detection limit.
- X5: Matrix spike was diluted out during analysis.
- X6: Recovery of matrix spike was outside advisory QC limits. Sample was re-analyzed with similar results.
- X7: Recovery of matrix spike outside advisory QC limits. Matrix interference is indicated by blank spike recovery data.
- X7a: Recovery and/or RPD values for MS/MSD outside advisory QC limits due to high contaminant levels.
- X8: Surrogate was diluted out during analysis.
- X9: Surrogate recovery outside advisory QC limits due to matrix composition.

10265

CHAIN OF CUSTODY RECORD

PROJ. NO.
1-2417-300

PROJECT NAME
Scaupal Rubber

SAMPLERS:
D. Kooby

RECEIVING LABORATORY:
Sound Analytical

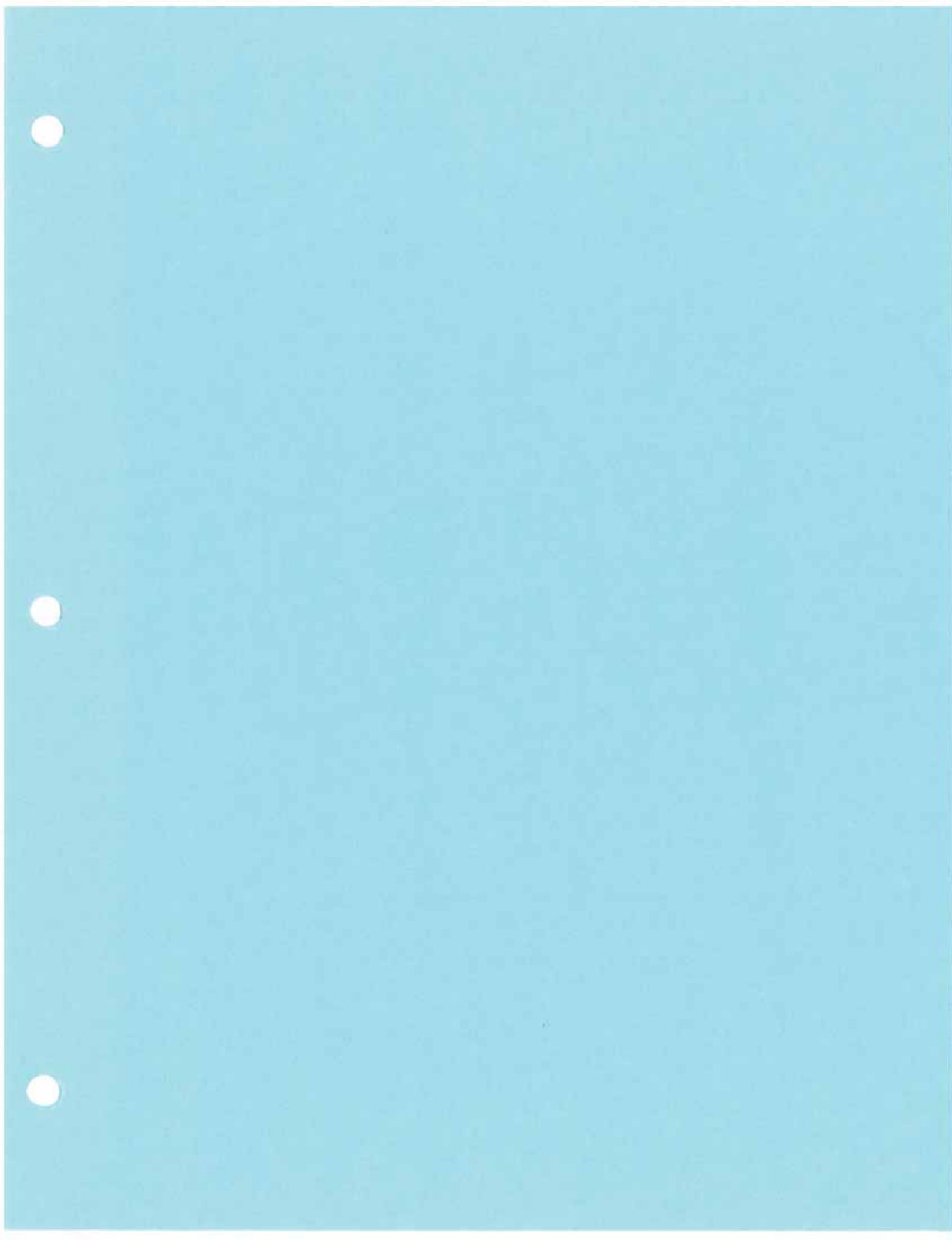
SEND RESULTS TO:
Grant Hainsworth

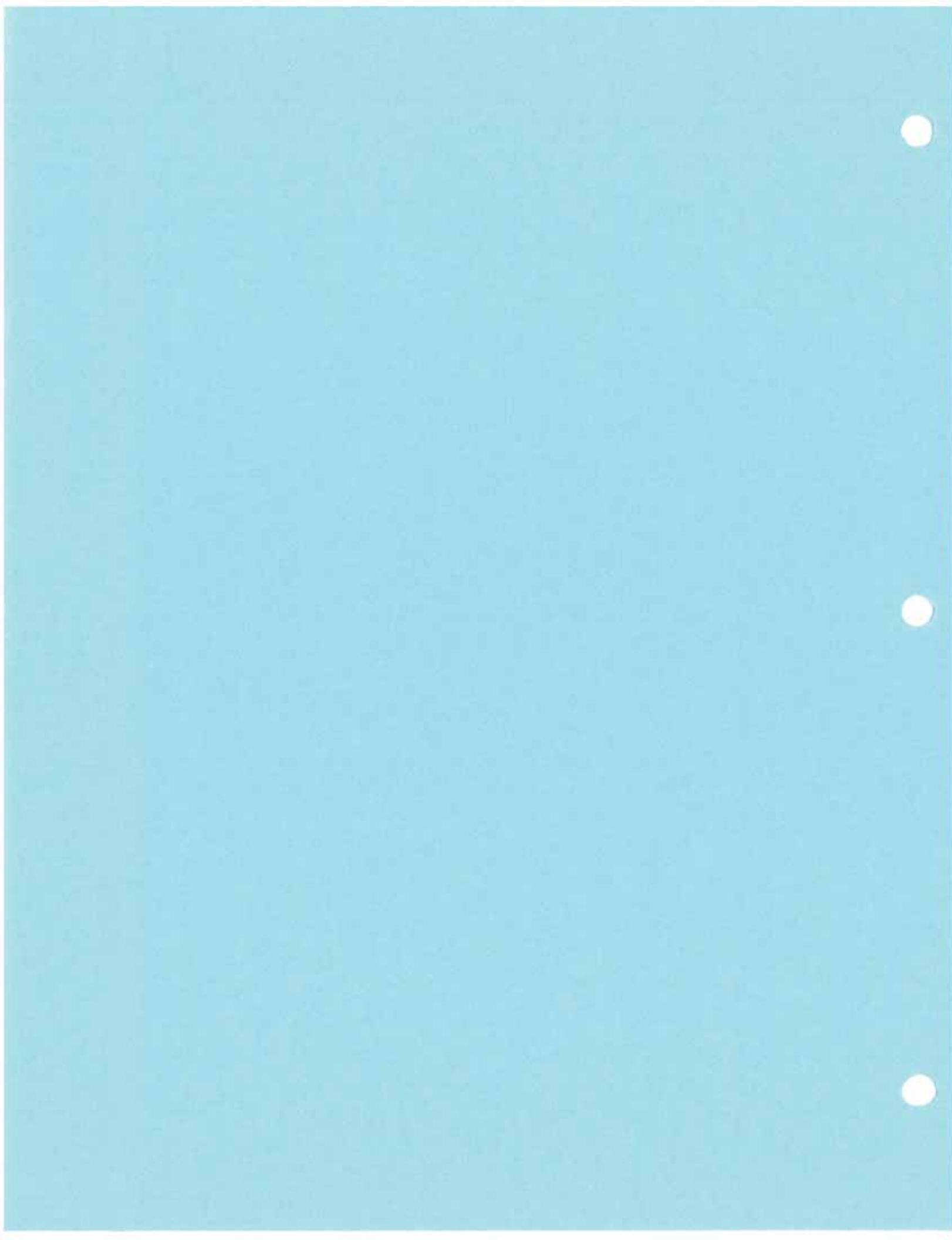
LAB I.D. NO.	DATE	TIME	SAMPLE NO.	NO. OF CONTAINERS	Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time
50281	195/9/96	1140	MW-13	3	X				X	Method 624 for vinyl chloride fill scan Method 624		
81		1225	MW-12	3	X				X			
82		1245	MW-16	3	X				X			
83		1255	MW-20	3	X				X			
84		1305	MW-21	3	X				X			
6		1330	MW-11	3	X				X	1.2 ppb detection limit for vinyl chloride		
7		1400	MW-14	3	X				X			
8		1420	MW-4	3	X				X			
9		1445	MW-15	3	X				X			

Relinquished by: (Signature) <i>[Signature]</i>	Date / Time 5/10/96 09:30	Received by: (Signature) Courier	Date / Time
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature) <i>[Signature]</i>	Date / Time 5/10/96 12:30
Shipper Information			

RETEC
REMEDIAL ACTION
TECHNOLOGIES INC

REMEDICATION TECHNOLOGIES
1011 S.W. Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349





SOUND ANALYTICAL SERVICES, INC.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

TRANSMITTAL MEMORANDUM

DATE: November 20, 1995

TO: Linda Baker
Retec

PROJECT: 1-1686-800 Scougal Rubber

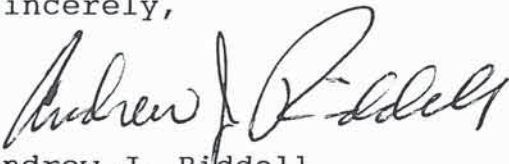
LABORATORY NUMBER: 52685

Enclosed are the test results for eight samples received at Sound Analytical Services on November 7, 1995.

The report consists of this transmittal memo, analytical results, quality control reports, a copy of the chain-of-custody, a list of data qualifiers when applicable, and a copy of any requested raw data.

Should there be any questions regarding this report, please contact me at (206) 922-2310.

Sincerely,



Andrew J. Riddell
Project Manager

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-15
Lab ID:	52685-01
Date Received:	11/7/95
Date Prepared:	11/9/95
Date Analyzed:	11/9/95
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	101		88	118
Toluene-d8	102		83	111
4-Bromofluorobenzene	90		86	112

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	1	
Vinyl chloride	ND	0.2	
Bromomethane	ND	1	
Chloroethane	ND	1	
Trichlorofluoromethane	ND	1	
1,1-Dichloroethene	ND	0.5	
Acetone	ND	0.5	
Vinyl Acetate	ND	0.5	
Methylene chloride	0.66	0.5	B1
cis-1,2-Dichloroethene	ND	0.5	
Acrylonitrile	ND	5	
Acrolein	ND	5	
1,1-Dichloroethane	ND	0.5	
trans-1,2-Dichloroethene	ND	0.5	
2-Butanone	ND	0.5	
Chloroform	ND	0.5	
1,1,1-Trichloroethane	ND	0.5	
Carbon Tetrachloride	ND	0.5	
Benzene	ND	0.5	
1,2-Dichloroethane	ND	0.5	
Trichloroethene	ND	0.2	
1,2-Dichloropropane	ND	0.5	
Bromodichloromethane	ND	0.5	
2-Chloroethylvinylether	ND	2.5	
cis-1,3-Dichloropropene	ND	0.5	
4-Methyl-2-pentanone	ND	0.5	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for 52685-01 continued...

Analyte	Result (ug/L)	PQL	Flags
Toluene	ND	0.5	
trans-1,3-Dichloropropene	ND	0.5	
1,1,2-Trichloroethane	ND	0.5	
Tetrachloroethene	ND	0.5	
Dibromochloromethane	ND	0.5	
Chlorobenzene	ND	0.5	
Ethylbenzene	ND	0.5	
m,p-Xylene	ND	0.5	
o-Xylene	ND	0.5	
Styrene	ND	0.5	
Bromoform	ND	0.5	
1,1,2,2-Tetrachloroethane	ND	0.5	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-16
Lab ID:	52685-02
Date Received:	11/7/95
Date Prepared:	11/9/95
Date Analyzed:	11/9/95
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	105		88	118
Toluene-d8	103		83	111
4-Bromofluorobenzene	90		86	112

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	1	
Vinyl chloride	6.2	0.2	
Bromomethane	ND	1	
Chloroethane	ND	1	
Trichlorofluoromethane	ND	1	
1,1-Dichloroethene	ND	0.5	
Acetone	ND	0.5	
Vinyl Acetate	ND	0.5	
Methylene chloride	1.5	0.5	B1
cis-1,2-Dichloroethene	13	0.5	
Acrylonitrile	ND	5	
Acrolein	ND	5	
1,1-Dichloroethane	0.44	0.5	J
trans-1,2-Dichloroethene	ND	0.5	
2-Butanone	ND	0.5	
Chloroform	ND	0.5	
1,1,1-Trichloroethane	ND	0.5	
Carbon Tetrachloride	ND	0.5	
Benzene	1.6	0.5	
1,2-Dichloroethane	ND	0.5	
Trichloroethene	0.2	0.2	
1,2-Dichloropropane	ND	0.5	
Bromodichloromethane	ND	0.5	
2-Chloroethylvinylether	ND	2.5	
cis-1,3-Dichloropropene	ND	0.5	
4-Methyl-2-pentanone	ND	0.5	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for 52685-02 continued...

Analyte	Result (ug/L)	PQL	Flags
Toluene	ND	0.5	
trans-1,3-Dichloropropene	ND	0.5	
1,1,2-Trichloroethane	ND	0.5	
Tetrachloroethene	ND	0.5	
Dibromochloromethane	ND	0.5	
Chlorobenzene	ND	0.5	
Ethylbenzene	ND	0.5	
m,p-Xylene	ND	0.5	
o-Xylene	ND	0.5	
Styrene	ND	0.5	
Bromoform	ND	0.5	
1,1,2,2-Tetrachloroethane	ND	0.5	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-13
Lab ID:	52685-03
Date Received:	11/7/95
Date Prepared:	11/9/95
Date Analyzed:	11/10/95
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	106		88	118
Toluene-d8	103		83	111
4-Bromofluorobenzene	91		86	112

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	1	
Vinyl chloride	17	0.2	
Bromomethane	ND	1	
Chloroethane	ND	1	
Trichlorofluoromethane	ND	1	
1,1-Dichloroethene	ND	0.5	
Acetone	ND	0.5	
Vinyl Acetate	ND	0.5	
Methylene chloride	0.74	0.5	B1
cis-1,2-Dichloroethene	29	0.5	D
Acrylonitrile	ND	5	
Acrolein	ND	5	
1,1-Dichloroethane	3.2	0.5	
trans-1,2-Dichloroethene	0.89	0.5	
2-Butanone	ND	0.5	
Chloroform	ND	0.5	
1,1,1-Trichloroethane	ND	0.5	
Carbon Tetrachloride	ND	0.5	
Benzene	ND	0.5	
1,2-Dichloroethane	ND	0.5	
Trichloroethene	42	0.2	D
1,2-Dichloropropane	ND	0.5	
Bromodichloromethane	ND	0.5	
2-Chloroethylvinylether	ND	2.5	
cis-1,3-Dichloropropene	ND	0.5	
4-Methyl-2-pentanone	ND	0.5	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for 52685-03 continued...

Analyte	Result (ug/L)	PQL	Flags
Toluene	0.29	0.5	J
trans-1,3-Dichloropropene	ND	0.5	
1,1,2-Trichloroethane	ND	0.5	
Tetrachloroethene	0.65	0.5	
Dibromochloromethane	ND	0.5	
Chlorobenzene	ND	0.5	
Ethylbenzene	ND	0.5	
m,p-Xylene	0.29	0.5	J
o-Xylene	0.18	0.5	J
Styrene	ND	0.5	
Bromoform	ND	0.5	
1,1,2,2-Tetrachloroethane	ND	0.5	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-6
Lab ID:	52685-04
Date Received:	11/7/95
Date Prepared:	11/10/95
Date Analyzed:	11/10/95
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	101		88	118
Toluene-d8	100		83	111
4-Bromofluorobenzene	91		86	112

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	1	
Vinyl chloride	ND	0.2	
Bromomethane	ND	1	
Chloroethane	ND	1	
Trichlorofluoromethane	ND	1	
1,1-Dichloroethene	ND	0.5	
Acetone	1.4	0.5	
Vinyl Acetate	ND	0.5	
Methylene chloride	1.8	0.5	
cis-1,2-Dichloroethene	0.43	0.5	J
Acrylonitrile	ND	5	
Acrolein	ND	5	
1,1-Dichloroethane	ND	0.5	
trans-1,2-Dichloroethene	ND	0.5	
2-Butanone	ND	0.5	
Chloroform	ND	0.5	
1,1,1-Trichloroethane	ND	0.5	
Carbon Tetrachloride	ND	0.5	
Benzene	0.2	0.5	J
1,2-Dichloroethane	ND	0.5	
Trichloroethene	ND	0.2	
1,2-Dichloropropane	ND	0.5	
Bromodichloromethane	ND	0.5	
2-Chloroethylvinylether	ND	2.5	
cis-1,3-Dichloropropene	ND	0.5	
4-Methyl-2-pentanone	ND	0.5	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for 52685-04 continued...

Analyte	Result (ug/L)	PQL	Flags
Toluene	0.4	0.5	J
trans-1,3-Dichloropropene	ND	0.5	
1,1,2-Trichloroethane	ND	0.5	
Tetrachloroethene	ND	0.5	
Dibromochloromethane	ND	0.5	
Chlorobenzene	ND	0.5	
Ethylbenzene	ND	0.5	
m,p-Xylene	ND	0.5	
o-Xylene	ND	0.5	
Styrene	ND	0.5	
Bromoform	ND	0.5	
1,1,2,2-Tetrachloroethane	ND	0.5	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-14
Lab ID:	52685-05
Date Received:	11/7/95
Date Prepared:	11/9/95
Date Analyzed:	11/10/95
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	102		88	118
Toluene-d8	106		83	111
4-Bromofluorobenzene	90		86	112

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	1	
Vinyl chloride	510	0.2	D
Bromomethane	ND	1	
Chloroethane	ND	1	
Trichlorofluoromethane	ND	1	
1,1-Dichloroethene	6.7	0.5	
Acetone	ND	0.5	
Vinyl Acetate	ND	0.5	
Methylene chloride	1.8	0.5	B1
cis-1,2-Dichloroethene	410	0.5	D
Acrylonitrile	ND	5	
Acrolein	350	5	D
1,1-Dichloroethane	5.9	0.5	
trans-1,2-Dichloroethene	2.1	0.5	
2-Butanone	ND	0.5	
Chloroform	0.27	0.5	J
1,1,1-Trichloroethane	0.29	0.5	J
Carbon Tetrachloride	ND	0.5	
Benzene	0.24	0.5	J
1,2-Dichloroethane	ND	0.5	
Trichloroethene	210	0.2	D
1,2-Dichloropropane	ND	0.5	
Bromodichloromethane	ND	0.5	
2-Chloroethylvinylether	ND	2.5	
cis-1,3-Dichloropropene	ND	0.5	
4-Methyl-2-pentanone	ND	0.5	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for 52685-05 continued...

Analyte	Result (ug/L)	PQL	Flags
Toluene	3.3	0.5	
trans-1,3-Dichloropropene	ND	0.5	
1,1,2-Trichloroethane	ND	0.5	
Tetrachloroethene	11	0.5	
Dibromochloromethane	ND	0.5	
Chlorobenzene	ND	0.5	
Ethylbenzene	ND	0.5	
m,p-Xylene	ND	0.5	
o-Xylene	0.67	0.5	
Styrene	ND	0.5	
Bromoform	ND	0.5	
1,1,2,2-Tetrachloroethane	ND	0.5	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-11
Lab ID:	52685-06
Date Received:	11/7/95
Date Prepared:	11/10/95
Date Analyzed:	11/10/95
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	96		88	118
Toluene-d8	102		83	111
4-Bromofluorobenzene	87		86	112

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	1	
Vinyl chloride	6.7	0.2	
Bromomethane	ND	1	
Chloroethane	ND	1	
Trichlorofluoromethane	ND	1	
1,1-Dichloroethene	0.52	0.5	
Acetone	ND	0.5	
Vinyl Acetate	ND	0.5	
Methylene chloride	2	0.5	
cis-1,2-Dichloroethene	17	0.5	
Acrylonitrile	ND	5	
Acrolein	ND	5	
1,1-Dichloroethane	0.68	0.5	
trans-1,2-Dichloroethene	0.59	0.5	
2-Butanone	ND	0.5	
Chloroform	0.22	0.5	J
1,1,1-Trichloroethane	ND	0.5	
Carbon Tetrachloride	ND	0.5	
Benzene	0.22	0.5	J
1,2-Dichloroethane	ND	0.5	
Trichloroethene	50	0.2	D
1,2-Dichloropropane	ND	0.5	
Bromodichloromethane	ND	0.5	
2-Chloroethylvinylether	ND	2.5	
cis-1,3-Dichloropropene	ND	0.5	
4-Methyl-2-pentanone	ND	0.5	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for 52685-06 continued...

Analyte	Result (ug/L)	PQL	Flags
Toluene	ND	0.5	
trans-1,3-Dichloropropene	ND	0.5	
1,1,2-Trichloroethane	ND	0.5	
Tetrachloroethene	0.53	0.5	
Dibromochloromethane	ND	0.5	
Chlorobenzene	ND	0.5	
Ethylbenzene	ND	0.5	
m,p-Xylene	ND	0.5	
o-Xylene	ND	0.5	
Styrene	ND	0.5	
Bromoform	ND	0.5	
1,1,2,2-Tetrachloroethane	ND	0.5	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-20
Lab ID:	52685-07
Date Received:	11/7/95
Date Prepared:	11/9/95
Date Analyzed:	11/10/95
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	95		88	118
Toluene-d8	103		83	111
4-Bromofluorobenzene	89		86	112

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	1	
Vinyl chloride	8.4	0.2	
Bromomethane	ND	1	
Chloroethane	ND	1	
Trichlorofluoromethane	ND	1	
1,1-Dichloroethene	0.65	0.5	
Acetone	ND	0.5	
Vinyl Acetate	ND	0.5	
Methylene chloride	1.6	0.5	B1
cis-1,2-Dichloroethene	.19	0.5	
Acrylonitrile	ND	5	
Acrolein	ND	5	
1,1-Dichloroethane	0.79	0.5	
trans-1,2-Dichloroethene	0.66	0.5	
2-Butanone	ND	0.5	
Chloroform	0.24	0.5	J
1,1,1-Trichloroethane	ND	0.5	
Carbon Tetrachloride	ND	0.5	
Benzene	0.24	0.5	J
1,2-Dichloroethane	ND	0.5	
Trichloroethene	56	0.2	D
1,2-Dichloropropane	ND	0.5	
Bromodichloromethane	ND	0.5	
2-Chloroethylvinylether	ND	2.5	
cis-1,3-Dichloropropene	ND	0.5	
4-Methyl-2-pentanone	ND	0.5	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for 52685-07 continued...

Analyte	Result (ug/L)	PQL	Flags
Toluene	ND	0.5	
trans-1,3-Dichloropropene	ND	0.5	
1,1,2-Trichloroethane	ND	0.5	
Tetrachloroethene	0.68	0.5	
Dibromochloromethane	ND	0.5	
Chlorobenzene	ND	0.5	
Ethylbenzene	ND	0.5	
m,p-Xylene	ND	0.5	
o-Xylene	ND	0.5	
Styrene	ND	0.5	
Bromoform	ND	0.5	
1,1,2,2-Tetrachloroethane	ND	0.5	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-12
Lab ID:	52685-08
Date Received:	11/7/95
Date Prepared:	11/15/95
Date Analyzed:	11/16/95
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	99		88	118
Toluene-d8	96		83	111
4-Bromofluorobenzene	96		86	112

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	1	
Vinyl chloride	1.9	0.2	
Bromomethane	ND	1	
Chloroethane	ND	1	
Trichlorofluoromethane	ND	1	
1,1-Dichloroethene	0.46	0.5	J
Acetone	ND	0.5	
Vinyl Acetate	ND	0.5	
Methylene chloride	0.49	0.5	J B1
cis-1,2-Dichloroethene	0.87	0.5	
Acrylonitrile	ND	5	
Acrolein	ND	5	
1,1-Dichloroethane	ND	0.5	
trans-1,2-Dichloroethene	ND	0.5	
2-Butanone	ND	0.5	
Chloroform	ND	0.5	
1,1,1-Trichloroethane	ND	0.5	
Carbon Tetrachloride	ND	0.5	
Benzene	ND	0.5	
1,2-Dichloroethane	ND	0.5	
Trichloroethene	ND	0.2	
1,2-Dichloropropane	ND	0.5	
Bromodichloromethane	ND	0.5	
2-Chloroethylvinylether	ND	2.5	
cis-1,3-Dichloropropene	ND	0.5	
4-Methyl-2-pentanone	ND	0.5	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for 52685-08 continued...

Analyte	Result (ug/L)	PQL	Flags
Toluene	ND	0.5	
trans-1,3-Dichloropropene	ND	0.5	
1,1,2-Trichloroethane	ND	0.5	
Tetrachloroethene	ND	0.5	
Dibromochloromethane	ND	0.5	
Chlorobenzene	ND	0.5	
Ethylbenzene	ND	0.5	
m,p-Xylene	ND	0.5	
o-Xylene	ND	0.5	
Styrene	ND	0.5	
Bromoform	ND	0.5	
1,1,2,2-Tetrachloroethane	ND	0.5	

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - T2487
Date Received:	-
Date Prepared:	11/9/95
Date Analyzed:	11/9/95
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	101		88	118
Toluene-d8	102		83	111
4-Bromofluorobenzene	86		86	112

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	1	
Vinyl chloride	ND	0.2	
Bromomethane	ND	1	
Chloroethane	ND	1	
Trichlorofluoromethane	ND	1	
1,1-Dichloroethene	ND	0.5	
Acetone	ND	0.5	
Vinyl Acetate	ND	0.5	
Methylene chloride	0.74	0.5	
cis-1,2-Dichloroethene	ND	0.5	
Acrylonitrile	ND	5	
Acrolein	ND	5	
1,1-Dichloroethane	ND	0.5	
trans-1,2-Dichloroethene	ND	0.5	
2-Butanone	ND	0.5	
Chloroform	ND	0.5	
1,1,1-Trichloroethane	ND	0.5	
Carbon Tetrachloride	ND	0.5	
Benzene	ND	0.5	
1,2-Dichloroethane	ND	0.5	
Trichloroethene	ND	0.2	
1,2-Dichloropropane	ND	0.5	
Bromodichloromethane	ND	0.5	
2-Chloroethylvinylether	ND	2.5	
cis-1,3-Dichloropropene	ND	0.5	
4-Methyl-2-pentanone	ND	0.5	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for T2487 continued...

Analyte	Result (ug/L)	PQL	Flags
Toluene	ND	0.5	
trans-1,3-Dichloropropene	ND	0.5	
1,1,2-Trichloroethane	ND	0.5	
Tetrachloroethene	ND	0.5	
Dibromochloromethane	ND	0.5	
Chlorobenzene	ND	0.5	
Ethylbenzene	ND	0.5	
m,p-Xylene	ND	0.5	
o-Xylene	ND	0.5	
Styrene	ND	0.5	
Bromoform	ND	0.5	
1,1,2,2-Tetrachloroethane	ND	0.5	

SOUND ANALYTICAL SERVICES, INC.

Blank Spike/Blank Spike Duplicate Report

Lab ID: T2487
Date Prepared: 11/9/95
Date Analyzed: 11/9/95
QC Batch ID: T2487

Volatile Organics by USEPA Method 624

Compound Name	Blank Result (ug/L)	Spike Amount (ug/L)	BS Result (ug/L)	BS % Rec.	BSD Result (ug/L)	BSD % Rec.	RPD	Flag
1,1-Dichloroethene	0	5	5.8	117	6.1	121	3.4	
Benzene	0	5	5.4	107	5.5	110	2.8	
Trichloroethene	0	5	5.4	109	5.5	111	1.8	
Toluene	0	5	5.3	106	5.8	115	8.1	
Chlorobenzene	0	5	5.1	103	5.7	114	10.0	

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - T2501
Date Received:	-
Date Prepared:	11/10/95
Date Analyzed:	11/10/95
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	95		88	118
Toluene-d8	106		83	111
4-Bromofluorobenzene	95		86	112

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	1	
Vinyl chloride	ND	0.2	
Bromomethane	ND	1	
Chloroethane	ND	1	
Trichlorofluoromethane	ND	1	
1,1-Dichloroethene	ND	0.5	
Acetone	ND	0.5	
Vinyl Acetate	ND	0.5	
Methylene chloride	ND	0.5	
cis-1,2-Dichloroethene	ND	0.5	
Acrylonitrile	ND	5	
Acrolein	ND	5	
1,1-Dichloroethane	ND	0.5	
trans-1,2-Dichloroethene	ND	0.5	
2-Butanone	ND	0.5	
Chloroform	ND	0.5	
1,1,1-Trichloroethane	ND	0.5	
Carbon Tetrachloride	ND	0.5	
Benzene	ND	0.5	
1,2-Dichloroethane	ND	0.5	
Trichloroethene	ND	0.2	
1,2-Dichloropropane	ND	0.5	
Bromodichloromethane	ND	0.5	
2-Chloroethylvinylether	ND	2.5	
cis-1,3-Dichloropropene	ND	0.5	
4-Methyl-2-pentanone	ND	0.5	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for T2501 continued...

Analyte	Result (ug/L)	PQL	Flags
Toluene	ND	0.5	
trans-1,3-Dichloropropene	ND	0.5	
1,1,2-Trichloroethane	ND	0.5	
Tetrachloroethene	ND	0.5	
Dibromochloromethane	ND	0.5	
Chlorobenzene	ND	0.5	
Ethylbenzene	ND	0.5	
m,p-Xylene	ND	0.5	
o-Xylene	ND	0.5	
Styrene	ND	0.5	
Bromoform	ND	0.5	
1,1,2,2-Tetrachloroethane	ND	0.5	

SOUND ANALYTICAL SERVICES, INC.

Blank Spike/Blank Spike Duplicate Report

Lab ID: T2501
Date Prepared: 11/10/95
Date Analyzed: 11/10/95
QC Batch ID: T2501

Volatile Organics by USEPA Method 624

Compound Name	Blank Result (ug/L)	Spike Amount (ug/L)	BS Result (ug/L)	BS % Rec.	BSD Result (ug/L)	BSD % Rec.	RPD	Flag
1,1-Dichloroethene	0	5	7	140	6.7	133	5.1	
Benzene	0	5	6.1	122	6.1	122	0.0	
Trichloroethene	0	5	5.9	118	5.9	118	0.0	
Toluene	0	5	5.8	115	6	121	5.1	
Chlorobenzene	0	5	5.7	114	6	120	5.1	

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - T2566
Date Received:	-
Date Prepared:	11/15/95
Date Analyzed:	11/16/95
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	103		88	118
Toluene-d8	94		83	111
4-Bromofluorobenzene	96		86	112

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	1	
Vinyl chloride	ND	0.2	
Bromomethane	ND	1	
Chloroethane	ND	1	
Trichlorofluoromethane	ND	1	
1,1-Dichloroethene	ND	0.5	
Acetone	ND	0.5	
Vinyl Acetate	ND	0.5	
Methylene chloride	0.48	0.5	J
cis-1,2-Dichloroethene	ND	0.5	
Acrylonitrile	ND	5	
Acrolein	ND	5	
1,1-Dichloroethane	ND	0.5	
trans-1,2-Dichloroethene	ND	0.5	
2-Butanone	ND	0.5	
Chloroform	ND	0.5	
1,1,1-Trichloroethane	ND	0.5	
Carbon Tetrachloride	ND	0.5	
Benzene	ND	0.5	
1,2-Dichloroethane	ND	0.5	
Trichloroethene	ND	0.2	
1,2-Dichloropropane	ND	0.5	
Bromodichloromethane	ND	0.5	
2-Chloroethylvinylether	ND	2.5	
cis-1,3-Dichloropropene	ND	0.5	
4-Methyl-2-pentanone	ND	0.5	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for T2566 continued...

Analyte	Result (ug/L)	PQL	Flags
Toluene	ND	0.5	
trans-1,3-Dichloropropene	ND	0.5	
1,1,2-Trichloroethane	ND	0.5	
Tetrachloroethene	ND	0.5	
Dibromochloromethane	ND	0.5	
Chlorobenzene	ND	0.5	
Ethylbenzene	ND	0.5	
m,p-Xylene	ND	0.5	
o-Xylene	ND	0.5	
Styrene	ND	0.5	
Bromoform	ND	0.5	
1,1,2,2-Tetrachloroethane	ND	0.5	

SOUND ANALYTICAL SERVICES, INC.

Blank Spike/Blank Spike Duplicate Report

Lab ID: T2566
Date Prepared: 11/15/95
Date Analyzed: 11/16/95
QC Batch ID: T2566

Volatile Organics by USEPA Method 624

Compound Name	Blank Result (ug/L)	Spike Amount (ug/L)	BS Result (ug/L)	BS % Rec.	BSD Result (ug/L)	BSD % Rec.	RPD	Flag
1,1-Dichloroethene	0	5	4.5	89	5.4	109	20.0	
Benzene	0	5	4.2	84	4.9	99	16.0	
Trichloroethene	0	5	4.3	86	4.8	96	11.0	
Toluene	0	5	3.9	78	4.6	91	16.0	
Chlorobenzene	0	5	3.9	78	4.6	93	17.0	

SOUND ANALYTICAL SERVICES, INC.

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 • TELEPHONE 206-922-2310 • FAX 206-922-5047

DATA QUALIFIERS AND ABBREVIATIONS

- J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.
- B1: This analyte was also detected in the associated method blank. The reported sample results have been adjusted for moisture, final extract volume, and/or dilutions performed during extract preparation. The analyte concentration was evaluated prior to sample preparation adjustments, and was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank).
- B2: This analyte was also detected in the associated method blank. However, the analyte concentration in the sample was determined to be significantly higher than the method blank (greater than ten times the concentration reported in the blank).
- E: The concentration of this analyte exceeded the instrument calibration range.
- D: The reported result for this analyte is calculated based on a secondary dilution factor.
- X1: Contaminant does not appear to be "typical" product. Elution pattern suggests it may be _____.
- X2: Contaminant does not appear to be "typical" product. Further testing is suggested for identification.
- X3: Identification and quantification of peaks was complicated by matrix interference; GC/MS confirmation is recommended.
- X4: RPD for duplicates outside advisory QC limits. Sample was re-analyzed with similar results.
- X4a: RPD for duplicates outside advisory QC limits due to analyte concentration near the method practical quantitation limit/detection limit.
- X5: Matrix spike was diluted out during analysis.
- X6: Recovery of matrix spike outside advisory QC limits. Sample was re-analyzed with similar results.
- X7: Recovery of matrix spike outside advisory QC limits. Matrix interference is indicated by blank spike recovery data.
- X7a: Recovery and/or RPD values for MS/MSD outside advisory QC limits due to high contaminant levels.
- X8: Surrogate was diluted out during analysis.
- X9: Surrogate recovery outside advisory QC limits due to matrix composition.
- N: See analytical narrative.
- ND: Not Detected
- PQL: Practical Quantitation Limit
- MCL: Maximum Contaminant Level

10108

CHAIN OF CUSTODY RECORD

PROJ. NO. 1-1686-800 PROJECT NAME Scougal Rubber
 SAMPLERS: D. Kinney

RECEIVING LABORATORY: Sound Analytical

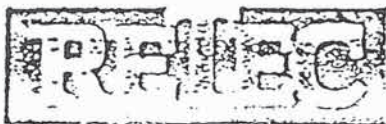
NO. OF CONTAINERS
 Method 624 (Fall Scan) *

SEND RESULTS TO: Linda Baker

LAB I.D. NO.	DATE	TIME	SAMPLE NO.	NO. OF CONTAINERS	REMARKS
	11/6/95	1145	MW-15	M	Need 0.2 ppb detection limit for TCE & Methyl chloride
		1235	MW-16	M	
		1745	MW-13	M	
		1310	MW-6	M	
		1340	MW-14	M	
		1430	MW-11	M	
		1440	MW-20	M	
		1520	MW-12	M	

Relinquished by: (Signature) _____ Date / Time _____
 Received by: (Signature) _____ Date / Time _____
 Relinquished by: (Signature) _____ Date / Time _____
 Received for Laboratory by: (Signature) Courier Date / Time 11/7/95-1930

Shipper Information



REMEDIA
TECHNOLOGIES INC

FIELD ACTIVITY DAILY LOG

PROJECT Spongel Rubber

COMPLETED BY D. Kinney

JOB NO. 1-1686-800

APPROVED BY _____

DAY & DATE Mon Nov. 6th 1995

SHEET 1 OF 1

FIELD ACTIVITY SUBJECT: Water level measurements / Giv sampling

DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

TIME	
0850	Arrived on site & checked in at plant
0905	Setup to do WL's
1057	Finished WL's & Setup to Giv sample Calibrated YSI model 3500 pH/conduct./temp meter: (pH 4 & 7 buffers)
1127	Started purging Well 15
1145	Sampled Well 15 for TCE & Vinyl chloride
1212	Started purging Well 13
1217	Bailed Well 13 dry
1224	Started purging Well 16
1235	Sampled Well 16 (same parameters as MW-15)
1245	" " 13 (" " " " " ")
1254	Started purging MW-6
1310	Sampled MW-6 (same as MW-15)
1327	Started purging MW-14
1340	Sampled MW-14 (same as MW-15)
1356	Started purging MW-11
1430	Sampled MW-11 (took duplicate; labeled MW-20)
1444	Started purging MW-12
1520	Sample MW-12 (same as MW-15)
1530	Picked up equip & put away
1555	Left site

VISITORS ON SITE:
None

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS.
None

WEATHER CONDITIONS:
Cloudy, 45-50 °F

IMPORTANT TELEPHONE CALLS:
-

PERSONNEL ON SITE: Dean Kinney

(FIELD ENGINEER)

GROUNDWATER SAMPLING LOG

PROJECT NAME Seismic Rubber
 PROJECT NO. 1-1686-000
 DATE 11/6/95

WELL NO. MW-15
 SAMPLED BY DWIK

WELL	INFORMATION	
DEPTH TO WATER	(TOC-ft)	7.5
	(wl.prot. -ft)	—
DEPTH OF WELL	(ft)	18.00
WELL DIAMETER	(inches)	2
FEET OF WATER		10.65
CASING VOLUME*	(gal)	1.7
PURGE VOLUME	(gal)	5.1
PRODUCT THICK.	(ft)	—
WELL CONDITION		ok
WEATHER		Cloudy, 45°F

	PURGE	DATA			
START PURGE TIME:	1132				
VOL. PURGED (gal)	3	4	5		
TIME	1135	1137	1139		
FLOW RATE					
pH (units)	6.02	6.09	6.11		
CONDUCTIVITY (umhos/cm)	540	627	633		
TEMP. (C)	15.1	15.2	15.1		
WATER COLOR	Red/BRN →				
PURGE AND SAMPLE EQUIP:	Polyethylene Bailar				

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
MW-15	1145	TCE @ U.L.	40ml Vial	2	NONE

ADDITIONAL INFORMATION: Lot of reddish brown sediment

TOC = Top of well casing
 wl.prot. = top of well protector
 *casing volume = $r^2h(\text{in ft}) \times 7.48 \text{ gal/ft}$

GROUNDWATER SAMPLING LOG

PROJECT NAME Sougal Rubber
 PROJECT NO. 1-1686-800
 DATE 11/6/95

WELL NO. MW-16
 SAMPLED BY DWK

WELL	INFORMATION	
DEPTH TO WATER	(TOC-ft)	7.17
	(wl.prot. -ft)	-
DEPTH OF WELL	(ft)	19.15
WELL DIAMETER	(inches)	2
FEET OF WATER		11.98
CASING VOLUME*	(gal)	1.92
PURGE VOLUME	(gal)	5.75
PRODUCT THICK.	(ft)	-
WELL CONDITION		OK
WEATHER		Cloudy, 50°F

		PURGE	DATA		
START PURGE TIME:	1229				
VOL. PURGED (gal)	4	5	5.75		
TIME	1229	1231	1232		
FLOW RATE					
pH (units)	6.07	6.06	6.08		
CONDUCTIVITY (umhos/cm)	246	297	325		
TEMP. (C)	15.0	15.1	15.0		
WATER COLOR	b/c				
PURGE AND SAMPLE EQUIP:	Polyethylene Bailer				

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
MW-16	1235	TRIA-U.C	40ml Vial	3	None

ADDITIONAL INFORMATION:

Some sediment

TOC = Top of well casing

wl.prot. = top of well protector

*casing volume = r^2h (in ft) x 7.48 gal/ft

GROUNDWATER SAMPLING LOG

PROJECT NAME Scough Rubber
 PROJECT NO. 1-1686-800
 DATE 11/6/95

WELL NO. MW-13
 SAMPLED BY DWK

WELL	INFORMATION	
DEPTH TO WATER	(TOC-ft)	7.09
	(wl.prot.-ft)	—
DEPTH OF WELL	(ft)	19.65
WELL DIAMETER	(inches)	2
FEET OF WATER		12.56
CASING VOLUME*	(gal)	201
PURGE VOLUME	(gal)	6.0
PRODUCT THICK.	(ft)	—
WELL CONDITION		pk
WEATHER		Cloudy, 50°F

PURGE		DATA			
START PURGE TIME:	12:12				
VOL. PURGED (gal)	3.5				
TIME	12:17				
FLOW RATE					
pH (units)	Bailed				
CONDUCTIVITY (umhos/cm)	Dry				
TEMP. (C)					
WATER COLOR					
PURGE AND SAMPLE EQUIP: Polyethylene Bailer					

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
MW-13	12:45	TCE & VC method 624	40ml vial	3	None

ADDITIONAL INFORMATION:

TOC = Top of well casing
 wl.prot. = top of well protector
 *casing volume = r²h(in ft) x 7.48 gal/ft

GROUNDWATER SAMPLING LOG

PROJECT NAME Ecogal Rubber
 PROJECT NO. 1-1686-800
 DATE 11/6/95

WELL NO. MW-6
 SAMPLED BY DW

WELL	INFORMATION	
DEPTH TO WATER	(TOC-ft)	6.28
	(wl.prot.-ft)	-
DEPTH OF WELL	(ft)	9.95
WELL DIAMETER	(inches)	2
FEET OF WATER		3.67
CASING VOLUME*	(gal)	0.59
PURGE VOLUME	(gal)	1.8
PRODUCT THICK.	(ft)	-
WELL CONDITION		ok
WEATHER		cloudy, 50° F

	PURGE	DATA
START PURGE TIME:	1254	
VOL. PURGED (gal)	1.0	1.8 1.0 <u>DW</u>
TIME	1257	
FLOW RATE		Bailed
pH (units)	6.01	
CONDUCTIVITY (umhos/cm)	1136	Dry
TEMP. (C)	15.4	
WATER COLOR	Red/BRN	
PURGE AND SAMPLE EQUIPT: <u>Polyethylene Bailor</u>		

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESER-VATIVE
<u>MW-6</u>	<u>1310</u>	<u>TRB & V.C.</u>	<u>40ml/vial</u>	<u>3</u>	<u>None</u>

ADDITIONAL INFORMATION:

TOC = Top of well casing

wl.prot. = top of well protector

*casing volume = r^2h (in ft) x 7.48 gal/ft

GROUNDWATER SAMPLING LOG

PROJECT NAME Seawall Rubber
 PROJECT NO. 1-1686-800
 DATE 11/6/95

WELL NO. MW-14
 SAMPLED BY DWK

WELL	INFORMATION	
DEPTH TO WATER	(TOC-ft)	7.88
	(wl.prot.-ft)	—
DEPTH OF WELL	(ft)	19.35
WELL DIAMETER	(inches)	2
FEET OF WATER		11.47
CASING VOLUME*	(gal)	1.84
PURGE VOLUME	(gal)	5.5
PRODUCT THICK.	(ft)	—
WELL CONDITION		ok
WEATHER		Cloudy, 50 °F

		PURGE	DATA		
START PURGE TIME:		1327			
VOL. PURGED (gal)	4	5	5.5		
TIME	1331	1333	1334		
FLOW RATE					
pH (units)	6.55	6.55	6.54		
CONDUCTIVITY (umhos/cm)	313	325	325		
TEMP. (C)	15.2	15.3	15.4		
WATER COLOR	BRN →				
PURGE AND SAMPLE EQUIP: Polyethylene Briler					

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESER-VATIVE
MW-14	1340	TCE & V.C.	40ml vial	3	None

ADDITIONAL INFORMATION:

TOC = Top of well casing

wl.prot. = top of well protector

*casing volume = r^2h (in ft) x 7.48 gal/ft

RETEC

GROUNDWATER SAMPLING LOG

PROJECT NAME Sensical Rubber
 PROJECT NO. 1-1686-800
 DATE 11/6/95

WELL NO. MW-11
 SAMPLED BY DME

WELL	INFORMATION	
DEPTH TO WATER	(TOC-ft)	6.57
	(wl.prot. -ft)	—
DEPTH OF WELL	(ft)	19.45
WELL DIAMETER	(inches)	4
FEET OF WATER		12.46
CASING VOLUME*	(gal)	8.63
PURGE VOLUME	(gal)	25.9
PRODUCT THICK.	(ft)	—
WELL CONDITION	Well cover in places	
WEATHER	Cloudy, 50°F	

PURGE		DATA			
START PURGE TIME:	1356				
VOL. PURGED (gal)	15	20	23	26	
TIME	1411	1417	1421	1426	
FLOW RATE					
pH (units)	4.54	4.88	4.89	4.89	
CONDUCTIVITY (umhos/cm)	539	575	599	598	
TEMP. (C)	16.1	16.1	16.1	16.1	
WATER COLOR	clear				
PURGE AND SAMPLE EQUIP: <u>Polyethylene Bailed</u>					

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESER-VATIVE
MW-11	1430	TCF & Vinyl Chloride method 624	40ml vinyl	3	None

ADDITIONAL INFORMATION:

TOC = Top of well casing

wl.prot. = top of well protector

*casing volume = r²h(in ft) x 7.48 gal/ft

GROUNDWATER SAMPLING LOG

PROJECT NAME Seoagal Rubber
 PROJECT NO. 1-1686-800
 DATE 11/6/95

Dup of
 WELL NO. MW-11
 SAMPLED BY DWK

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) (wl.prot. -ft)
DEPTH OF WELL	(ft)
WELL DIAMETER	(inches) <u>same</u>
FEET OF WATER	<u>as</u>
CASING VOLUME*	(gal)
PURGE VOLUME	(gal) <u>MW-11</u>
PRODUCT THICK.	(ft)
WELL CONDITION	
WEATHER	

PURGE DATA					
START PURGE TIME:					
VOL. PURGED (gal)					
TIME					
FLOW RATE	<u>same as</u>				
pH (units)	<u>MW-11</u>				
CONDUCTIVITY (umhos/cm)	<u>MW-11</u>				
TEMP. (C)					
WATER COLOR					
PURGE AND SAMPLE EQUIP:					

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-20</u>	<u>1440</u>	<u>TCE + VEG</u>	<u>40ml vial</u>	<u>3</u>	<u>None</u>

ADDITIONAL INFORMATION:

TOC = Top of well casing

wl.prot. = top of well protector

*casing volume = $r^2h(\text{in ft}) \times 7.48 \text{ gal/ft}$

GROUNDWATER SAMPLING LOG

PROJECT NAME Sponge Rubber
 PROJECT NO. 1-1686-800
 DATE 11/6/95

WELL NO. MW-12
 SAMPLED BY DWK

WELL	INFORMATION	
DEPTH TO WATER	(TOC-ft)	6.34
	(wl.prot. -ft)	-
DEPTH OF WELL	(ft)	19.25
WELL DIAMETER	(inches)	4
FEET OF WATER		13.01
CASING VOLUME*	(gal)	8.72
PURGE VOLUME	(gal)	20.2
PRODUCT THICK.	(ft)	-
WELL CONDITION		ok
WEATHER		cloudy, 50 °F

	PURGE	DATA			
START PURGE TIME:	1444				
VOL. PURGED (gal)	15	20	23	26	
TIME	1500	1506	1511	1515	
FLOW RATE					
pH (units)	5.72	5.74	5.79	5.83	
CONDUCTIVITY (umhos/cm)	879	529	824	801	
TEMP. (C)	15.3	15.6	15.4	15.3	
WATER COLOR	L BRN	clear	clear	clear	
PURGE AND SAMPLE EQUIP:	Polyethylene Bator				

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
MW-12	1520	TCE & V.C	40ml vial	3	None

ADDITIONAL INFORMATION:

TOC = Top of well casing

wl.prot. = top of well protector

*casing volume = $r^2h(\text{in ft}) \times 7.48 \text{ gal/ft}$



GROUNDWATER SAMPLING LOG

PROJECT NAME Sougal Rubber
 PROJECT NO. 1-1686-800
 DATE 1/30/96

WELL NO. MW-16
 SAMPLED BY DWK

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>5.82</u> (wl.prot. -ft)
DEPTH OF WELL	(ft) <u>19.4</u>
WELL DIAMETER	(inches) <u>2</u>
FEET OF WATER	<u>13.58</u>
CASING VOLUME*	(gal) <u>2.17</u>
PURGE VOLUME	(gal) <u>6.5</u>
PRODUCT THICK.	(ft) <u>-</u>
WELL CONDITION	<u>Bolted to cover gone</u>
WEATHER	<u>Clear, 30 °F</u>

	PURGE	DATA
START PURGE TIME:	<u>1500</u>	
VOL. PURGED (gal)	<u>5.0</u>	<u>6.0</u> <u>6.5</u>
TIME	<u>1517</u>	<u>1519</u> <u>1521</u>
FLOW RATE		
pH (units)	<u>6.17</u>	<u>6.13</u> <u>6.18</u>
CONDUCTIVITY (umhos/cm)	<u>119</u>	<u>120</u> <u>122</u>
TEMP. (C)	<u>11.7</u>	<u>12.6</u> <u>12.8</u>
WATER COLOR	<u>BRN</u>	
PURGE AND SAMPLE EQUIPT:	<u>Polyethylene Bailer</u>	

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-16</u>	<u>1525</u>	<u>Method 624</u>	<u>40ml vial</u>	<u>3</u>	<u>HCl</u>

ADDITIONAL INFORMATION: Took duplicate - labeled MW-16S /15140i

TOC = Top of well casing
 wl.prot. = top of well protector
 *casing volume = r²h (in ft) x 7.48 gal/ft

GROUNDWATER SAMPLING LOG

PROJECT NAME Sougal Rubber
 PROJECT NO. 1-1686-800
 DATE 1/30/96

WELL NO. MW-4
 SAMPLED BY DWLC

WELL	INFORMATION	
DEPTH TO WATER	(TOC-ft)	6.07
	(wl.prot.-ft)	
DEPTH OF WELL	(ft)	9.8
WELL DIAMETER	(inches)	2
FEET OF WATER		3.73
CASING VOLUME*	(gal)	0.6
PURGE VOLUME	(gal)	1.8
PRODUCT THICK.	(ft)	-
WELL CONDITION	Well pack broke	
WEATHER	Clear, 50F	

		PURGE	DATA		
START PURGE TIME:		14:39			
VOL. PURGED (gal)	1	1.5	2.0		
TIME	1440	1442	1443		
FLOW RATE					
pH (units)	6.44	6.42	6.34		
CONDUCTIVITY (umhos/cm)	347	348	342		
TEMP. (C)	12.0	12.1	12.0		
WATER COLOR	BRN				
PURGE AND SAMPLE EQUIPT: <u>Polyethylene Bailer</u>					

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESER-VATIVE
MW-4	1445	Method 62A	40ml/vial	3	HCl

ADDITIONAL INFORMATION:

TOC = Top of well casing

wl.prot. = top of well protector

*casing volume = $r^2h(\text{in ft}) \times 7.48 \text{ gal/ft}$

SOUND ANALYTICAL SERVICES, INC.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

TRANSMITTAL MEMORANDUM

DATE: February 9, 1996

TO: Grant Hainsworth
Retec

PROJECT: 1-1686-800 Scougal Rubber

LABORATORY NUMBER: 54371

Enclosed are the test results for three samples received at Sound Analytical Services on January 31, 1996.

The report consists of this transmittal memo, analytical results, quality control reports, a copy of the chain-of-custody, a list of data qualifiers when applicable, and a copy of any requested raw data.

Should there be any questions regarding this report, please contact me at (206) 922-2310.

Sincerely,



Andrew J. Riddell
Project Manager

AJR:tm

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-4
Lab ID:	54371-01
Date Received:	1/31/96
Date Prepared:	2/7/96
Date Analyzed:	2/7/96
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	99		88	118
Toluene-d8	90		83	111
4-Bromofluorobenzene	93		86	112

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	1	
Vinyl chloride	ND	0.2	
Bromomethane	ND	1	
Chloroethane	ND	1	
Trichlorofluoromethane	ND	1	
1,1-Dichloroethene	ND	0.5	
Acetone	1.2	0.5	B1
Vinyl Acetate	ND	0.5	
Methylene chloride	0.49	0.5	J
cis-1,2-Dichloroethene	ND	0.5	
Acrylonitrile	ND	5	
Acrolein	ND	5	
1,1-Dichloroethane	ND	0.5	
trans-1,2-Dichloroethene	ND	0.5	
2-Butanone	0.41	0.5	J
Chloroform	ND	0.5	
1,1,1-Trichloroethane	ND	0.5	
Carbon Tetrachloride	ND	0.5	
Benzene	ND	0.5	
1,2-Dichloroethane	ND	0.5	
Trichloroethene	13	0.2	
1,2-Dichloropropane	ND	0.5	
Bromodichloromethane	ND	0.5	
2-Chloroethylvinylether	ND	2.5	
cis-1,3-Dichloropropene	ND	0.5	
4-Methyl-2-pentanone	ND	0.5	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for 54371-01 continued...

Analyte	Result (ug/L)	PQL	Flags
Toluene	ND	0.5	
trans-1,3-Dichloropropene	ND	0.5	
1,1,2-Trichloroethane	ND	0.5	
Tetrachloroethene	ND	0.5	
Dibromochloromethane	ND	0.5	
Chlorobenzene	ND	0.5	
Ethylbenzene	ND	0.5	
m,p-Xylene	ND	0.5	
o-Xylene	ND	0.5	
Styrene	ND	0.5	
Bromoform	ND	0.5	
1,1,2,2-Tetrachloroethane	ND	0.5	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-16
Lab ID:	54371-02
Date Received:	1/31/96
Date Prepared:	2/7/96
Date Analyzed:	2/7/96
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	100		88	118
Toluene-d8	98		83	111
4-Bromofluorobenzene	98		86	112

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	1	
Vinyl chloride	0.27	0.2	
Bromomethane	ND	1	
Chloroethane	ND	1	
Trichlorofluoromethane	ND	1	
1,1-Dichloroethene	ND	0.5	
Acetone	1.7	0.5	B1
Vinyl Acetate	ND	0.5	
Methylene chloride	0.37	0.5	J
cis-1,2-Dichloroethene	0.76	0.5	
Acrylonitrile	ND	5	
Acrolein	ND	5	
1,1-Dichloroethane	ND	0.5	
trans-1,2-Dichloroethene	ND	0.5	
2-Butanone	1.6	0.5	
Chloroform	ND	0.5	
1,1,1-Trichloroethane	ND	0.5	
Carbon Tetrachloride	ND	0.5	
Benzene	ND	0.5	
1,2-Dichloroethane	ND	0.5	
Trichloroethene	ND	0.2	
1,2-Dichloropropane	ND	0.5	
Bromodichloromethane	ND	0.5	
2-Chloroethylvinylether	ND	2.5	
cis-1,3-Dichloropropene	ND	0.5	
4-Methyl-2-pentanone	ND	0.5	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for 54371-02 continued...

Analyte	Result (ug/L)	PQL	Flags
Toluene	ND	0.5	
trans-1,3-Dichloropropene	ND	0.5	
1,1,2-Trichloroethane	ND	0.5	
Tetrachloroethene	ND	0.5	
Dibromochloromethane	ND	0.5	
Chlorobenzene	ND	0.5	
Ethylbenzene	ND	0.5	
m,p-Xylene	ND	0.5	
o-Xylene	ND	0.5	
Styrene	ND	0.5	
Bromoform	ND	0.5	
1,1,2,2-Tetrachloroethane	ND	0.5	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-16S
Lab ID:	54371-03
Date Received:	1/31/96
Date Prepared:	2/7/96
Date Analyzed:	2/7/96
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	100		88	118
Toluene-d8	92		83	111
4-Bromofluorobenzene	98		86	112

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	1	
Vinyl chloride	0.23	0.2	
Bromomethane	ND	1	
Chloroethane	ND	1	
Trichlorofluoromethane	ND	1	
1,1-Dichloroethene	ND	0.5	
Acetone	1.8	0.5	B1
Vinyl Acetate	ND	0.5	
Methylene chloride	0.32	0.5	J
cis-1,2-Dichloroethene	0.62	0.5	
Acrylonitrile	ND	5	
Acrolein	ND	5	
1,1-Dichloroethane	ND	0.5	
trans-1,2-Dichloroethene	ND	0.5	
2-Butanone	1.6	0.5	
Chloroform	ND	0.5	
1,1,1-Trichloroethane	ND	0.5	
Carbon Tetrachloride	ND	0.5	
Benzene	ND	0.5	
1,2-Dichloroethane	ND	0.5	
Trichloroethene	ND	0.2	
1,2-Dichloropropane	ND	0.5	
Bromodichloromethane	ND	0.5	
2-Chloroethylvinylether	ND	2.5	
cis-1,3-Dichloropropene	ND	0.5	
4-Methyl-2-pentanone	ND	0.5	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for 54371-03 continued...

Analyte	Result (ug/L)	PQL	Flags
Toluene	ND	0.5	
trans-1,3-Dichloropropene	ND	0.5	
1,1,2-Trichloroethane	ND	0.5	
Tetrachloroethene	ND	0.5	
Dibromochloromethane	ND	0.5	
Chlorobenzene	ND	0.5	
Ethylbenzene	ND	0.5	
m,p-Xylene	ND	0.5	
o-Xylene	ND	0.5	
Styrene	ND	0.5	
Bromoform	ND	0.5	
1,1,2,2-Tetrachloroethane	ND	0.5	

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - T3634
Date Received:	-
Date Prepared:	2/7/96
Date Analyzed:	2/7/96
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Dibromofluoromethane	98		88	118
Toluene-d8	95		83	111
4-Bromofluorobenzene	95		86	112

Analyte	Result (ug/L)	PQL	Flags
Chloromethane	ND	1	
Vinyl chloride	ND	0.2	
Bromomethane	ND	1	
Chloroethane	ND	1	
Trichlorofluoromethane	ND	1	
1,1-Dichloroethene	ND	0.5	
Acetone	0.4	0.5	J
Vinyl Acetate	ND	0.5	
Methylene chloride	ND	0.5	
cis-1,2-Dichloroethene	ND	0.5	
Acrylonitrile	ND	5	
Acrolein	ND	5	
1,1-Dichloroethane	ND	0.5	
trans-1,2-Dichloroethene	ND	0.5	
2-Butanone	ND	0.5	
Chloroform	ND	0.5	
1,1,1-Trichloroethane	ND	0.5	
Carbon Tetrachloride	ND	0.5	
Benzene	ND	0.5	
1,2-Dichloroethane	ND	0.5	
Trichloroethene	ND	0.2	
1,2-Dichloropropane	ND	0.5	
Bromodichloromethane	ND	0.5	
2-Chloroethylvinylether	ND	2.5	
cis-1,3-Dichloropropene	ND	0.5	
4-Methyl-2-pentanone	ND	0.5	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 624 data for T3634 continued...

Analyte	Result (ug/L)	PQL	Flags
Toluene	ND	0.5	
trans-1,3-Dichloropropene	ND	0.5	
1,1,2-Trichloroethane	ND	0.5	
Tetrachloroethene	ND	0.5	
Dibromochloromethane	ND	0.5	
Chlorobenzene	ND	0.5	
Ethylbenzene	ND	0.5	
m,p-Xylene	ND	0.5	
o-Xylene	ND	0.5	
Styrene	ND	0.5	
Bromoform	ND	0.5	
1,1,2,2-Tetrachloroethane	ND	0.5	

SOUND ANALYTICAL SERVICES, INC.

Blank Spike/Blank Spike Duplicate Report

Lab ID: T3634
Date Prepared: 2/7/96
Date Analyzed: 2/7/96
QC Batch ID: T3634

Volatile Organics by USEPA Method 624

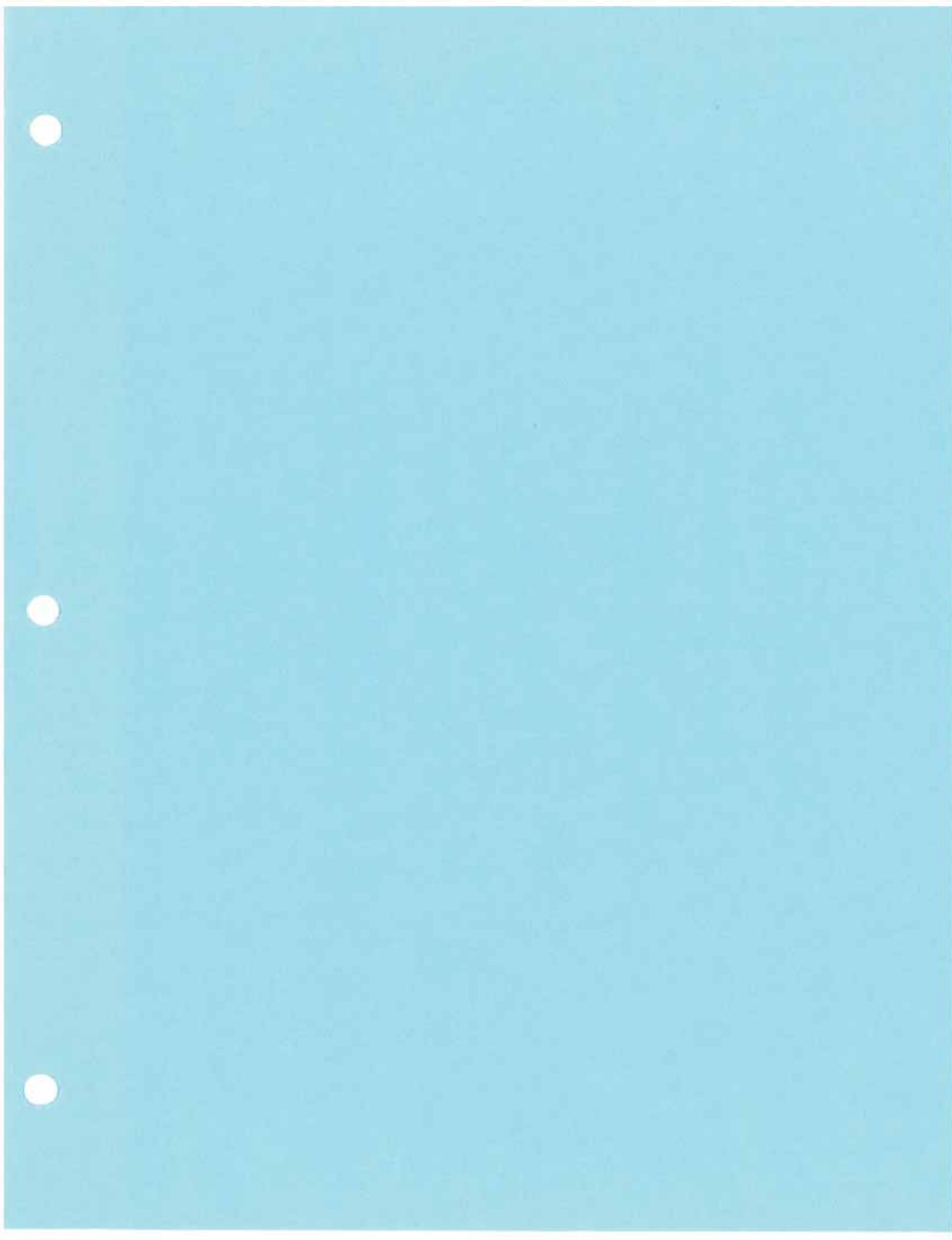
Compound Name	Blank Result (ug/L)	Spike Amount (ug/L)	BS Result (ug/L)	BS % Rec.	BSD Result (ug/L)	BSD % Rec.	RPD	Flag
1,1-Dichloroethene	0	5	4.5	89	4.6	91	2.3	
Benzene	0	5	5.2	103	5.1	103	0.0	
Trichloroethene	0	5	4.9	98	4.9	98	0.5	
Toluene	0	5	4.7	95	4.7	94	0.7	
Chlorobenzene	0	5	4.8	95	4.7	95	0.6	

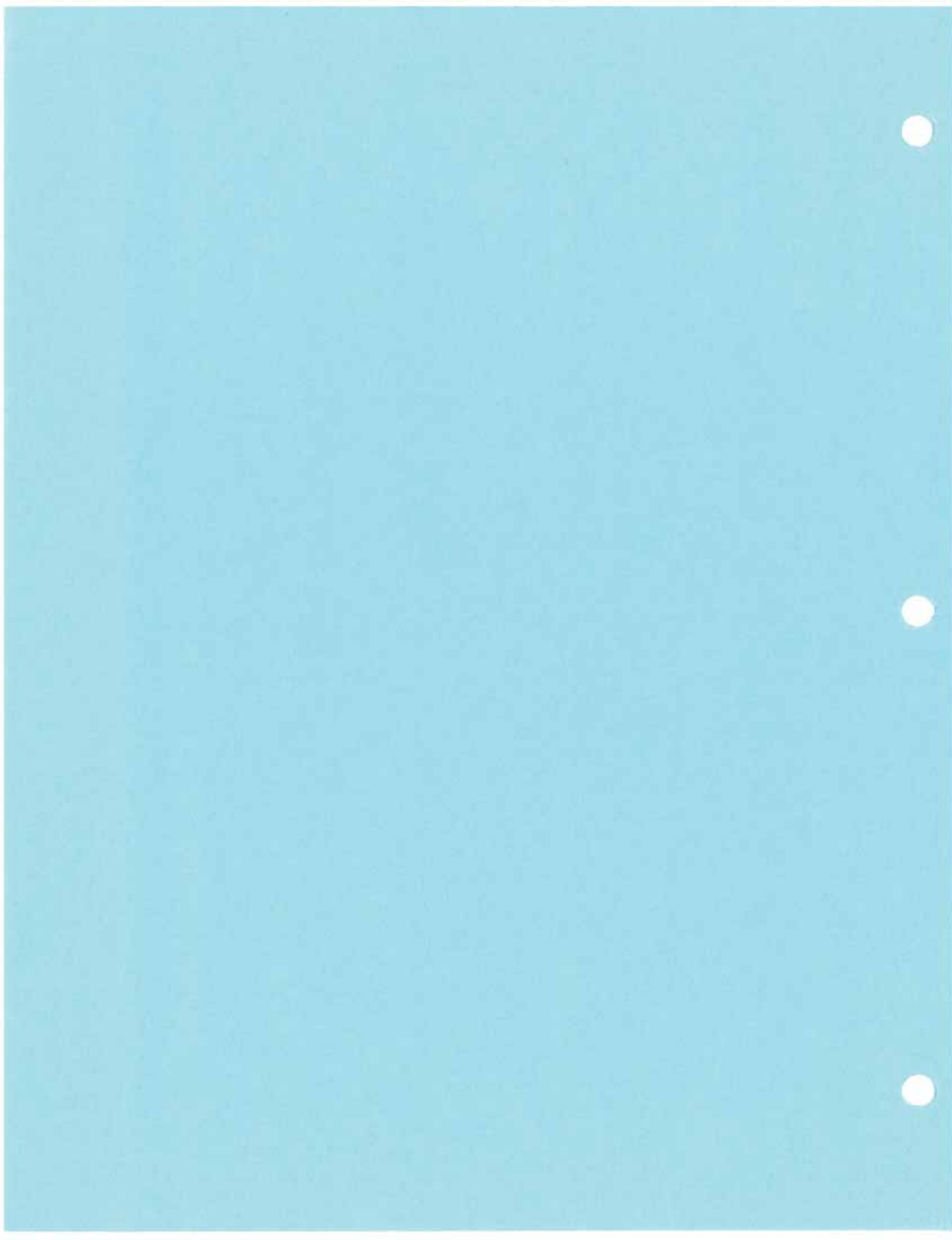
SOUND ANALYTICAL SERVICES, INC.

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 • TELEPHONE 206-922-2310 • FAX 206-922-5047

DATA QUALIFIERS AND ABBREVIATIONS

- J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.
- B1: This analyte was also detected in the associated method blank. The reported sample results have been adjusted for moisture, final extract volume, and/or dilutions performed during extract preparation. The analyte concentration was evaluated prior to sample preparation adjustments, and was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank).
- B2: This analyte was also detected in the associated method blank. However, the analyte concentration in the sample was determined to be significantly higher than the method blank (greater than ten times the concentration reported in the blank).
- E: The concentration of this analyte exceeded the instrument calibration range.
- D: The reported result for this analyte is calculated based on a secondary dilution factor.
- X1: Contaminant does not appear to be "typical" product. Elution pattern suggests it may be _____.
- X2: Contaminant does not appear to be "typical" product. Further testing is suggested for identification.
- X3: Identification and quantification of peaks was complicated by matrix interference; GC/MS confirmation is recommended.
- X4: RPD for duplicates outside advisory QC limits. Sample was re-analyzed with similar results.
- X4a: RPD for duplicates outside advisory QC limits due to analyte concentration near the method practical quantitation limit/detection limit.
- X5: Matrix spike was diluted out during analysis.
- X6: Recovery of matrix spike outside advisory QC limits. Sample was re-analyzed with similar results.
- X7: Recovery of matrix spike outside advisory QC limits. Matrix interference is indicated by blank spike recovery data.
- X7a: Recovery and/or RPD values for MS/MSD outside advisory QC limits due to high contaminant levels.
- X8: Surrogate was diluted out during analysis.
- X9: Surrogate recovery outside advisory QC limits due to matrix composition.
- N: See analytical narrative.
- ND: Not Detected
- PQL: Practical Quantitation Limit
- MCL: Maximum Contaminant Level





SOUND ANALYTICAL SERVICES, INC.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

TRANSMITTAL MEMORANDUM

DATE: June 14, 1995

TO: Dave King
Retec

LABORATORY NUMBER: 49168

Enclosed are the test results for six samples received at Sound Analytical Services on June 5, 1995.

The report consists of this transmittal memo, analytical results, quality control reports, a copy of the chain-of-custody, a list of data qualifiers when applicable, and a copy of any requested raw data.

Should there be any questions regarding this report, please call me at (206) 922-2310.

Sincerely,



Andrew J. Riddell
Project Manager

AJR:tm

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-14
Lab ID:	49168-01
Date Received:	6/5/95
Date Prepared:	6/8/95
Date Analyzed:	6/8/05
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
1,2-Dichloroethane-d4	102		76	114
Toluene-d8	102		88	110
Bromofluorobenzene	88		86	115

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	28	2	D
Trichloroethene	47	2	D

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	PW-9
Lab ID:	49168-02
Date Received:	6/5/95
Date Prepared:	6/9/95
Date Analyzed:	6/9/95
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
1,2-Dichloroethane-d4	100		76	114
Toluene-d8	91		88	110
Bromofluorobenzene	93		86	115

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	1.9	0.2	
Trichloroethene	ND	0.2	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-13
Lab ID:	49168-03
Date Received:	6/5/95
Date Prepared:	6/8/95
Date Analyzed:	6/8/05
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
1,2-Dichloroethane-d4	101		76	114
Toluene-d8	97		88	110
Bromofluorobenzene	98		86	115

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	7.9	0.2	
Trichloroethene	18	0.2	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	OW-10
Lab ID:	49168-04
Date Received:	6/5/95
Date Prepared:	6/8/95
Date Analyzed:	6/8/05
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
1,2-Dichloroethane-d4	103		76	114
Toluene-d8	97		88	110
Bromofluorobenzene	99		86	115

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	2.6	0.2	
Trichloroethene	14	0.2	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-11
Lab ID:	49168-05
Date Received:	6/5/95
Date Prepared:	6/9/95
Date Analyzed:	6/9/95
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
1,2-Dichloroethane-d4	101		76	114
Toluene-d8	86	X9	88	110
Bromofluorobenzene	105		86	115

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	ND	0.2	
Trichloroethene	8.6	0.2	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	DUP
Lab ID:	49168-06
Date Received:	6/5/95
Date Prepared:	6/9/95
Date Analyzed:	6/9/95
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
1,2-Dichloroethane-d4	102		76	114
Toluene-d8	89		88	110
Bromofluorobenzene	101		86	115

Analyte	Result	PQL	Flags
	(ug/L)		
Vinyl chloride	2	0.2	
Trichloroethene	0.76	0.2	

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - D8829
Date Received:	-
Date Prepared:	6/8/95
Date Analyzed:	6/8/05
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
1,2-Dichloroethane-d4	101		76	114
Toluene-d8	98		88	110
Bromofluorobenzene	106		86	115

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	ND	0.2	
Trichloroethene	ND	0.2	

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - D8858
Date Received:	-
Date Prepared:	6/9/95
Date Analyzed:	6/9/95
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
1,2-Dichloroethane-d4	101		76	114
Toluene-d8	93		88	110
Bromofluorobenzene	113		86	115

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	ND	0.2	
Trichloroethene	ND	0.2	

SOUND ANALYTICAL SERVICES, INC.

Blank Spike/Blank Spike Duplicate Report

Lab ID: D8829
Date Prepared: 6/8/95
Date Analyzed: 6/8/05
QC Batch ID: D8829

Volatile Organics by USEPA Method 624

Compound Name	Blank Result (ug/L)	Spike Amount (ug/L)	BS Result (ug/L)	BS % Rec.	BSD Result (ug/L)	BSD % Rec.	RPD	Flag
Trichloroethene	0	5	3.1	63	3.6	73	15.0	

SOUND ANALYTICAL SERVICES, INC.

Blank Spike/Blank Spike Duplicate Report

Lab ID: D8858
Date Prepared: 6/9/95
Date Analyzed: 6/9/95
QC Batch ID: D8858

Volatile Organics by USEPA Method 624

Compound Name	Blank Result (ug/L)	Spike Amount (ug/L)	BS Result (ug/L)	BS % Rec.	BSD Result (ug/L)	BSD % Rec.	RPD	Flag
Trichloroethene	0	5	4.8	97	4.7	95	2.2	



SOUND ANALYTICAL SERVICES, INC.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 Pacific Hwy. East
Tacoma, Washington 984
(206) 922-2310 • FAX (206) 922-5047

CHAIN OF CUSTODY / REQUEST FOR LABORATORY ANALYSIS

CLIENT: <i>ReTel 1-1686</i>		ANALYSIS REQUESTED:										SPECIAL INSTRUCTIONS/COMMENTS:										
PROJECT NAME: <i>Scoring Rubber</i>												<i>Required Detection Limit is 0.2 mg/l (GCMS)</i> <i>Same requirements as the previous analysis. Please call Linda Baker w/ any questions.</i>										
CONTACT: <i>Dave King / Linda Baker</i>																						
PHONE NO: <i>624-9349</i>																						
LAB #	SAMPLE I.D.	DATE	TIME	MATRIX	# of Containers	Halogenated Volatiles EPA 801/8010	Aromatic Volatiles EPA 602/8020	Chlorinated Pest., PCB's EPA 608/8080	PAH's	Volatile Organics EPA 624/8240 (GCMS)	Semi-volatiles EPA 625/8270 (GCMS)			TPH 418.1	Oil & Grease	Total Metals (Specify below)	8 Metals	Volatiles	Semi-volatiles	Pesticides & Herbicides		
	<i>MW-14</i>	<i>5/1/95</i>	<i>1435</i>	<i>H₂O</i>	<i>2</i>															<i>EPA 624 GCMS TCB & Amphibiole</i>		
	<i>PLW-9</i>		<i>1545</i>		<i>2</i>													<i>X</i>				
	<i>MW-13</i>		<i>1700</i>		<i>2</i>													<i>X</i>				
	<i>OW-10</i>		<i>1506</i>		<i>2</i>													<i>X</i>				
	<i>MW-11</i>		<i>1430</i>		<i>2</i>													<i>X</i>				
	<i>Dup</i>				<i>2</i>													<i>X</i>				
Relinquished By	<i>D.W. RETEC</i>	Signature	Printed Name		Firm	Time / Date																
Received By	<i>Mike Ogilvie</i>	<i>RET</i>	<i>DAVID KING</i>		<i>RETEL</i>	<i>745/6/2/95</i>																
Relinquished By						<i>1:50 6/2/95</i>																
Received By																						
Relinquished By																						
Received By																						



REMEDICATION TECHNOLOGIES INC

FIELD ACTIVITY DAILY LOG

PROJECT Sougl Pubber

COMPLETED BY D. Krug

JOB NO. 1-1686-800

APPROVED BY _____

DAY & DATE 6-1-95

SHEET 1 OF 1

FIELD ACTIVITY SUBJECT: OW Sampling

DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

TIME	DESCRIPTION
1300	Arrived onsite at 1300 at the request of Linda Baker to gauge all wells and sample mws MW-11, MW-13, OW-10, PW-9 at MW-14.
1310	Began gauging wells using a water level indicator. Measurements were from top of casing. See attached gauging sheet.
1410	Began gws sampling. See attached groundwater sampling sheets. The wells were purged at least 3 well volumes prior to sampling. Samples were obtained w/ a disussible bailer and nylon cord. New material was used between wells. Purge water was discarded in the onsite storm sewer - Sougl property. Parameters including T, Cond. and pH were collected during sampling.
1700	Finished sampling, cleaned-up left site.
	Note: The nonvent cover to MW-12 was broken and was transferred to MW-11. This cover needs to be replaced.

VISITORS ON SITE: None

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS.

WEATHER CONDITIONS: Sunny, 80°

IMPORTANT TELEPHONE CALLS:

PERSONNEL ON SITE: DW JF

(FIELD ENGINEER)

REMEDATION TECHNOLOGIES, INC.

Groundwater Well Development Record
Sampling

PROJECT *Groundwater* WELL NO. *MW-13*
 DATE *6-1-85* TIME *1640*
 WEATHER CONDITIONS *Sunny, 80°*

1. WELL DEVELOPMENT AND EVACUATION

- a. Location of measuring point *TDC*
- b. Depth of water table from measuring point *6.44*
- c. Height of measuring point above ground surface *+*
- d. Total depth of well below measuring point *19.65*
- e. Length of water column (line 1d-1b) *13.21*
- f. Development method *Disposable bailer & nylon cord*
- g. Evacuated volume *6.5 gallons*

Pumping	Duration	Volume Removed	pH	Cond.	T(C)	Color
	<i>1.0</i>		<i>3.47</i>	<i>600</i>	<i>15.1</i>	<i>lt. yellow</i>
	<i>2.0</i>		<i>3.48</i>	<i>1600</i>	<i>14.2</i>	
	<i>4.0</i>		<i>3.53</i>	<i>1700</i>	<i>13.9</i>	
	<i>5.0</i>		<i>3.63</i>	<i>2000</i>	↓	
	<i>7.0</i>		<i>3.65</i>	<i>2000</i>	↓	↓

2. COMMENTS *Sampled at 1700*

REMEDATION TECHNOLOGIES, INC.

Groundwater Well Development Record
Sampling

PROJECT *Scowal Rubber* WELL NO. *mw-11*
 DATE *6-1-95* TIME *1550*
 WEATHER CONDITIONS *Sunny, 80°*

1. WELL DEVELOPMENT AND EVACUATION

- a. Location of measuring point *TOC*
- b. Depth of water table from measuring point *5.88*
- c. Height of measuring point above ground surface *-*
- d. Total depth of well below measuring point *19.55*
- e. Length of water column (line 1d-1b) *13.67*
- f. Development method *disposable bailer & nylon cord*
- g. Evacuated volume *27 gallons*

Pumping	Duration	Volume Removed	pH	Cond.	T(C)	Color
	<i>5.0</i>		<i>6.28</i>	<i>350</i>	<i>15.6</i>	<i>H. yellow</i>
	<i>10.0</i>		<i>6.01</i>	<i>370</i>	<i>13.7</i>	↓
	<i>15.0</i>		<i>5.75</i>	<i>370</i>	<i>13.5</i>	
	<i>20.0</i>		<i>5.52</i>	<i>370</i>	<i>13.3</i>	
	<i>27.0</i>		<i>5.58</i>	<i>370</i>	<i>13.4</i>	

2. COMMENTS *Sampled at 1630*

REMEDIATION TECHNOLOGIES, INC.

Groundwater Well Development Record
Sampling

PROJECT Georgal Packer WELL NO. PW-9
 DATE 6-1-95 TIME 1570
 WEATHER CONDITIONS Sunny, 80°

1. WELL DEVELOPMENT AND EVACUATION

- a. Location of measuring point TOL
- b. Depth of water table from measuring point 8.92
- c. Height of measuring point above ground surface —
- d. Total depth of well below measuring point 24.09
- e. Length of water column (line 1d-1b) 15.17
- f. Development method disposable bailer & nylon cord
- g. Evacuated volume 30 gallons

Pumping	Duration	Volume	Removed	pH	Cond.	T(C)	Color
		5		5.25	440	16.7	H. red
		10		4.80	430	15.3	SAA
		20		5.85	340	15.3	H. yellow
		25		5.94	350	15.4	↓
		30		5.97	340	15.4	↓

2. COMMENTS Sampled at 1545

REMEDATION TECHNOLOGIES, INC.

Groundwater Well Development Record
Sampling

PROJECT Seward Rubber WELL NO. OW-10
 DATE 6-1-85 TIME 1445
 WEATHER CONDITIONS Sunny, 80°

1. WELL DEVELOPMENT AND EVACUATION

- a. Location of measuring point TDC
- b. Depth of water table from measuring point 6.20
- c. Height of measuring point above ground surface —
- d. Total depth of well below measuring point 14.28
- e. Length of water column (line 1d-1b) 8.08
- f. Development method disposable bailer & nylon cord
- g. Evacuated volume 4.5 gallons

Pumping	Duration	Volume Removed	pH	Cond.	T(C)	Color
		1.0	6.36	490	16.2	light red
		2.0	6.06	550	15.8	↓
		3.0	5.92	600	15.4	
		4.5	5.80	600	15.3	

2. COMMENTS Sampled at 1500

REMEDATION TECHNOLOGIES, INC.

Groundwater Well Development Record
Sampling

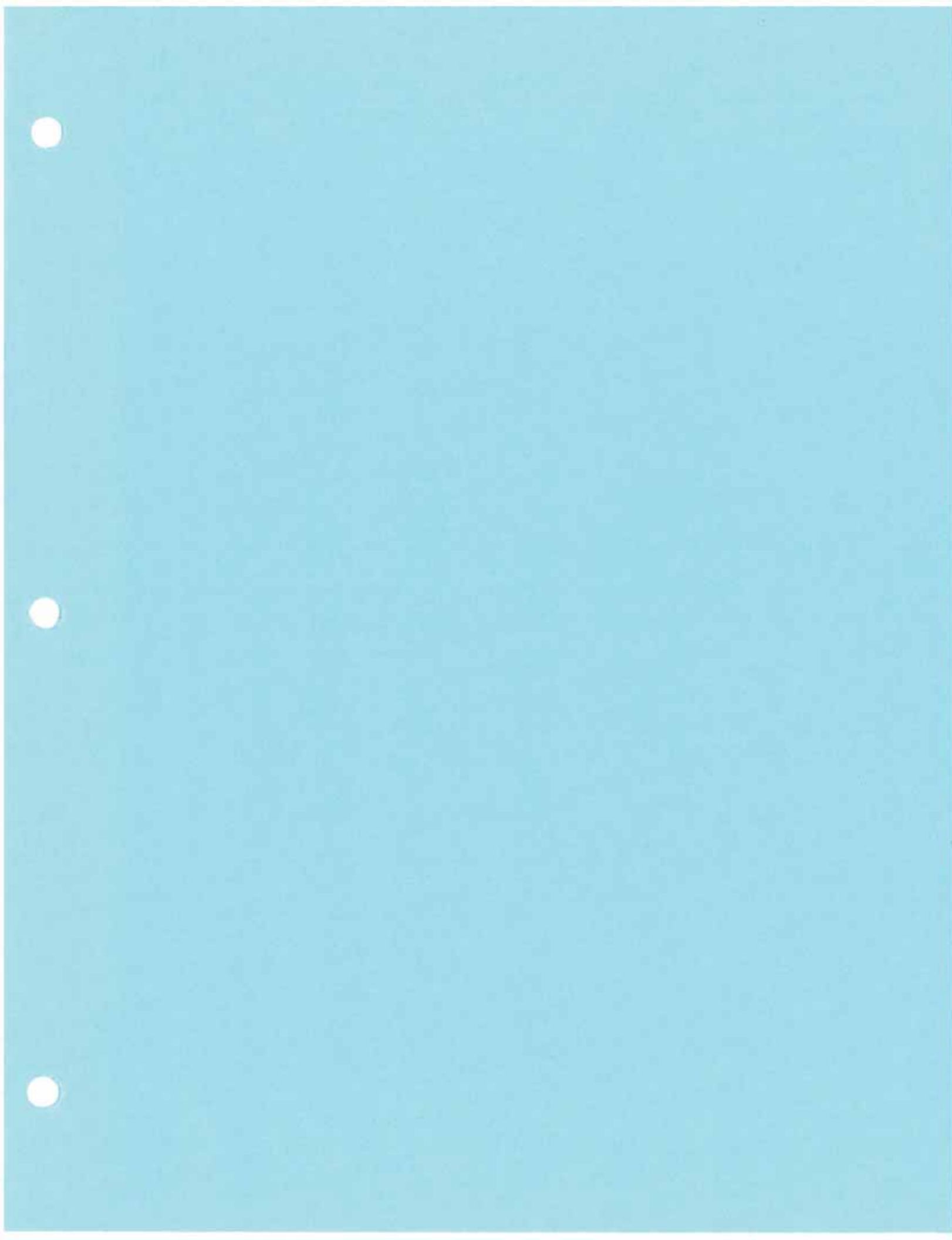
PROJECT Stougal Rubber WELL NO. MW-14
 DATE 6-1-95 TIME 1410
 WEATHER CONDITIONS Sunny 80°

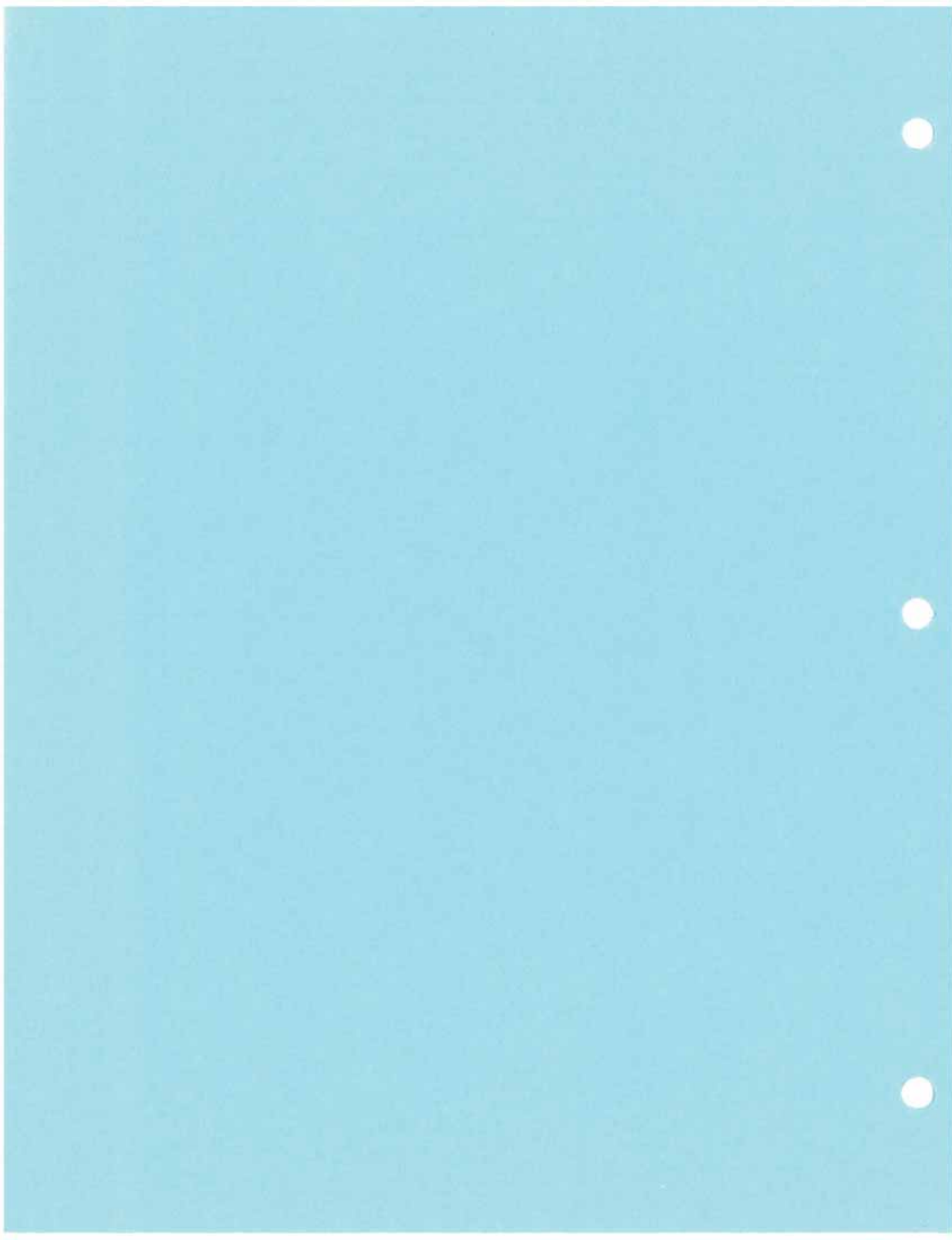
1. WELL DEVELOPMENT AND EVACUATION

- a. Location of measuring point DC
- b. Depth of water table from measuring point 7.17
- c. Height of measuring point above ground surface —
- d. Total depth of well below measuring point 19.38
- e. Length of water column (line 1d-1b) 12.21
- f. Development method disposable bailer & nylon cord
- g. Evacuated volume 6.5 gallons

Pumping	Duration	Volume Removed	pH	Cond.	T(C)	Color
	1.0		6.25	220	16.0	light red
	2.0		6.27	170	15.4	↓
	4.0		6.19	210	13.9	
	6.5		6.19	190	13.9	

2. COMMENTS Sampled at 1435





SOUND ANALYTICAL SERVICES, INC.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

TRANSMITTAL MEMORANDUM

DATE: March 27, 1995

TO: Dave King
Retec

PROJECT: Scougal Rubber

LABORATORY NUMBER: 47015

Enclosed are the original and one copy of the Tier II data deliverables package for Laboratory Work Order Number 47015. Eight samples were received for analysis at Sound Analytical Services, Inc., on March 10, 1995.

Should there be any questions regarding this data package, please do not hesitate to call me at (206) 922-2310.

Sincerely,



Andrew J. Riddell
Project Manager

AJR:tm

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-14
Lab ID:	47015-01
Date Received:	3/10/95
Date Prepared:	3/22/95
Date Analyzed:	3/22/95
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
1,2-Dichloroethane-d4	98		76	114
Toluene-d8	106		88	110
Bromofluorobenzene	90		86	115

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	ND	0.2	
Trichloroethene	20	0.2	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	PW-9
Lab ID:	47015-02
Date Received:	3/10/95
Date Prepared:	3/22/95
Date Analyzed:	3/22/95
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
1,2-Dichloroethane-d4	94		76	114
Toluene-d8	103		88	110
Bromofluorobenzene	115		86	115

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	2.3	0.2	
Trichloroethene	1.8	0.2	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-13
Lab ID:	47015-03
Date Received:	3/10/95
Date Prepared:	3/22/95
Date Analyzed:	3/22/95
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
1,2-Dichloroethane-d4	93		76	114
Toluene-d8	106		88	110
Bromofluorobenzene	122	X9	86	115

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	0.3	0.2	
Trichloroethene	16	0.2	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	OW-10
Lab ID:	47015-04
Date Received:	3/10/95
Date Prepared:	3/22/95
Date Analyzed:	3/22/95
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
1,2-Dichloroethane-d4	94		76	114
Toluene-d8	106		88	110
Bromofluorobenzene	101		86	115

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	0.29	0.2	
Trichloroethene	13	0.2	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-11
Lab ID:	47015-05
Date Received:	3/10/95
Date Prepared:	3/22/95
Date Analyzed:	3/22/95
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
1,2-Dichloroethane-d4	99		76	114
Toluene-d8	107		88	110
Bromofluorobenzene	117	X9	86	115

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	ND	0.2	
Trichloroethene	3.9	0.2	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-12
Lab ID:	47015-06
Date Received:	3/10/95
Date Prepared:	3/22/95
Date Analyzed:	3/22/95
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
1,2-Dichloroethane-d4	100		76	114
Toluene-d8	105		88	110
Bromofluorobenzene	104		86	115

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	ND	0.2	
Trichloroethene	ND	0.2	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	DUP
Lab ID:	47015-07
Date Received:	3/10/95
Date Prepared:	3/22/95
Date Analyzed:	3/22/95
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
1,2-Dichloroethane-d4	97		76	114
Toluene-d8	105		88	110
Bromofluorobenzene	123	X9	86	115

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	ND	0.2	
Trichloroethene	4	0.2	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-2
Lab ID:	47015-08
Date Received:	3/10/95
Date Prepared:	3/22/95
Date Analyzed:	3/22/95
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
1,2-Dichloroethane-d4	102		76	114
Toluene-d8	104		88	110
Bromofluorobenzene	108		86	115

Analyte	Result	PQL	Flags
	(ug/L)		
Vinyl chloride	ND	0.2	
Trichloroethene	0.82	0.2	

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - D7387
Date Received:	-
Date Prepared:	3/22/95
Date Analyzed:	3/22/95
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
1,2-Dichloroethane-d4	97		76	114
Toluene-d8	104		88	110
Bromofluorobenzene	99		86	115

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	ND	0.2	
Trichloroethene	ND	0.2	

SOUND ANALYTICAL SERVICES, INC.

Blank Spike/Blank Spike Duplicate Report

Lab ID: D7387
Date Prepared: 3/22/95
Date Analyzed: 3/22/95
QC Batch ID: D7387

Volatile Organics by USEPA Method 624

Compound Name	Blank Result (ug/L)	Spike Amount (ug/L)	BS Result (ug/L)	BS % Rec.	BSD Result (ug/L)	BSD % Rec.	RPD	Flag
Trichloroethene	0	5	5.6	113	4.5	90	22.0	

SOUND ANALYTICAL SERVICES, INC.

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DATA QUALIFIERS AND ABBREVIATIONS

- J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.
- B1: This analyte was also detected in the associated method blank. The reported sample results have been adjusted for moisture, final extract volume, and/or dilutions performed during extract preparation. The analyte concentration was evaluated prior to sample preparation adjustments, and was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank).
- B2: This analyte was also detected in the associated method blank. However, the analyte concentration in the sample was determined to be significantly higher than the method blank (greater than ten times the concentration reported in the blank).
- E: The concentration of this analyte exceeded the instrument calibration range.
- D: The reported result for this analyte is calculated based on a secondary dilution factor.
- X1: Contaminant does not appear to be "typical" product. Elution pattern suggests it may be _____.
- X2: Contaminant does not appear to be "typical" product. Further testing is suggested for identification.
-) Identification and quantification of peaks was complicated by matrix interference; GC/MS confirmation is recommended.
- X4: RPD for duplicates outside advisory QC limits. Sample was re-analyzed with similar results.
- X4a: RPD for duplicates outside advisory QC limits due to analyte concentration near the method practical quantitation limit/detection limit.
- X5: Matrix spike was diluted out during analysis.
- X6: Recovery of matrix spike outside advisory QC limits. Sample was re-analyzed with similar results.
- X7: Recovery of matrix spike outside advisory QC limits. Matrix interference is indicated by blank spike recovery data.
- X7a: Recovery and/or RPD values for MS/MSD outside advisory QC limits due to high contaminant levels.
- X8: Surrogate was diluted out during analysis.
- X9: Surrogate recovery outside advisory QC limits due to matrix composition.
- N: See analytical narrative.
- ND: Not Detected
- PQL: Practical Quantitation Limit
- MCL: Maximum Contaminant Level



SOUND ANALYTICAL SERVICES, INC.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4013 Pacific Hwy. East
Tacoma, Washington 98424
(206) 922-2310 • FAX (206) 922-5047

CHAIN OF CUSTODY / REQUEST FOR LABORATORY ANALYSIS

ANALYSIS REQUESTED:				SPECIAL INSTRUCTIONS/COMMENTS:															
CLIENT: <u>PuTel 1-1686</u>				Time / Date															
PROJECT NAME: <u>Sealsal Rubber</u>				Firm															
CONTACT: <u>Dave King</u>				Printed Name															
PHONE NO: <u>624-9349</u>				Signature															
LAB #	SAMPLE I.D.	DATE	TIME	MATRIX	# of Containers	Halogenated Volatiles EPA 601/8010	Aromatic Volatiles EPA 602/8020	Chlorinated Pest., PCB's EPA 608/8080	PAH's	Volatile Organics EPA 624/8240 (GC/MS)	Semi-volatiles EPA625/8270 (GC/MS)	TPH 418.1	Oil & Grease	Total Metals (Specify below)	8 Metals	Volatiles	Semi-volatiles	Pesticides & Herbicides	
	MW-14	3-9-95	1035	W	2														
	PW-9		1115	W	2														
	MW-13		1145	W	2														
	OW-10		1205	W	2														
	MW-11		1305	W	2														
	MW-12		1345	W	2														
	Dup		-	W	2														
	MW-2		1005	W	2														

WELL GAUGING LOG

PROJECT: Seavagal Rubber
 PROJECT NO: 1-1686
 GAUGED BY: D. King

WELL NUMBER	DATE	TIME	DEPTH TO WATER		REMARKS
			CASING	WELL PROT.	
MW-1	3-9-95	835	7.62	7.92	Good condition
MW-2		839	7.46	7.70	" "
MW-4		848	6.20	6.57	" "
MW-5		917	6.57	6.90	" "
MW-6		910	5.19	5.43	" "
MW-7		915	3.62	3.90	
MW-8		935	4.01	4.44	Good condition
MW-9		855	8.39	9.39	
MW-10		900	5.62	6.27	" "
MW-11		902	5.35	6.62	" "
MW-12		908	5.21	5.44	" "
MW-13		906	5.93	6.33	" "
MW-14		850	6.67	7.10	" "
MW-15		925	6.24	7.00	
MW-16		905	7.95	8.02	Good Good - bolts missing

System was off when gauging and water sampling. The system was turned off at 9:00am on 3/8/95. The system was turned back on at 1400 on 3/9/95.

REIEC

GROUNDWATER SAMPLING LOG

PROJECT NAME Seoul Piller
 PROJECT NO. 1-1686
 DATE 3-9-95

WELL NO. MW-2
 SAMPLED BY D. King

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>7.46</u> (wl.prot.-ft)
DEPTH OF WELL	(ft) <u>10.17</u>
WELL DIAMETER	(inches) <u>2"</u>
FEET OF WATER	<u>2.71</u>
CASING VOLUME*	(gal) <u>.46</u>
PURGE VOLUME	(gal) <u>1.38</u> → purged 3 gallons since well has not been sampled for over a year
PRODUCT THICK.	(ft) <u>0</u>
WELL CONDITION	<u>good - seal bad</u>
WEATHER	<u>rain</u>

PURGE DATA					
START PURGE TIME:	<u>9:45</u>				
VOL PURGED (gal)	<u>0.5</u>	<u>1.0</u>	<u>1.5</u>	<u>2.0</u>	<u>3.0</u>
TIME					
FLOWRATE					
pH (units)	<u>7.64</u>	<u>7.09</u>	<u>6.79</u>	<u>6.35</u>	<u>6.82</u>
CONDUCTIVITY (umhos/cm)	<u>140</u>	<u>140</u>	<u>140</u>	<u>170</u>	<u>150</u>
TEMP. (C)	<u>12.7</u>	<u>12.7</u>	<u>13.0</u>	<u>12.9</u>	<u>12.9</u>
WATER COLOR	<u>red-rusty</u> <u>NO</u>	<u>light red</u> <u>NO</u>			
PURGE AND SAMPLE EQUIPT: <u>disposable baits - used save baits to sample w/</u>					

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-2</u>	<u>1005</u>	<u>EPA 624</u>	<u>2 VOLS</u>		<u>N</u>

ADDITIONAL INFORMATION:

TOC = Top of well casing
 wl.prot. = top of well protector
 *casing volume = $\pi r^2 h (\text{in } \text{ft}) \times 7.48 \text{ gal/ft}^3$

REI/EC

GROUNDWATER SAMPLING LOG

PROJECT NAME Stougal Piller
 PROJECT NO. 1-1686
 DATE 3-4-95

WELL NO. MW-14
 SAMPLED BY D. King

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>6.67</u> (wl.prot.-ft)
DEPTH OF WELL	(ft) <u>19.35</u>
WELL DIAMETER	(inches) <u>12.685</u>
FEET OF WATER	<u>2"</u>
CASING VOLUME*	(gal) <u>2.15</u>
PURGE VOLUME	(gal) <u>6.5</u>
PRODUCT THICK	(ft) <u>0</u>
WELL CONDITION	<u>good</u>
WEATHER	<u>rain</u>

PURGE	DATA			
START PURGE TIME:	<u>1015</u>			
VOL PURGED (gal)	<u>1.5</u>	<u>3.0</u>	<u>4.5</u>	<u>6.5</u>
TIME				
FLOW RATE				
pH (units)	<u>6.23</u>	<u>6.57</u>	<u>6.41</u>	<u>6.46</u>
CONDUCTIVITY (umhos/cm)	<u>meter not working</u>			
TEMP. (C)	<u>13.1</u>	<u>13.2</u>	<u>13.3</u>	<u>13.3</u>
WATER COLOR	<u>dark red, NS</u>	<u>light red, NS</u>		
PURGE AND SAMPLE EQUIP: <u>class sampler - used same batch to sample w/</u>				

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-14</u>	<u>1035</u>	<u>EPA 624</u>	<u>glass</u>	<u>2 - VOLS</u>	<u>N</u>

ADDITIONAL INFORMATION:

TOC = Top of well casing
 wl.prot. = top of well protector
 *casing volume = $\pi r^2 h$ (in ft) x 7.48 gal/ft

REIEC

GROUNDWATER SAMPLING LOG

PROJECT NAME Groundwater
 PROJECT NO. 1-1086
 DATE 3-9-95

WELL NO. PW-9
 SAMPLED BY D. King

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>8.39</u> (wl.prot.-ft)
DEPTH OF WELL	(ft) <u>24.05</u>
WELL DIAMETER	(inches) <u>4"</u>
FEET OF WATER	<u>15.66</u>
CASING VOLUME*	(gal) <u>10.49</u>
PURGE VOLUME	(gal) <u>31.5</u>
PRODUCT THICK.	(ft) <u>0</u>
WELL CONDITION	<u>good</u>
WEATHER	<u>rain</u>

PURGE DATA					
START PURGE TIME:	<u>1030</u>				
VOL PURGED (gal)	<u>5.0</u>	<u>10</u>	<u>15</u>	<u>20</u>	<u>31.5</u>
TIME					
FLOW RATE					
pH (units)	<u>5.83</u>	<u>6.16</u>	<u>6.13</u>	<u>6.20</u>	<u>6.19</u>
CONDUCTIVITY (umhos/cm)	<u>meter not working</u>				<u>→</u>
TEMP. (C)	<u>14.4</u>	<u>14.3</u>	<u>14.4</u>	<u>14.3</u>	<u>14.4</u>
WATER COLOR	<u>light yellow, clear, odor</u>	<u>pale yellow, clear odor</u>			<u>→</u>
PURGE AND SAMPLE EQUIP: <u>disposable bulbs - used same bulbs to sample w/</u>					

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>PW-9</u>	<u>1115</u>	<u>EPA 624</u>	<u>glass</u>	<u>2 vials</u>	<u>N</u>

ADDITIONAL INFORMATION:

TOC = Top of well casing
 wl.prot. = top of well protector
 *casing volume = $\pi r^2 h (\text{in } \text{ft}) \times 7.48 \text{ gal/ft}^3$

REIEC

GROUNDWATER SAMPLING LOG

PROJECT NAME Seasonal Ditch
 PROJECT NO. 1-1686
 DATE 2-9-95

WELL NO. MW-13
 SAMPLED BY D. King

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>5.93</u> (wl.prot.-ft)
DEPTH OF WELL	(ft) <u>17.65</u>
WELL DIAMETER	(inches) <u>2"</u>
FEET OF WATER	<u>13.72</u>
CASING VOLUME*	(gal) <u>233</u>
PURGE VOLUME	(gal) <u>7.0</u>
PRODUCT THICK.	(ft) <u>0</u>
WELL CONDITION	<u>good - but bad seal</u>
WEATHER	<u>sun</u>

	PURGE DATA				
START PURGE TIME:	<u>1125</u>				
VOL PURGED (gal)	<u>2.0</u>	<u>4.0</u>	<u>6.0</u>	<u>7.0</u>	
TIME					
FLOW RATE					
pH (units)	<u>4.78</u>	<u>4.35</u>	<u>4.65</u>	<u>4.70</u>	
CONDUCTIVITY (umhos/cm)	<u>mts not working</u>				→
TEMP. (C)	<u>13.5</u>	<u>13.8</u>	<u>13.5</u>	<u>13.5</u>	
WATER COLOR	<u>clear, ni</u>				→
PURGE AND SAMPLE EQUIPT:	<u>disposable bucket - use same baits for sample</u>				

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-13</u>	<u>1145</u>	<u>EPA 624</u>	<u>glass</u>	<u>2 vials</u>	<u>N</u>

ADDITIONAL INFORMATION:

- TOC = Top of well casing
- wl.prot. = top of well protector
- *casing volume = $\pi r^2 h$ (in ft) x 7.48 gal/ft

RETEC

GROUNDWATER SAMPLING LOG

PROJECT NAME Georgel Rubber
 PROJECT NO. 1-1686
 DATE 3-9-85

WELL NO. OCW-10
 SAMPLED BY D. King

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>5.62</u> (wl.prot.-ft)
DEPTH OF WELL	(ft) <u>14.30</u>
WELL DIAMETER	(inches) <u>2"</u>
FEET OF WATER	<u>0.62</u>
CASING VOLUME*	(gal) <u>1.5</u>
PURGE VOLUME	(gal) <u>1.5</u>
PRODUCT THICK.	(ft) <u>0</u>
WELL CONDITION	<u>good</u>
WEATHER	<u>clear</u>

PURGE DATA					
START PURGE TIME:	<u>1150</u>				
VOL PURGED (gal)	<u>1.0</u>	<u>2.0</u>	<u>3.0</u>	<u>4.0</u>	<u>4.5</u>
TIME					
FLOW RATE					
pH (units)	<u>5.01</u>	<u>5.06</u>	<u>5.16</u>	<u>5.18</u>	<u>5.20</u>
CONDUCTIVITY (umhos/cm)	<u>Not used</u>				
TEMP. (C)	<u>14</u>	<u>14</u>	<u>13.9</u>	<u>14</u>	<u>13.9</u>
WATER COLOR	<u>light yellow</u>				
PURGE AND SAMPLE EQUIP: <u>disposable bath - some bath was used to sample</u>					

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>OCW-10</u>	<u>1205</u>	<u>EPA 624</u>	<u>glass</u>	<u>2 vials</u>	<u>N</u>

ADDITIONAL INFORMATION:

TOC = Top of well casing

wl.prot. = top of well protector

*casing volume = $\pi r^2 h (n \times 7.48 \text{ gal/ft})$

RELIEC

GROUNDWATER SAMPLING LOG

PROJECT NAME Sewage Filter
 PROJECT NO. 1-1686
 DATE 3-9-95

WELL NO. mw-11
 SAMPLED BY D. King

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>5.35</u> (wl.prot.-ft)
DEPTH OF WELL	(ft) <u>19.45</u>
WELL DIAMETER	(inches) <u>4"</u>
FEET OF WATER	<u>14.1</u>
CASING VOLUME*	(gal) <u>9.12</u>
PURGE VOLUME	(gal) <u>27.5</u> → <u>28</u>
PRODUCT THICK.	(ft) <u>0</u>
WELL CONDITION	<u>good</u>
WEATHER	<u>Sunny</u>

		PURGE DATA			
START PURGE TIME:	<u>1220</u>				
VOL PURGED (gal)	<u>7</u>	<u>11</u>	<u>21</u>	<u>28</u>	
TIME					
FLOW RATE					
pH (units)	<u>7.20</u>	<u>6.71</u>	<u>6.68</u>	<u>6.74</u>	
CONDUCTIVITY (umhos/cm)	<u>NOT working</u>				
TEMP. (C)	<u>13.2</u>	<u>12.7</u>	<u>12.8</u>	<u>12.7</u>	
WATER COLOR	<u>light red-brown 607</u>	<u>light yellow-green 607</u>			
PURGE AND SAMPLE EQUIPT: <u>disposable bits - save bits used to sample</u>					

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>mw-11</u>	<u>1305</u>	<u>EPA-624</u>	<u>glass</u>	<u>2 VOLS</u>	<u>N</u>

ADDITIONAL INFORMATION:

TOC = Top of well casing

wl.prot. = top of well protector

*casing volume = $7.48 \times \pi \times R^2 \times H$

REIEC

GROUNDWATER SAMPLING LOG

PROJECT NAME Southern Pizzeria
 PROJECT NO. 1-1086
 DATE 3-9-95

WELL NO. MW-12
 SAMPLED BY D. King

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>5.21</u> (wl.prot.-ft)
DEPTH OF WELL	(ft) <u>19.32</u>
WELL DIAMETER	(inches) <u>4"</u>
FEET OF WATER	<u>14.11</u>
CASING VOLUME*	(gal) <u>9.45</u>
PURGE VOLUME	(gal) <u>28.36</u> → <u>28.50</u>
PRODUCT THICK.	(ft) <u>0</u>
WELL CONDITION	<u>good</u>
WEATHER	<u>sun</u>

PURGE DATA					
START PURGE TIME:					
VOL PURGED (gal)	<u>4.0</u>	<u>14.0</u>	<u>24.0</u>	<u>28.5</u>	
TIME					
FLOW RATE					
pH (units)	<u>6.83</u>	<u>6.79</u>	<u>6.85</u>	<u>6.79</u>	
CONDUCTIVITY (umhos/cm)	<u>not working</u>				→
TEMP. (C)	<u>13.3</u>	<u>13.4</u>	<u>13.3</u>	<u>13.2</u>	
WATER COLOR	<u>light yellow</u>				→
PURGE AND SAMPLE EQUIPT: <u>disposable bottles - also used to sample w/</u>					

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-12</u>	<u>1345</u>	<u>EPA 624</u>	<u>glass</u>	<u>2 VOLS</u>	<u>N</u>

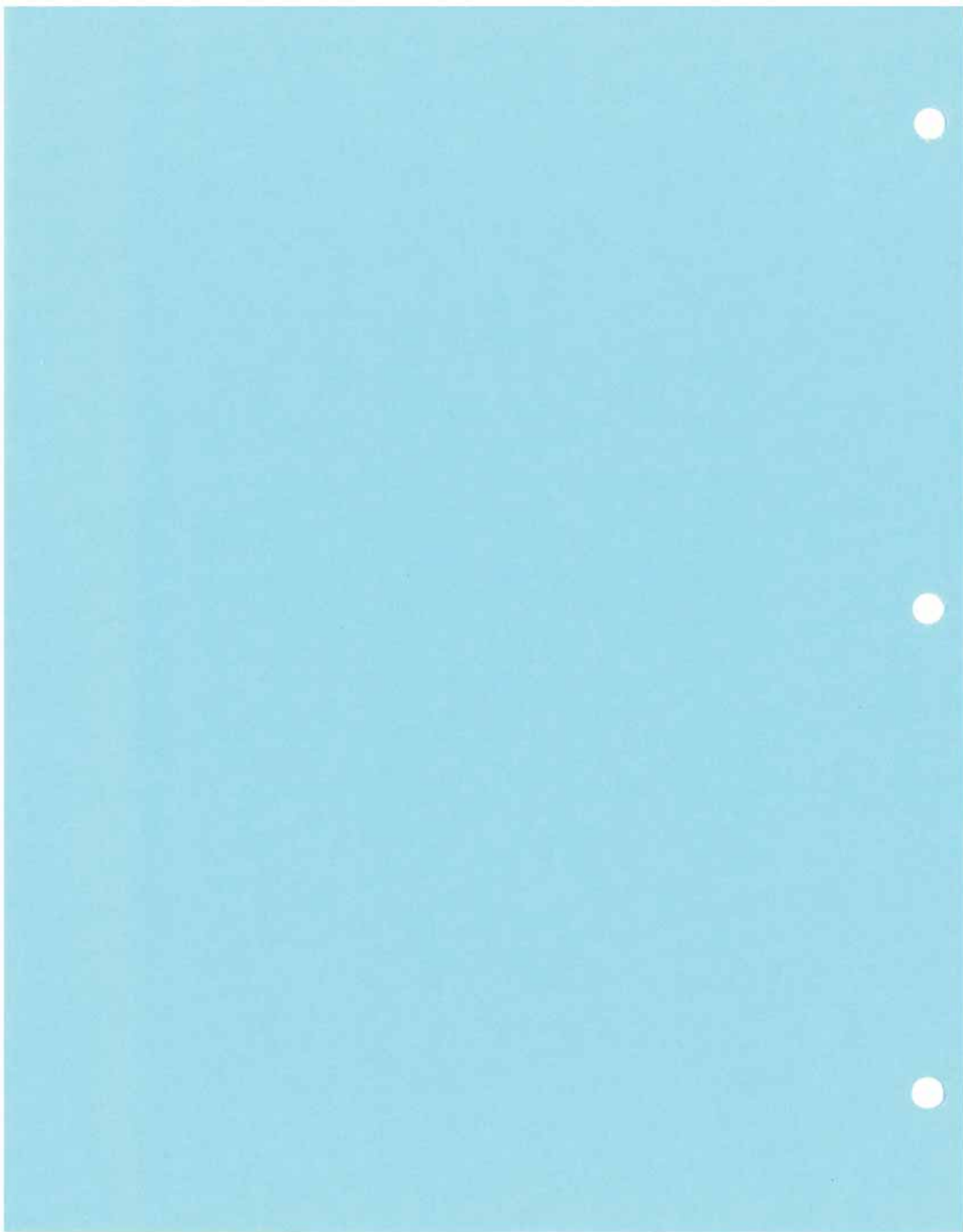
ADDITIONAL INFORMATION:

TOC = Top of well casing

wl.prot. = top of well protector

*casing volume = $\pi r^2 h (n \times 7.48 \text{ gal/ft})$





SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

TRANSMITTAL MEMORANDUM

DATE: November 9, 1994

TO: Dave King
Retec

PROJECT: 1-1686 Scougal

LABORATORY NUMBER: 44081

Enclosed are the original and one copy of the Tier II data deliverables package for Laboratory Work Order Number 44081. Five samples were received for analysis at Sound Analytical Services, Inc., on October 25, 1994.

Should there be any questions regarding this data package, please do not hesitate to call me at (206) 922-2310.

Sincerely,



Andrew J. Riddell
Project Manager

AJR:tm

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	PW-9
Lab ID:	44081-01
Date Received:	10/25/94
Date Prepared:	11/3/94
Date Analyzed:	11/3/94
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
1,2-Dichloroethane-d4	99		76	114
Toluene-d8	97		88	110
Bromofluorobenzene	99		86	115

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	54	2	D
Trichloroethene	2.1	0.2	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	DUP
Lab ID:	44081-02
Date Received:	10/25/94
Date Prepared:	11/3/94
Date Analyzed:	11/3/94
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
1,2-Dichloroethane-d4	97		76	114
Toluene-d8	96		88	110
Bromofluorobenzene	93		86	115

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	0.49	0.2	
Trichloroethene	5.1	0.2	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-11
Lab ID:	44081-03
Date Received:	10/25/94
Date Prepared:	11/3/94
Date Analyzed:	11/3/94
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
1,2-Dichloroethane-d4	100		76	114
Toluene-d8	92		88	110
Bromofluorobenzene	91		86	115

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	0.48	0.2	
Trichloroethene	4.8	0.2	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	MW-14
Lab ID:	44081-04
Date Received:	10/25/94
Date Prepared:	11/1/94
Date Analyzed:	11/1/94
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
1,2-Dichloroethane-d4	95		76	114
Toluene-d8	95		88	110
Bromofluorobenzene	97		86	115

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	1300	80	
Trichloroethene	1000	80	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	DW-10
Lab ID:	44081-05
Date Received:	10/25/94
Date Prepared:	11/3/94
Date Analyzed:	11/3/94
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
1,2-Dichloroethane-d4	101		76	114
Toluene-d8	98		88	110
Bromofluorobenzene	95		86	115

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	13	0.2	
Trichloroethene	19	0.2	

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - D5474
Date Received:	-
Date Prepared:	11/1/94
Date Analyzed:	11/1/94
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
1,2-Dichloroethane-d4	90		76	114
Toluene-d8	102		88	110
Bromofluorobenzene	97		86	115

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	ND	0.2	
Trichloroethene	ND	0.2	

SOUND ANALYTICAL SERVICES

Blank Spike/Blank Spike Duplicate Report

Lab ID: SD5472
Date Prepared: 11/1/94
Date Analyzed: 11/1/94

Volatile Organics by USEPA Method 624

Compound Name	Blank Result (ug/L)	Spike Amount (ug/L)	BS Result (ug/L)	BS % Rec.	BSD Result (ug/L)	BSD % Rec.	RPD	Flag
Trichloroethene	0	5	6.3	125	6.4	128	2.4	

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - D5507
Date Received:	-
Date Prepared:	11/3/94
Date Analyzed:	11/3/94
% Solids	-

Volatile Organics by USEPA Method 624

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
1,2-Dichloroethane-d4	99		76	114
Toluene-d8	93		88	110
Bromofluorobenzene	96		86	115

Analyte	Result (ug/L)	PQL	Flags
Vinyl chloride	ND	0.2	
Trichloroethene	ND	0.2	

SOUND ANALYTICAL SERVICES

Blank Spike/Blank Spike Duplicate Report

Lab ID: SD5505
Date Prepared: 11/3/94
Date Analyzed: 11/3/94

Volatile Organics by USEPA Method 624

Compound Name	Blank Result (ug/L)	Spike Amount (ug/L)	BS Result (ug/L)	BS % Rec.	BSD Result (ug/L)	BSD % Rec.	RPD	Flag
Trichloroethene	0	5	6.5	130	6.6	133	2.3	

SOUND ANALYTICAL SERVICES, INC.

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 • TELEPHONE 206-922-2310 • FAX 206-922-5047

DATA QUALIFIER FLAGS

- J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.
- B1: This analyte was also detected in the associated method blank. The reported sample results have been adjusted for moisture, final extract volume, and/or dilutions performed during extract preparation. The analyte concentration was evaluated prior to sample preparation adjustments, and was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank).
- B2: This analyte was also detected in the associated method blank. However, the analyte concentration in the sample was determined to be significantly higher than the method blank (greater than ten times the concentration reported in the blank).
- E: The concentration of this analyte exceeded the instrument calibration range.
- D: The reported result for this analyte is calculated based on a secondary dilution factor.
- X1: Contaminant does not appear to be "typical" product. Elution pattern suggests it may be _____.
- X2: Contaminant does not appear to be "typical" product. Further testing is suggested for identification.
- X3: Identification and quantification of peaks was complicated by matrix interference; GC/MS confirmation is recommended.
- X4: RPD for duplicates outside advisory QC limits. Sample was re-analyzed with similar results.
- X4a: RPD for duplicates outside advisory QC limits due to analyte concentration near the method practical quantitation limit/detection limit.
- X5: Matrix spike was diluted out during analysis.
- X6: Recovery of matrix spike outside advisory QC limits. Sample was re-analyzed with similar results.
- X7: Recovery of matrix spike outside advisory QC limits. Matrix interference is indicated by blank spike recovery data.
- X7a: Recovery and/or RPD values for MS/MSD outside advisory QC limits due to high contaminant levels.
- X8: Surrogate was diluted out during analysis.
- X9: Surrogate recovery outside advisory QC limits due to matrix composition.
- N: See analytical narrative.



REMEDICATION
TECHNOLOGIES INC

FIELD ACTIVITY DAILY LOG

PROJECT Scougal

COMPLETED BY D. King

JOB NO. 1-1686-800

APPROVED BY _____

DAY & DATE 10-24-94

SHEET 1 OF 1

FIELD ACTIVITY SUBJECT: GW Sampling

DESCRIPTION ON DAILY ACTIVITIES AND EVENTS:

TIME	
950	Arrived onsite w/ Grant Hainsworth [RETEC] who showed me the well locations. Grant left the site shortly after.
1000	Began sampling MW-14. A disposable bailer & nylon cord approx 3 well gallons were purged prior to sampling. The raw sampling report is provided as an attachment. Purge water was disposed of in the onsite sewer drain. Note the conductivity meter was not working properly. It was still used as a guideline along w/ T & Cond. during purging. Tried to fix the conductivity meter but could not.
1115	Sampled OW-10.
1210	Sampled PW-9
1300	Sampled MW-11. After sampling cleaned-up site and ^{around} wells. All samples were placed in coolers w/ ice. Chain-of-custody procedure was followed at all times.
1330	Left site.

VISITORS ON SITE: none

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS.

WEATHER CONDITIONS:

IMPORTANT TELEPHONE CALLS:

PERSONNEL ON SITE:

D. King
(FIELD ENGINEER)

REMEDIATION TECHNOLOGIES, INC.

Groundwater Well Development Record

PROJECT Georgia WELL NO. MW-14
 DATE 10-24-94 TIME 1010
 WEATHER CONDITIONS Sunny - warm

1. WELL DEVELOPMENT AND EVACUATION

- a. Location of measuring point TOC.
- b. Depth of water table from measuring point 8.32
- c. Height of measuring point above ground surface —
- d. Total depth of well below measuring point 19.35
- e. Length of water column (line 1d-1b) 11.03
- f. Development method purging w/ disposable Sailer
- g. Evacuated volume 0 gallons

Pumping	Duration	Volume	Removed	pH	Cond.	T(C)	Color
		1.0 gln		6.09	4000	17	red-rust
		2.0 gln		6.59	5000	17.5	SAA
		4.0 gln		6.94	5000	17.1	yellow-clear
		6.0 gln		6.89	5500	17.0	yellow-clear
		sampled at 6.0 gln					

2. COMMENTS Cond meters not working right

REMEDIATION TECHNOLOGIES, INC.

Groundwater Well Development Record

PROJECT Scougal WELL NO. MW-11
 DATE 10-24-94 TIME 1300
 WEATHER CONDITIONS Sunny-warm

1. \WELL DEVELOPMENT AND EVACUATION

- a. Location of measuring point _____
- b. Depth of water table from measuring point 7.04
- c. Height of measuring point above ground surface _____
- d. Total depth of well below measuring point 19.7
- e. Length of water column (line 1d-1b) 12.03
- f. Development method bail w/ disposable bailer
- g. Evacuated volume 1200 plus

Pumping	Duration	Volume Removed	pH	Cond.	T(C)	Color
	1.0		5.01	1,400	17.1	rust-clea
	3.0		5.15	1,400	17.7	clear
	6.0		5.37	1,700	17.6	SAA
	9.0		5.41	1,800	17.4	SAA
	12.0		5.43	1,700	17.4	SAA

2. COMMENTS Cond. meter not working properly

REMEDATION TECHNOLOGIES, INC.

Groundwater Well Development Record

PROJECT Scougal WELL NO. OW-10
 DATE 10-24-99 TIME 1115
 WEATHER CONDITIONS Sunny warm

1. WELL DEVELOPMENT AND EVACUATION

- a. Location of measuring point TDC
- b. Depth of water table from measuring point 7.38
- c. Height of measuring point above ground surface —
- d. Total depth of well below measuring point 14.25
- e. Length of water column (line 1d-1b) 6.87
- f. Development method bail w/ disposable buckets
- g. Evacuated volume 3.5 gals

Pumping	Duration	Volume	Removed	pH	Cond.	T(C)	Color
		0.5		4.65	2,800	17.6	yellow-clr
		1.5		4.20	2,200	17.8	red-rust clr.
		2.5		4.47	2,100	17.4	red-rust clr.
		3.5		4.46	2,000	16.9	S.A.A

2. COMMENTS Cond. not working properly

REMEDIATION TECHNOLOGIES, INC.

Groundwater Well Development Record

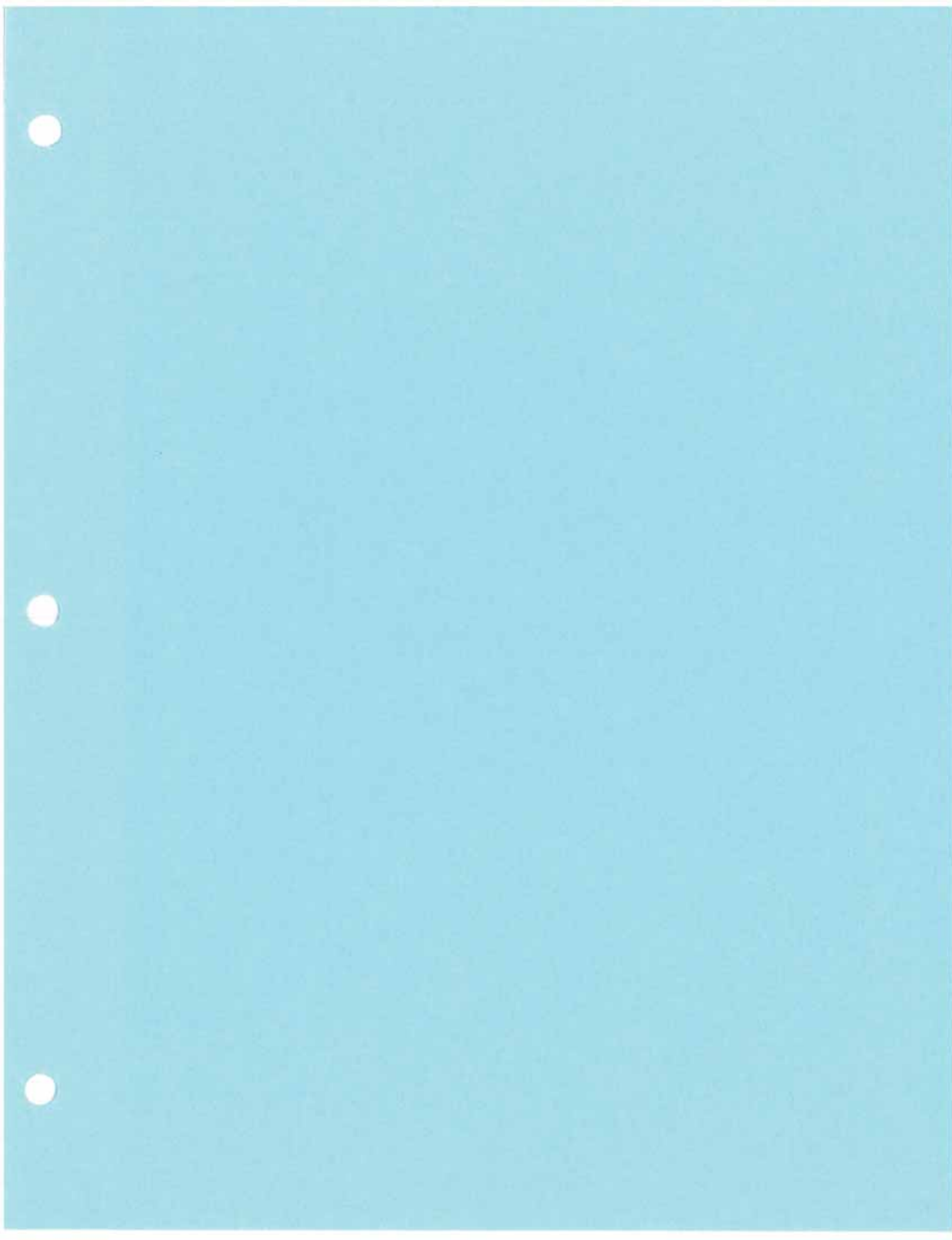
PROJECT Scougal WELL NO. DW-9
 DATE 10-24-94 TIME 1210
 WEATHER CONDITIONS Sunny-warm

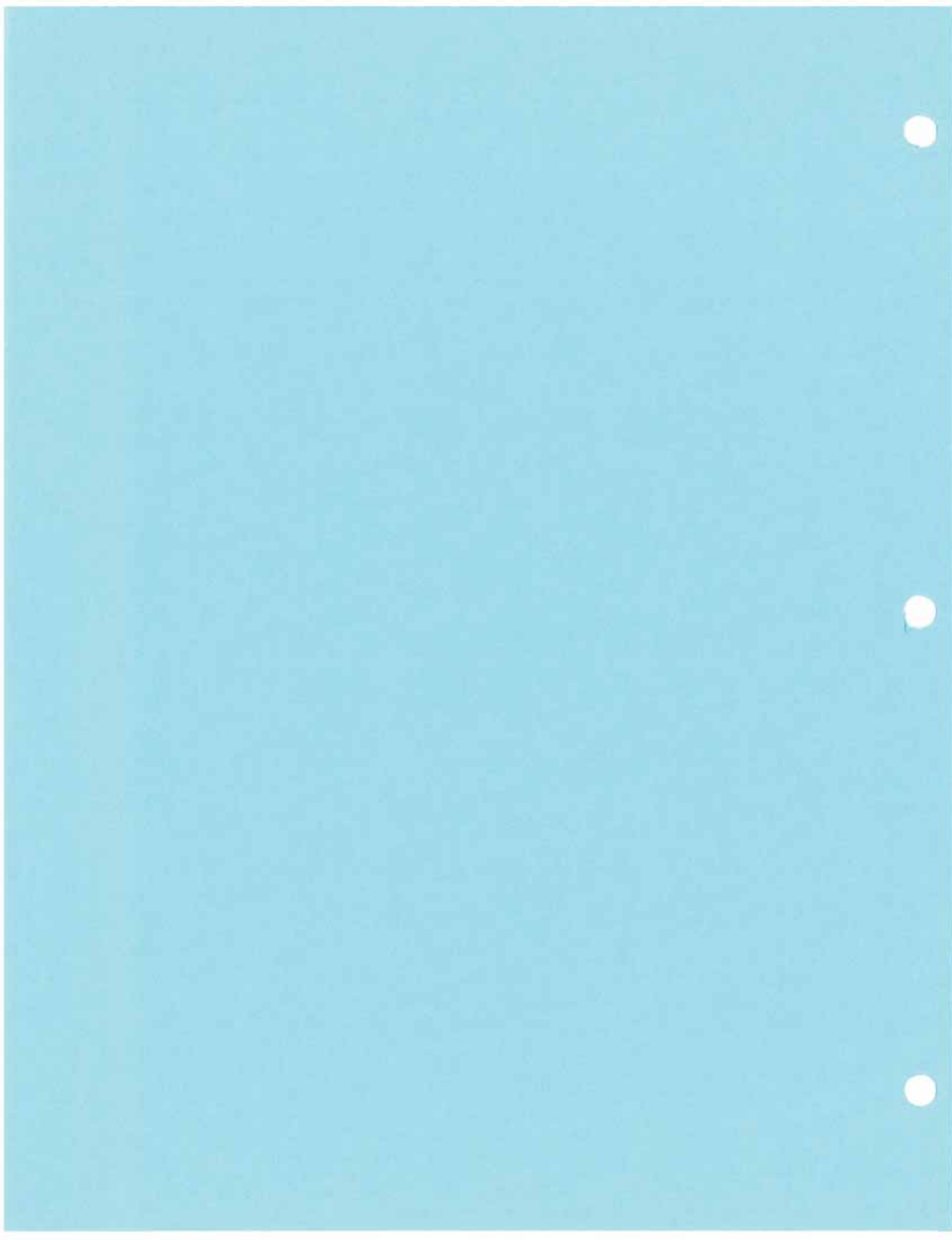
1. WELL DEVELOPMENT AND EVACUATION

- a. Location of measuring point TOC
- b. Depth of water table from measuring point 10.05
- c. Height of measuring point above ground surface —
- d. Total depth of well below measuring point 24.0
- e. Length of water column (line 1d-1b) 13.95
- f. Development method bail w/ disposable bailer
- g. Evacuated volume 13.95 ~ 14.0 gal

Pumping	Duration	Volume Removed	pH	Cond.	T(C)	Color
		1.0 gal	4.94	2,000	18.7	yellow- cloudy
		3.0 gal	5.37	1,600	18.6	SAA
		6.0 gal	5.33	2,000	18.1	SAA
		9.0 gal	5.49	1,900	17.8	yellow clear
		12 gal	5.57	1,800	17.6	SAA
		14 gal	5.60	1,800	17.4	SAA

2. COMMENTS Conductivity meter not working properly.





SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

TRANSMITTAL MEMORANDUM

DATE: September 29, 1994

TO: Merv Coover
Retec

PROJECT: 1-1686-800

LABORATORY NUMBER: 43304

Enclosed are the original and one copy of the Tier I data deliverables package for Laboratory Work Order Number 43304. Seven samples were received for analysis at Sound Analytical Services, Inc., on September 20, 1994.

Should there be any questions regarding this data package, please do not hesitate to call me at (206) 922-2310.

Sincerely,



Andrew J. Riddell
Project Manager

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	16
Lab ID:	43304-1
Date Received:	9/20/94
Date Prepared:	9/27/94
Date Analyzed:	9/27/94
% Solids	-

Volatile Organics by USEPA Method 524.2

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Bromofluorobenzene	98		80	120
1,2-Dichlorobenzene-d4	98		70	130

Analyte	Result (ug/L)	PQL	Flags
Vinyl Chloride	ND	0.2	
Trichloroethene	ND	0.2	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	6
Lab ID:	43304-2
Date Received:	9/20/94
Date Prepared:	9/27/94
Date Analyzed:	9/27/94
% Solids	-

Volatile Organics by USEPA Method 524.2

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Bromofluorobenzene	100		80	120
1,2-Dichlorobenzene-d4	105		70	130

Analyte	Result (ug/L)	PQL	Flags
Vinyl Chloride	ND	0.2	
Trichloroethene	ND	0.2	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	100
Lab ID:	43304-3
Date Received:	9/20/94
Date Prepared:	9/27/94
Date Analyzed:	9/27/94
% Solids	-

Volatile Organics by USEPA Method 524.2

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Bromofluorobenzene	101		80	120
1,2-Dichlorobenzene-d4	100		70	130

Analyte	Result (ug/L)	PQL	Flags
Vinyl Chloride	ND	0.2	
Trichloroethene	ND	0.2	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	12
Lab ID:	43304-4
Date Received:	9/20/94
Date Prepared:	9/27/94
Date Analyzed:	9/27/94
% Solids	-

Volatile Organics by USEPA Method 524.2

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Bromofluorobenzene	99		80	120
1,2-Dichlorobenzene-d4	101		70	130

Analyte	Result (ug/L)	PQL	Flags
Vinyl Chloride	ND	0.2	
Trichloroethene	ND	0.2	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	13
Lab ID:	43304-5
Date Received:	9/20/94
Date Prepared:	9/27/94
Date Analyzed:	9/27/94
% Solids	-

Volatile Organics by USEPA Method 524.2

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Bromofluorobenzene	102		80	120
1,2-Dichlorobenzene-d4	104		70	130

Analyte	Result (ug/L)	PQL	Flags
Vinyl Chloride	3.7	0.2	
Trichloroethene	11	0.2	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	13B
Lab ID:	43304-6
Date Received:	9/20/94
Date Prepared:	9/27/94
Date Analyzed:	9/27/94
% Solids	-

Volatile Organics by USEPA Method 524.2

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Bromofluorobenzene	102		80	120
1,2-Dichlorobenzene-d4	105		70	130

Analyte	Result (ug/L)	PQL	Flags
Vinyl Chloride	3.8	0.2	
Trichloroethene	11	0.2	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Retec
Client ID:	15
Lab ID:	43304-7
Date Received:	9/20/94
Date Prepared:	9/27/94
Date Analyzed:	9/27/94
% Solids	-

Volatile Organics by USEPA Method 524.2

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Bromofluorobenzene	96		80	120
1,2-Dichlorobenzene-d4	103		70	130

Analyte	Result (ug/L)	PQL	Flags
Vinyl Chloride	ND	0.2	
Trichloroethene	ND	0.2	

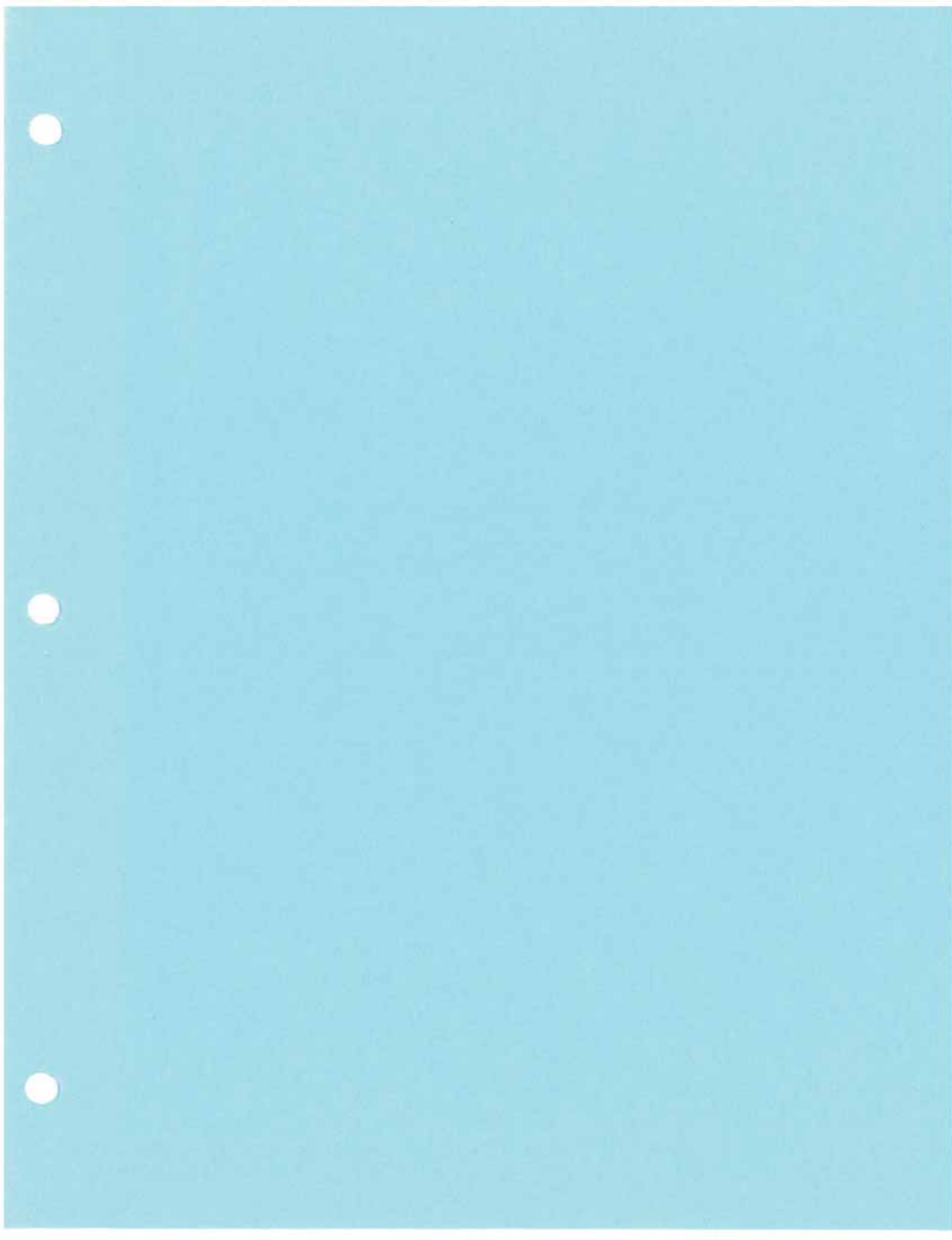
SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - D5228
Date Received:	-
Date Prepared:	9/27/94
Date Analyzed:	9/27/94
% Solids	-

Volatile Organics by USEPA Method 524.2

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
Bromofluorobenzene	102		80	120
1,2-Dichlorobenzene-d4	106		70	130

Analyte	Result (ug/L)	PQL	Flags
Vinyl Chloride	ND	0.2	
Trichloroethene	ND	0.2	





SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

TRANSMITTAL MEMORANDUM

DATE: June 17, 1994

TO: Grant Hainsworth
Retec

PROJECT: 3-1308-800 Scougal Rubber Corp.

LABORATORY NUMBER: 40881

Enclosed are the original and one copy of the Tier II data deliverables package for Laboratory Work Order Number 40881. Five samples were received for analysis at Sound Analytical Services, Inc., on June 9, 1994.

If there are any questions regarding this data package, please do not hesitate to call me at (206) 922-2310.

Sincerely,



Andrew J. Riddell
Project Manager

AJR:tm

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Retec

Date: June 17, 1994

Report On: Analysis of Water

Lab No.: 40881

IDENTIFICATION:

Samples received on 06-09-94

Project: 3-1308-800 Scougal Rubber Corp.

ANALYSIS:

Lab Sample No. 40881-1

Client ID: MW-6

Halogenated Volatile Organics Per SW-846 Method 8010

Date Analyzed: 6-14-94

Units: mg/L

<u>Compound</u>	<u>Result</u>	<u>PQL</u>
Vinyl Chloride	ND	0.002
Methylene chloride	ND	0.002
1,1-dichloroethylene	ND	0.002
1,1-dichloroethane	ND	0.002
Trans-1,2-dichloroethylene	ND	0.002
1,2-dichloroethane	ND	0.002
Chloroform	ND	0.002
1,1,1-trichloroethane	ND	0.002
Carbon Tetrachloride	ND	0.002
1,2-dichloropropane	ND	0.002
Bromodichloromethane	ND	0.002
Trans-1,3-dichloropropene	ND	0.002
Trichloroethylene	ND	0.002
Cis-1,3-dichloropropene	ND	0.002
1,1,2-trichloroethane	ND	0.002
Tetrachloroethylene	ND	0.002
Chlorodibromomethane	ND	0.002
1,1,2,2-tetrachloroethane	ND	0.002
Bromoform	ND	0.002
Chlorobenzene	ND	0.002
1,2 Dichlorobenzene	ND	0.002
1,3 Dichlorobenzene	ND	0.002
1,4 Dichlorobenzene	ND	0.002

SURROGATE RECOVERY, %

Bromochloromethane	88
2-bromo-1-chloropropane	83
1,4-dichlorobutane	76

ND - Not Detected

PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

Retec

Project: 3-1308-800 Scougal Rubber Corp.

Lab No. 40881

June 17, 1994

Lab Sample No. 40881-2

Client ID: MW-12

Halogenated Volatile Organics Per SW-846 Method 8010

Date Analyzed: 6-14-94

Units: mg/L

<u>Compound</u>	<u>Result</u>	<u>PQL</u>
Vinyl Chloride	ND	0.002
Methylene chloride	ND	0.002
1,1-dichloroethylene	ND	0.002
1,1-dichloroethane	ND	0.002
Trans-1,2-dichloroethylene	ND	0.002
1,2-dichloroethane	ND	0.002
Chloroform	ND	0.002
1,1,1-trichloroethane	ND	0.002
Carbon Tetrachloride	ND	0.002
1,2-dichloropropane	ND	0.002
Bromodichloromethane	ND	0.002
Trans-1,3-dichloropropene	ND	0.002
Trichloroethylene	ND	0.002
Cis-1,3-dichloropropene	ND	0.002
1,1,2-trichloroethane	ND	0.002
Tetrachloroethylene	ND	0.002
Chlorodibromomethane	ND	0.002
1,1,2,2-tetrachloroethane	ND	0.002
Bromoform	ND	0.002
Chlorobenzene	ND	0.002
1,2 Dichlorobenzene	ND	0.002
1,3 Dichlorobenzene	ND	0.002
1,4 Dichlorobenzene	ND	0.002
<u>SURROGATE RECOVERY, %</u>		
Bromochloromethane	97	
2-bromo-1-chloropropane	83	
1,4-dichlorobutane	73	

ND - Not Detected

PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

Retec
Project: 3-1308-800 Scougal Rubber Corp.
Lab No. 40881
June 17, 1994

Lab Sample No. 40881-3

Client ID: MW-13

Halogenated Volatile Organics Per SW-846 Method 8010

Date Analyzed: 6-14-94

Units: mg/L

<u>Compound</u>	<u>Result</u>	<u>PQL</u>
Vinyl Chloride	0.004	0.002
Methylene chloride	ND	0.002
1,1-dichloroethylene	ND	0.002
1,1-dichloroethane	ND	0.002
Trans-1,2-dichloroethylene	ND	0.002
1,2-dichloroethane	ND	0.002
Chloroform	ND	0.002
1,1,1-trichloroethane	ND	0.002
Carbon Tetrachloride	ND	0.002
1,2-dichloropropane	ND	0.002
Bromodichloromethane	ND	0.002
Trans-1,3-dichloropropene	ND	0.002
Trichloroethylene	0.004	0.002
Cis-1,3-dichloropropene	ND	0.002
1,1,2-trichloroethane	ND	0.002
Tetrachloroethylene	ND	0.002
Chlorodibromomethane	ND	0.002
1,1,2,2-tetrachloroethane	ND	0.002
Bromoform	ND	0.002
Chlorobenzene	ND	0.002
1,2 Dichlorobenzene	ND	0.002
1,3 Dichlorobenzene	ND	0.002
1,4 Dichlorobenzene	ND	0.002
<u>SURROGATE RECOVERY, %</u>		
Bromochloromethane	100	
2-bromo-1-chloropropane	83	
1,4-dichlorobutane	63	

ND - Not Detected

PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

Retec
Project: 3-1308-800 Scougal Rubber Corp.
Lab No. 40881
June 17, 1994

Lab Sample No. 40881-4

Client ID: MW-15

Halogenated Volatile Organics Per SW-846 Method 8010
Date Analyzed: 6-14-94
Units: mg/L

<u>Compound</u>	<u>Result</u>	<u>PQL</u>
Vinyl Chloride	ND	0.002
Methylene chloride	ND	0.002
1,1-dichloroethylene	ND	0.002
1,1-dichloroethane	ND	0.002
Trans-1,2-dichloroethylene	ND	0.002
1,2-dichloroethane	ND	0.002
Chloroform	ND	0.002
1,1,1-trichloroethane	ND	0.002
Carbon Tetrachloride	ND	0.002
1,2-dichloropropane	ND	0.002
Bromodichloromethane	ND	0.002
Trans-1,3-dichloropropene	ND	0.002
Trichloroethylene	ND	0.002
Cis-1,3-dichloropropene	ND	0.002
1,1,2-trichloroethane	ND	0.002
Tetrachloroethylene	ND	0.002
Chlorodibromomethane	ND	0.002
1,1,2,2-tetrachloroethane	ND	0.002
Bromoform	ND	0.002
Chlorobenzene	ND	0.002
1,2 Dichlorobenzene	ND	0.002
1,3 Dichlorobenzene	ND	0.002
1,4 Dichlorobenzene	ND	0.002
<u>SURROGATE RECOVERY, %</u>		
Bromochloromethane	82	
2-bromo-1-chloropropane	83	
1,4-dichlorobutane	74	

ND - Not Detected

PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

Retec
Project: 3-1308-800 Scougal Rubber Corp.
Lab No. 40881
June 17, 1994

Lab Sample No. 40881-5

Client ID: MW-16

Halogenated Volatile Organics Per SW-846 Method 8010

Date Analyzed: 6-14-94

Units: mg/L

<u>Compound</u>	<u>Result</u>	<u>PQL</u>
Vinyl Chloride	ND	0.002
Methylene chloride	ND	0.002
1,1-dichloroethylene	ND	0.002
1,1-dichloroethane	ND	0.002
Trans-1,2-dichloroethylene	ND	0.002
1,2-dichloroethane	ND	0.002
Chloroform	ND	0.002
1,1,1-trichloroethane	ND	0.002
Carbon Tetrachloride	ND	0.002
1,2-dichloropropane	ND	0.002
Bromodichloromethane	ND	0.002
Trans-1,3-dichloropropene	ND	0.002
Trichloroethylene	ND	0.002
Cis-1,3-dichloropropene	ND	0.002
1,1,2-trichloroethane	ND	0.002
Tetrachloroethylene	ND	0.002
Chlorodibromomethane	ND	0.002
1,1,2,2-tetrachloroethane	ND	0.002
Bromoform	ND	0.002
Chlorobenzene	ND	0.002
1,2 Dichlorobenzene	ND	0.002
1,3 Dichlorobenzene	ND	0.002
1,4 Dichlorobenzene	ND	0.002
<u>SURROGATE RECOVERY, %</u>		
Bromochloromethane	99	
2-bromo-1-chloropropane	84	
1,4-dichlorobutane	70	

ND - Not Detected

PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

QUALITY CONTROL REPORT

Halogenated Volatile Organics
Per EPA Method 8010

Client: Retec
Lab No: 40881qcl
Units: mg/L

Date Analyzed: 6-14-94

METHOD BLANK

Parameter	Result	PQL
Vinyl Chloride	ND	0.001
Methylene chloride	ND	0.001
1,1-dichloroethylene	ND	0.001
1,1-dichloroethane	ND	0.001
Trans-1,2-dichloroethylene	ND	0.001
1,2-dichloroethane	ND	0.001
Chloroform	ND	0.001
1,1,1-trichloroethane	ND	0.001
Carbon Tetrachloride	ND	0.001
1,2-dichloropropane	ND	0.001
Bromodichloromethane	ND	0.001
Trans-1,3-dichloropropene	ND	0.001
Trichloroethylene	ND	0.001
Cis-1,3-dichloropropene	ND	0.001
1,1,2-trichloroethane	ND	0.001
Tetrachloroethylene	ND	0.001
1,1,2,2-tetrachloroethane	ND	0.001
Chlorodibromomethane	ND	0.001
Bromoform	ND	0.001
Chlorobenzene	ND	0.001
1,2 Dichlorobenzene	ND	0.001
1,3 Dichlorobenzene	ND	0.001
1,4 Dichlorobenzene	ND	0.001
<u>SURROGATE RECOVERY, %</u>		
Bromochloromethane	83	
2-bromo-1-chloropropane	81	
1,4-dichlorobutane	73	

ND - Not Detected

PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206) 922-2310 - FAX (206) 922-5047

QUALITY CONTROL REPORT

HALOGENATED VOLATILE ORGANICS - EPA METHOD 8010

Client: Retec
Lab No: 40881qc2
Units: mg/L

BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY

Parameter	Blank Spike Result (BS)	Spike Added (SA)	%R	Blank Spike Dup Result (BSD)	Spike Added (SA)	%R	RPD	Flag
1,1-DCE	0.015	0.010	150	0.015	0.010	150	0.0	
TCE	0.011	0.010	110	0.011	0.010	110	0.0	
Chloro-benzene	0.012	0.010	120	0.012	0.010	120	0.0	
Chloroform	0.008	0.010	80	0.008	0.010	80	0.0	
Tetrachloro-ethene	0.012	0.010	120	0.011	0.010	110	8.7	

%R = Percent Recovery
BS = Blank Spike

RPD = Relative Percent Difference
BSD = Blank Spike Duplicate

GROUNDWATER SAMPLING LOG

PROJECT NAME SCUDGAL AVENUE WELL NO. MW-6
 PROJECT NO. 3-1308-800 SAMPLED BY ILIAS T.
 DATE JUNE 8/94

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>9.78</u> (wl.prot.-ft)
DEPTH OF WELL	(ft) <u>6.1</u>
WELL DIAMETER	(inches) <u>2</u>
FEET OF WATER	<u>3.68</u>
CASING VOLUME*	(gal) <u>0.6</u>
PURGE VOLUME	(gal) <u>1.8</u>
PRODUCT THICK	(ft)
WELL CONDITION	
WEATHER	

Bailed very dark orange GW until taking sample - getting alot of sediment from bottom of well

	PURGE		DATA
START PURGE TIME:	<u>2:05</u>		
VOL. PURGED (gal)	<u>1.0</u>	<u>1.5</u>	<u>2.0</u>
TIME	<u>2:15</u>	<u>2:17</u>	<u>2:21</u>
FLOW RATE			
pH (units)	<u>4.9</u>	<u>4.94</u>	<u>4.9</u>
CONDUCTIVITY	<u>0.41 x 100</u>	<u>5.26</u>	<u>5.13</u>
(umhos/cm)			
TEMP. (C)	<u>69.4</u>	<u>67.6</u>	<u>67.0</u>
WATER COLOR	<u>BROWN</u>	<u>"</u>	<u>lt Brn.</u>

PURGE AND SAMPLE EQUIPT:

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
	<u>2:25</u>	<u>8010</u>	<u>VOA</u>	<u>2</u>	<u>-</u>

ADDITIONAL INFORMATION:

TOC=Top of well casing
 tl top of well protector
 casing volume = $\pi r^2 h (ft) \times 7.48 \text{ gal/ft}^3$

GROUNDWATER SAMPLING LOG

PROJECT NAME SUGGAL RUBBER WELL NO. MW-12
 PROJECT NO. 3-1308-800 SAMPLED BY ILIAS T.
 DATE JUNE 8/99

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>6.2</u>
	(wl.prot.-ft) <u>6.2</u>
DEPTH OF WELL	(ft) <u>19.51</u>
WELL DIAMETER	(inches) <u>4</u>
FEET OF WATER	<u>13.31</u>
CASING VOLUME*	(gal) <u>8.68</u>
PURGE VOLUME	(gal) <u>26</u>
PRODUCT THICK	(ft)
WELL CONDITION	
WEATHER	

	PURGE		DATA
START PURGE TIME:	<u>3:30</u>		<u>4:25</u>
VOL. PURGED (gal)	<u>21</u>	<u>23</u>	<u>26</u>
TIME	<u>4:15</u>	<u>4:20</u>	<u>4:25</u>
FLOW RATE			
pH (units)	<u>5.13</u>	<u>5.12</u>	<u>5.11</u>
CONDUCTIVITY	<u>3.39 x 100</u>	<u>3.16</u>	<u>3080</u>
(umhos/cm)			
TEMP. (C)	<u>69.9</u>	<u>66.3</u>	<u>65.0°</u>
WATER COLOR	<u>lt yellow</u>	<u>orange</u>	<u>clr</u>
PURGE AND SAMPLE EQUIPT:	<u>disposable bailer</u>		

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-12</u>	<u>10:30</u>	<u>8010</u>	<u>VOA</u>	<u>2</u>	<u>—</u>

ADDITIONAL INFORMATION:

TOC=Top of well casing
 wl.prot.=top of well protector
 *casing volume= $\pi r^2 h(ft) \times 7.48 gal/ft^3$

Tested calibration at end of day.
sy says pH 7 buffer is 6.40

GROUNDWATER SAMPLING LOG

PROJECT NAME SCUDAL ROOPER
 PROJECT NO. 3-1308-800
 DATE JUNE 8/99

WELL NO. MW-13
 SAMPLED BY ILIAS T.

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>6.82</u> (wl.prot.-ft)
DEPTH OF WELL	(ft) <u>19.82</u>
WELL DIAMETER	(inches) <u>2</u>
FEET OF WATER	<u>13</u>
CASING VOLUME*	(gal) <u>2.12</u>
PURGE VOLUME	(gal) <u>6.36</u>
PRODUCT THICK	(ft)
WELL CONDITION	
WEATHER	

First PH reading to low @ 2 gal
 Bad meter reading.
 incorrect

	PURGE		DATA	
START PURGE TIME:	<u>1:00</u>			
VOL. PURGED (gal)	<u>2</u>	<u>4</u>	<u>6</u>	<u>7</u>
TIME	<u>1:20</u>	<u>1:30</u>	<u>1:40</u>	<u>1:45</u>
FLOW RATE				
pH (units)	<u>1.81</u>	<u>3.27</u>	<u>4.1</u>	<u>3.8</u>
CONDUCTIVITY	<u>5.24 x 1000</u>	<u>3.58</u>	<u>3.33</u>	<u>3.32</u>
(umhos/cm)				
TEMP. (C)	<u>64.5</u>	<u>64.3</u>	<u>64.5</u>	<u>64.1</u>
WATER COLOR	<u>VERY LIGHT ORANGE</u>	<u>1.6 NTU</u>		
PURGE AND SAMPLE EQUIPT:				

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
	<u># 1:50</u>	<u>1080</u>	<u>50A</u>	<u>2</u>	<u>-</u>

ADDITIONAL INFORMATION:

TOC= Top of well casing
 wl. top of well protector
 *casing volume = $\pi r^2 h (ft) \times 7.48 gal/ft^3$

NOTE: This well is in the sand blasting area therefore there are metal files around and on well cover, There may be some also in well, when well is opened.
 MW-16

GROUNDWATER SAMPLING LOG

PROJECT NAME SCORCAL RUBBER WELL NO. MW-15
 PROJECT NO. 3-1308-800 SAMPLED BY ILIAS T.
 DATE JUNE 8/94

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) 7.25 (wl.prot.-ft)
DEPTH OF WELL	(ft) 19.22
WELL DIAMETER	(inches) 2
FEET OF WATER	12.0
CASING VOLUME*	(gal) 1.95
PURGE VOLUME	(gal) 5.8
PRODUCT THICK	(ft)
WELL CONDITION	
WEATHER	

	PURGE		DATA	
START PURGE TIME:	2:40			
VOL. PURGED (gal)	2	4	6	
TIME	2:50	3:00	3:10	
FLOW RATE				
pH (units)	5.40	5.38	5.38	
CONDUCTIVITY	2.95 x 100	2.66	2.62	
(umhos/cm)				
TEMP. (C)	66.0	64.1	63.0	
WATER COLOR				
PURGE AND SAMPLE EQUIPT:				

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
	15:15	1080	VOA	2	-

ADDITIONAL INFORMATION:

TOC= Top of well casing

wl.prot.= top of well protector

*casing volume = $\pi r^2 h(\text{ft}) \times 7.48 \text{ gal/ft}^3$

GROUNDWATER SAMPLING LOG

PROJECT NAME SOUTH RUBBER
 PROJECT NO. 3-1308-800
 DATE JUNE 8/94

WELL NO. MW-16
 SAMPLED BY ILIAS T.

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>7.02</u> (wl.prot.-ft)
DEPTH OF WELL	(ft) <u>19.42</u>
WELL DIAMETER	(inches) <u>2</u>
FEET OF WATER	<u>12.4</u>
CASING VOLUME*	(gal) <u>2</u>
PURGE VOLUME	(gal) <u>6</u>
PRODUCT THICK	(ft)
WELL CONDITION	
WEATHER	

	PURGE		DATA	
START PURGE TIME:	<u>12:30</u>	<u>12:5</u>		
VOL. PURGED (gal)	<u>2.0</u>	<u>4.0</u>	<u>6</u>	
TIME	<u>12:40</u>	<u>12:50</u>	<u>13:00</u>	
FLOW RATE				
pH (units)	<u>3.96</u>	<u>4.63</u>	<u>4.78</u>	
CONDUCTIVITY	<u>3.92 x 100</u>	<u>3.72</u>	<u>3.73</u>	
(umhos/cm)				
TEMP. (C)	<u>67.4</u>	<u>66.1</u>	<u>65.2</u>	
WATER COLOR	<u>ORANGE</u>	<u>DARKER G.</u>	<u>LIGHT O.</u>	
PURGE AND SAMPLE EQUIPT:				

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
	<u>11:02</u>	<u>1080</u>	<u>UOA</u>	<u>2</u>	<u>-</u>

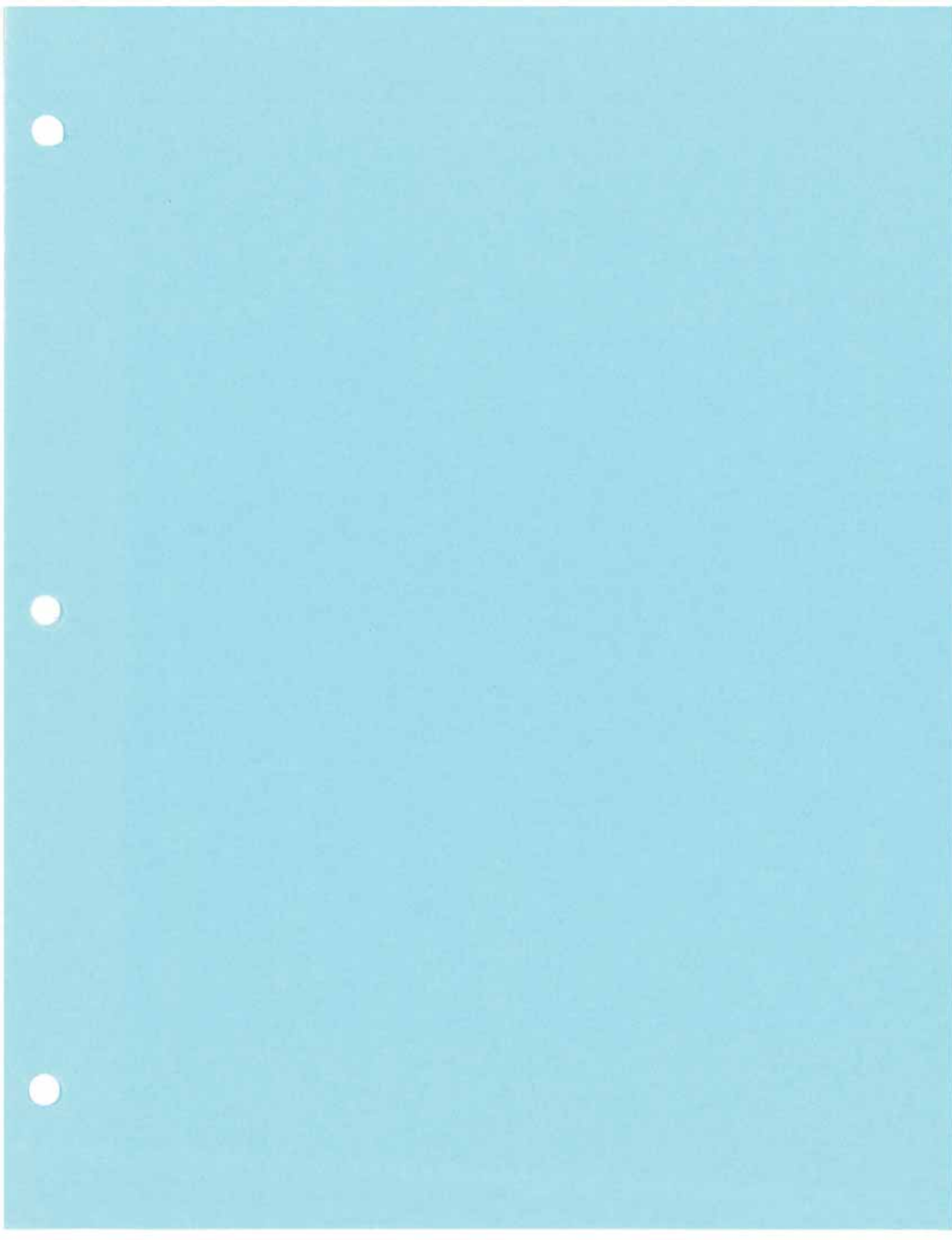
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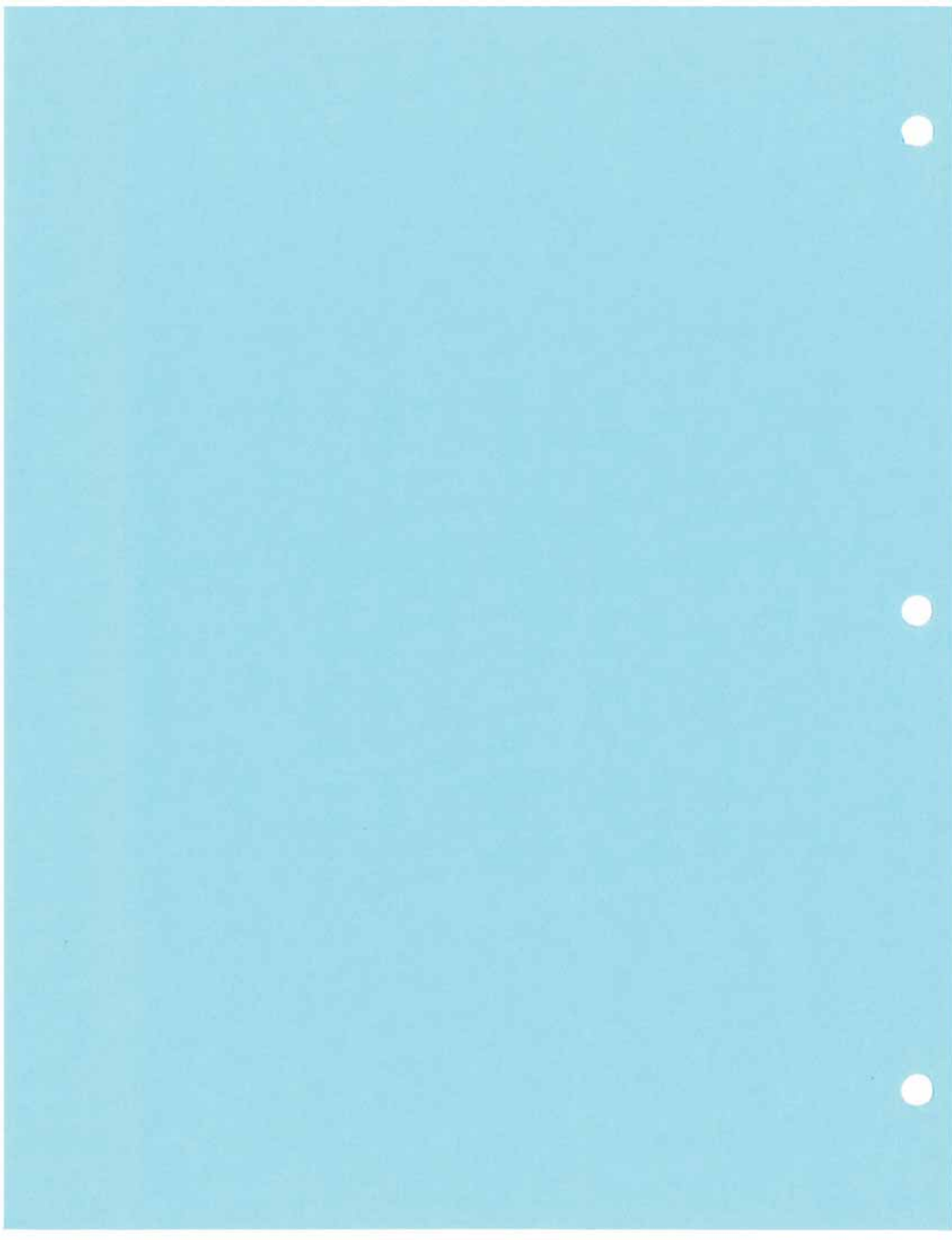
TOC=Top of well casing

wl₁ top of well protector

*casing volume = $\pi r^2 h (ft) \times 7.48 \text{ gal/ft}^3$

NOTE: MW-16





SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

TRANSMITTAL MEMORANDUM

DATE: March 8, 1994

TO: Ward Beebe
Retec

PROJECT NAME: Scougal Rubber

PROJECT NUMBER: 3-1308

LABORATORY NUMBER: 38379

Enclosed are one original and one copy of the Tier I data deliverables package for Laboratory Work Order Number 38379. Five samples were received for analysis at Sound Analytical Services, Inc., on February 28, 1994.

If there are any questions regarding this data package, please do not hesitate to call me at (206) 922-2310.

Sincerely,



Dennis L. Bean
Project Manager

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Retec

Date: March 8, 1994

Report On: Analysis of Water

Lab No.: 38379

IDENTIFICATION:

Samples received on 02-28-94

Project: 3-1308 Scougal Rubber

ANALYSIS:

Lab Sample No. 38379-1

Client ID: MW6

WTPH-D

Date Extracted: 3-1-94

Date Analyzed: 3-7-94

Units: mg/L

<u>Parameter</u>	<u>Result</u>	<u>PQL</u>	<u>Flag</u>
Diesel (> C12 - C24)	0.55	0.25	X2

SURROGATE RECOVERY, %

o-terphenyl	76
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ND - Not Detected

PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

Retec
Project: 3-1308 Scougal Rubber
Lab No. 38379
March 8, 1994

Lab Sample No. 38379-1

Client ID: MW6

Halogenated Volatile Organics Per EPA Method 8010
Date Analyzed: 3-1-94
Units: mg/L

<u>Compound</u>	<u>Result</u>	<u>PQL</u>
Vinyl Chloride	ND	0.001
Methylene chloride	ND	0.001
1,1-dichloroethylene	ND	0.001
1,1-dichloroethane	ND	0.001
Trans-1,2-dichloroethylene	ND	0.001
1,2-dichloroethane	ND	0.001
Chloroform	ND	0.001
1,1,1-trichloroethane	ND	0.001
Carbon Tetrachloride	ND	0.001
1,2-dichloropropane	ND	0.001
Bromodichloromethane	ND	0.001
Trans-1,3-dichloropropene	ND	0.001
Trichloroethylene	ND	0.001
Cis-1,3-dichloropropene	ND	0.001
1,1,2-trichloroethane	ND	0.001
Tetrachloroethylene	ND	0.001
Chlorodibromomethane	ND	0.001
1,1,2,2-tetrachloroethane	ND	0.001
Bromoform	ND	0.001
Chlorobenzene	ND	0.001
1,2 Dichlorobenzene	ND	0.001
1,3 Dichlorobenzene	ND	0.001
1,4 Dichlorobenzene	ND	0.001
<u>SURROGATE RECOVERY, %</u>		
Bromochloromethane	101	
2-bromo-1-chloropropane	94	
1,4-dichlorobutane	107	

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

Retec
Project: 3-1308 Scougal Rubber
Lab No. 38379
March 8, 1994

Lab Sample No. 38379-2

Client ID: MW12

WTPH-D
Date Extracted: 3-1-94
Date Analyzed: 3-7-94
Units: mg/L

<u>Parameter</u>	<u>Result</u>	<u>PQL</u>	<u>Flag</u>
Diesel (> C12 - C24)	0.61	0.25	X2
<u>SURROGATE RECOVERY, %</u>			
o-terphenyl	83		

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

Retec
Project: 3-1308 Scougal Rubber
Lab No. 38379
March 8, 1994

Lab Sample No. 38379-2

Client ID: MW12

Halogenated Volatile Organics Per EPA Method 8010
Date Analyzed: 3-1-94
Units: mg/L

<u>Compound</u>	<u>Result</u>	<u>PQL</u>
Vinyl Chloride	0.004	0.001
Methylene chloride	ND	0.001
1,1-dichloroethylene	ND	0.001
1,1-dichloroethane	ND	0.001
Trans-1,2-dichloroethylene	ND	0.001
1,2-dichloroethane	ND	0.001
Chloroform	ND	0.001
1,1,1-trichloroethane	ND	0.001
Carbon Tetrachloride	ND	0.001
1,2-dichloropropane	ND	0.001
Bromodichloromethane	ND	0.001
Trans-1,3-dichloropropene	ND	0.001
Trichloroethylene	ND	0.001
Cis-1,3-dichloropropene	ND	0.001
1,1,2-trichloroethane	ND	0.001
Tetrachloroethylene	ND	0.001
Chlorodibromomethane	ND	0.001
1,1,2,2-tetrachloroethane	ND	0.001
Bromoform	ND	0.001
Chlorobenzene	ND	0.001
1,2 Dichlorobenzene	ND	0.001
1,3 Dichlorobenzene	ND	0.001
1,4 Dichlorobenzene	ND	0.001
<u>SURROGATE RECOVERY, %</u>		
Bromochloromethane	100	
2-bromo-1-chloropropane	93	
1,4-dichlorobutane	98	

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

Retec
Project: 3-1308 Scougal Rubber
Lab No. 38379
March 8, 1994

Lab Sample No. 38379-3

Client ID: MW15

WTPH-D
Date Extracted: 3-1-94
Date Analyzed: 3-7-94
Units: mg/L

<u>Parameter</u>	<u>Result</u>	<u>PQL</u>	<u>Flag</u>
Diesel (> C12 - C24)	0.28	0.25	
<u>SURROGATE RECOVERY, %</u>			
o-terphenyl	81		

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

Retec
Project: 3-1308 Scougal Rubber
Lab No. 38379
March 8, 1994

Lab Sample No. 38379-3

Client ID: MW15

Halogenated Volatile Organics Per EPA Method 8010
Date Analyzed: 3-1-94
Units: mg/L

<u>Compound</u>	<u>Result</u>	<u>PQL</u>
Vinyl Chloride	ND	0.001
Methylene chloride	ND	0.001
1,1-dichloroethylene	ND	0.001
1,1-dichloroethane	ND	0.001
Trans-1,2-dichloroethylene	ND	0.001
1,2-dichloroethane	ND	0.001
Chloroform	ND	0.001
1,1,1-trichloroethane	ND	0.001
Carbon Tetrachloride	ND	0.001
1,2-dichloropropane	ND	0.001
Bromodichloromethane	ND	0.001
Trans-1,3-dichloropropene	ND	0.001
Trichloroethylene	ND	0.001
Cis-1,3-dichloropropene	ND	0.001
1,1,2-trichloroethane	ND	0.001
Tetrachloroethylene	ND	0.001
Chlorodibromomethane	ND	0.001
1,1,2,2-tetrachloroethane	ND	0.001
Bromoform	ND	0.001
Chlorobenzene	ND	0.001
1,2 Dichlorobenzene	ND	0.001
1,3 Dichlorobenzene	ND	0.001
1,4 Dichlorobenzene	ND	0.001
<u>SURROGATE RECOVERY, %</u>		
Bromochloromethane	101	
2-bromo-1-chloropropane	102	
1,4-dichlorobutane	97	

ND - Not Detected

PQL - Practical Quantitation Limit

502
6

SOUND ANALYTICAL SERVICES, INC.

Retec
Project: 3-1308 Scougal Rubber
Lab No. 38379
March 8, 1994

Lab Sample No. 38379-4

Client ID: MW13

WTPH-D
Date Extracted: 3-1-94
Date Analyzed: 3-7-94
Units: mg/L

<u>Parameter</u>	<u>Result</u>	<u>PQL</u>	<u>Flag</u>
Diesel (> C12 - C24)	0.36	0.25	
<u>SURROGATE RECOVERY, %</u>			
o-terphenyl	71		

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

Retec
Project: 3-1308 Scougal Rubber
Lab No. 38379
March 8, 1994

Lab Sample No. 38379-4

Client ID: MW13

Halogenated Volatile Organics Per EPA Method 8010
Date Analyzed: 3-1-94
Units: mg/L

<u>Compound</u>	<u>Result</u>	<u>PQL</u>	<u>Flag</u>
Vinyl Chloride	0.089	0.001	
Methylene chloride	ND	0.001	
1,1-dichloroethylene	0.008	0.001	
1,1-dichloroethane	0.002	0.001	
Trans-1,2-dichloroethylene	ND	0.001	
1,2-dichloroethane	ND	0.001	
Chloroform	ND	0.001	
1,1,1-trichloroethane	ND	0.001	
Carbon Tetrachloride	ND	0.001	
1,2-dichloropropane	ND	0.001	
Bromodichloromethane	ND	0.001	
Trans-1,3-dichloropropene	ND	0.001	
Trichloroethylene	0.54	0.10	D
Cis-1,3-dichloropropene	ND	0.001	
1,1,2-trichloroethane	ND	0.001	
Tetrachloroethylene	0.005	0.001	
Chlorodibromomethane	ND	0.001	
1,1,2,2-tetrachloroethane	ND	0.001	
Bromoform	ND	0.001	
Chlorobenzene	ND	0.001	
1,2 Dichlorobenzene	ND	0.001	
1,3 Dichlorobenzene	ND	0.001	
1,4 Dichlorobenzene	ND	0.001	
<u>SURROGATE RECOVERY, %</u>			
Bromochloromethane	115		
2-bromo-1-chloropropane	96		
1,4-dichlorobutane	96		

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

Retec
Project: 3-1308 Scougal Rubber
Lab No. 38379
March 8, 1994

Lab Sample No. 38379-5

Client ID: MW16

WTPH-D
Date Extracted: 3-1-94
Date Analyzed: 3-7-94
Units: mg/L

<u>Parameter</u>	<u>Result</u>	<u>PQL</u>	<u>Flag</u>
Diesel (> C12 - C24)	0.54	0.25	X2
<u>SURROGATE RECOVERY, %</u>			
o-terphenyl	71		

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

Retec
Project: 3-1308 Scougal Rubber
Lab No. 38379
March 8, 1994

Lab Sample No. 38379-5

Client ID: MW16

Halogenated Volatile Organics Per EPA Method 8010
Date Analyzed: 3-1-94
Units: mg/L

<u>Compound</u>	<u>Result</u>	<u>PQL</u>
Vinyl Chloride	ND	0.001
Methylene chloride	ND	0.001
1,1-dichloroethylene	ND	0.001
1,1-dichloroethane	ND	0.001
Trans-1,2-dichloroethylene	ND	0.001
1,2-dichloroethane	ND	0.001
Chloroform	ND	0.001
1,1,1-trichloroethane	ND	0.001
Carbon Tetrachloride	ND	0.001
1,2-dichloropropane	ND	0.001
Bromodichloromethane	ND	0.001
Trans-1,3-dichloropropene	ND	0.001
Trichloroethylene	ND	0.001
Cis-1,3-dichloropropene	ND	0.001
1,1,2-trichloroethane	ND	0.001
Tetrachloroethylene	ND	0.001
Chlorodibromomethane	ND	0.001
1,1,2,2-tetrachloroethane	ND	0.001
Bromoform	ND	0.001
Chlorobenzene	ND	0.001
1,2 Dichlorobenzene	ND	0.001
1,3 Dichlorobenzene	ND	0.001
1,4 Dichlorobenzene	ND	0.001
<u>SURROGATE RECOVERY, %</u>		
Bromochloromethane	100	
2-bromo-1-chloropropane	92	
1,4-dichlorobutane	91	

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

QUALITY CONTROL REPORT

WTPH-D
(Diesel Range Organics)

Client: Retec
Lab No: 38379qc1
Units: mg/L

Date Extracted: 3-1-94
Date Analyzed: 3-7-94

METHOD BLANK

Blank No. 032F0401.D

Parameter	Result	PQL
Diesel	ND	0.25
<u>SURROGATE RECOVERY, %</u> o-terphenyl	87	

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

QUALITY CONTROL REPORT

Halogenated Volatile Organics
Per EPA Method 8010

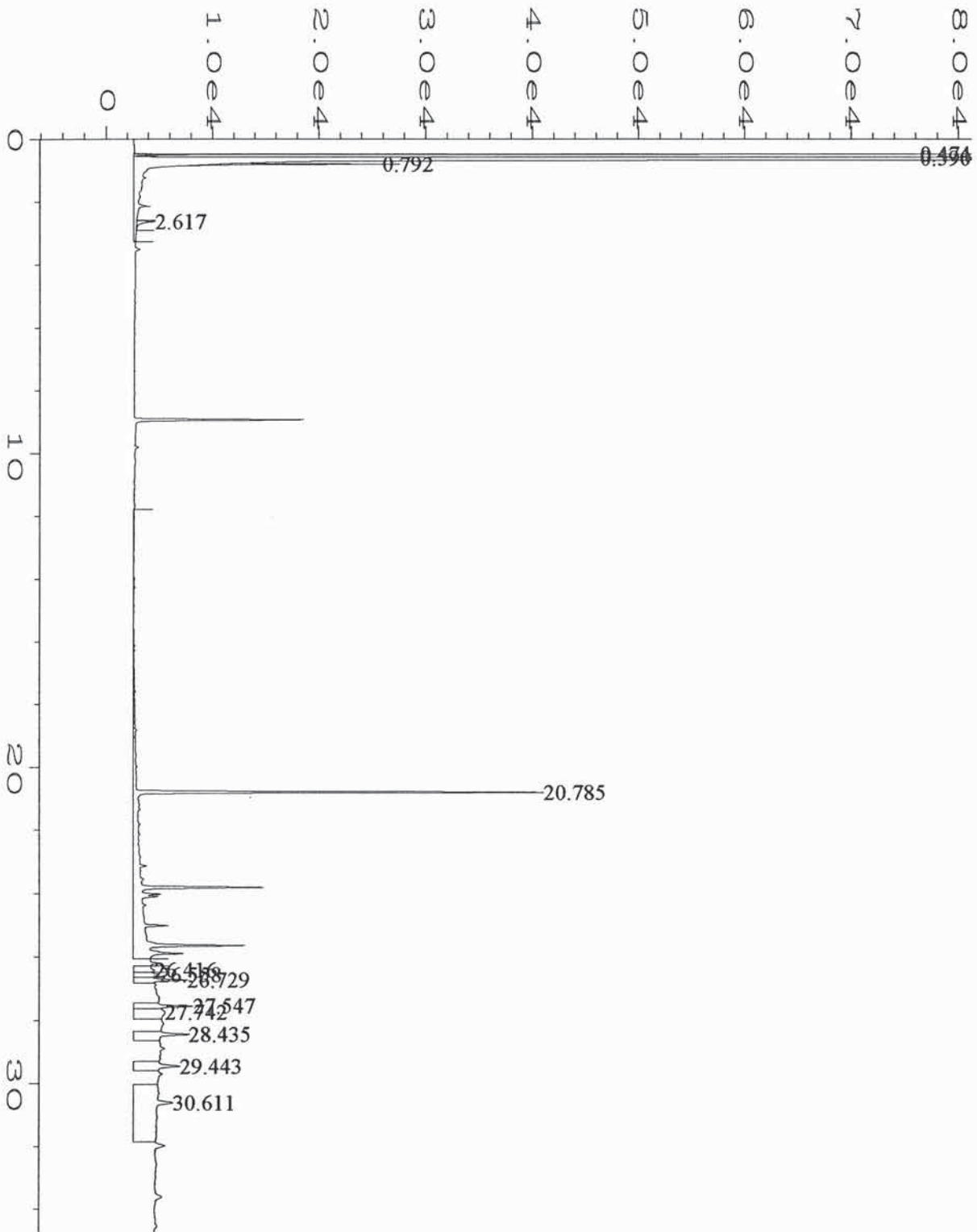
Client: Retec
Lab No: 38379qc2
Units: mg/L

Date Analyzed: 3-1-94

METHOD BLANK

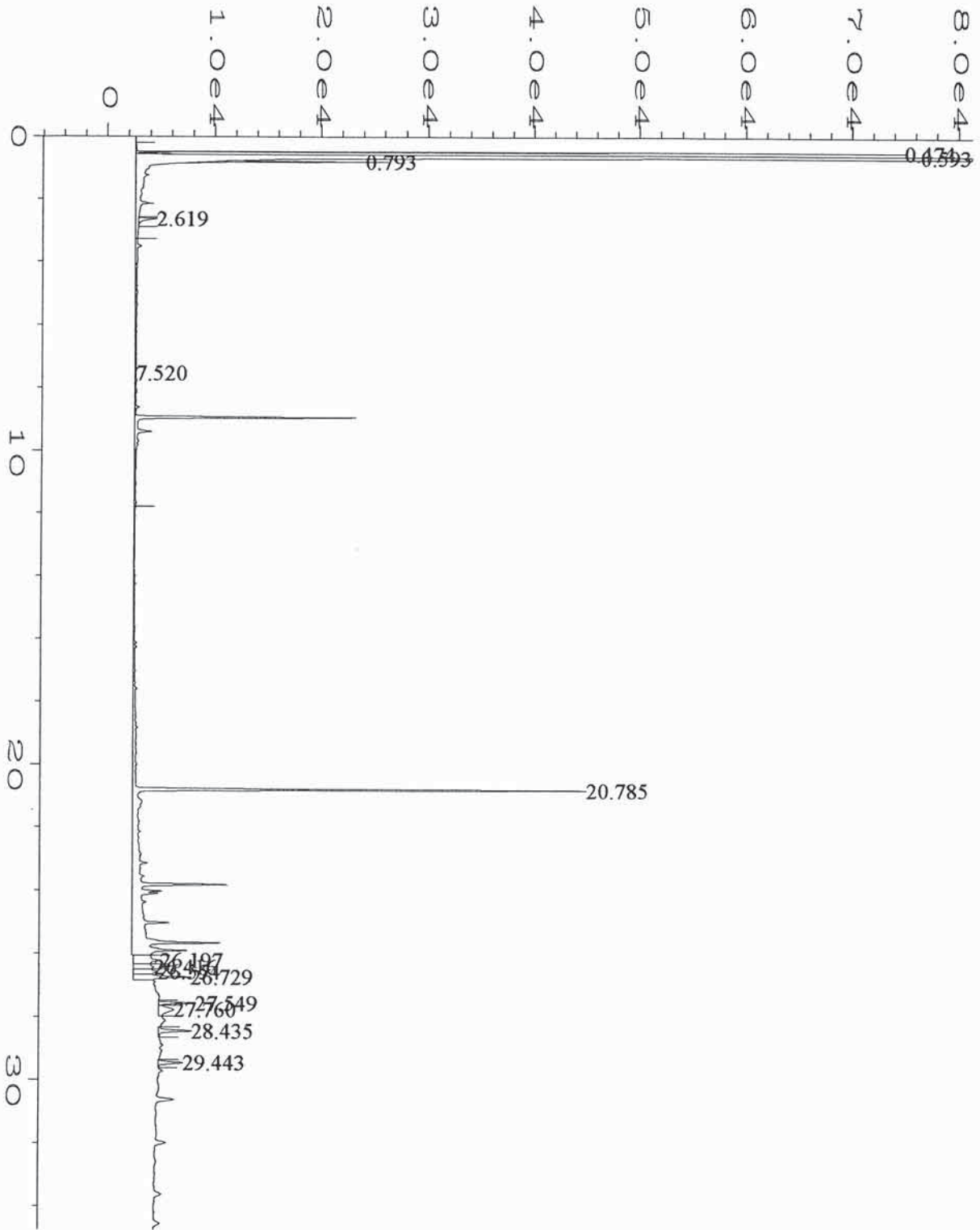
Parameter	Result	PQL
Vinyl Chloride	ND	0.001
Methylene chloride	ND	0.001
1,1-dichloroethylene	ND	0.001
1,1-dichloroethane	ND	0.001
Trans-1,2-dichloroethylene	ND	0.001
1,2-dichloroethane	ND	0.001
Chloroform	ND	0.001
1,1,1-trichloroethane	ND	0.001
Carbon Tetrachloride	ND	0.001
1,2-dichloropropane	ND	0.001
Bromodichloromethane	ND	0.001
Trans-1,3-dichloropropane	ND	0.001
Trichloroethylene	ND	0.001
Cis-1,3-dichloropropane	ND	0.001
1,1,2-trichloroethane	ND	0.001
Tetrachloroethylene	ND	0.001
1,1,2,2-tetrachloroethane	ND	0.001
Chlorodibromomethane	ND	0.001
Bromoform	ND	0.001
Chlorobenzene	ND	0.001
1,2 Dichlorobenzene	ND	0.001
1,3 Dichlorobenzene	ND	0.001
1,4 Dichlorobenzene	ND	0.001
<u>SURROGATE RECOVERY, %</u>		
Bromochloromethane	102	
2-bromo-1-chloropropane	92	
1,4-dichlorobutane	95	

ND - Not Detected
PQL - Practical Quantitation Limit



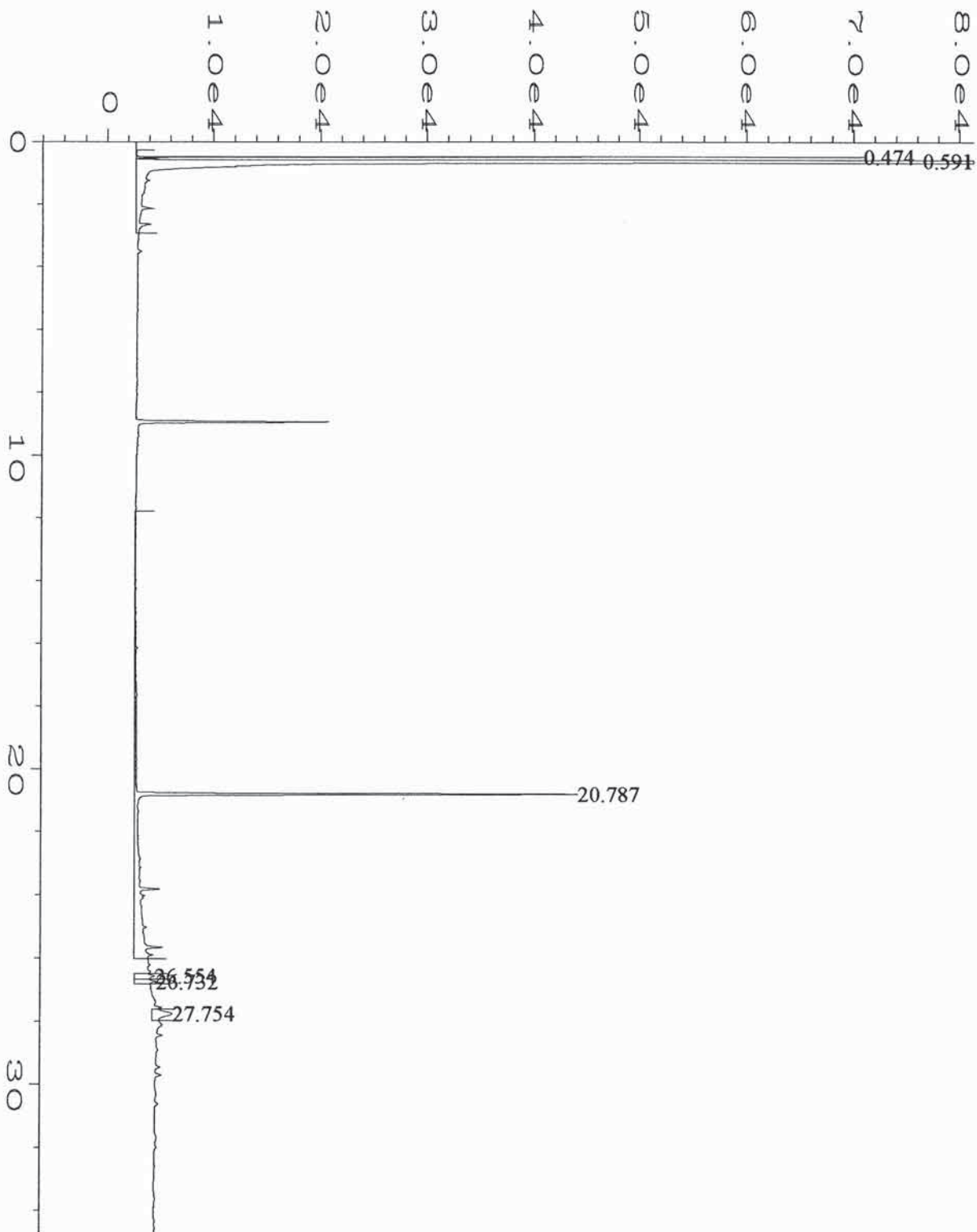
user modified

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Instrument	: HP 5890	Injection Number	: 1
Sample Name	: 38379-1	Sequence Line	: 4
Run Time Bar Code:		Instrument Method:	SU0301-1.MT
Acquired on	: 07 Mar 94 04:50 PM	Analysis Method	: 0301-2D.MTH
Report Created on:	08 Mar 94 08:57 AM	Sample Amount	: 0
Last Recalib on	: 04 MAR 94 10:39 AM	ISTD Amount	: 14
Multiplier	: 1		



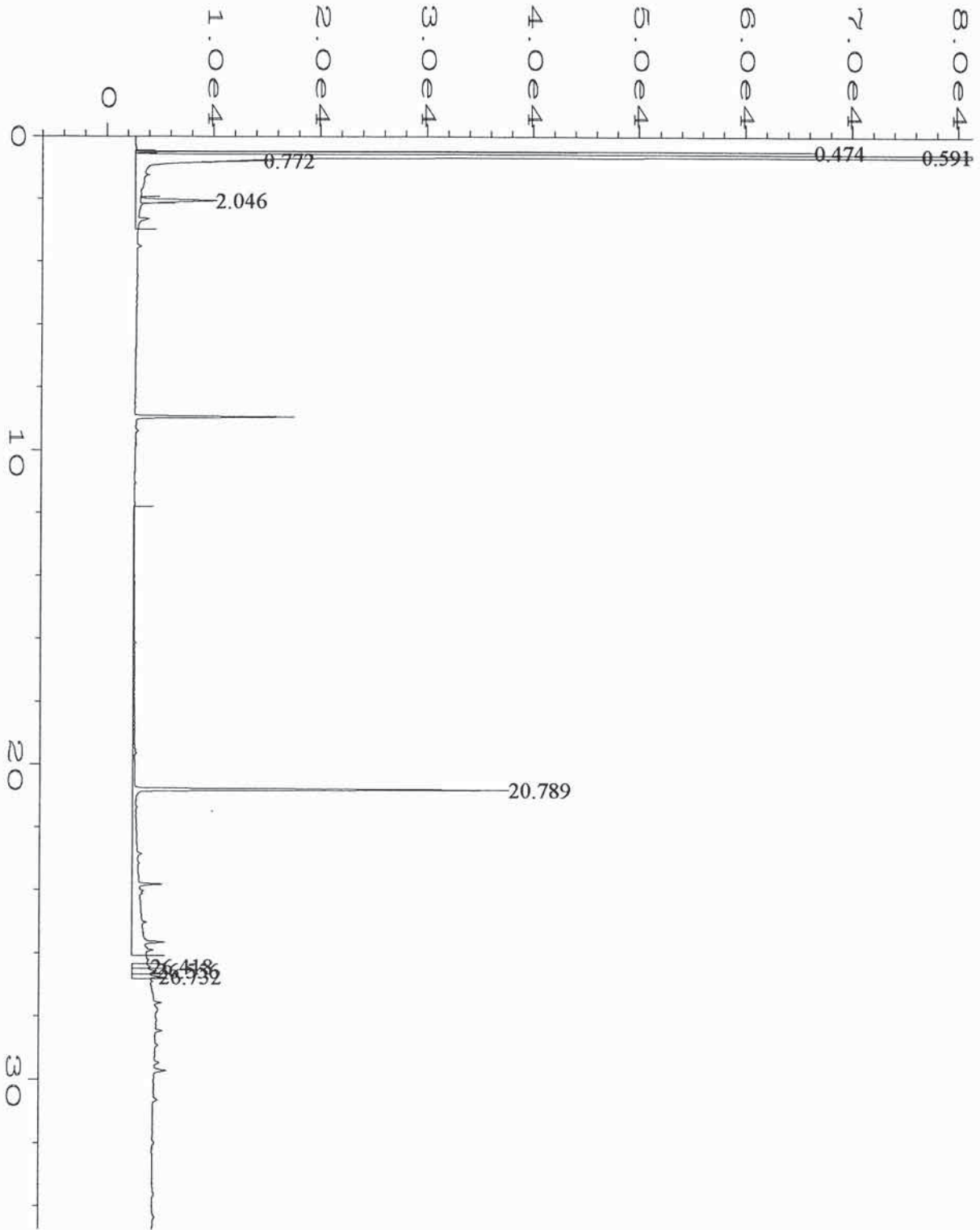
user modified

Data File Name	: C:\HPCHEM\1\DATA\030794_A\035R0401.D	Page Number	: 1
Operator	: ELG/DAS	Vial Number	: 35
Instrument	: HP 5890	Injection Number	: 1
Sample Name	: 38379-2	Sequence Line	: 4
Run Time Bar Code:		Instrument Method:	SU0301-1.MTH
Acquired on	: 07 Mar 94 05:32 PM	Analysis Method	: 0301-2D.MTH
Report Created on:	08 Mar 94 08:58 AM	Sample Amount	: 0
Last Recalib on	: 04 MAR 94 10:39 AM	ISTD Amount	:
Multiplier	: 1		



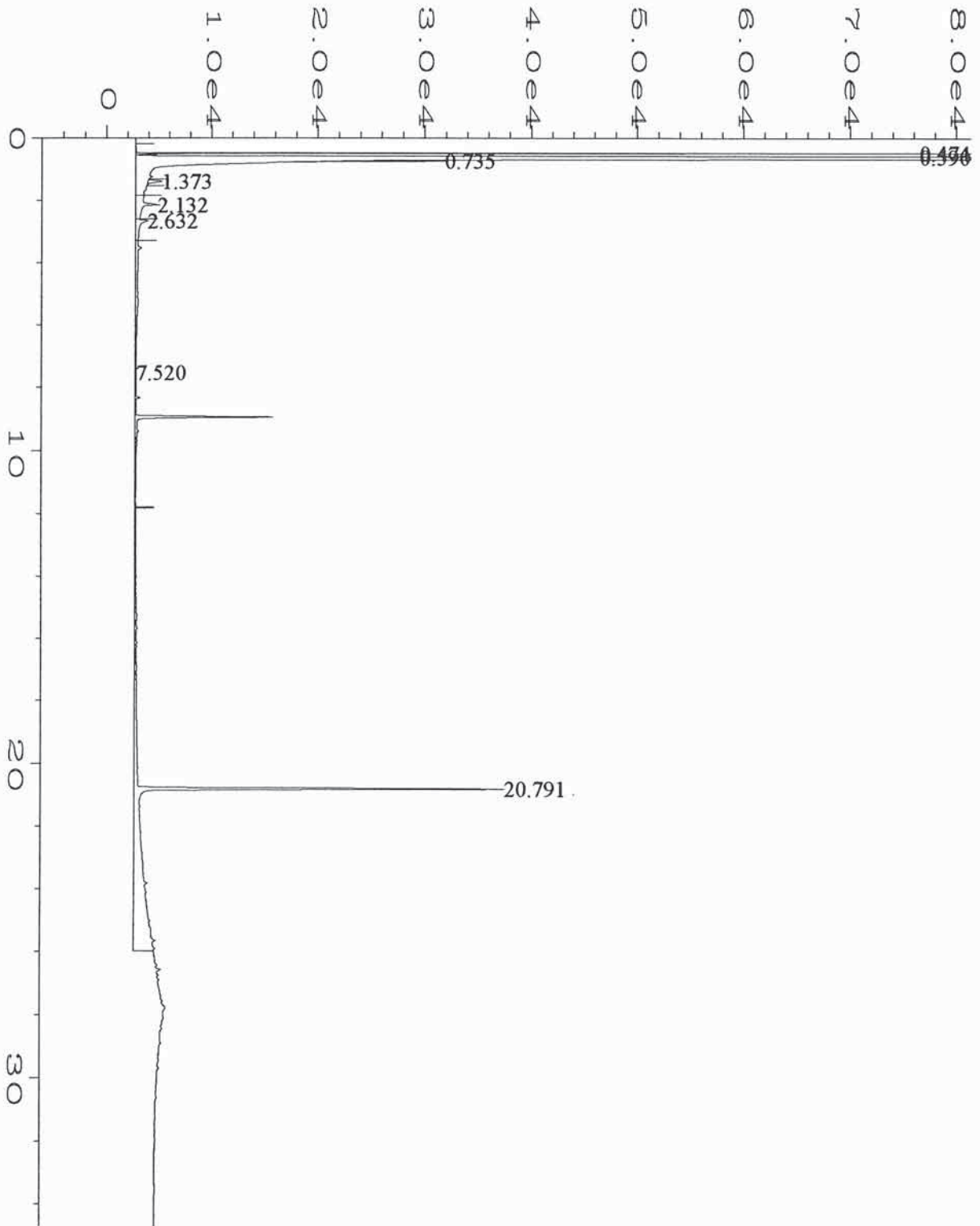
user modified

Data File Name	: C:\HPCHEM\1\DATA\030794_A\036R0401.D	Page Number	: 1
Operator	: ELG/DAS	Vial Number	: 36
Instrument	: HP 5890	Injection Number	: 1
Sample Name	: 38379-3	Sequence Line	: 4
Run Time Bar Code:		Instrument Method:	SU0301-1.M7
Acquired on	: 07 Mar 94 06:13 PM	Analysis Method	: 0301-2D.MTH
Report Created on:	08 Mar 94 09:00 AM	Sample Amount	: 0
Last Recalib on	: 04 MAR 94 10:39 AM	ISTD Amount	:
Multiplier	: 1		



user modified

Data File Name	: C:\HPCHEM\1\DATA\030794_A\037R0401.D	Page Number	: 1
Operator	: ELG/DAS	Vial Number	: 37
Instrument	: HP 5890	Injection Number	: 1
Sample Name	: 38379-4	Sequence Line	: 4
Run Time Bar Code:		Instrument Method:	SU0301-1.MTH
Acquired on	: 07 Mar 94 06:55 PM	Analysis Method	: 0301-2D.MTH
Report Created on:	08 Mar 94 09:02 AM	Sample Amount	: 0
Last Recalib on	: 04 MAR 94 10:39 AM	ISTD Amount	:
Multiplier	: 1		



user modified

Data File Name	: C:\HPCHEM\1\DATA\030794_A\038R0401.D	Page Number	: 1
Operator	: ELG/DAS	Vial Number	: 38
Instrument	: HP 5890	Injection Number	: 1
Sample Name	: 38379-5	Sequence Line	: 4
Run Time Bar Code:		Instrument Method:	SU0301-1.M7
Acquired on	: 07 Mar 94 07:36 PM	Analysis Method	: 0301-2D.MTH
Report Created on:	08 Mar 94 09:03 AM	Sample Amount	: 0
Last Recalib on	: 04 MAR 94 10:39 AM	ISTD Amount	: 18
Multiplier	: 1		

SOUND ANALYTICAL SERVICES, INC.

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 • TELEPHONE 206-922-2310 • FAX 206-922-5047

DATA QUALIFIER FLAGS

- J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.
- B1: This analyte was also detected in the associated method blank. The reported sample results have been adjusted for moisture, final extract volume, and/or dilutions performed during extract preparation. The analyte concentration was evaluated prior to sample preparation adjustments, and was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank).
- B2: This analyte was also detected in the associated method blank. However, the analyte concentration in the sample was determined to be significantly higher than the method blank (greater than ten times the concentration reported in the blank).
- E: The concentration of this analyte exceeded the instrument calibration range.
- D: The reported result for this analyte is calculated based on a secondary dilution factor.
- X1: Contaminant does not appear to be "typical" product. Elution pattern suggests it may be
_____.
- X2: Contaminant does not appear to be "typical" product. Further testing is suggested for identification.
- X3: Identification and quantification of peaks was complicated by matrix interference; GC/MS confirmation is recommended.
- X4: RPD for duplicates outside QC limits. Sample was re-analyzed with similar results.
- X4a: RPD for duplicates outside QC limits due to analyte concentration near the method practical quantitation limit/detection limit.
- X5: Matrix spike was diluted out during analysis.
- X6: Recovery of matrix spike outside QC limits. Sample was re-analyzed with similar results.
- X7: Recovery of matrix spike outside QC limits. Matrix interference is indicated by blank spike recovery data.
- X7a: Recovery and/or RPD values for MS/MSD outside QC limits due to high contaminant levels.
- X8: Surrogate was diluted out during analysis.
- X9: Surrogate recovery outside QC limits due to matrix composition.

GROUNDWATER SAMPLING LOG

PROJECT NAME Slovak Rubber
 PROJECT NO. 3-1308-500
 DATE 2/25/94

WELL NO. MW-6
 SAMPLED BY EL

WELL	INFORMATION	
DEPTH TO WATER	(TOC-ft)	6.04
	(wl.prot.-ft)	
DEPTH OF WELL	(ft)	9.54
WELL DIAMETER	(inches)	8.2
FEET OF WATER		3.50
CASING VOLUME*	(gal)	.6
PURGE VOLUME	(gal)	2
PRODUCT THICK.	(ft)	
WELL CONDITION		
WEATHER		

- appear like surface
H₂O may have entered well

	PURGE		DATA		
START PURGE TIME:	1:25				
VOL. PURGED (gal)	1.0	1.5	2		
TIME					
FLOW RATE					
pH (units)	< 7.3	< 7.15	< 7.10		
CONDUCTIVITY (umhos/cm)	380	380	370		
TEMP. (C)	12.0	11.8	11.5		
WATER COLOR	Gray/Orange				
PURGE AND SAMPLE EQUIP:					

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
	1:25	8015	1L	1	H ₂ SO ₄
		8010	40ml WBA	2	-

ADDITIONAL INFORMATION:

TOC = Top of well casing

W.prot. = top of well protector

*casing volume = $\pi r^2 h$ (ft) x 7.48 gal/ft³

3.95

19.25

GROUNDWATER SAMPLING LOG

PROJECT NAME SCOUZAL RUBBER
 PROJECT NO. 3-1308-500
 DATE 2/25/94

WELL NO. MW-12
 SAMPLED BY ER

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>5.95</u> (wl.prot.-ft)
DEPTH OF WELL	(ft) <u>19.5</u>
WELL DIAMETER	(inches) <u>4</u> <u>10</u>
FEET OF WATER	<u>13.55</u>
CASING VOLUME*	(gal) <u>9</u>
PURGE VOLUME	(gal) <u>27</u>
PRODUCT THICK.	(ft)
WELL CONDITION	
WEATHER	

	PURGE	DATA		
START PURGE TIME:	<u>12:00</u>			
VOL. PURGED (gal)	<u>22</u>	<u>25</u>	<u>27</u>	
TIME	<u>12:50</u>	<u>12:55</u>	<u>1:00</u>	
FLOW RATE				
pH (units)	<u>8.01</u>	<u>7.51</u>	<u>7.48</u>	
CONDUCTIVITY (umhos/cm)	<u>380</u>	<u>380</u>	<u>380</u>	
TEMP. (C)	<u>13.2</u>	<u>13.3</u>	<u>13.4</u>	
WATER COLOR	<u>Brown</u>	<u>LT Brown</u>	<u>Clear</u>	
PURGE AND SAMPLE EQUIP:	<u>DESP BATTER</u>			

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>1</u>	<u>1:05</u>	<u>8015</u>	<u>1L</u>	<u>1</u>	<u>H₂SO₄</u>
<u>2+3</u>	<u>1:05</u>	<u>8010</u>	<u>40ml V/A</u>	<u>2</u>	<u>-</u>

ADDITIONAL INFORMATION:

Top of well casing

top of well protector

Volume = $\pi r^2 h$ (ft) x 7.48 gal/ft³

GROUNDWATER SAMPLING LOG

PROJECT NAME SCOVILLE RUBBER
 PROJECT NO. 3-1308-500
 DATE 2/25/94

WELL NO. MW-13
 SAMPLED BY ER

WELL	INFORMATION
DEPTH TO WATER	(TOC-ft) <u>6.79</u> (wl.prot.-ft)
DEPTH OF WELL	(ft) <u>20.4</u>
WELL DIAMETER	(inches) <u>2</u>
FEET OF WATER	<u>13.61</u>
CASING VOLUME*	(gal) <u>2</u>
PURGE VOLUME	(gal) <u>6</u>
PRODUCT THICK.	(ft)
WELL CONDITION	
WEATHER	

20.40
 6.79

 13.61
 .16
 81.66
 13.61
 2.1776

	PURGE		DATA	
START PURGE TIME:	<u>2:30</u>			
VOL. PURGED (gal)	<u>2</u>	<u>4</u>	<u>6</u>	
TIME	<u>2:40</u>	<u>2:45</u>	<u>2:50</u>	
FLOW RATE				
pH (units)	<u>7.11</u>	<u>7.07</u>	<u>7.05</u>	
CONDUCTIVITY (umhos/cm)	<u>220</u>	<u>240</u>	<u>240</u>	
TEMP. (C)	<u>13.7</u>	<u>14.0</u>	<u>14.2</u>	
WATER COLOR	<u>Brown</u>	<u>Brown</u>	<u>Clear Brown</u>	
PURGE AND SAMPLE EQUIP:	<u>DESP PATEL</u>			

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
	<u>3:00</u>	<u>8015</u>	<u>1L</u>	<u>1</u>	<u>N₂S₂O₄</u>
	<u>3:20</u>	<u>8010</u>	<u>40 ml VOA</u>	<u>2</u>	<u>-</u>

ADDITIONAL INFORMATION:

TOC = Top of well casing

.prot. = top of well protector

*casing volume = $\pi r^2 h$ (ft) x 7.48 gal/ft³

SAMPLES IN R4

GROUNDWATER SAMPLING LOG

PROJECT NAME SLUGA RUBBER
 PROJECT NO. 3-1308-500
 DATE 2/25/94

WELL NO. MW-15
 SAMPLED BY ERC

WELL INFORMATION	
DEPTH TO WATER	(TOC-ft) <u>7.05</u> (wl.prot.-ft)
DEPTH OF WELL	(ft) <u>19.20</u>
WELL DIAMETER	(inches) <u>8.2</u>
FEET OF WATER	<u>12.15</u>
CASING VOLUME*	(gal) <u>2</u>
PURGE VOLUME	(gal) <u>6</u>
PRODUCT THICK.	(ft)
WELL CONDITION	
WEATHER	

PURGE		DATA	
START PURGE TIME:	<u>1:50</u>		
VOL. PURGED (gal)	<u>2</u>	<u>4</u>	<u>6</u>
TIME	<u>1:55</u>	<u>2</u>	<u>2:05</u>
FLOW RATE			
pH (units)	<u>7.49</u>	<u>7.45</u>	<u>7.41</u>
CONDUCTIVITY (umhos/cm)	<u>190</u>	<u>190</u>	<u>190</u>
TEMP. (C)	<u>13.4</u>	<u>13.6</u>	<u>13.8</u>
WATER COLOR	<u>Red Brown</u>	<u>-</u>	<u>-</u>
PURGE AND SAMPLE EQUIP: <u>RETEC</u>			

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
	<u>2:10</u>	<u>8015</u>	<u>1 L</u>	<u>1</u>	<u>H₂SO₄</u>
	<u>2:10</u>	<u>8010</u>	<u>40 ml VOA</u>	<u>2</u>	<u>-</u>

ADDITIONAL INFORMATION:

TOC = Top of well casing

wl.prot. = top of well protector

*casing volume = $\pi r^2 h$ (ft) x 7.48 gal/ft³

GROUNDWATER SAMPLING LOG

PROJECT NAME Severna Park Rubber
 PROJECT NO. 3-1308-500
 DATE 2/25/94

WELL NO. MW-16
 SAMPLED BY LR

WELL INFORMATION	
DEPTH TO WATER (TOC-ft)	6.8
(wl.prot.-ft)	
DEPTH OF WELL (ft)	19.3
WELL DIAMETER (inches)	2 8
FEET OF WATER	12.5
CASING VOLUME* (gal)	2
PURGE VOLUME (gal)	6
PRODUCT THICK. (ft)	
WELL CONDITION	
WEATHER	

PURGE DATA	
START PURGE TIME:	12:45
VOL. PURGED (gal)	2 4 6
TIME	12:55 1:00 1:07
FLOW RATE	
pH (units)	7.57 7.27 7.21
CONDUCTIVITY (umhos/cm)	180 190 210
TEMP. (C)	13.1 13.1 13.1
WATER COLOR	6 Brown Brown LT Brown
PURGE AND SAMPLE EQUIP:	DISP BATTER

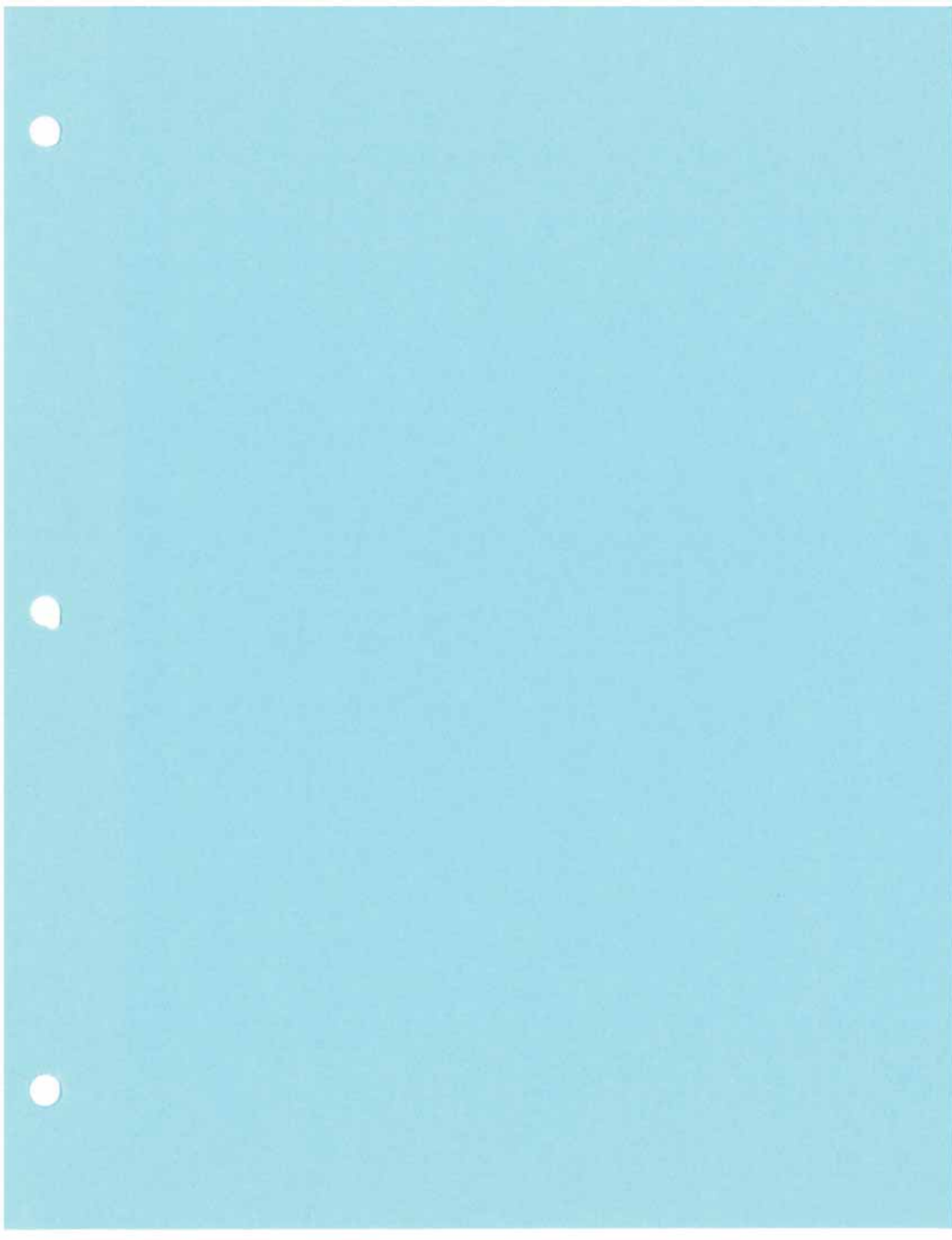
SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
4	1:10	8015	1L	1	M2524
5+6	1:16	4010	40 ml vOA	2	-

ADDITIONAL INFORMATION:

TOC = Top of well casing

..prot. = top of well protector

*casing volume = $\pi r^2 h$ (ft) x 7.48 gal/ft³





SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

TRANSMITTAL MEMORANDUM

DATE: October 12, 1993
TO: Linda Baker
Retec
PROJECT NAME: Scougal Rubber
PROJECT NUMBER: 3-1308
LABORATORY NUMBER: 35254

Enclosed is one original and one copy of the Tier I data deliverables package for Laboratory Work Order Number 35254. Three samples were received for analysis at Sound Analytical Services, Inc., on October 1, 1993.

If there are any questions regarding this data package, please do not hesitate to call me at (206) 922-2310.

Sincerely,



Dennis L. Bean
Project Manager

DLB:tm

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Retec

Date: October 12, 1993

Report On: Analysis of Water

Lab No.: 35254

Page 1 of 6

IDENTIFICATION:

Sample Received on 10-01-93

Project: 3-1308 Scougal Rubber

ANALYSIS:

Lab Sample No. 35254-1

Client ID: MW-13

Volatile Organics Per EPA Method 8240

Date Analyzed: 10-7-93

Compound	Concentration ug/L	PQL	Flag
Chloromethane	ND	100	J
Bromomethane	ND	100	
Vinyl Chloride	40	100	
Chloroethane	ND	100	
Methylene Chloride	ND	50	
Acetone	ND	250	
Carbon Disulfide	ND	50	
1,1-Dichloroethene	ND	50	
1,1-Dichloroethane	ND	50	
1,2-Dichloroethene (Total)	91	50	
Chloroform	ND	50	
1,2-Dichloroethane	ND	50	
2-Butanone	ND	250	
1,1,1-Trichloroethane	ND	50	
Carbon Tetrachloride	ND	50	
Vinyl Acetate	ND	250	
Bromodichloromethane	ND	50	
1,2-Dichloropropane	ND	50	
Cis-1,3-Dichloropropene	ND	50	
Trichloroethene	670	50	
Dibromochloromethane	ND	50	
1,1,2-Trichloroethane	ND	50	

ND - Not Detected

PQL - Practical Quantitation Limit

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 3-1308 Scougal Rubber
 Page 2 of 6
 Lab No. 35254
 October 12, 1993

Lab Sample No. 35254-1

Client ID: MW-13

8240 Continued . . .

Compound	Concentration ug/L	PQL	Flag
Benzene	ND	50	
Trans-1,3-Dichloropropene	ND	50	
Bromoform	ND	50	
4-Methyl-2-Pentanone	ND	250	
2-Hexanone	ND	50	
Tetrachloroethene	ND	50	
1,1,2,2-Tetrachloroethane	ND	50	
Toluene	ND	50	
Chlorobenzene	ND	50	
Ethyl Benzene	ND	50	
Styrene	ND	50	
Total Xylenes	ND	50	

ND - Not Detected

PQL - Practical Quantitation Limit

Volatile Surrogates

Surrogate Compound	Percent Recovery	Flags	Control Limits	
			Water	Soil
Toluene - D8	96		88 - 110	81 - 117
Bromofluorobenzene	98		86 - 115	74 - 121
1,2-Dichloroethane-D4	92		76 - 114	70 - 121

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 3-1308 Scougal Rubber
 Page 3 of 6
 Lab No. 35254
 October 12, 1993

Lab Sample No. 35254-2

Client ID: MW-14

Volatile Organics Per EPA Method 8240
 Date Analyzed: 10-7-93

Compound	Concentration ug/L	PQL	Flag
Chloromethane	ND	400	
Bromomethane	ND	400	
Vinyl Chloride	2,600	400	
Chloroethane	ND	400	
Methylene Chloride	ND	200	
Acetone	ND	1,000	
Carbon Disulfide	ND	200	
1,1-Dichloroethene	ND	200	
1,1-Dichloroethane	ND	200	
1,2-Dichloroethene (Total)	1,600	200	
Chloroform	ND	200	
1,2-Dichloroethane	ND	200	
2-Butanone	ND	1,000	
1,1,1-Trichloroethane	ND	200	
Carbon Tetrachloride	ND	200	
Vinyl Acetate	ND	1,000	
Bromodichloromethane	ND	200	
1,2-Dichloropropane	ND	200	
Cis-1,3-Dichloropropene	ND	200	
Trichloroethene	390	200	
Dibromochloromethane	ND	200	
1,1,2-Trichloroethane	ND	200	

ND - Not Detected
 PQL - Practical Quantitation Limit

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 3-1308 Scougal Rubber
 Page 4 of 6
 Lab No. 35254
 October 12, 1993

Lab Sample No. 35254-2

Client ID: MW-14

8240 Continued . . .

Compound	Concentration ug/L	PQL	Flag
Benzene	ND	200	
Trans-1,3-Dichloropropene	ND	200	
Bromoform	ND	200	
4-Methyl-2-Pentanone	ND	1,000	
2-Hexanone	ND	200	
Tetrachloroethene	ND	200	
1,1,2,2-Tetrachloroethane	ND	200	
Toluene	ND	200	
Chlorobenzene	ND	200	
Ethyl Benzene	ND	200	
Styrene	ND	200	
Total Xylenes	ND	200	

ND - Not Detected

PQL - Practical Quantitation Limit

Volatile Surrogates

Surrogate Compound	Percent Recovery	Flags	Control Limits	
			Water	Soil
Toluene - D8	95		88 - 110	81 - 117
Bromofluorobenzene	97		86 - 115	74 - 121
1,2-Dichloroethane-D4	92		76 - 114	70 - 121

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
Project: 3-1308 Scougal Rubber
Page 5 of 6
Lab No. 35254
October 12, 1993

Lab Sample No. 35254-3

Client ID: MW-15

Volatile Organics Per EPA Method 8240
Date Analyzed: 10-7-93

Compound	Concentration ug/L	PQL	Flag
Chloromethane	ND	20	
Bromomethane	ND	20	
Vinyl Chloride	ND	20	
Chloroethane	ND	20	
Methylene Chloride	ND	10	
Acetone	ND	50	
Carbon Disulfide	ND	10	
1,1-Dichloroethene	ND	10	
1,1-Dichloroethane	ND	10	
1,2-Dichloroethene (Total)	ND	10	
Chloroform	ND	10	
1,2-Dichloroethane	ND	10	
2-Butanone	ND	50	
1,1,1-Trichloroethane	ND	10	
Carbon Tetrachloride	ND	10	
Vinyl Acetate	ND	50	
Bromodichloromethane	ND	10	
1,2-Dichloropropane	ND	10	
Cis-1,3-Dichloropropene	ND	10	
Trichloroethene	ND	10	
Dibromochloromethane	ND	10	
1,1,2-Trichloroethane	ND	10	

ND - Not Detected

PQL - Practical Quantitation Limit

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 3-1308 Scougal Rubber
 Page 6 of 6
 Lab No. 35254
 October 12, 1993

Lab Sample No. 35254-3

Client ID: MW-15

8240 Continued . . .

Compound	Concentration ug/L	PQL	Flag
Benzene	ND	10	
Trans-1,3-Dichloropropene	ND	10	
Bromoform	ND	10	
4-Methyl-2-Pentanone	ND	50	
2-Hexanone	ND	10	
Tetrachloroethene	ND	10	
1,1,2,2-Tetrachloroethane	ND	10	
Toluene	ND	10	
Chlorobenzene	ND	10	
Ethyl Benzene	ND	10	
Styrene	ND	10	
Total Xylenes	ND	10	

ND - Not Detected
 PQL - Practical Quantitation Limit

Volatile Surrogates

Surrogate Compound	Percent Recovery	Flags	Control Limits	
			Water	Soil
Toluene - D8	95		88 - 110	81 - 117
Bromofluorobenzene	97		86 - 115	74 - 121
1,2-Dichloroethane-D4	91		76 - 114	70 - 121

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

QUALITY CONTROL REPORT

VOLATILE ORGANICS PER EPA METHOD 8240

Page 1 of 2

Client: Retec
Lab No: 35254qc
Units: ug/L
Date: October 12, 1993
Blank No: Z3582

Date Analyzed: 10-7-93

METHOD BLANK

Compound	Result	PQL	Flags
Chloromethane	ND	10	
Bromomethane	ND	10	
Vinyl Chloride	ND	10	
Chloroethane	ND	10	
Methylene Chloride	ND	5	
Acetone	ND	25	
Carbon Disulfide	ND	5	
1,1-Dichloroethene	ND	5	
1,1-Dichloroethane	ND	5	
1,2-Dichloroethene (Total)	ND	5	
Chloroform	ND	5	
1,2-Dichloroethane	ND	5	
2-Butanone	ND	25	
1,1,1-Trichloroethane	ND	5	
Carbon Tetrachloride	ND	5	
Vinyl Acetate	ND	25	
Bromodichloromethane	ND	5	
1,2-Dichloropropane	ND	5	
Cis-1,3-Dichloropropene	ND	5	
Trichloroethene	ND	5	
Dibromochloromethane	ND	5	
1,1,2-Trichloroethane	ND	5	
Benzene	ND	5	
Trans-1,3-Dichloropropene	ND	5	

ND - Not Detected

PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

QUALITY CONTROL REPORT

VOLATILE ORGANICS PER EPA METHOD 8240

Page 2 of 2

Client: Retec
 Lab No: 35254qc
 Units: ug/L
 Blank No: Z3582

METHOD BLANK

Compound	Result	PQL	Flags
Bromoform	ND	5	
4-Methyl-2-Pentanone	ND	25	
2-Hexanone	ND	5	
Tetrachloroethene	ND	5	
1,1,2,2-Tetrachloroethane	ND	5	
Toluene	ND	5	
Chlorobenzene	ND	5	
Ethyl Benzene	ND	5	
Styrene	ND	5	
Total Xylenes	ND	5	

ND - Not Detected

PQL - Practical Quantitation Limit

Volatile Surrogates

Surrogate Compound	Percent Recovery	Flags	Control Limits	
			Water	Soil
Toluene - D8	96		88 - 110	81 - 117
Bromofluorobenzene	97		86 - 115	74 - 121
1,2-Dichloroethane-D4	93		76 - 114	70 - 121

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206) 922-2310 - FAX (206) 922-5047

DATA QUALIFIER FLAGS

- ND: Indicates that the analyte was analyzed for but was not detected. The associated numerical value is the practical quantitation limit, corrected for sample dilution.
- J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.
- C: The identification of this analyte was confirmed by GC/MS.
- B1: This analyte was also detected in the associated method blank. The reported sample results have been adjusted for moisture, final extract volume, and/or dilutions performed during extract preparation. The analyte concentration was evaluated prior to sample preparation adjustments, and was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank).
- B2: This analyte was also detected in the associated method blank. However, the analyte concentration in the sample was determined to be significantly higher than the method blank (greater than ten times the concentration reported in the blank).
- E: The concentration of this analyte exceeded the instrument calibration range.
- D: The reported result for this analyte is calculated based on a secondary dilution factor.
- A: This TIC is a suspected aldol-condensation product.
- M: Quantitation Limits are elevated due to matrix interferences.
- S: The calibration quality control criteria for this compound were not met. The reported concentration should be considered an estimated quantity.
- X1: Contaminant does not appear to be "typical" product. Elution pattern suggests it may be _____.
- X2: Contaminant does not appear to be "typical" product. Further testing is suggested for identification.
- X3: Identification and quantification of peaks was complicated by matrix interference; GC/MS confirmation is recommended.
- X4: RPD for duplicates outside QC limits. Sample was re-analyzed with similar results. Sample matrix is nonhomogeneous.
- X4a: RPD for duplicates outside QC limits due to analyte concentration near the method practical quantitation limit/detection limit.
- X5: Matrix spike was diluted out during analysis.
- X6: Recovery of matrix spike outside QC limits. Sample was re-analyzed with similar results.
- X7: Recovery of matrix spike outside QC limits. Matrix interference is indicated by blank spike recovery data.
- X7a: Recovery and/or RPD values for MS/MSD outside QC limits due to high contaminant levels.
- X8: Surrogate was diluted out during analysis.
- X9: Surrogate recovery outside QC limits due to matrix composition.
- X10: Surrogate recovery outside QC limits due to high contaminant levels.





SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

TRANSMITTAL MEMORANDUM

DATE: September 7, 1993

TO: Ward Beebe
Retec

PROJECT NAME: Scougal Rubber

PROJECT NUMBER: 3-1308-100

LABORATORY NUMBER: 34316

Enclosed is one original and one copy of the Tier I data deliverables package for Laboratory Work Order Number 34316. Two samples were received for analysis at Sound Analytical Services, Inc., on August 24, 1993.

If there are any questions regarding this data package, please do not hesitate to call me at (206) 922-2310.

Sincerely,



Dennis L. Bean
Project Manager

DLB:tm

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Retec

Date: September 7, 1993

Report On: Analysis of Water

Lab No.: 34316
Page 1 of 6

IDENTIFICATION:

Samples Received on 08-24-93

Project: 3-1308-100 Scougal Rubber

ANALYSIS:

Lab Sample No. 34316-1

Client ID: MW-12

Volatile Organics Per EPA Method 8240

Date Analyzed: 9-2-93

Compound	Concentration ug/L	PQL	Flag
Chloromethane	ND	20	
Bromomethane	ND	20	
Vinyl Chloride	9.6	20	J
Chloroethane	ND	20	
Methylene Chloride	ND	10	
Acetone	ND	50	
Carbon Disulfide	ND	10	
1,1-Dichloroethene	ND	10	
1,1-Dichloroethane	ND	10	
1,2-Dichloroethene (Total)	ND	10	
Chloroform	ND	10	
1,2-Dichloroethane	ND	10	
2-Butanone	ND	50	
1,1,1-Trichloroethane	ND	10	
Carbon Tetrachloride	ND	10	
Vinyl Acetate	ND	50	
Bromodichloromethane	ND	10	
1,2-Dichloropropane	ND	10	
Cis-1,3-Dichloropropene	ND	10	
Trichloroethene	ND	10	
Dibromochloromethane	ND	10	
1,1,2-Trichloroethane	ND	10	

ND - Not Detected

PQL - Practical Quantitation Limit

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 3-1308-100
 Page 2 of 6
 Lab No. 34316
 September 7, 1993

Lab Sample No. 34316-1

Client ID: MW-12

8240 Continued . . .

Compound	Concentration ug/L	PQL	Flag
Benzene	ND	10	
Trans-1,3-Dichloropropene	ND	10	
Bromoform	ND	10	
4-Methyl-2-Pentanone	ND	50	
2-Hexanone	ND	10	
Tetrachloroethene	ND	10	
1,1,2,2-Tetrachloroethane	ND	10	
Toluene	ND	10	
Chlorobenzene	ND	10	
Ethyl Benzene	ND	10	
Styrene	ND	10	
Total Xylenes	ND	10	

ND - Not Detected
 PQL - Practical Quantitation Limit

Volatile Surrogates

Surrogate Compound	Percent Recovery	Flags	Control Limits	
			Water	Soil
Toluene - D8	105		88 - 110	81 - 117
Bromofluorobenzene	102		86 - 115	74 - 121
1,2-Dichloroethane-D4	111		76 - 114	70 - 121

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
Project: 3-1308-100
Page 3 of 6
Lab No. 34316
September 7, 1993

Lab Sample No. 34316-1

Client ID: MW-12

WTPH-D
Date Extracted: 8-25-93
Date Analyzed: 8-27-93

<u>Parameter</u>	<u>Concentration, mg/L</u>	<u>PQL</u>	<u>Flag</u>
Diesel (> C12 - C24)	1.4	0.25	X2

SURROGATE RECOVERY, %

o-terphenyl 82

ND - Not Detected
PQL - Practical Quantitation Limit

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 3-1308-100
 Page 4 of 6
 Lab No. 34316
 September 7, 1993

Lab Sample No. 34316-2

Client ID: MW-13

Volatile Organics Per EPA Method 8240
 Date Analyzed: 9-3-93

Compound	Concentration ug/L	PQL	Flag
Chloromethane	ND	100	
Bromomethane	ND	100	
Vinyl Chloride	22	100	J
Chloroethane	ND	100	
Methylene Chloride	ND	50	
Acetone	210	250	B1, J
Carbon Disulfide	ND	50	
1,1-Dichloroethene	ND	50	
1,1-Dichloroethane	ND	50	
1,2-Dichloroethene (Total)	160	50	
Chloroform	ND	50	
1,2-Dichloroethane	ND	50	
2-Butanone	ND	250	
1,1,1-Trichloroethane	ND	50	
Carbon Tetrachloride	ND	50	
Vinyl Acetate	ND	250	
Bromodichloromethane	ND	50	
1,2-Dichloropropane	ND	50	
Cis-1,3-Dichloropropene	ND	50	
Trichloroethene	1,500	50	
Dibromochloromethane	ND	50	
1,1,2-Trichloroethane	ND	50	

ND - Not Detected
 PQL - Practical Quantitation Limit

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 3-1308-100
 Page 5 of 6
 Lab No. 34316
 September 7, 1993

Lab Sample No. 34316-2

Client ID: MW-13

8240 Continued . . .

Compound	Concentration ug/L	PQL	Flag
Benzene	ND	50	
Trans-1,3-Dichloropropene	ND	50	
Bromoform	ND	50	
4-Methyl-2-Pentanone	ND	250	
2-Hexanone	ND	50	
Tetrachloroethene	11	50	J
1,1,2,2-Tetrachloroethane	ND	50	
Toluene	ND	50	
Chlorobenzene	ND	50	
Ethyl Benzene	ND	50	
Styrene	ND	50	
Total Xylenes	ND	50	

ND - Not Detected
 PQL - Practical Quantitation Limit

Volatile Surrogates

Surrogate Compound	Percent Recovery	Flags	Control Limits	
			Water	Soil
Toluene - D8	106		88 - 110	81 - 117
Bromofluorobenzene	103		86 - 115	74 - 121
1,2-Dichloroethane-D4	95		76 - 114	70 - 121

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
Project: 3-1308-100
Page 6 of 6
Lab No. 34316
September 7, 1993

Lab Sample No. 34316-2

Client ID: MW-13

WTPH-D
Date Extracted: 8-25-93
Date Analyzed: 8-27-93

<u>Parameter</u>	<u>Concentration, mg/L</u>	<u>PQL</u>	<u>Flag</u>
Diesel (> C12 - C24)	1.2	0.25	X2

SURROGATE RECOVERY, %

o-terphenyl	74
-------------	----

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

QUALITY CONTROL REPORT VOLATILE ORGANICS PER EPA METHOD 8240 Page 1 of 2

Client: Retec
Lab No: 34316qc1
Units: ug/L
Date: September 7, 1993
Blank No: Z2632

Date Analyzed: 9-2-93

METHOD BLANK

Compound	Result	PQL	Flags
Chloromethane	ND	10	
Bromomethane	ND	10	
Vinyl Chloride	ND	10	
Chloroethane	ND	10	
Methylene Chloride	ND	5	
Acetone	5.1	25	J
Carbon Disulfide	ND	5	
1,1-Dichloroethene	ND	5	
1,1-Dichloroethane	ND	5	
1,2-Dichloroethene (Total)	ND	5	
Chloroform	ND	5	
1,2-Dichloroethane	ND	5	
2-Butanone	ND	25	
1,1,1-Trichloroethane	ND	5	
Carbon Tetrachloride	ND	5	
Vinyl Acetate	ND	25	
Bromodichloromethane	ND	5	
1,2-Dichloropropane	ND	5	
Cis-1,3-Dichloropropene	ND	5	
Trichloroethene	ND	5	
Dibromochloromethane	ND	5	
1,1,2-Trichloroethane	ND	5	
Benzene	ND	5	
Trans-1,3-Dichloropropene	ND	5	
Bromoform	ND	5	
4-Methyl-2-Pentanone	ND	25	
2-Hexanone	ND	5	
Tetrachloroethene	ND	5	
1,1,2,2-Tetrachloroethane	ND	5	
Toluene	ND	5	
Chlorobenzene	ND	5	
Ethyl Benzene	ND	5	
Styrene	ND	5	
Total Xylenes	ND	5	

ND - Not Detected

PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

QUALITY CONTROL REPORT

VOLATILE ORGANICS PER EPA METHOD 8240

Page 2 of 2

Client: Retec
Lab No: 34316qc1
Date: September 7, 1993
Blank No: Z2632

Volatile Surrogates

Surrogate Compound	Percent Recovery	Flags	Control Limits	
			Water	Soil
Toluene - D8	109		88 - 110	81 - 117
Bromofluorobenzene	106		86 - 115	74 - 121
1,2-Dichloroethane-D4	99		76 - 114	70 - 121

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

QUALITY CONTROL REPORT VOLATILE ORGANICS PER EPA METHOD 8240 Page 1 of 2

Client: Retec
Lab No: 34316qc2
Units: ug/L
Date: September 7, 1993
Blank No: Z2656

Date Analyzed: 9-3-93

METHOD BLANK

Compound	Result	PQL	Flags
Chloromethane	ND	10	
Bromomethane	ND	10	
Vinyl Chloride	ND	10	
Chloroethane	ND	10	
Methylene Chloride	ND	5	
Acetone	11	25	J
Carbon Disulfide	ND	5	
1,1-Dichloroethene	ND	5	
1,1-Dichloroethane	ND	5	
1,2-Dichloroethene (Total)	ND	5	
Chloroform	ND	5	
1,2-Dichloroethane	ND	5	
2-Butanone	ND	25	
1,1,1-Trichloroethane	ND	5	
Carbon Tetrachloride	ND	5	
Vinyl Acetate	ND	25	
Bromodichloromethane	ND	5	
1,2-Dichloropropane	ND	5	
Cis-1,3-Dichloropropene	ND	5	
Trichloroethene	ND	5	
Dibromochloromethane	ND	5	
1,1,2-Trichloroethane	ND	5	
Benzene	ND	5	
Trans-1,3-Dichloropropene	ND	5	
Bromoform	ND	5	
4-Methyl-2-Pentanone	ND	25	
2-Hexanone	ND	5	
Tetrachloroethene	ND	5	
1,1,2,2-Tetrachloroethane	ND	5	
Toluene	ND	5	
Chlorobenzene	ND	5	
Ethyl Benzene	ND	5	
Styrene	ND	5	
Total Xylenes	ND	5	

ND - Not Detected

PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

QUALITY CONTROL REPORT

VOLATILE ORGANICS PER EPA METHOD 8240

Page 2 of 2

Client: Retec
Lab No: 34316qc2
Date: September 7, 1993
Blank No: Z2656

Volatile Surrogates

Surrogate Compound	Percent Recovery	Flags	Control Limits	
			Water	Soil
Toluene - D8	97		88 - 110	81 - 117
Bromofluorobenzene	102		86 - 115	74 - 121
1,2-Dichloroethane-D4	93		76 - 114	70 - 121

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

QUALITY CONTROL REPORT

WTPH-D
(Diesel Range Organics)

Client: Retec
Lab No: 34316qc3
Units: mg/L
Date: September 7, 1993

METHOD BLANK

Blank No. 021F0101.D

Parameter	Result	PQL
Diesel	ND	0.25
<u>SURROGATE RECOVERY, %</u> o-terphenyl	77	

ND - Not Detected

PQL - Practical Quantitation Limit

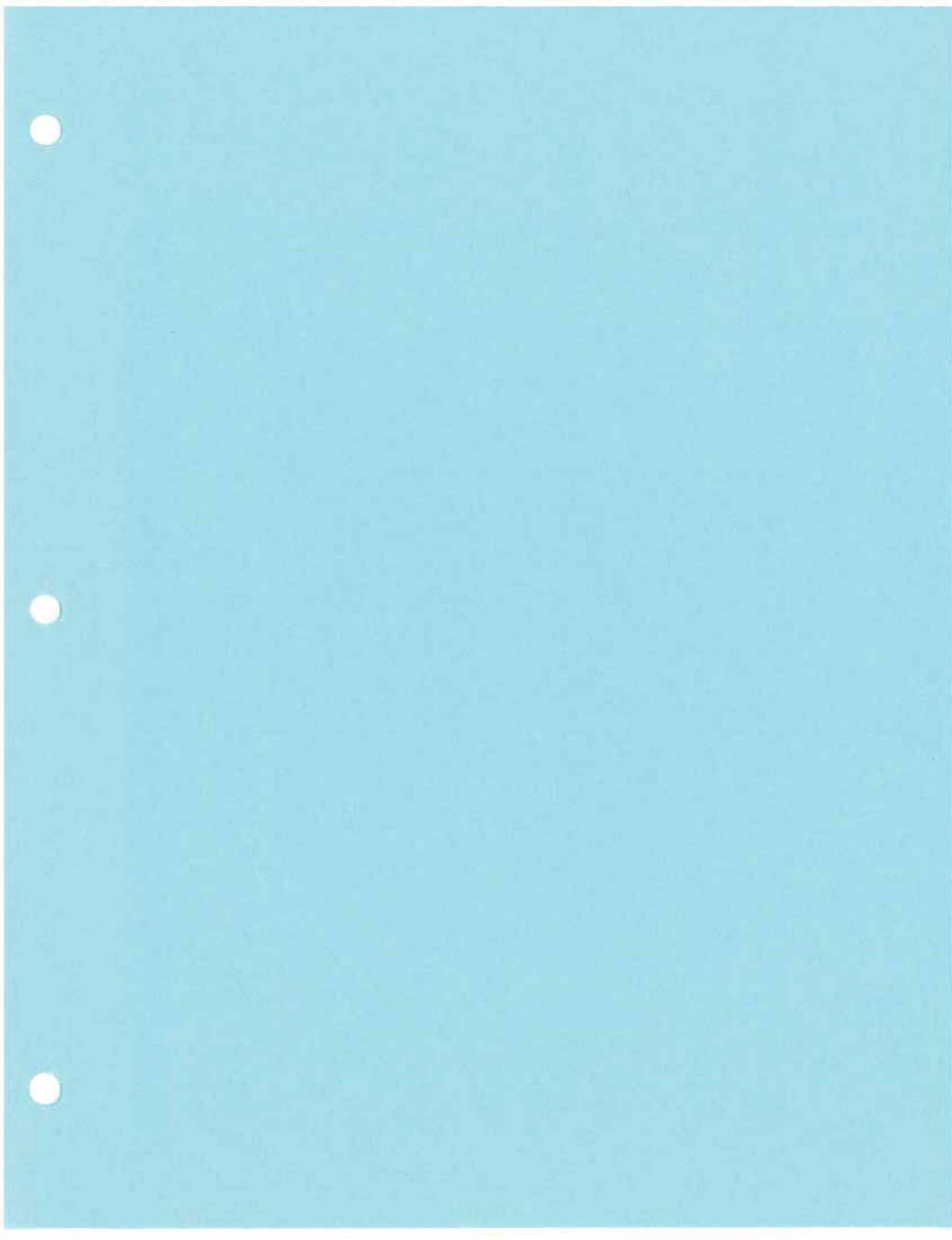
SOUND ANALYTICAL SERVICES, INC.

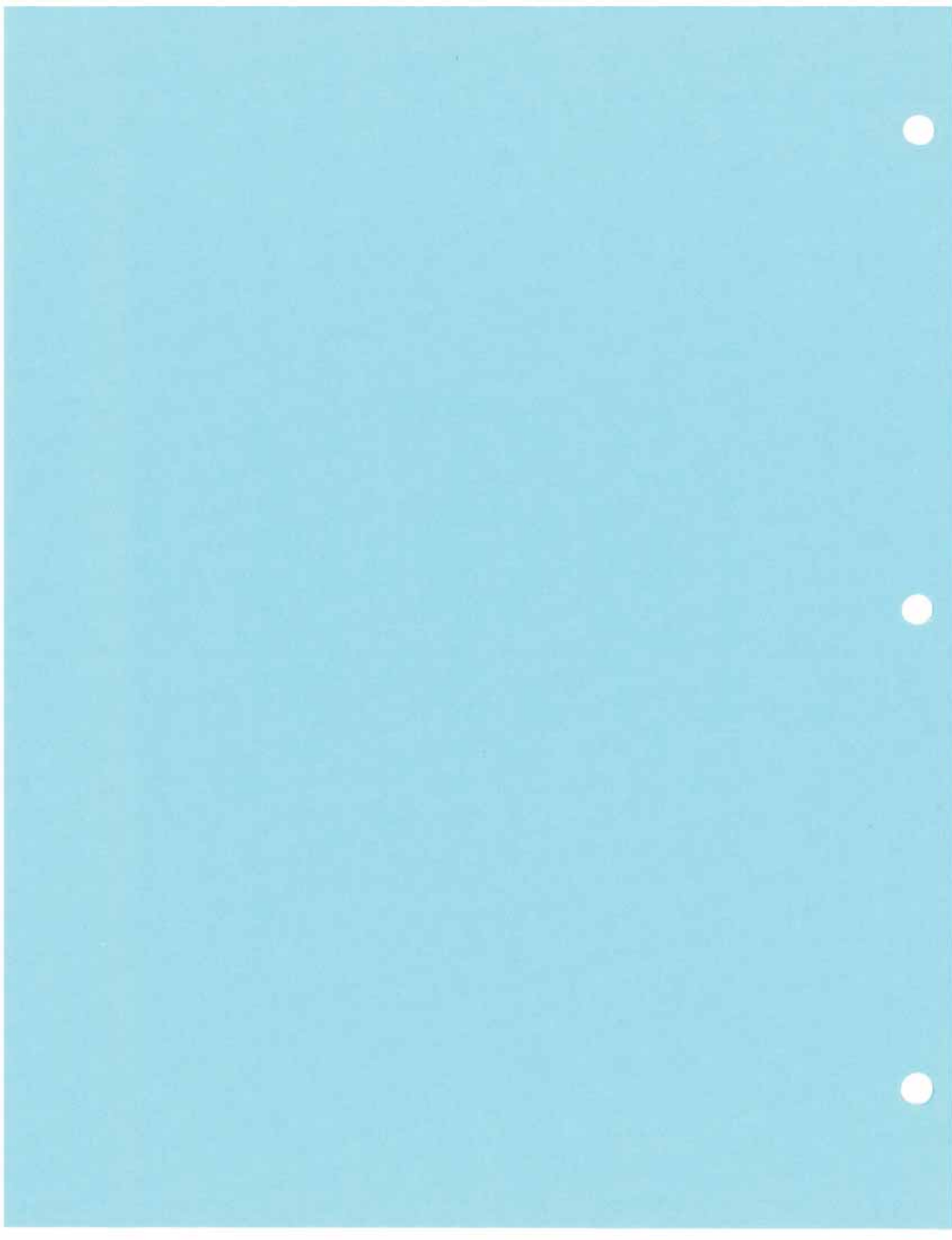
SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206) 922-2310 - FAX (206) 922-5047

DATA QUALIFIER FLAGS

- ND: Indicates that the analyte was analyzed for but was not detected. The associated numerical value is the practical quantitation limit, corrected for sample dilution.
- J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.
- C: The identification of this analyte was confirmed by GC/MS.
- B1: This analyte was also detected in the associated method blank. The reported sample results have been adjusted for moisture, final extract volume, and/or dilutions performed during extract preparation. The analyte concentration was evaluated prior to sample preparation adjustments, and was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank).
- B2: This analyte was also detected in the associated method blank. However, the analyte concentration in the sample was determined to be significantly higher than the method blank (greater than ten times the concentration reported in the blank).
- E: The concentration of this analyte exceeded the instrument calibration range.
- D: The reported result for this analyte is calculated based on a secondary dilution factor.
- A: This TIC is a suspected aldol-condensation product.
- M: Quantitation Limits are elevated due to matrix interferences.
- S: The calibration quality control criteria for this compound were not met. The reported concentration should be considered an estimated quantity.
- X1: Contaminant does not appear to be "typical" product. Elution pattern suggests it may be _____.
- X2: Contaminant does not appear to be "typical" product. Further testing is suggested for identification.
- X3: Identification and quantification of peaks was complicated by matrix interference; GC/MS confirmation is recommended.
- X4: RPD for duplicates outside QC limits. Sample was re-analyzed with similar results. Sample matrix is nonhomogeneous.
- X4a: RPD for duplicates outside QC limits due to analyte concentration near the method practical quantitation limit/detection limit.
- X5: Matrix spike was diluted out during analysis.
- X6: Recovery of matrix spike outside QC limits. Sample was re-analyzed with similar results.
- X7: Recovery of matrix spike outside QC limits. Matrix interference is indicated by blank spike recovery data.
- X7a: Recovery and/or RPD values for MS/MSD outside QC limits due to high contaminant levels.
- X8: Surrogate was diluted out during analysis.
- X9: Surrogate recovery outside QC limits due to matrix composition.
- X10: Surrogate recovery outside QC limits due to high contaminant levels.





SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

TRANSMITTAL MEMORANDUM

DATE: August 2, 1993
TO: Linda Baker
Retec
PROJECT NAME: Scougal Rubber
PROJECT NUMBER: 3-1308-100
LABORATORY NUMBER: 33628

Enclosed is one original and one copy of the Tier I data deliverables package for Laboratory Work Order Number 33628. Three samples were received for analysis at Sound Analytical Services, Inc., on July 23, 1993.

If there are any questions regarding this data package, please do not hesitate to call me at (206) 922-2310.

Sincerely,



Dennis L. Bean
Project Manager

DB:tm

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: Retec

Date: August 2, 1993

Report On: Analysis of Water

Lab No.: 33628

Page 1 of 9

IDENTIFICATION:

Sample Received on 07-23-93

Project: 3-1308-100 Scougal Rubber

ANALYSIS:

Lab Sample No. 33628-1

Client ID: MW-11

Volatile Organics Per EPA Method 8240

Date Analyzed: 7-26-93

Compound	Concentration ug/L	PQL	Flag
Chloromethane	ND	20	
Bromomethane	ND	20	
Vinyl Chloride	220	20	
Chloroethane	2.1	20	J
Methylene Chloride	ND	10	
Acetone	ND	50	
Carbon Disulfide	ND	10	
1,1-Dichloroethene	1.7	10	J
1,1-Dichloroethane	2.0	10	J
1,2-Dichloroethene (Total)	ND	10	
Chloroform	ND	10	
1,2-Dichloroethane	ND	10	
2-Butanone	ND	50	
1,1,1-Trichloroethane	ND	10	
Carbon Tetrachloride	ND	10	
Vinyl Acetate	ND	50	
Bromodichloromethane	ND	10	
1,2-Dichloropropane	ND	10	
Cis-1,3-Dichloropropene	ND	10	
Trichloroethene	400	10	
Dibromochloromethane	ND	10	
1,1,2-Trichloroethane	ND	10	

ND - Not Detected

PQL - Practical Quantitation Limit

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 3-1308-100 Scougal Rubber
 Page 2 of 9
 Lab No. 33628
 August 2, 1993

Lab Sample No. 33628-1

Client ID: MW-11

8240 Continued . . .

Compound	Concentration ug/L	PQL	Flag
Benzene	ND	10	
Trans-1,3-Dichloropropene	ND	10	
Bromoform	ND	10	
4-Methyl-2-Pentanone	ND	50	
2-Hexanone	ND	10	
Tetrachloroethene	2.4	10	J
1,1,2,2-Tetrachloroethane	ND	10	
Toluene	ND	10	
Chlorobenzene	ND	10	
Ethyl Benzene	ND	10	
Styrene	ND	10	
Total Xylenes	ND	10	

ND - Not Detected
 PQL - Practical Quantitation Limit

Volatile Surrogates

Surrogate Compound	Percent Recovery	Flags	Control Limits	
			Water	Soil
Toluene - D8	99		88 - 110	81 - 117
Bromofluorobenzene	100		86 - 115	74 - 121
1,2-Dichloroethane-D4	96		76 - 114	70 - 121

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
Project: 3-1308-100 Scougal Rubber
Page 2 of 9
Lab No. 33628
August 2, 1993

Lab Sample No. 33628-1

Client ID: MW-11

WTPH-D
Date Extracted: 7-29-93
Date Analyzed: 7-29-93

<u>Parameter</u>	<u>Concentration, mg/L</u>	<u>PQL</u>	<u>Flag</u>
Diesel (> C12 - C24)	2.1	0.25	X2
<u>SURROGATE RECOVERY, %</u>			
o-terphenyl	96		

ND - Not Detected
PQL - Practical Quantitation Limit

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
Project: 3-1308-100 Scougal Rubber
Page 3 of 9
Lab No. 33628
August 2, 1993

Lab Sample No. 33628-2

Client ID: OW-10

Volatile Organics Per EPA Method 8240
Date Analyzed: 7-28-93

Compound	Concentration ug/L	PQL	Flag
Chloromethane	ND	100	
Bromomethane	ND	100	
Vinyl Chloride	110	100	
Chloroethane	ND	100	
Methylene Chloride	ND	50	
Acetone	ND	250	
Carbon Disulfide	ND	50	
1,1-Dichloroethene	ND	50	
1,1-Dichloroethane	ND	50	
1,2-Dichloroethene (Total)	ND	50	
Chloroform	ND	50	
1,2-Dichloroethane	ND	50	
2-Butanone	ND	250	
1,1,1-Trichloroethane	ND	50	
Carbon Tetrachloride	ND	50	
Vinyl Acetate	ND	250	
Bromodichloromethane	ND	50	
1,2-Dichloropropane	ND	50	
Cis-1,3-Dichloropropene	ND	50	
Trichloroethene	730	50	
Dibromochloromethane	ND	50	
1,1,2-Trichloroethane	ND	50	

ND - Not Detected

PQL - Practical Quantitation Limit

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 3-1308-100 Scougal Rubber
 Page 4 of 9
 Lab No. 33628
 August 2, 1993

Lab Sample No. 33628-2

Client ID: OW-10

8240 Continued . . .

Compound	Concentration ug/L	PQL	Flag
Benzene	ND	50	
Trans-1,3-Dichloropropene	ND	50	
Bromoform	ND	50	
4-Methyl-2-Pentanone	ND	250	
2-Hexanone	ND	50	
Tetrachloroethene	ND	50	
1,1,2,2-Tetrachloroethane	ND	50	
Toluene	ND	50	
Chlorobenzene	ND	50	
Ethyl Benzene	ND	50	
Styrene	ND	50	
Total Xylenes	ND	50	

ND - Not Detected
 PQL - Practical Quantitation Limit

Volatile Surrogates

Surrogate Compound	Percent Recovery	Flags	Control Limits	
			Water	Soil
Toluene - D8	98		88 - 110	81 - 117
Bromofluorobenzene	101		86 - 115	74 - 121
1,2-Dichloroethane-D4	98		76 - 114	70 - 121

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
Project: 3-1308-100 Scougal Rubber
Page 6 of 9
Lab No. 33628
August 2, 1993

Lab Sample No. 33628-2

Client ID: OW-10

WTPH-D
Date Extracted: 7-29-93
Date Analyzed: 7-30-93

<u>Parameter</u>	<u>Concentration, mg/L</u>	<u>PQL</u>	<u>Flag</u>
Diesel (> C12 - C24)	2.1	0.25	X2
<u>SURROGATE RECOVERY, %</u>			
o-terphenyl	96		

ND - Not Detected
PQL - Practical Quantitation Limit

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 3-1308-100 Scougal Rubber
 Page 7 of 9
 Lab No. 33628
 August 2, 1993

Lab Sample No. 33628-3

Client ID: PW-9

Volatile Organics Per EPA Method 8240
 Date Analyzed: 7-28-93

Compound	Concentration ug/L	PQL	Flag
Chloromethane	ND	100	
Bromomethane	ND	100	
Vinyl Chloride	120	100	
Chloroethane	ND	100	
Methylene Chloride	ND	50	
Acetone	ND	250	
Carbon Disulfide	ND	50	
1,1-Dichloroethene	ND	50	
1,1-Dichloroethane	ND	50	
1,2-Dichloroethene (Total)	ND	50	
Chloroform	ND	50	
1,2-Dichloroethane	ND	50	
2-Butanone	49	250	J
1,1,1-Trichloroethane	ND	50	
Carbon Tetrachloride	ND	50	
Vinyl Acetate	ND	250	
Bromodichloromethane	ND	50	
1,2-Dichloropropane	ND	50	
Cis-1,3-Dichloropropene	ND	50	
Trichloroethene	140	50	
Dibromochloromethane	ND	50	
1,1,2-Trichloroethane	ND	50	

ND - Not Detected
 PQL - Practical Quantitation Limit

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
 Project: 3-1308-100 Scougal Rubber
 Page 8 of 9
 Lab No. 33628
 August 2, 1993

Lab Sample No. 33628-3

Client ID: PW-9

8240 Continued . . .

Compound	Concentration ug/L	PQL	Flag
Benzene	ND	50	
Trans-1,3-Dichloropropene	ND	50	
Bromoform	ND	50	
4-Methyl-2-Pentanone	ND	250	
2-Hexanone	ND	50	
Tetrachloroethene	ND	50	
1,1,2,2-Tetrachloroethane	ND	50	
Toluene	28	50	J
Chlorobenzene	ND	50	
Ethyl Benzene	270	50	
Styrene	ND	50	
Total Xylenes	500	50	

ND - Not Detected
 PQL - Practical Quantitation Limit

Volatile Surrogates

Surrogate Compound	Percent Recovery	Flags	Control Limits	
			Water	Soil
Toluene - D8	99		88 - 110	81 - 117
Bromofluorobenzene	102		86 - 115	74 - 121
1,2-Dichloroethane-D4	95		76 - 114	70 - 121

Continued

SOUND ANALYTICAL SERVICES, INC.

Retec
Project: 3-1308-100 Scougal Rubber
Page 9 of 9
Lab No. 33628
August 2, 1993

Lab Sample No. 33628-3

Client ID: PW-9

WTPH-D
Date Extracted: 7-29-93
Date Analyzed: 7-30-93

<u>Parameter</u>	<u>Concentration, mg/L</u>	<u>PQL</u>	<u>Flag</u>
Diesel (> C12 - C24)	3.7	0.25	X1

SURROGATE RECOVERY, %

o-terphenyl	104
-------------	-----

X1 - Single component contamination
ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

QUALITY CONTROL REPORT VOLATILE ORGANICS PER EPA METHOD 8240 Page 1 of 2

Client: Retec
Lab No: 33628qc1
Units: ug/L
Date: August 2, 1993
Blank No: Z1888

Date Analyzed: 7-26-93

METHOD BLANK

Compound	Result	PQL	Flags
Chloromethane	ND	10	
Bromomethane	ND	10	
Vinyl Chloride	ND	10	
Chloroethane	ND	10	
Methylene Chloride	ND	5	
Acetone	ND	25	
Carbon Disulfide	ND	5	
1,1-Dichloroethene	ND	5	
1,1-Dichloroethane	ND	5	
1,2-Dichloroethene (Total)	ND	5	
Chloroform	ND	5	
1,2-Dichloroethane	ND	5	
2-Butanone	ND	25	
1,1,1-Trichloroethane	ND	5	
Carbon Tetrachloride	ND	5	
Vinyl Acetate	ND	25	
Bromodichloromethane	ND	5	
1,2-Dichloropropane	ND	5	
Cis-1,3-Dichloropropene	ND	5	
Trichloroethene	ND	5	
Dibromochloromethane	ND	5	
1,1,2-Trichloroethane	ND	5	
Benzene	ND	5	
Trans-1,3-Dichloropropene	ND	5	
Bromoform	ND	5	
4-Methyl-2-Pentanone	ND	25	
2-Hexanone	ND	5	
Tetrachloroethene	ND	5	
1,1,2,2-Tetrachloroethane	ND	5	
Toluene	ND	5	
Chlorobenzene	ND	5	
Ethyl Benzene	ND	5	
Styrene	ND	5	
Total Xylenes	ND	5	

ND - Not Detected

PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

QUALITY CONTROL REPORT

VOLATILE ORGANICS PER EPA METHOD 8240

Page 2 of 2

Client: Retec
Lab No: 33628qcl
Date: August 2, 1993
Blank No: Z1888

Volatile Surrogates

Surrogate Compound	Percent Recovery	Flags	Control Limits	
			Water	Soil
Toluene - D8	101		88 - 110	81 - 117
Bromofluorobenzene	100		86 - 115	74 - 121
1,2-Dichloroethane-D4	92		76 - 114	70 - 121

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

QUALITY CONTROL REPORT VOLATILE ORGANICS PER EPA METHOD 8240 Page 1 of 2

Client: Retec
Lab No: 33628qc2
Units: ug/L
Date: August 2, 1993
Blank No: Z1889

Date Analyzed: 7-28-93

METHOD BLANK

Compound	Result	PQL	Flags
Chloromethane	ND	10	
Bromomethane	ND	10	
Vinyl Chloride	ND	10	
Chloroethane	ND	10	
Methylene Chloride	ND	5	
Acetone	ND	25	
Carbon Disulfide	ND	5	
1,1-Dichloroethene	ND	5	
1,1-Dichloroethane	ND	5	
1,2-Dichloroethene (Total)	ND	5	
Chloroform	ND	5	
1,2-Dichloroethane	ND	5	
2-Butanone	ND	25	
1,1,1-Trichloroethane	ND	5	
Carbon Tetrachloride	ND	5	
Vinyl Acetate	ND	25	
Bromodichloromethane	ND	5	
1,2-Dichloropropane	ND	5	
Cis-1,3-Dichloropropene	ND	5	
Trichloroethene	ND	5	
Dibromochloromethane	ND	5	
1,1,2-Trichloroethane	ND	5	
Benzene	ND	5	
Trans-1,3-Dichloropropene	ND	5	
Bromoform	ND	5	
4-Methyl-2-Pentanone	ND	25	
2-Hexanone	ND	5	
Tetrachloroethene	ND	5	
1,1,2,2-Tetrachloroethane	ND	5	
Toluene	ND	5	
Chlorobenzene	ND	5	
Ethyl Benzene	ND	5	
Styrene	ND	5	
Total Xylenes	ND	5	

ND - Not Detected

PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

QUALITY CONTROL REPORT

VOLATILE ORGANICS PER EPA METHOD 8240

Page 2 of 2

Client: Retec
Lab No: 33628qc2
Date: August 2, 1993
Blank No: Z1889

Volatile Surrogates

Surrogate Compound	Percent Recovery	Flags	Control Limits	
			Water	Soil
Toluene - D8	97		88 - 110	81 - 117
Bromofluorobenzene	102		86 - 115	74 - 121
1,2-Dichloroethane-D4	98		76 - 114	70 - 121

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

QUALITY CONTROL REPORT

WTPH-D
(Diesel Range Organics)

Client: Retec
Lab No: 33628qc3
Units: mg/L
Date: August 2, 1993

METHOD BLANK

Blank No. 003F0101.D

Parameter	Result	PQL
Diesel	ND	0.25
<u>SURROGATE RECOVERY, %</u> o-terphenyl	87	

ND - Not Detected

PQL - Practical Quantitation Limit



GROUNDWATER SAMPLING LOG

PROJECT NAME Sheena
 PROJECT NO. 3-1308
 DATE 7/22/93

WELL NO. PW-9
 SAMPLED BY DWIK

WELL INFORMATION	
DEPTH TO WATER (TOC-ft)	<u>NDI</u>
(wl.prot.-ft)	<u>MEASURED</u>
DEPTH OF WELL (ft)	
WELL DIAMETER (inches)	
FEET OF WATER	
CASING VOLUME* (gal)	
PURGE VOLUME (gal)	
PRODUCT THICK. (ft)	
WELL CONDITION	
WEATHER	<u>Windy, P. cloudy, 70°F</u>

PURGE DATA	
START PURGE TIME:	<u>1641</u>
VOL. PURGED (gal)	
TIME	<u>1641</u>
FLOW RATE	
pH (units)	<u>6.79</u>
CONDUCTIVITY (umhos/cm)	<u>369</u>
TEMP. (C)	<u>21.0</u>
WATER COLOR	<u>Lt BRN</u>
PURGE AND SAMPLE EQUIPT:	<u>Polyethylene Bailor</u>

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>PW-9</u>	<u>1645</u>	<u>8240</u>	<u>40ml Vial</u>	<u>2</u>	<u>HCl</u>
		<u>WPH-D</u>	<u>11 Amber</u>	<u>1</u>	<u>NONE</u>

ADDITIONAL INFORMATION:

Sheena

TOC = Top of well casing

wl.prot. = top of well protector

*casing volume = $r^2h(\text{in ft}) \times 7.48 \text{ gal/ft}$

REIEC

GROUNDWATER SAMPLING LOG

PROJECT NAME Souza
 PROJECT NO. 3-1308
 DATE 7/22/93

WELL NO. MW-11
 SAMPLED BY DWK

WELL INFORMATION	
DEPTH TO WATER	(TOC-ft) <u>6.40</u> (wl.prot.-ft)
DEPTH OF WELL	(ft) <u>20.0</u>
WELL DIAMETER	(inches) <u>4</u>
FEET OF WATER	<u>13.60</u>
CASING VOLUME*	(gal) <u>2.18</u>
PURGE VOLUME	(gal) <u>27.3</u>
PRODUCT THICK	(ft) <u>—</u>
WELL CONDITION	<u>ok</u>
WEATHER	<u>Windy, Pt Cloudy, 70°F</u>

PURGE DATA					
START PURGE TIME:	<u>1549</u>				
VOL PURGED (gal)	<u>15</u>	<u>25</u>	<u>30</u>	<u>35</u>	<u>40</u>
TIME	<u>1553</u>	<u>1555</u>	<u>1556</u>	<u>1558</u>	<u>1559</u>
FLOW RATE					
pH (units)	<u>6.52</u>	<u>6.64</u>	<u>6.52</u>	<u>6.64</u>	<u>6.70</u>
CONDUCTIVITY (umhos/cm)	<u>345</u>	<u>340</u>	<u>341</u>	<u>339</u>	<u>340</u>
TEMP. (C)	<u>18.1</u>	<u>16.4</u>	<u>16.0</u>	<u>15.9</u>	<u>15.9</u>
WATER COLOR	<u>Rust BRN</u>			<u>Clear</u>	<u>Clear</u>
PURGE AND SAMPLE EQUIP:	<u>Wilden Pump / Sample w/ Polyethylene Bailer</u>				

13.6 13.6
~~13.6~~ .67
 816 952
 1360 8160
 2176 9112
 6528 3
 27336

SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
<u>MW-11</u>	<u>1600</u>	<u>Q24D</u>	<u>40ml Vial</u>	<u>2</u>	<u>HCl</u>
		<u>WTPH-D</u>	<u>1L Amber</u>	<u>1</u>	<u>NONE</u>

ADDITIONAL INFORMATION:

TOC = Top of well casing

wl.prot. = top of well protector

*casing volume = $r^2h(\text{in ft}) \times 7.48 \text{ gal/ft}$

Slight sheen

RETEC

GROUNDWATER SAMPLING LOG

PROJECT NAME Southern
 PROJECT NO. 3-1308
 DATE 7/22/93

WELL NO. OW-10
 SAMPLED BY DWIK

WELL	INFORMATION	
DEPTH TO WATER	(TOC-ft)	6.86
	(wl.prot.-ft)	
DEPTH OF WELL	(ft)	14.25
WELL DIAMETER	(inches)	2
FEET OF WATER		7.39
CASING VOLUME*	(gal)	1.18
PURGE VOLUME	(gal)	3.5
PRODUCT THICK.	(ft)	—
WELL CONDITION		ok
WEATHER	Windy, P. Cloudy, 70°F	

		PURGE DATA		
START PURGE TIME:	1619			
VOL. PURGED (gal)	2	3	3.5	
TIME	1623	1628	1631	
FLOW RATE				
pH (units)	6.75	6.71	6.71	
CONDUCTIVITY (umhos/cm)	421	422	412	
TEMP. (C)	17.3	16.7	16.9	
WATER COLOR	DK. BRN →			
PURGE AND SAMPLE EQUIP:	Polyethylene Bailer			

7.39
 .16
 44.34
 7390
 61825
 3
 35472

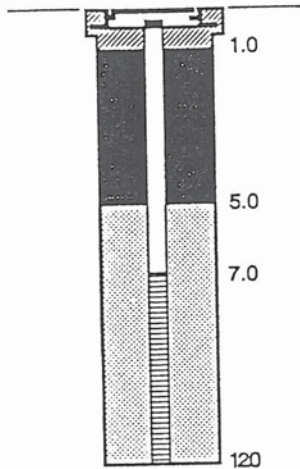
SAMPLE NUMBER	SAMPLE TIME	ANALYSIS	CONTAINER	# BOTTLES	PRESERVATIVE
OW-10	1635	8240	40ml/Vial	2	HCl
		W-TPHD	1L Amber	1	NONE

ADDITIONAL INFORMATION: Shoen

TOC = Top of well casing
 wl.prot. = top of well protector
 *casing volume = $r^2h(\pi ft) \times 7.48 \text{ gal/ft}$

Appendix C
Boring and Well Logs

Well Construction Summary



OVM

124

36

102

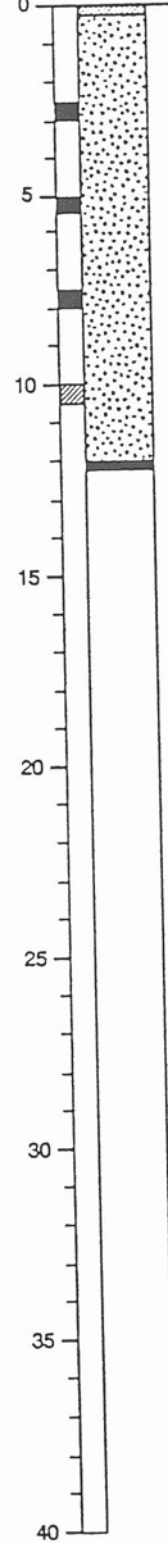
159

120

Equipment 4-inch Hollow-Stem Auger

Land Surface Elevation 100.1 feet * Date 1/17/91

Depth (feet)
Sample



3" Asphalt Concrete.
BLACK BROWN SAND (SP) loose, moist; with occasional gravel, medium grained.

Boring terminated at 12 feet.

Groundwater encountered at 8.5 feet on 1/17/91 during drilling.

Boring converted to monitoring well on 1/17/91.

* Based on AGI temporary bench mark located at the southwest point of a ventilation condenser concrete support pad on the west side of the warehouse.

Top of casing elevation = 99.81 feet.

PLATE

A4



Applied Geotechnology Inc.
Geotechnical Engineering
Geology & Hydrogeology

Log of Monitoring Well 1
Scougal Rubber/Phase II Environmental Assessment
Seattle, Washington

JOB NUMBER
15.547.003

DRAWN
JFL

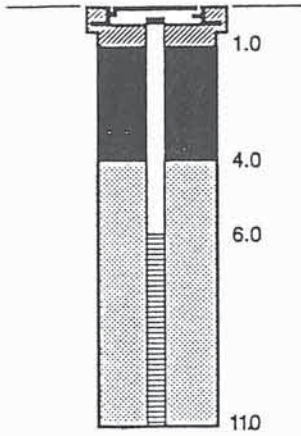
APPROVED
GHS

DATE
23 Jan. 91

REVISED

DATE

Well Construction Summary



OVM

10

22

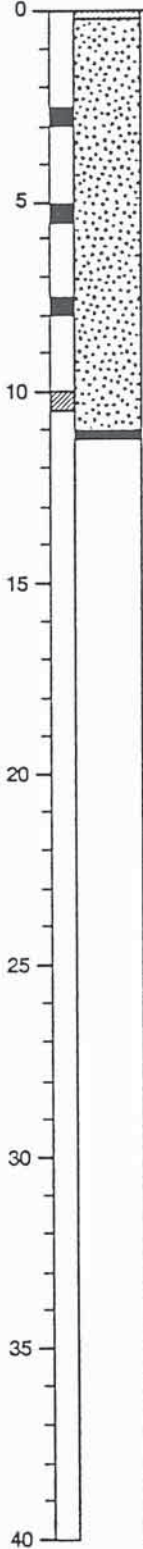
74

2

Equipment 4-inch Hollow-Stem Auger

Land Surface Elevation 99.6 feet Date 1/17/91

Depth (feet)
Sample



3" Asphalt Concrete.

BLACK BROWN SAND (SP) loose, moist; with occasional gravel, medium grained.

Boring terminated at 11 feet.

Groundwater encountered at 6.5 feet on 1/17/91 during drilling.

Boring converted to monitoring well on 1/17/91.

Top of casing elevation = 99.33 feet.



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Geotechnical Engineering
Geology & Hydrogeology

Log of Monitoring Well 2
Scougal Rubber/Phase II Environmental Assessment
Seattle, Washington

PLATE

A5

JOB NUMBER
15,547.003

DRAWN
JFL

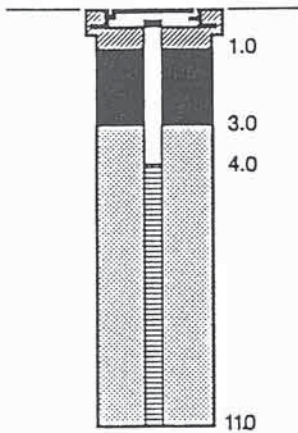
APPROVED
GHS

DATE
23 Jan. 91

REVISED

DATE

Well Construction Summary



OVM
NR*
NR
NR
NR

Equipment 4-inch Hallow-Stem Auger

Land Surface Elevation 98.4 feet Date 1/17/91

Depth (feet)
Sample
0
5
10
15
20
25
30
35
40

12" Portland Cement Concrete.
BLACK BROWN SAND (SP) loose, moist; occasional gravel, medium grained, petroleum odor.
Some silt.
Becomes saturated, slight sheen, strong petroleum odor.
Boring terminated at 11 feet.
Groundwater encountered at 6.5 feet on 1/17/91.
Boring converted to monitoring well on 1/17/91.

* NR = Not recorded

Top of casing elevation = 98.19 feet.



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Geotechnical Engineering
Geology & Hydrogeology

Log of Monitoring Well 3

Scougal Rubber/Phase II Environmental Assessment
Seattle, Washington

PLATE

A6

JOB NUMBER
15,547.003

DRAWN
JFL

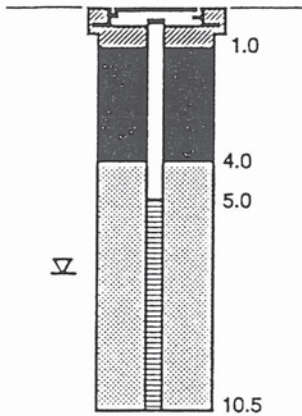
APPROVED
GHS

DATE
23 Jan. 91

REVISED

DATE

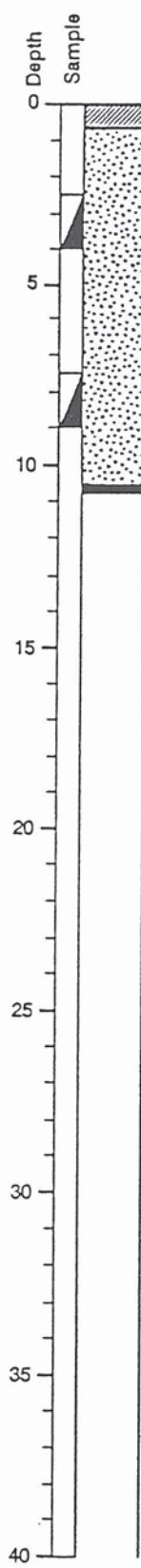
Well Construction Summary



Top of casing elevation = 98.15 feet.

Equipment Modified Mobile Drill B-61
 Land Surface 98.5 feet Date 3/27/91
 Elevation

OVM
 Blows per Foot



4" Asphalt Concrete.
 BROWN GRAY SAND (SP) loose, moist; medium grained.
 Becomes dark gray, saturated.
 Boring terminated at 10.5 feet on 3/27/91.
 Groundwater encountered at 7.0 feet during drilling.
 Boring converted to monitoring well on 3/27/91.

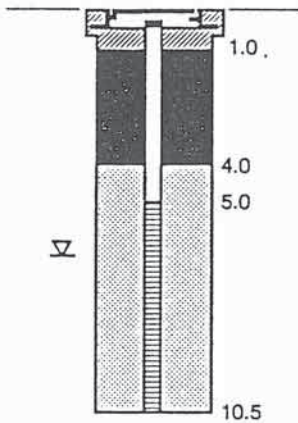


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 Geology & Hydrogeology

Log of Monitoring Well 4
 Scougal Rubber/Phase II Environmental Assessment
 Seattle, Washington

PLATE
A7

Well Construction Summary



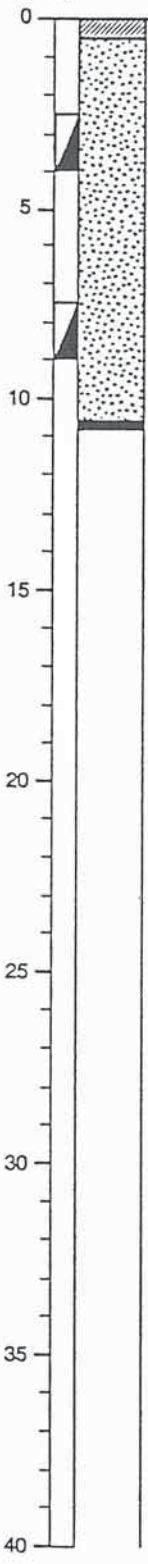
Top of casing elevation = 98.20 feet.

Equipment Modified Mobile DrillB-61

Land Surface 98.6 feet Date 3/27/91
Elevation

OVM
Blows per Foot

Depth
Sample



4" Asphalt Concrete.

BROWN GRAY SAND (SP) loose, moist; medium grained.

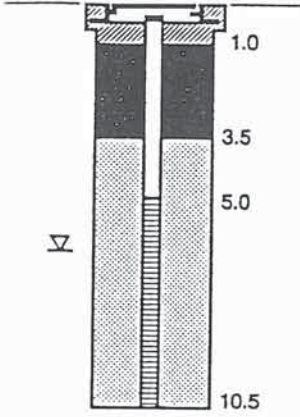
Becomes dark gray, saturated; with a trace of organics, sand is fine grained.

Boring terminated at 10.5 feet on 3/27/91.

Groundwater encountered at 6.5 feet during drilling.

Boring converted to monitoring well on 3/27/91.

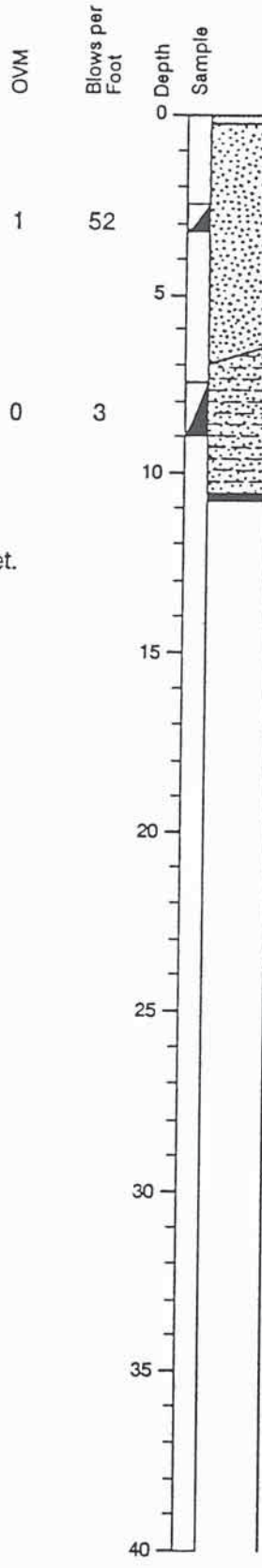
Well Construction Summary



Top of casing elevation = 96.93 feet.

Equipment Modified Mobile Drill B-61

Land Surface Elevation 97.4 feet Date 3/27/91



2" Asphalt Concrete.

GRAY SAND (SP) very dense, moist; medium grained, with some gravel and silt.

GRAY SILTY SAND (SM) loose, saturated; fine grained, with a trace of organics.

Boring terminated at 10.5 feet on 3/27/91.

Groundwater encountered at 6.5 feet during drilling.

Boring converted to monitoring well on 3/27/91.



Applied Geotechnology Inc.
Geotechnical Engineering
Geology & Hydrogeology

Log of Monitoring Well 6
Scougal Rubber/Phase II Environmental Assessment
Seattle, Washington

PLATE

A9

JOB NUMBER
15,547.003

DRAWN
JFL

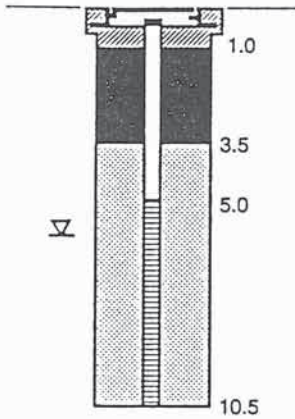
APPROVED

DATE
23 Jan. 91

REVISED

DATE

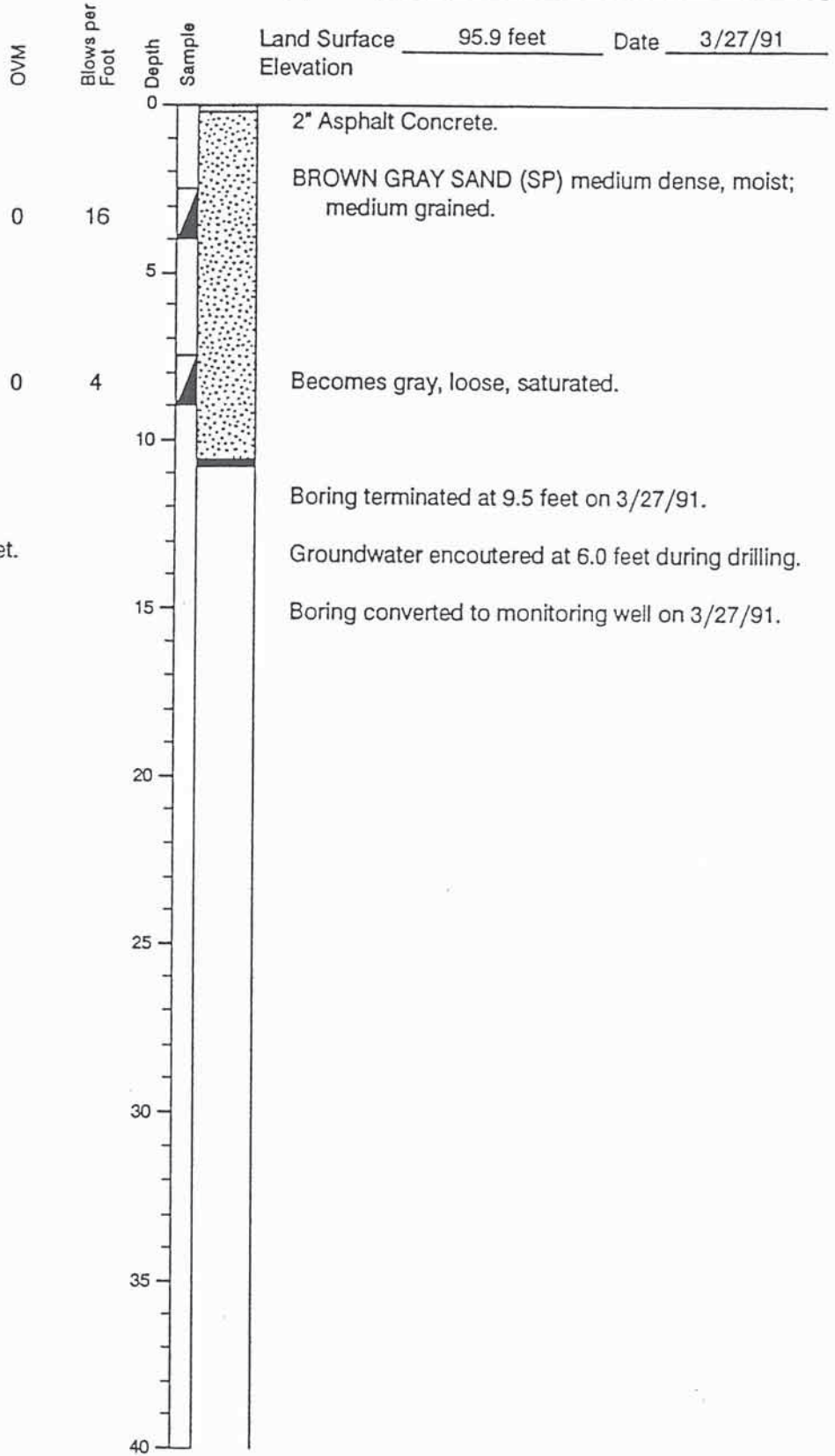
Well Construction Summary



Top of casing elevation = 95.26 feet.

Equipment Modified Mobile Drill B-61

Land Surface Elevation 95.9 feet Date 3/27/91



Applied Geotechnology Inc.
Geotechnical Engineering
Geology & Hydrogeology

Log of Monitoring Well 7
Scougal Rubber/Phase II Environmental Assessment
Seattle, Washington

PLATE

A10

JOB NUMBER
15,547.003

DRAWN
JFL

APPROVED
C H S

DATE
23 Jan. 91

REVISED

DATE



MONITORING WELL LOG

WELL NUMBER
PW-9 SHEET 1 OF 1

PROJECT NAME/NUMBER: Scougal Rubber 30-771-600

DRILLING CO: Layne Env.

LOCATION: Near former MW-3

DRILLER: Dan

DATE: 3/25/92
START: 1000 FINISH: 1430

BORING ID: 11"

RIG TYPE: Simco 2400 sk-1

WATER LEVEL:
DATE MEASURED:

BORING DEPTH: 23'

METHOD: HSA

GROUND ELEVATION:

LOGGED BY: TMG

DEPTH	WELL CONSTRUCTION	USCS	SOIL DESCRIPTION	SAMPLE DATA				
				TYPE	DEPTH	BLOWS	%RECOV	PID ppm
0	<p>4" PVC Casing</p> <p>Bentonite</p> <p>Screen TD TD=23</p>		0-4" Concrete					0
		GP	4"-3' <u>NEW FILL</u> : Gravely sand; brown, med-coarse sand, fine gravel, slightly moist.					9
		SP	3'-6.5' <u>OLD FILL</u> : Dk gray, med sand, loose, slightly moist.					
5			6.5' Groundwater 1st encountered					2
		SP	6.5'-10' <u>OLD FILL</u> : Dk gray, med sand, loose, saturated.					
10		SP	10'-10.8' <u>SAND</u> : Dk gray, med sand, med dense, very moist.	SS	14 9 9	100	6	
		ML	10.8'-10.9' <u>SILT</u> : Lt Brown, trc clay, soft, vry mst.					
		GW	10.9'-11.1' <u>SANDY GRAVEL</u> : Brown, fn-coarse gravel, and coarse sand, very moist, med dense.					
15		SP	15'-16.1' <u>SAND</u> : Dk gray, med sand, coarse, vry moist and dense.	SS	9 8 8	20	2	
		ML	16.1'-16.5' <u>SANDY SILT</u> : Dk gray, some vf sand, very moist, stiff.					
20	SP	20'-21.5' <u>SAND</u> : Dk gray, med sand.	SS	3 4 6	100	0		
25								

Used 4 bgs 10-20 Silica sand, @ 100 lb/bag
Bentonite
1 pall Enviroplug pellets
1 bag Holeplug chips

REMARKS: No obvious odors (or product) in any samples. Drilled and sampled first with 4.25" ID then 6.75" ID auger to set well.



MONITORING WELL LOG

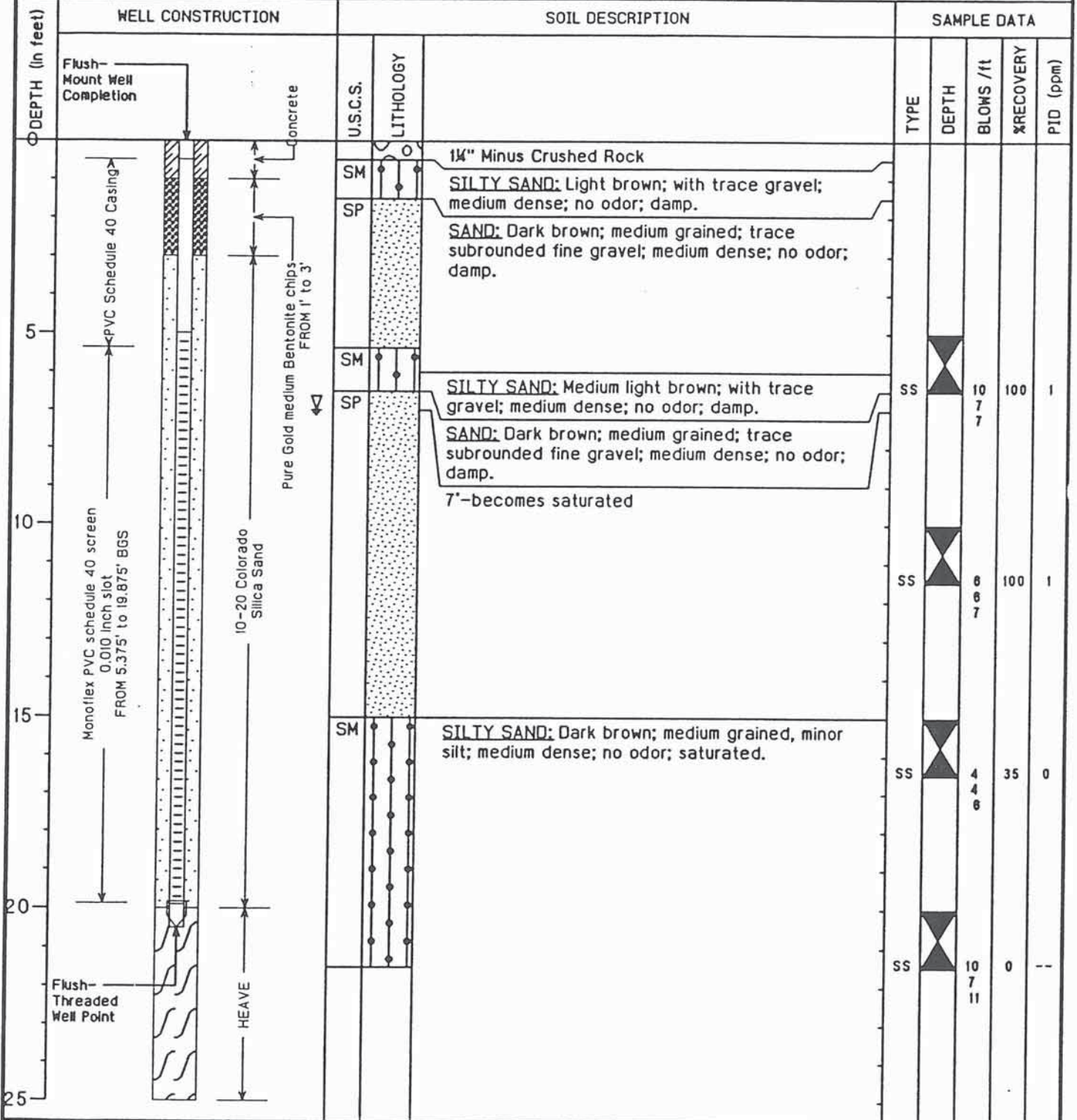
WELL NUMBER
OW-10 SHEET 1 OF 1

PROJECT NAME/NUMBER: Scougal Rubber 30-771-600		DRILLING CO: Layne Env.
LOCATION: NW of PW-9		DRILLER: Dan
DATE: 3/25/92	BORING ID: 7.25"	RIG TYPE: Simco 2400 sk-1
START: 1500 FINISH: 1640	BORING DEPTH: 15'	METHOD: HSA
WATER LEVEL:	GROUND ELEVATION:	LOGGED BY: TMG
DATE MEASURED:		

DEPTH 0 5 10 15 20 25	WELL CONSTRUCTION	SOIL DESCRIPTION		SAMPLE DATA				
	Flush Mount	U S C S		T Y P E	D E P T H	B L O W S	% R E C O V	P I D ppm
0-7'	Concrete Bentonite 2" PVC Casing 10/20 Silica Sand	GP	0'-7' <u>NEW FILL</u> : Gravely sand; brown, med-coarse sand, and fine gravel, slightly moist.					
10'-10.4'		SP	10'-10.4' <u>SAND</u> : Dk gray, med. sand, loose, very moist.	SS	3 6 8	50	0	
10.4'-10.8'		SM	10.4'-10.8' <u>SILTY SAND</u> : Dk gray, some vf-med sand, very moist.					
15'-15.75'		SP	15'-15.75' <u>SAND</u> : Dk gray, med sand, loose, very moist.	SS	5 6 9	100	0	
15.75'-16.1'		SM	15.75'-16.1' <u>SILTY SAND</u> : Dk gray, fn-med sand, some silt.					
16.1'-16.5'		SP	16.1'-16.5' <u>SAND</u> : Dk gray, med sand, loose, very moist.					
			Used 3.5x100# bag silica sand Bentonite 1 pall enviroplug pellets 1 bag chips Holeplug					

REMARKS: No visual or olfactory evidence of contamination.

PROJECT NO: 3-0771-300 Scougal Rubber	CLIENT: M.J. McIntyre L.P.
LOCATION: Seattle, WA Machinists Property	DRILLING CO.: Cascade Drilling
START DATE: 12/7/92 TIME: 1330	BORING ID: 10"
COMPLETION DATE: 12/7/92 TIME: 1730	TOTAL DEPTH: 20.5'
WATER LEVEL DURING DRILLING: 7' bgs	PVC STICK-UP: ~-0.4'
SURFACE ELEV.: NA	MP ELEV.: NA
	METHOD: HSA
	LOGGED BY: Hard Beebe



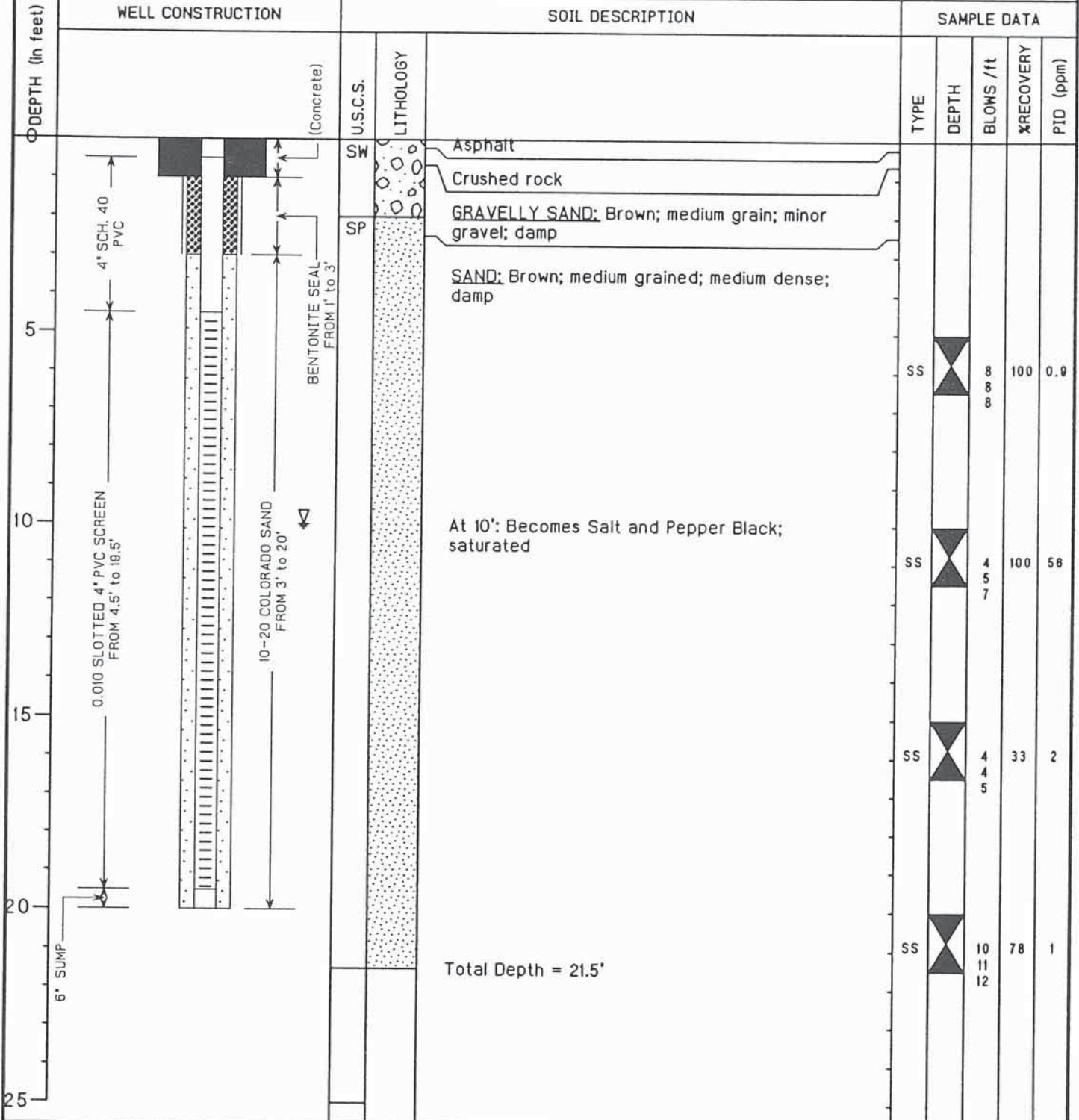
REMARKS: SS=2.5" diameter split spoon sampler



BORING/WELL INSTALLATION LOG
Monitoring MW-12

1011 SW Klickitat Way
Suite 207
Seattle, WA 98134
(206) 624-9349

PROJECT NO: 3-1308-100 SCOUGAL RUBBER		CLIENT: SCOUGAL RUBBER	
LOCATION: Seattle, WA Machinists		DRILLING CO.: Cascade Drilling	
START DATE: 08/06/93	TIME: 0830	BORING ID: 10"	DRILLER: S. Krueger/G. Rixon
COMPLETION DATE: 08/06/93		TIME: 1230	TOTAL DEPTH: 21.5 feet
RIG TYPE: CME 75		METHOD: HSA	
WATER LEVEL DURING DRILLING: 10' bgs		PVC STICK-UP:	
SURFACE ELEV.:		MP ELEV.:	
		LOGGED BY: Ward Beebe	



REMARKS: SS = Split Spoon

PROJECT NO: 3-1308-100 SCOUGAL RUBBER		CLIENT: SCOUGAL RUBBER	
LOCATION: Seattle, WA Machinists		DRILLING CO.: PTL	
START DATE: 08/13/93	TIME: 0900	BORING ID: 8"	DRILLER: C. Griffith/S. Carmel
COMPLETION DATE: 08/13/93	TIME: 1200	TOTAL DEPTH: 21.5 feet	RIG TYPE: SIMCO
WATER LEVEL DURING DRILLING: 11.5'bgs		PVC STICK-UP:	METHOD: HSA
SURFACE ELEV.:		MP ELEV.:	LOGGED BY: Ward Beebe

DEPTH (in feet)	WELL CONSTRUCTION	SOIL DESCRIPTION		SAMPLE DATA				
		U.S.C.S.	LITHOLOGY	TYPE	DEPTH	BLOWS /ft	%RECOVERY	PTD (ppm)
0 - 1.5	(Concrete)	SP	Concrete					
1.5 - 3.5	BENTONITE SEAL FROM 1' to 3'	SW	SAND: Gray; medium grained; loose; damp GRAVELLY SAND: Dark brown; medium grained; minor gravel; medium dense; damp					
3.5 - 10.5	0.010 SLOTTED 2" PVC SCREEN FROM 5.25' to 20.4'	SP	SAND: Salt and Pepper Black; medium grained; medium dense; damp At 10-11': Sand becomes fine to medium grained At 11': Becomes saturated	SS	4 3 3	83	0	
10.5 - 11.5	10-20 COLORADO SAND FROM 3' to 20.4'			SS	2 2 2	100	0	
11.5 - 16.5				SS	1 1 2	86	0	
16.5 - 21.5				SS	8 8 8	6	--	
		Total Depth = 21.5'						

REMARKS: SS = Split Spoon

PROJECT NO: 3-1308-110 SCOUGAL RUBBER		CLIENT: SCOUGAL RUBBER
LOCATION: Seattle, WA Former Barrel Storage		DRILLING CO.: Cascade Drilling
START DATE: 09/29/93 TIME:	BORING ID: 8"	DRILLER: Bruce Niermeyer
COMPLETION DATE: 09/29/93 TIME:	TOTAL DEPTH: 20.0 feet	RIG TYPE: CME 55
WATER LEVEL DURING DRILLING: 9' bgs	PVC STICK-UP:	METHOD: HSA
SURFACE ELEV.:	MP ELEV.:	LOGGED BY: Anthony Como

DEPTH (in feet)	WELL CONSTRUCTION		SOIL DESCRIPTION		SAMPLE DATA				
	U.S.C.S.	LITHOLOGY			TYPE	DEPTH	BLOWS / ft	%RECOVERY	PID (ppm)
0		Asphalt							
0 - 2.5	Concrete								
2.5 - 4.5	BENTONITE SEAL FROM 0.5' to 2.5'								
4.5 - 19.5	10-20 COLORADO SAND FROM 2.5' to 20'								
4.5 - 5.5	2" SCH. 40 PVC								
4.5 - 19.5	0.010 SLOTTED 2" PVC SCREEN FROM 4.5' to 19.5'								
0 - 20	6" SUMP								
0 - 20		SW							
0 - 2.5									
2.5 - 8									
8 - 11					SS	8	12	19	33
11 - 15					SS	1	1	1	33
15 - 19					SS	3	5	9	73
19 - 21.5					SS	29	35	35	80

REMARKS: SS = Split Spoon

PROJECT NO: 3-1308-110 SCOUGAL RUBBER		CLIENT: SCOUGAL RUBBER
LOCATION: Seattle, WA Sidewalk on Michigan St.		DRILLING CO.: Cascade Drilling
START DATE: 09/29/93	TIME:	BORING ID: 8"
COMPLETION DATE: 09/29/93		DRILLER: Bruce Niermeyer
WATER LEVEL DURING DRILLING: 9' bgs		RIG TYPE: CME 55
SURFACE ELEV.:		METHOD: HSA
MP ELEV.:		LOGGED BY: Anthony Como

DEPTH (in feet)	WELL CONSTRUCTION		SOIL DESCRIPTION		SAMPLE DATA				
	(Concrete)	U.S.C.S.	LITHOLOGY		TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)
0 - 1.0	Concrete	SW	Concrete						
1.0 - 5.0	2" SCH. 40 PVC BENTONITE SEAL FROM 1' to 3'		SAND: Dark brown to black; fine to medium well graded sand; some small gravel; dry						
5.0 - 10.5	10-20 COLORADO SAND FROM 3' to 20.5'		SAND: Black (salt & pepper); fine to medium well graded sand; moist	SS	1 3 6	100			
10.5 - 15.0	0.010 SLOTTED 2" PVC SCREEN FROM 5' to 20'		SAND: Black (salt & pepper); loose; fine to medium well graded sand; moist	SS	5 7 9	47			
15.0 - 20.0	6" SUMP		SAND: Black (salt & pepper); medium dense; fine to medium well graded sand; wet. Note: A piece of wood was encountered in sampler tip at 10.5'	SS	2 2 3	100			
20.0 - 25.0			SAND: Black (salt & pepper); loose; fine to medium well graded sand; wet	SS	3 5 5	80			

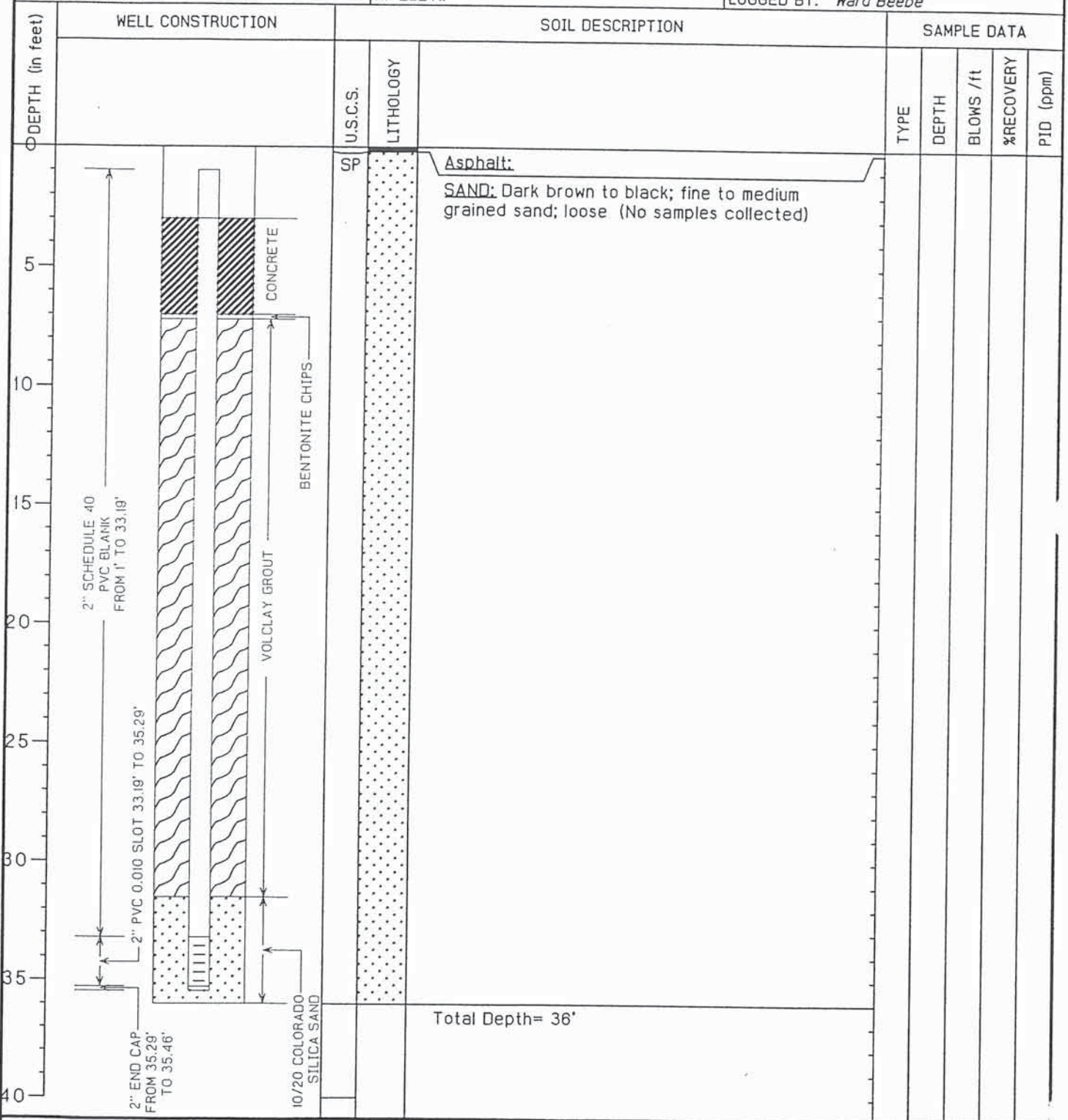
REMARKS: SS = Split Spoon

PROJECT NO: 3-1308-110 Scougal Rubber		CLIENT: Scougal Rubber
LOCATION: Pole Barn, Machinists Prop., Seattle, WA. State Well AA0-868		DRILLING CO.: Cascade Driling
START DATE: 2/21/94 TIME: 0800	BORING ID: 8"	DRILLER: L. Goble/M. Sharp/B. Gose
COMPLETION DATE: 2/21/94 TIME: 1200	TOTAL DEPTH: 21.5 feet	RIG TYPE: CME 55 Limited Access
WATER LEVEL DURING DRILLING: 10'bgs	PVC STICK-UP:	METHOD: HSA
SURFACE ELEV.:	MP ELEV.: TOC	LOGGED BY: Ward Beebe

DEPTH (in feet)	WELL CONSTRUCTION	SOIL DESCRIPTION		SAMPLE DATA					
		U.S.C.S.	LITHOLOGY	TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)	
0	<p>2" SCHEDULE 40 PVC BLANK</p> <p>CONCRETE</p> <p>PURE GOLD MEDIUM BENTONITE CHIPS</p> <p>10/20 COLORADO SILICA SAND</p> <p>SLOUGH</p> <p>2" END CAP FROM 19.33' TO 19.87'</p>	SP	<p>CONCRETE:</p> <p>SAND: Light gray; with trace gravel and trace debris (glass); medium grained; medium dense; damp</p> <p>3' - becomes light to medium brown, with minor gravel; gravel to 2";</p> <p>5' - becomes salt and pepper colored; medium to coarse grained;</p> <p>10' - becomes dark gray; with minor silt; saturated</p> <p>15' - becomes trace silt</p>						
5				SS		5 9 5	100	0	
10				SS		2 7 9	100	0	
15				SS		4 9 21	100	0	
20				SS		4 7 7	0	NR	
21.5			Total Depth= 21.5'						

REMARKS: SS=Split Spoon

PROJECT NO: 3-1308-400 Scougal Rubber		CLIENT: Scougal Rubber
LOCATION: North End of Alley; Seattle, WA. State Well AAO-058		DRILLING CO.: Cascade Drilling
START DATE: 01/18/94 TIME: 0745	BORING ID: 8"	DRILLER: R. LaBrosse/S. Hughes/L. Goble
COMPLETION DATE: 01/18/94 TIME: 0955	TOTAL DEPTH: 36.0 feet	RIG TYPE: CME 55 Limited Access
WATER LEVEL DURING DRILLING: 'bgs	PVC STICK-UP:	METHOD: HSA
SURFACE ELEV.:	MP ELEV.:	LOGGED BY: Ward Beebe



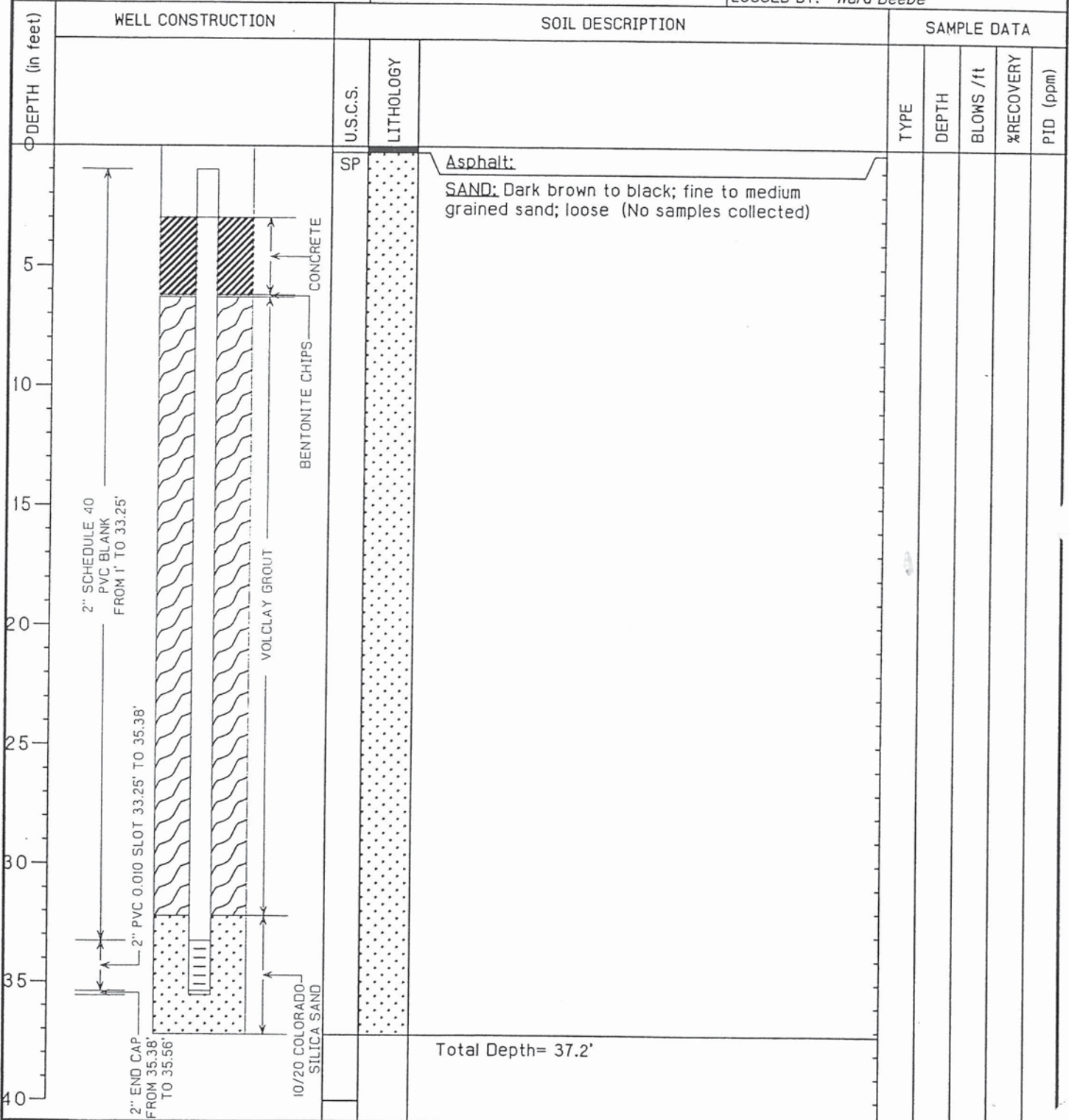
REMARKS:

PROJECT NO: 3-1308-400 Scougal Rubber		CLIENT: Scougal Rubber
LOCATION: South End of Alley; Seattle, WA. State Well AAO-059		DRILLING CO.: Cascade Drilling
START DATE: 01/18/94 TIME: 1005	BORING ID: 8"	DRILLER: R. LaBrosse/S. Hughes/L. Goble
COMPLETION DATE: 01/18/94 TIME: 1115	TOTAL DEPTH: 37.0 feet	RIG TYPE: CME 55 Limited Access
WATER LEVEL DURING DRILLING: 'bgs	PVC STICK-UP:	METHOD: HSA
SURFACE ELEV.:	MP ELEV.:	LOGGED BY: Ward Beebe

DEPTH (in feet)	WELL CONSTRUCTION	SOIL DESCRIPTION			SAMPLE DATA				
		U.S.C.S.	LITHOLOGY		TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)
0		SP	Concrete:						
0-5	CONCRETE		SAND: Dark brown to black; fine to medium grained sand; loose (No samples collected)						
5-35.46	2" SCHEDULE 40 PVC BLANK FROM 1' TO 33.31' 2" PVC 0.010 SLOT 33.31' TO 35.46'								
35.46-35.65	2" END CAP FROM 35.46' TO 35.65'								
35.65-37.0	10/20 COLORADO SILICA SAND VOLCLAY GROUT BENTONITE CHIPS								
Total Depth= 37'									

REMARKS:

PROJECT NO: 3-1308-400 Scougal Rubber	CLIENT: Scougal Rubber
LOCATION: South End of Flame Spray Building; Seattle, WA. State Well AA0-061	DRILLING CO.: Cascade Drilling
START DATE: 01/18/94 TIME: 1400	BORING ID: 8"
COMPLETION DATE: 01/18/94 TIME: 1515	TOTAL DEPTH: 37.2 feet
DRILLER: R. LaBrosse/S. Hughes/L. Goble	RIG TYPE: CME 55 Limited Access
WATER LEVEL DURING DRILLING: 'bgs	PVC STICK-UP:
METHOD: HSA	LOGGED BY: Ward Beebe
SURFACE ELEV.:	MP ELEV.:



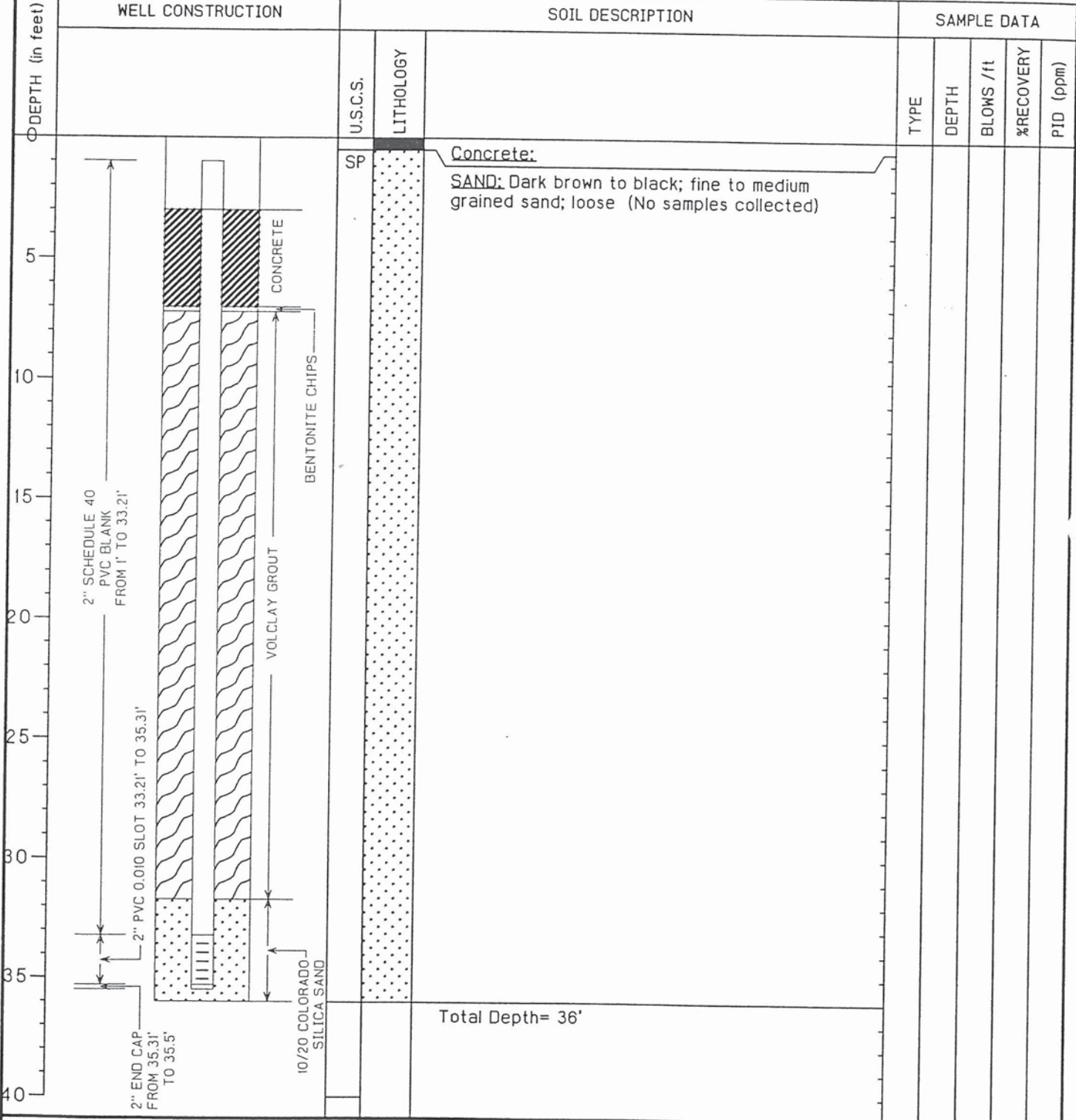
REMARKS:

PROJECT NO: 3-1308-400 Scougal Rubber	CLIENT: Scougal Rubber
LOCATION: Beneath Hopper; Seattle, WA. State Well AAO-060	DRILLING CO.: Cascade Drilling
START DATE: 01/18/94 TIME: 1140	BORING ID: 8"
COMPLETION DATE: 01/18/94 TIME: 1330	TOTAL DEPTH: 36.6 feet
WATER LEVEL DURING DRILLING: 'bgs	PVC STICK-UP:
SURFACE ELEV.:	MP ELEV.:
	RIG TYPE: CME 55 Limited Access
	METHOD: HSA
	LOGGED BY: Ward Beebe

DEPTH (in feet)	WELL CONSTRUCTION	SOIL DESCRIPTION			SAMPLE DATA									
		U.S.C.S.	LITHOLOGY		TYPE	DEPTH	BLOWS /ft	%RECOVERY	PTD (ppm)					
0				Asphalt:										
5	CONCRETE			SAND: Dark brown to black; fine to medium grained sand; loose (No samples collected)										
10	BENTONITE CHIPS													
15	VOLCLAY GROUT													
20	2" SCHEDULE 40 PVC BLANK FROM 1' TO 33.35'													
25	2" PVC 0.010 SLOT 33.35' TO 35.46'													
30	10/20 COLORADO SILICA SAND													
35	2" END CAP FROM 35.46' TO 35.65'													
40				Total Depth= 36.6'										

REMARKS:

PROJECT NO: 3-1308-400 Scougal Rubber	CLIENT: Scougal Rubber
LOCATION: NW Corner Flame Spray Building; Seattle, WA. State Well AAO-062	DRILLING CO.: Cascade Drilling
START DATE: 01/18/94 TIME: 1545	BORING ID: 8"
COMPLETION DATE: 01/18/94 TIME: 1700	TOTAL DEPTH: 36 feet
DRILLER: R. LaBrosse/S. Hughes/L. Goble	RIG TYPE: CME 55 Limited Access
WATER LEVEL DURING DRILLING: 'bgs	PVC STICK-UP:
METHOD: HSA	LOGGED BY: Ward Beebe
SURFACE ELEV.:	MP ELEV.:



REMARKS:

Equipment Hand Auger

Land Surface NR Date 1/16/91

Elevation _____

OVM

Depth (feet)

Sample

NR

0

5

10

15

20

25

30

35

40

2" Asphalt Concrete.

BROWN GRAVELLY SAND (SP) medium dense, moist; with some silt, medium grained.

Color change to black brown and becomes loose at approximately 3 feet.

Boring terminated at approximate depth of 6-1/2 feet.

Groundwater encountered at approximate depth of 6-1/2 feet on 1/16/91 while drilling.

Boring backfilled with bentonite and sealed with concrete on 1/16/91.



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Geotechnical Engineering
Geology & Hydrogeology

Log of Boring HA-1

Scougal Rubber/Phase II Environmental Assessment
Seattle, Washington

PLATE

A12

JOB NUMBER
15,547.003

DRAWN
JFL

APPROVED
G H J

DATE
23 Jan. 91

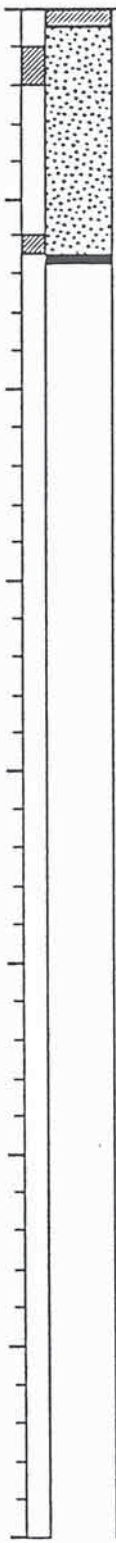
REVISED

DATE

Equipment Hand Auger

Land Surface NR Date 1/16/91
Elevation

OVM
Depth (feet)
Sample
0
NR
5
NR
10
15
20
25
30
35
40



6" Portland Cement Concrete.
BLACK BROWN SAND (SP) loose, moist; occasional gravel, medium grained.
Boring terminated at approximate depth of 6-1/2 feet.
Groundwater encountered at approximate depth of 6-1/2 feet on 1/18/91 while drilling.
Boring backfilled with bentonite and sealed with concrete on 1/18/91.



Applied Geotechnology Inc.
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Log of Boring HA-2
Scougal Rubber/Phase II Environmental Assessment
Seattle, Washington

PLATE

A13

JOB NUMBER
15,547.003

DRAWN
JFL

APPROVED
GHS

DATE
23 Jan. 91

REVISED

DATE

Equipment Hand Auger

Land Surface NR Date 1/18/91

Elevation _____

OVM
Depth (feet)
Sample
0
5
NR
10
15
20
25
30
35
40



12" Portland Cement Concrete.
BROWN GRAVELLY SAND (SP) medium dense,
moist, medium grained.
Color change to black brown.

Boring terminated at approximate depth of 6-1/2 feet.

Groundwater encountered at approximate depth of 6-1/2 feet on 1/18/91 while drilling.

Boring backfilled with bentonite and sealed with concrete on 1/18/91.



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Log of Boring HA-3

Scougal Rubber/Phase II Environmental Assessment
Seattle, Washington

PLATE

A14

JOB NUMBER	DRAWN	APPROVED	DATE	REVISED	DATE
15,547.003	JFL	GHS	23 Jan. 91		

Equipment Hand Auger

Land Surface NR Date 1/18/91

Elevation _____

OVM

Depth (feet)

Sample



6" Portland Cement Concrete.
 BROWN SANDY GRAVEL (GP) medium dense,
 moist; fine grained.
 BLACK BROWN SAND (SP) loose, moist; medium
 grained.

NR

Boring terminated at approximate depth of 6-1/2 feet.
 Groundwater encountered at approximate depth of 6-1/2 feet on 1/18/91 while drilling.
 Boring backfilled with bentonite and sealed with concrete on 1/18/91.



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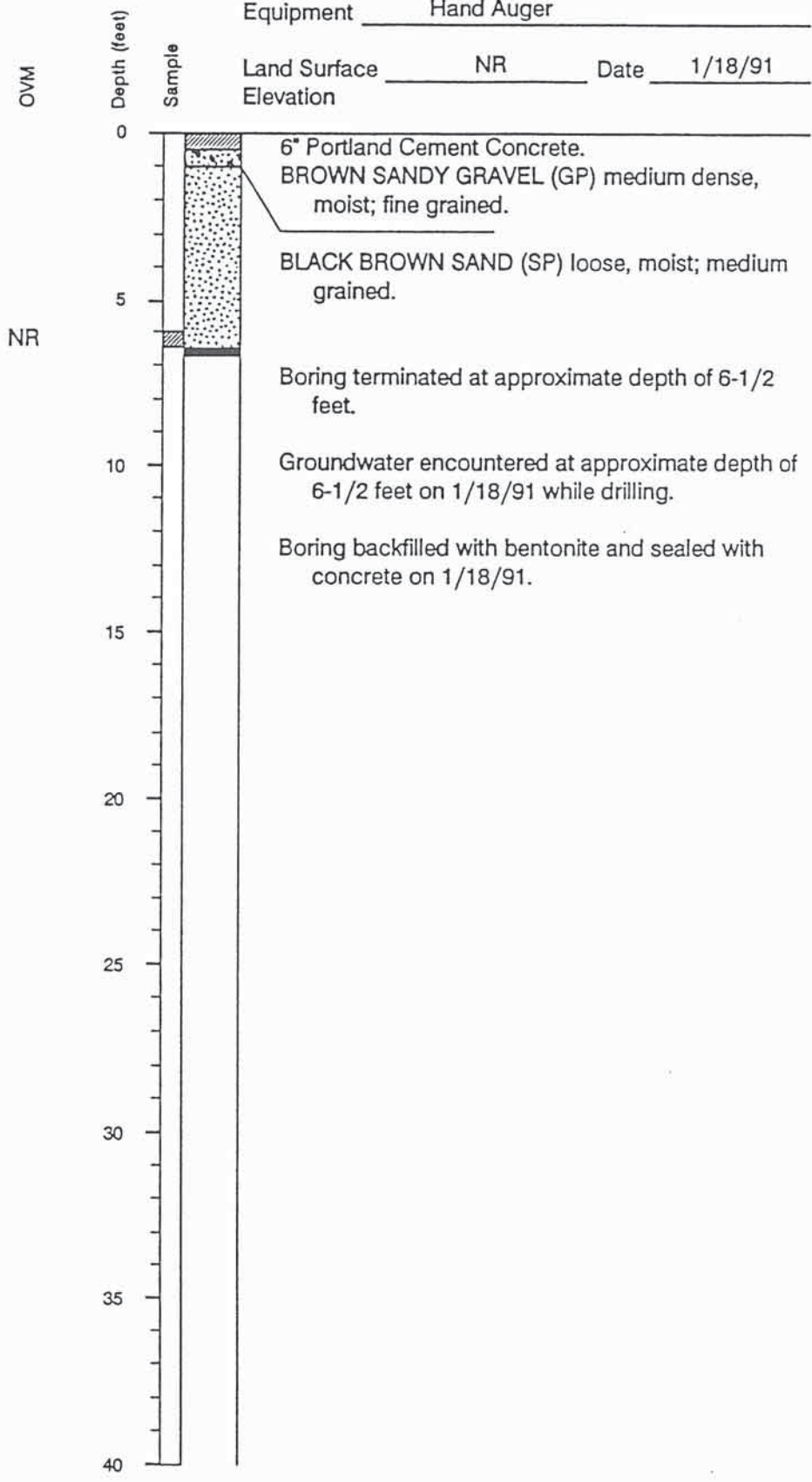
Log of Boring HA-4
 Scougal Rubber/Phase II Environmental Assessment
 Seattle, Washington

PLATE
A15

Equipment Hand Auger

Land Surface NR Date 1/18/91

Elevation _____



Applied Geotechnology Inc.
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Log of Boring HA-5

Scougal Rubber/Phase II Environmental Assessment
Seattle, Washington

PLATE

A16

JOB NUMBER	DRAWN	APPROVED	DATE	REVISED	DATE
15,547.003	JFL	C H S	23 Jan. 91		

PROJECT NO: 3-0771-300 Scougal Rubber		CLIENT: M.J. McIntyre L.P.
LOCATION: Seattle, WA South End Alley		DRILLING CO.: Cascade Drilling
START DATE: 12/7/92 TIME: 0830	BORING ID: 8"	DRILLER: John Swentik/Eric
COMPLETION DATE: 12/7/92 TIME: 1000	BORING DEPTH: 11.5'	RIG TYPE: Limited Access CME 55
WATER LEVEL DURING DRILLING: 7' bgs	SURFACE ELEV.: NA	METHOD: HSA
DATE MEASURED: 12/7/92	M. P. ELEVATION: NA	LOGGED BY: Ward Beebe

DEPTH (in feet)	SAMPLE DATA					SOIL DESCRIPTION	
	TYPE	DEPTH	BLOWS /ft	%RECOVERY	PTD (ppm)	U.S.C.S.	LITHOLOGY
0							CONCRETE
5	SS	8-15	11	100	1	SP	SAND: Dark brown; medium grained; trace subrounded fine gravel; trace silt; medium dense; no odor; damp.
10	SS	10-20	10	100	5.2		
15							
20							
25							

REMARKS: Backfilled with pure gold medium bentonite chips. SS = 2.5" diameter split spoon sampler.

PROJECT NO: 3-0771-300 Scougal Rubber			CLIENT: M.J. McIntyre L.P.		
LOCATION: Seattle, WA North End Alley			DRILLING CO.: Cascade Drilling		
START DATE: 12/7/92	TIME: 1000	BORING ID: 8"	DRILLER: John Swentik/Eric		
COMPLETION DATE: 12/7/92	TIME: 1115	BORING DEPTH: 11.5'	RIG TYPE: Limited Access CME 55		
WATER LEVEL DURING DRILLING: 7' bgs		SURFACE ELEV.: NA	METHOD: HSA		
DATE MEASURED: 12/7/92	M. P. ELEVATION: NA		LOGGED BY: Ward Beebe		

DEPTH (in feet)	SAMPLE DATA					SOIL DESCRIPTION	
	TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)	U.S.C.S.	LITHOLOGY
0							CONCRETE
0 - 5						SW	GRAVELLY SAND: Medium brown; medium grained; minor subrounded fine to coarse gravel; medium dense; no odor; damp.
5 - 10	SS	10 12 14	100	32.8		SP	SAND: Dark brown; medium grained; trace subrounded fine gravel; medium dense; no odor; damp.
10 - 11.5	SS	14* 6 6	85	28.8		SW	GRAVELLY SAND: Medium brown; medium grained minor subrounded fine to coarse gravel; medium dense; no odor; saturated.
15							
20							
25							

REMARKS: Backfilled with pure gold medium bentonite chips. SS = 2.5" diameter split spoon sampler. *High blow count due to sampler catching on auger.

PROJECT NO: 3-0771-300 Scougal Rubber		CLIENT: M.J. McIntyre L.P.
LOCATION: Seattle, WA South End Alley		DRILLING CO.: Cascade Drilling
START DATE: 12/7/92 TIME: 1115	BORING ID: 8"	DRILLER: John Swentik/Eric
COMPLETION DATE: 12/7/92 TIME: 1200	BORING DEPTH: 11.5'	RIG TYPE: Limited Access CME 55
WATER LEVEL DURING DRILLING: 7.5' bgs	SURFACE ELEV.: NA	METHOD: HSA
DATE MEASURED: 12/7/92	M. P. ELEVATION: NA	LOGGED BY: Ward Beebe

DEPTH (in feet)	SAMPLE DATA					SOIL DESCRIPTION	
	TYPE	DEPTH	BLOWS /ft	%RECOVERY	PTD (ppm)	U.S.C.S.	LITHOLOGY
0							CONCRETE
5	SS	9 11	100	1		SW	GRAVELLY SAND: Dark brown; medium grained; minor subrounded fine to coarse gravel; medium dense; no odor; damp.
10	SS	12 15 10	85	1		SP	SAND: Dark brown; medium grained; trace subrounded fine gravel; medium dense; no odor; saturated.
15							
20							
25							

REMARKS: Backfilled with pure gold medium bentonite chips. SS = 2.5" diameter split spoon sampler.

PROJECT NO: 3-0771-300 Scougal Rubber		CLIENT: M.J. McIntyre L.P.
LOCATION: Seattle, WA North End Alley		DRILLING CO.: Cascade Drilling
START DATE: 12/7/92 TIME: 1230	BORING ID: 8"	DRILLER: John Swentik/Eric
COMPLETION DATE: 12/7/92 TIME: 1330	BORING DEPTH: 11.5'	RIG TYPE: Limited Access CME55
WATER LEVEL DURING DRILLING: 7' bgs	SURFACE ELEV.: NA	METHOD: HSA
DATE MEASURED: 12/7/92	M. P. ELEVATION: NA	LOGGED BY: Ward Beebe

DEPTH (in feet)	SAMPLE DATA					SOIL DESCRIPTION	
	TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)	U.S.C.S.	LITHOLOGY
0						SW	CONCRETE
5	SS	10 12 17	85	11		SP	GRAVELLY SAND: Medium brown; medium grained; minor subrounded fine to coarse gravel; medium dense; no odor; damp.
10	SS	30* 50* 37*	100	28.4		▽	SAND: Dark brown; medium grained; trace subrounded fine gravel; medium dense; no odor; damp. 7' - becomes saturated
15							
20							
25							

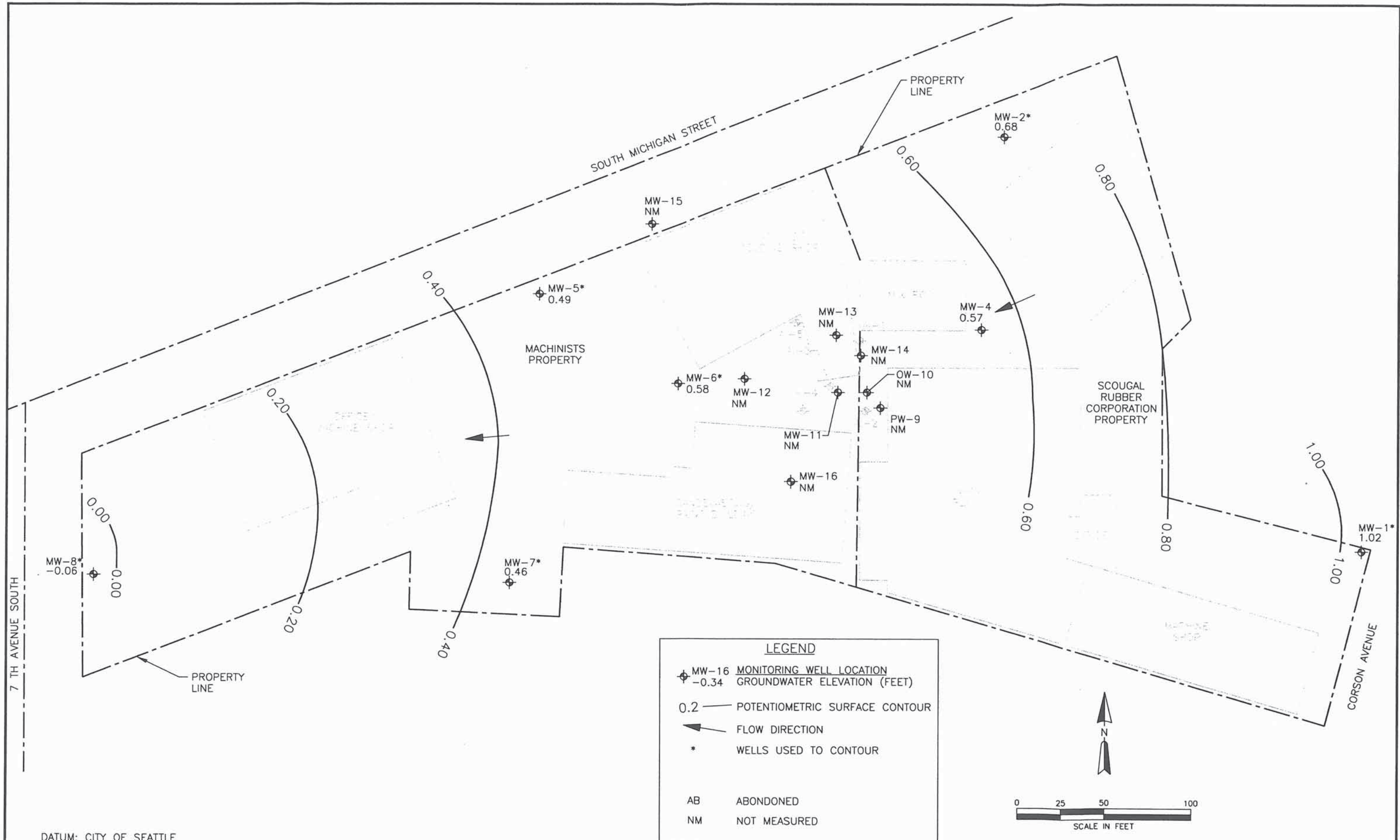
REMARKS: SS = 2.5" diameter split spoon sampler. Backfilled with pure gold medium bentonite chips. *High blow count due to sampler catching on auger.

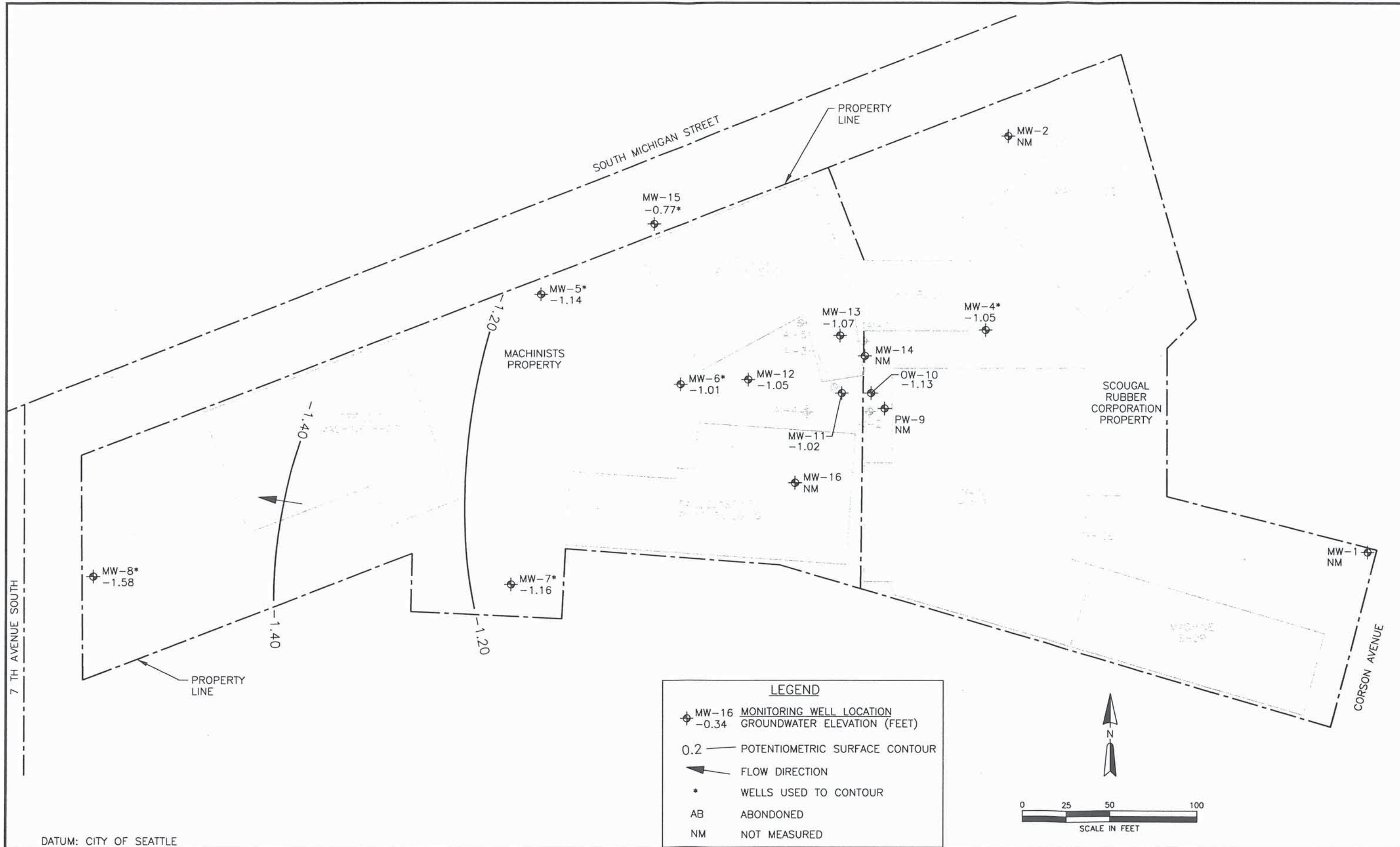
PROJECT NO: 3-1308-100 SCOUGAL RUBBER		CLIENT: SCOUGAL RUBBER
LOCATION: Seattle, WA Alley		DRILLING CO.: Cascade Drilling
START DATE: 08/06/93 TIME: 0830	BORING ID: 8"	DRILLER: D. Minor/B. Maloy
COMPLETION DATE: 08/06/93 TIME: 1230	BORING DEPTH: 36.5'	RIG TYPE: CME 55, Limited Access
WATER LEVEL DURING DRILLING: 12'	SURFACE ELEV.: ' (MSL)	METHOD: HSA
DATE MEASURED:	M. P. ELEVATION:	LOGGED BY: Ward Beebe

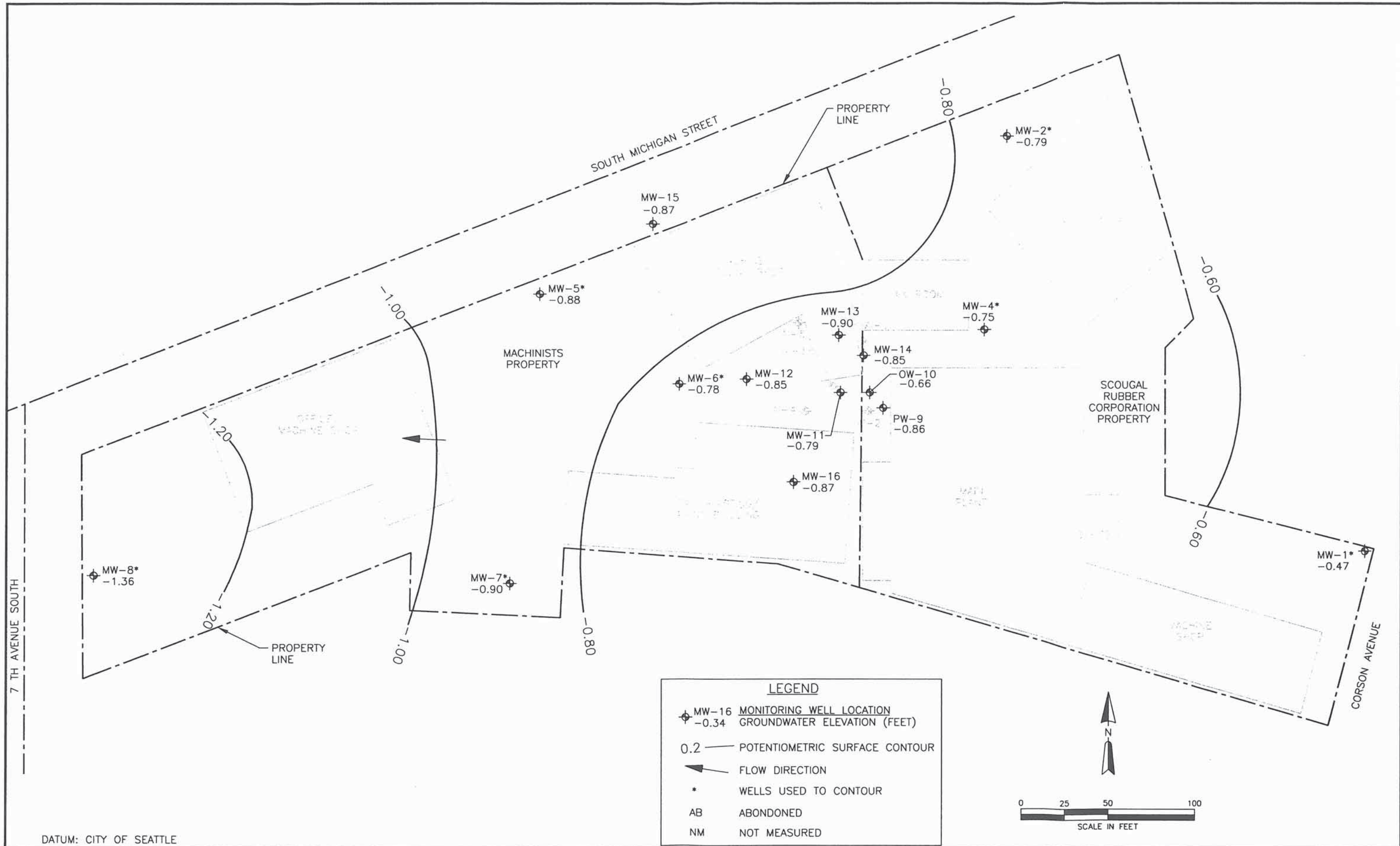
DEPTH (in feet)	SAMPLE DATA					SOIL DESCRIPTION	
	TYPE	DEPTH	BLOWS /ft	%RECOVERY	PID (ppm)	U.S.C.S.	LITHOLOGY
0							Concrete
0 - 2.5						SW	GRAVELLY SAND: Gray; medium grained; minor gravel; loose; fill; damp
2.5 - 8.5						GP	GRAVEL: Gray; medium grained; loose; "pea gravel"; damp
8.5 - 12.5	SS	10	11	89	7	SM	SILTY SAND: Dark brown to black; medium grained; minor silt; trace organics; loose; moist to wet
12.5 - 19.5	SS	12.9 13	100	2			SAND: Salt and pepper black; medium grained; medium dense; saturated
19.5 - 24.5	SS	5 8 9	0	--			
24.5 - 29.5	SS	8 9 19	0	--		SP	
29.5 - 34.5	SS	10 12 13	89	0			
34.5 - 36.5	SS	13 17 20	89	0			
Total Depth = 36.5'							

REMARKS: SS = Split Spoon

Appendix D
Potentiometric Maps







DATUM: CITY OF SEATTLE



SRC00-02417-400

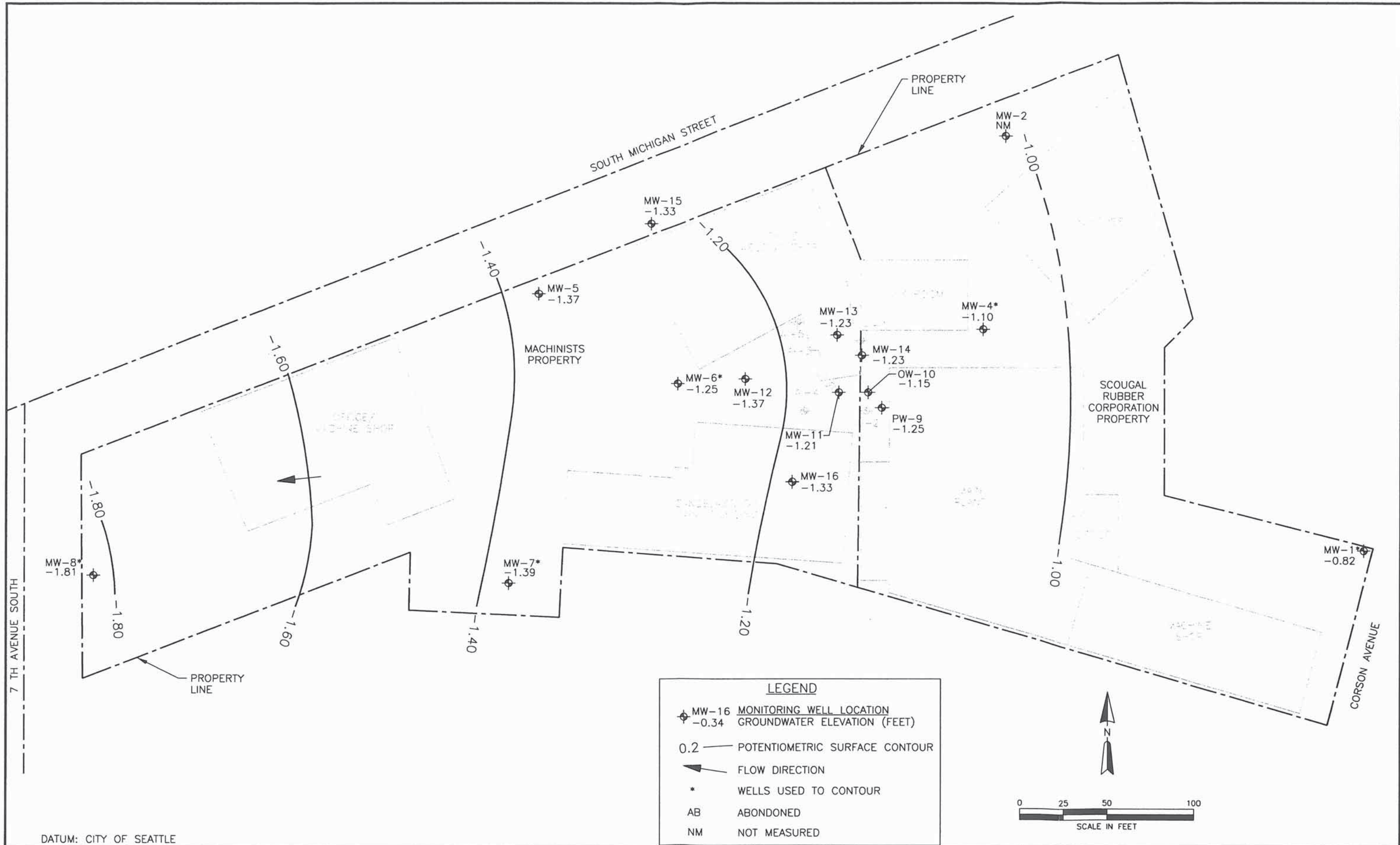
GROUNDWATER CONTOUR MAP
MAY 26, 1994

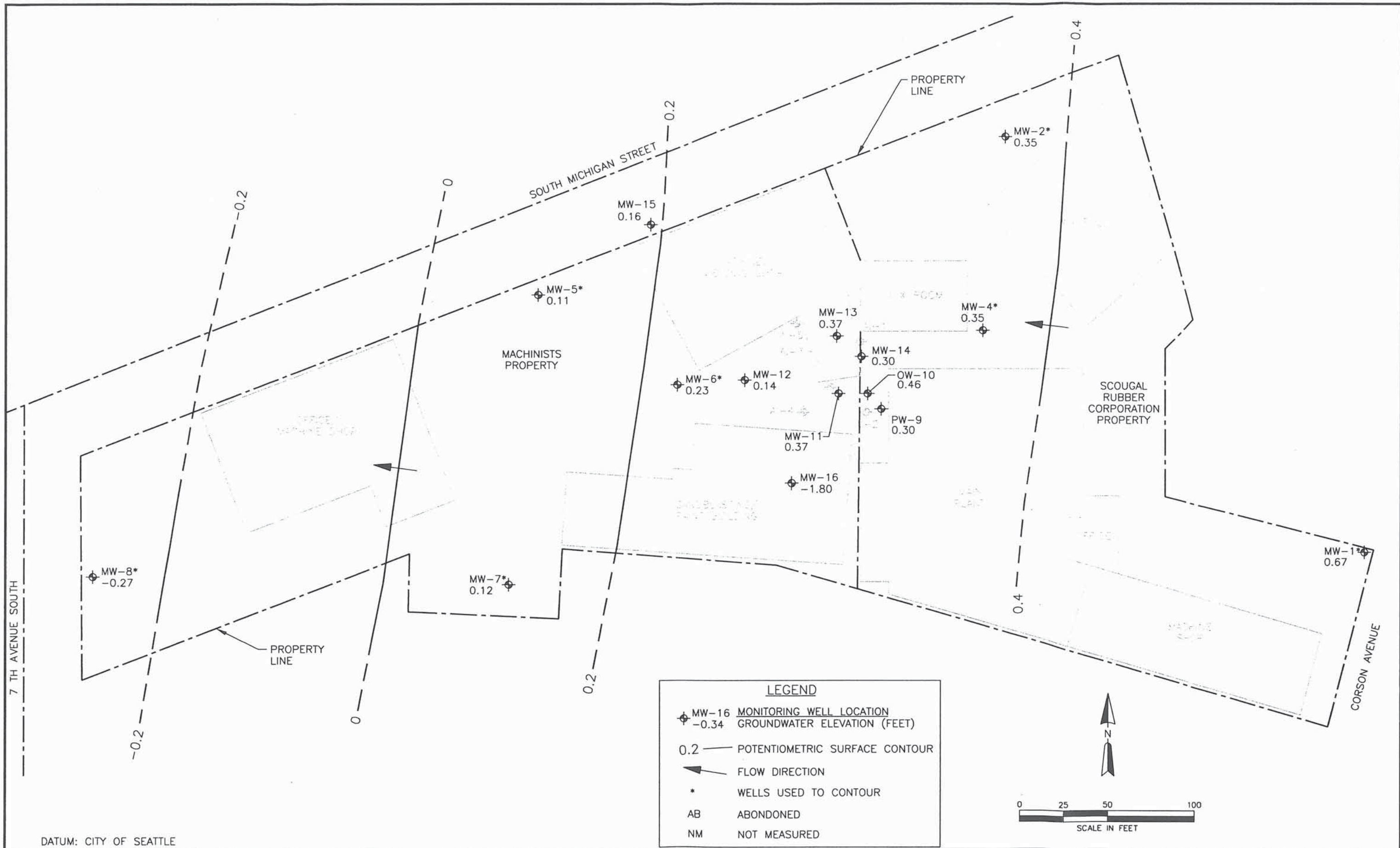
DATE: 04/17/01

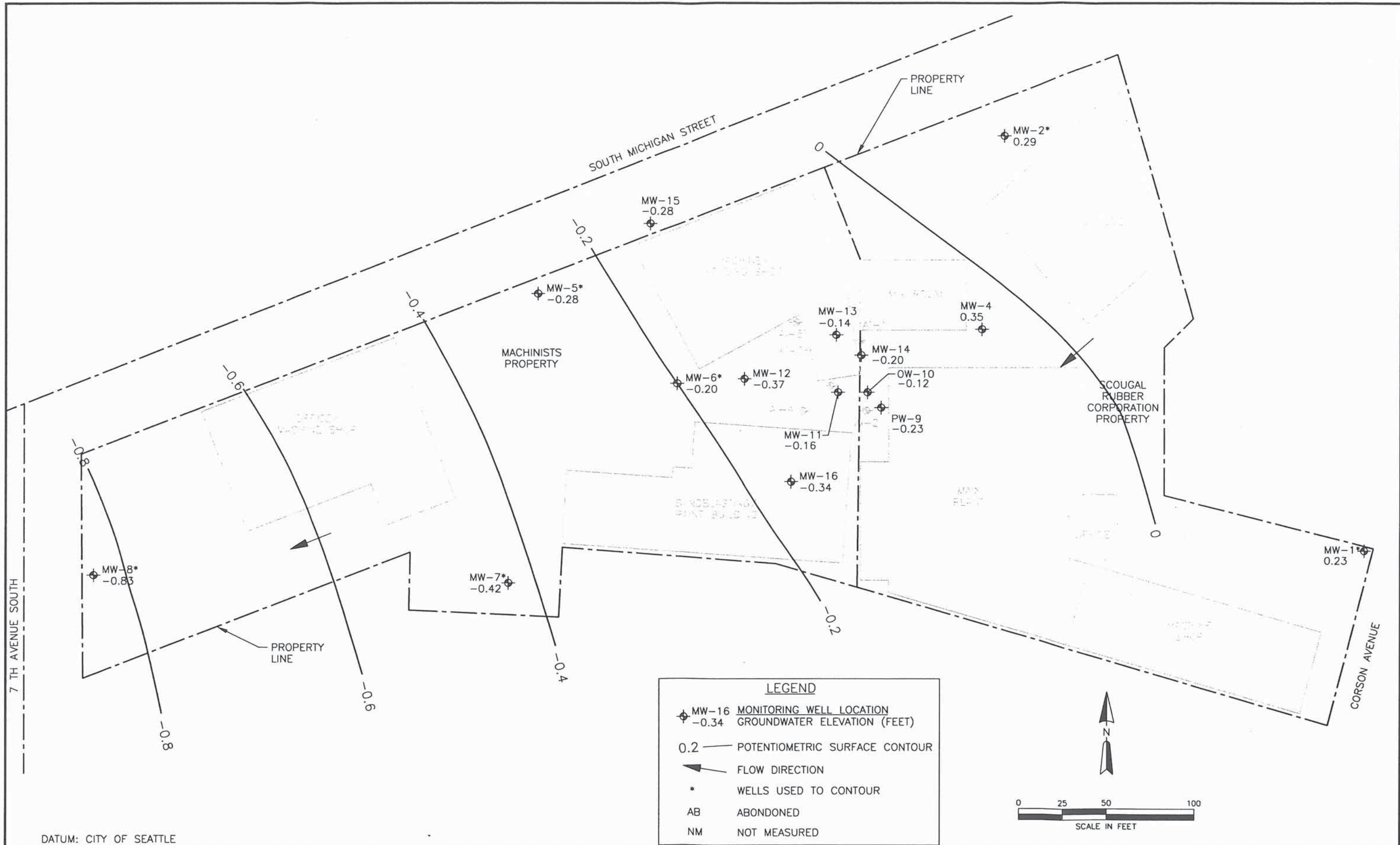
DRWN: S.E.

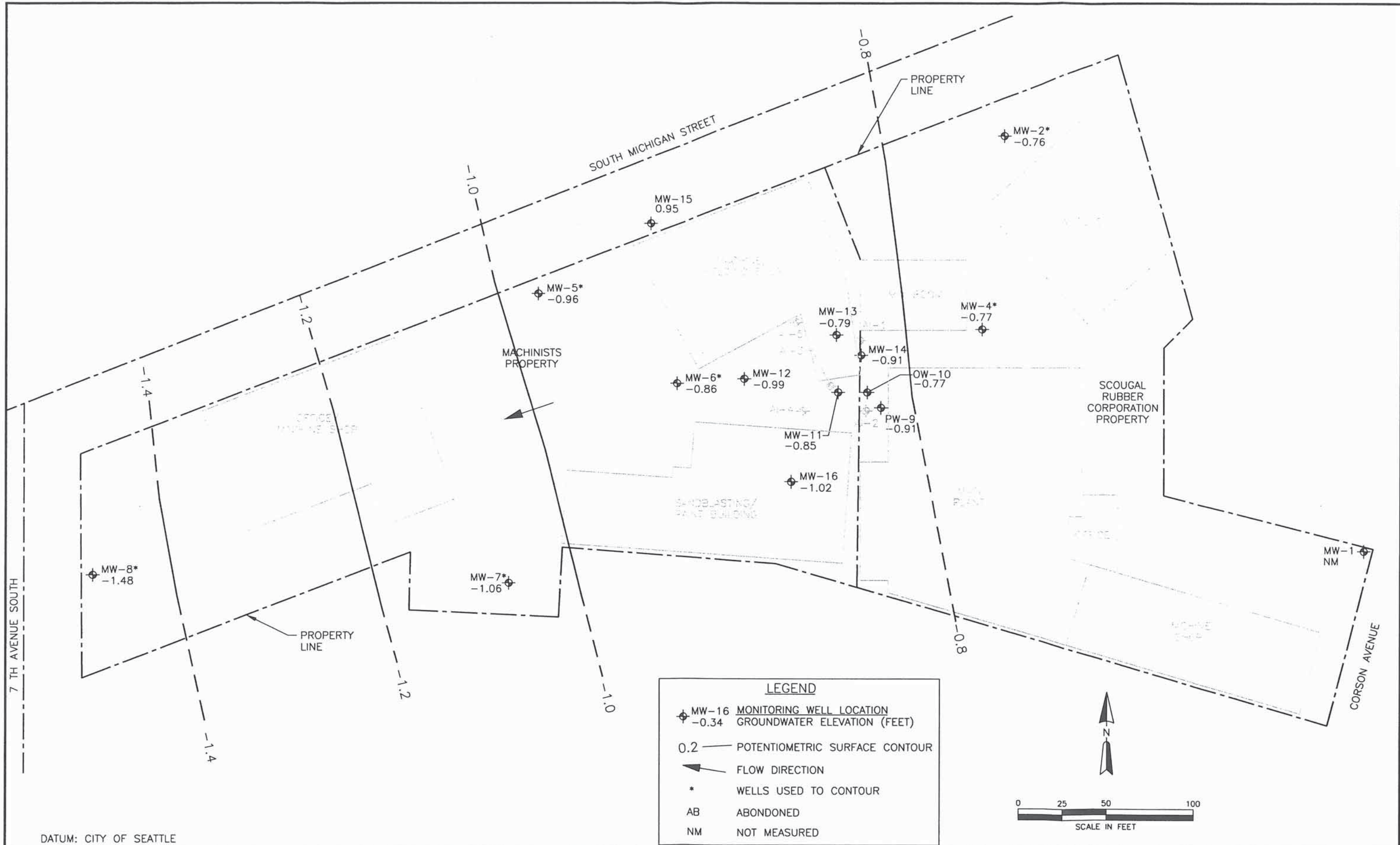
FILE: 2417s014s

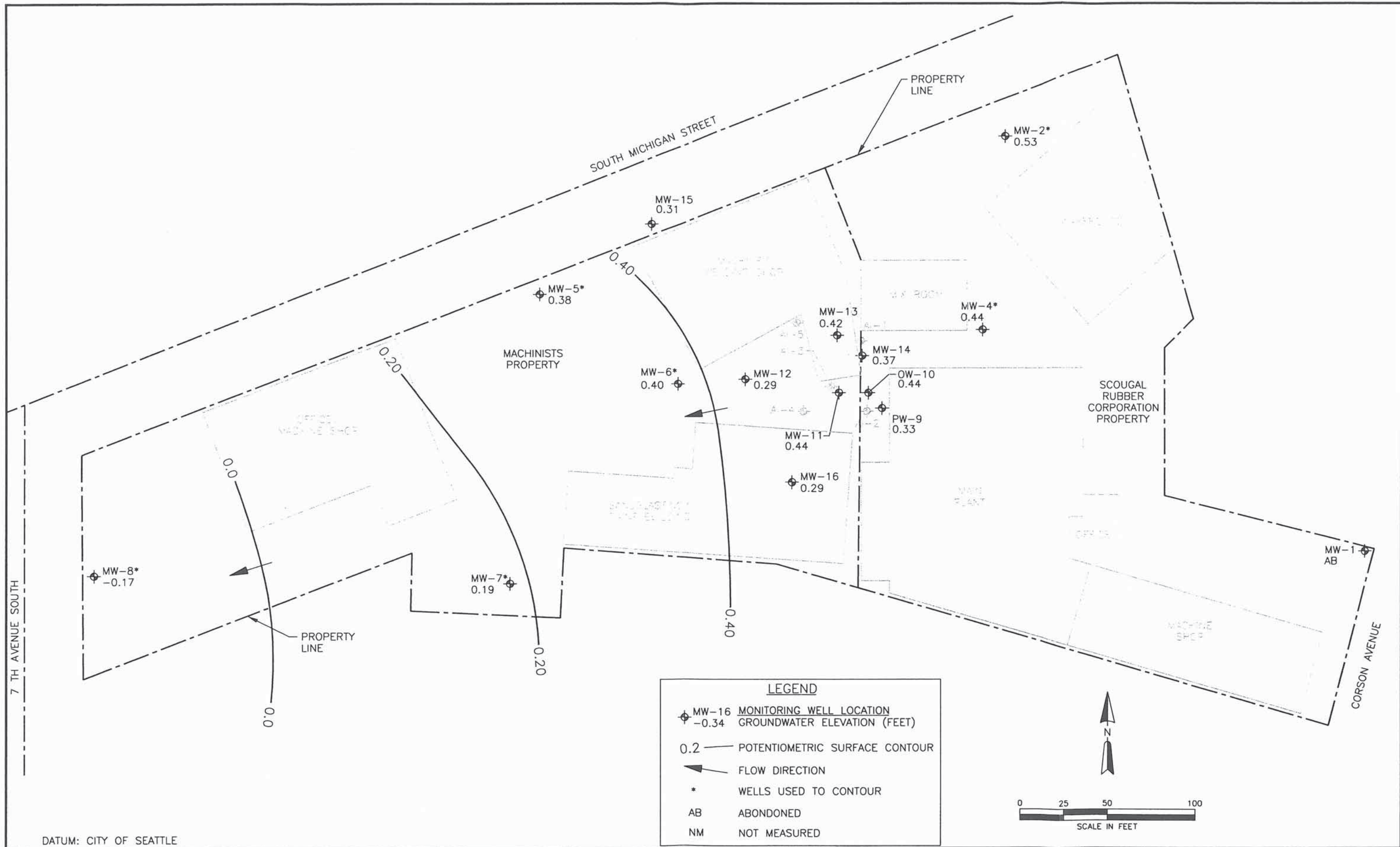
FIGURE D-3

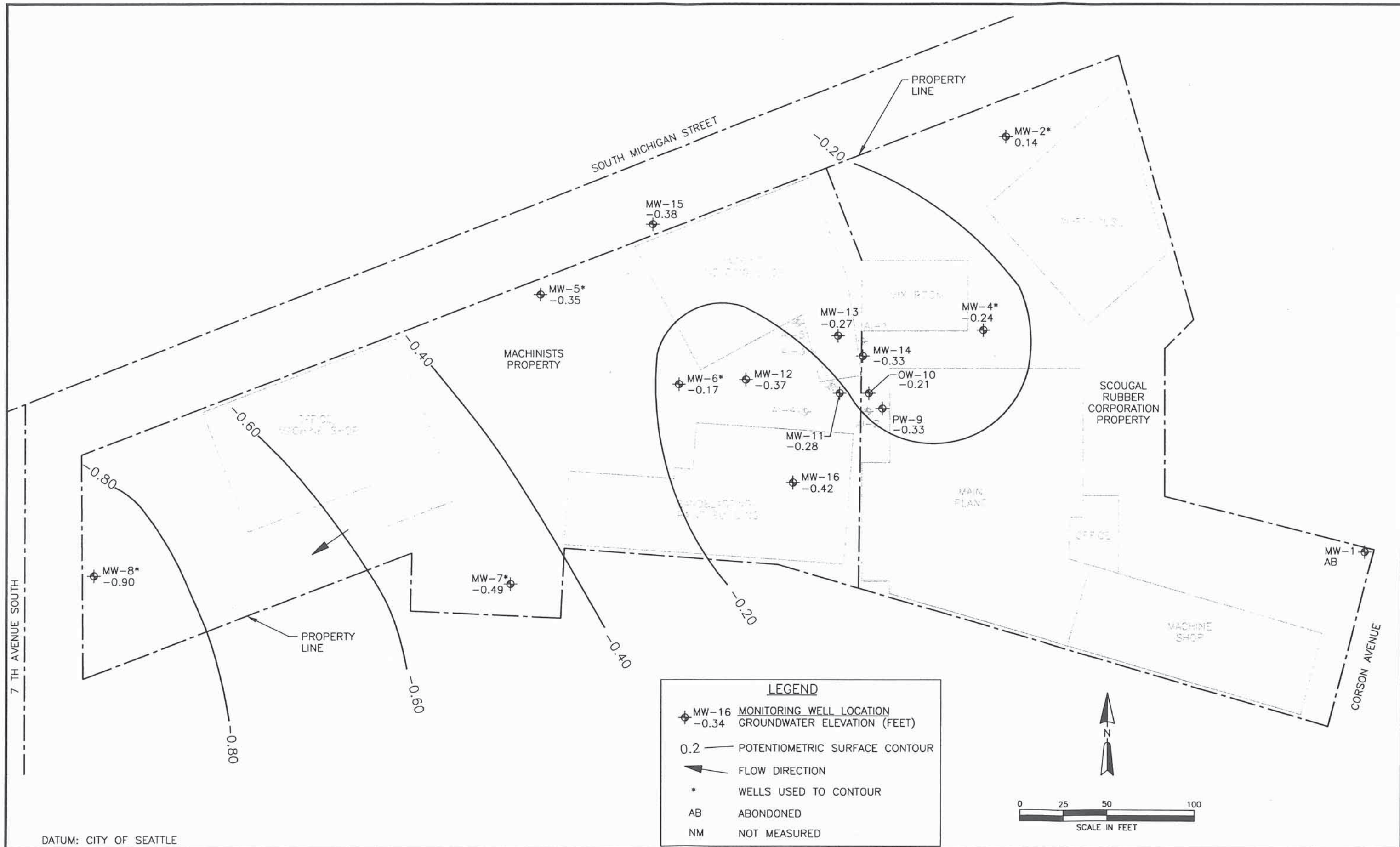


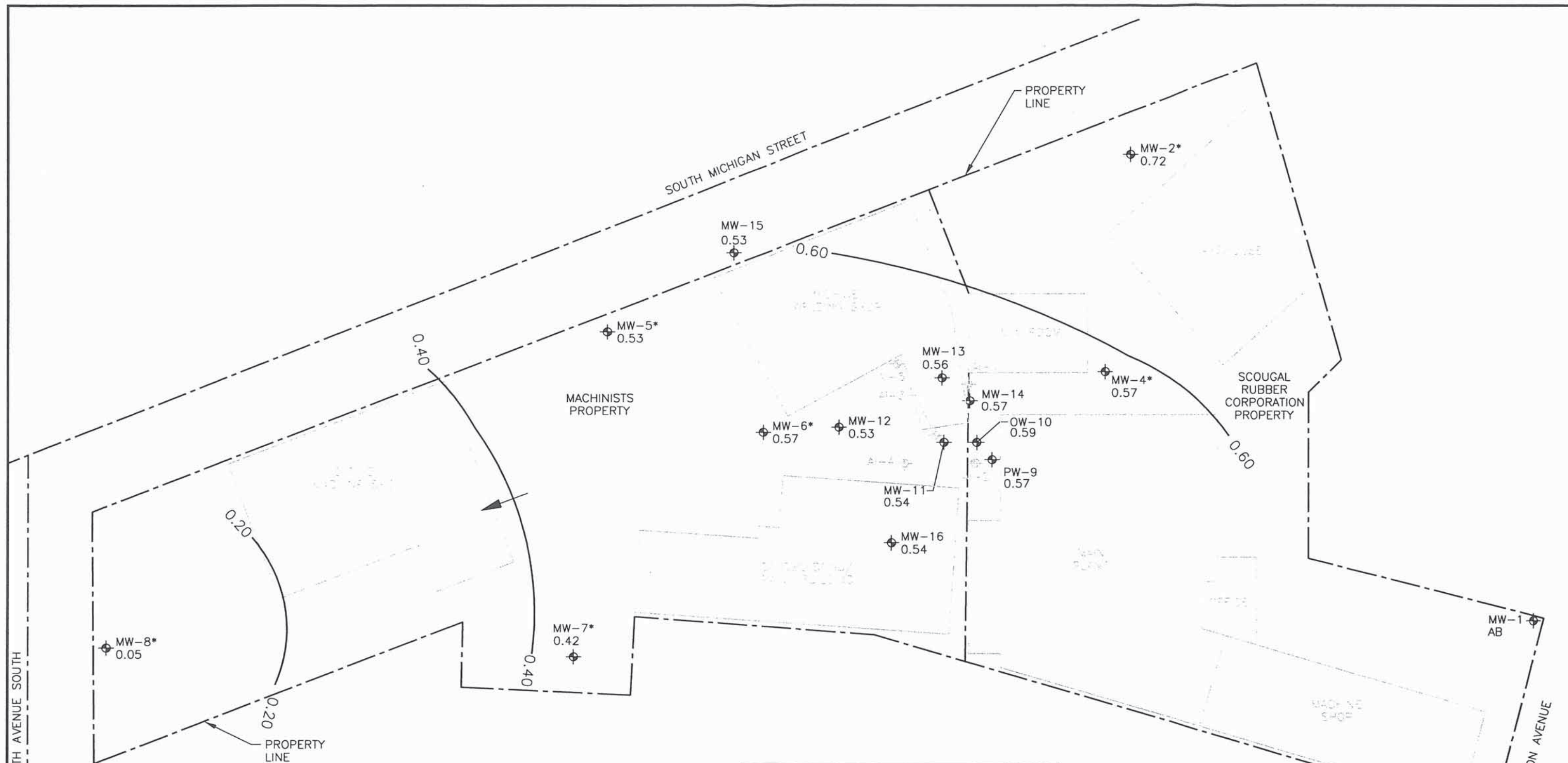






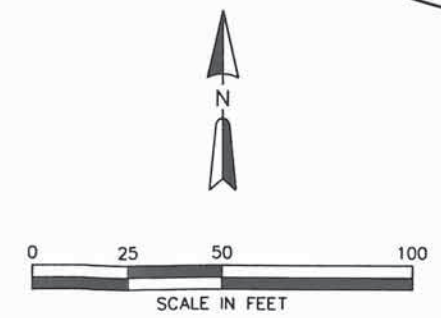






LEGEND

⊕ MW-16 -0.34	MONITORING WELL LOCATION GROUNDWATER ELEVATION (FEET)
0.2	POTENTIOMETRIC SURFACE CONTOUR
➔	FLOW DIRECTION
*	WELLS USED TO CONTOUR
AB	ABANDONED
NM	NOT MEASURED



DATUM: CITY OF SEATTLE



SRC00-02417-400

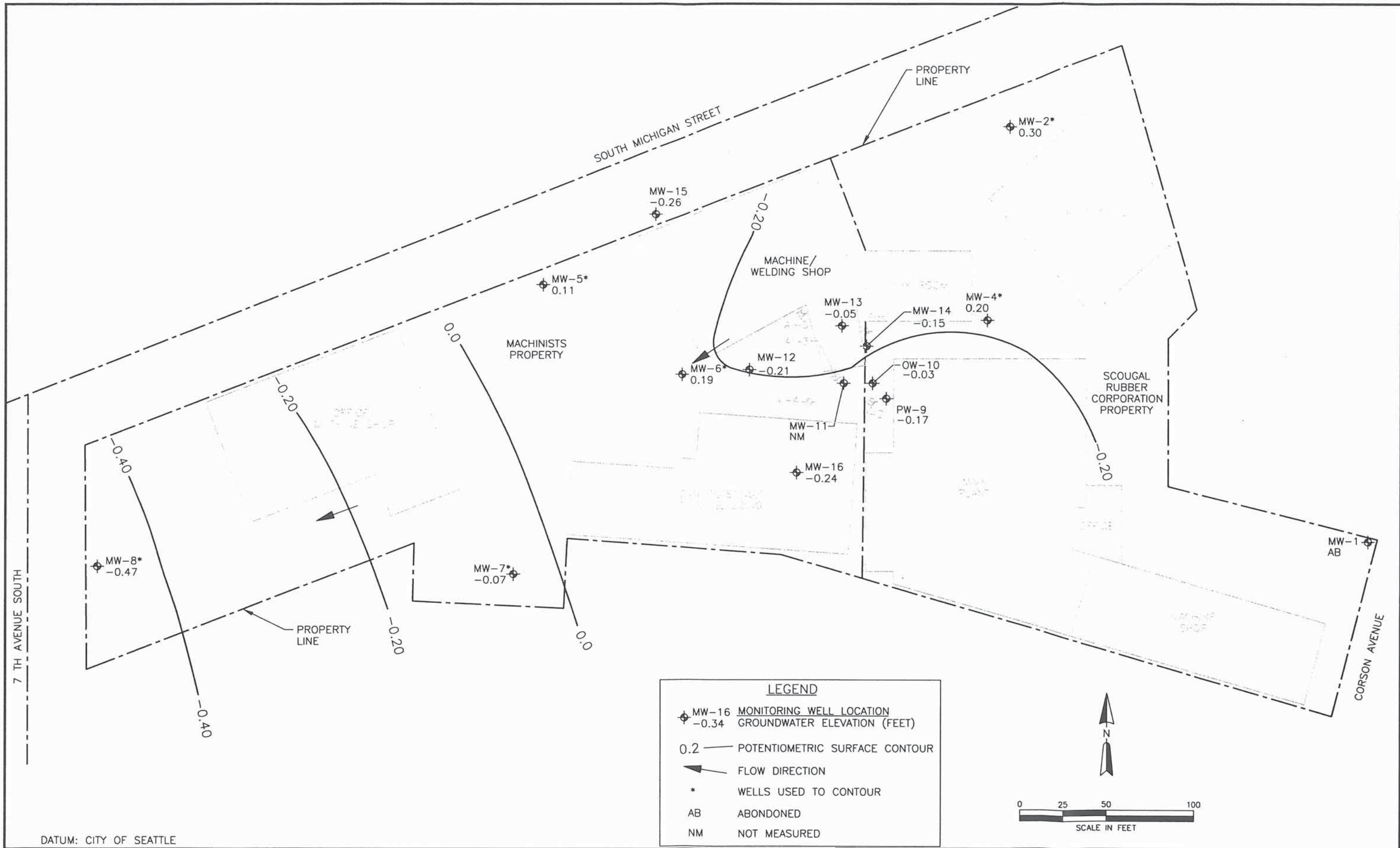
GROUNDWATER CONTOUR MAP
FEBRUARY 26, 1997

DATE: 06/20/01

DRWN: N.S.

FILE: 2417s008s

FIGURE D-10



DATUM: CITY OF SEATTLE



SRC00-02417-400

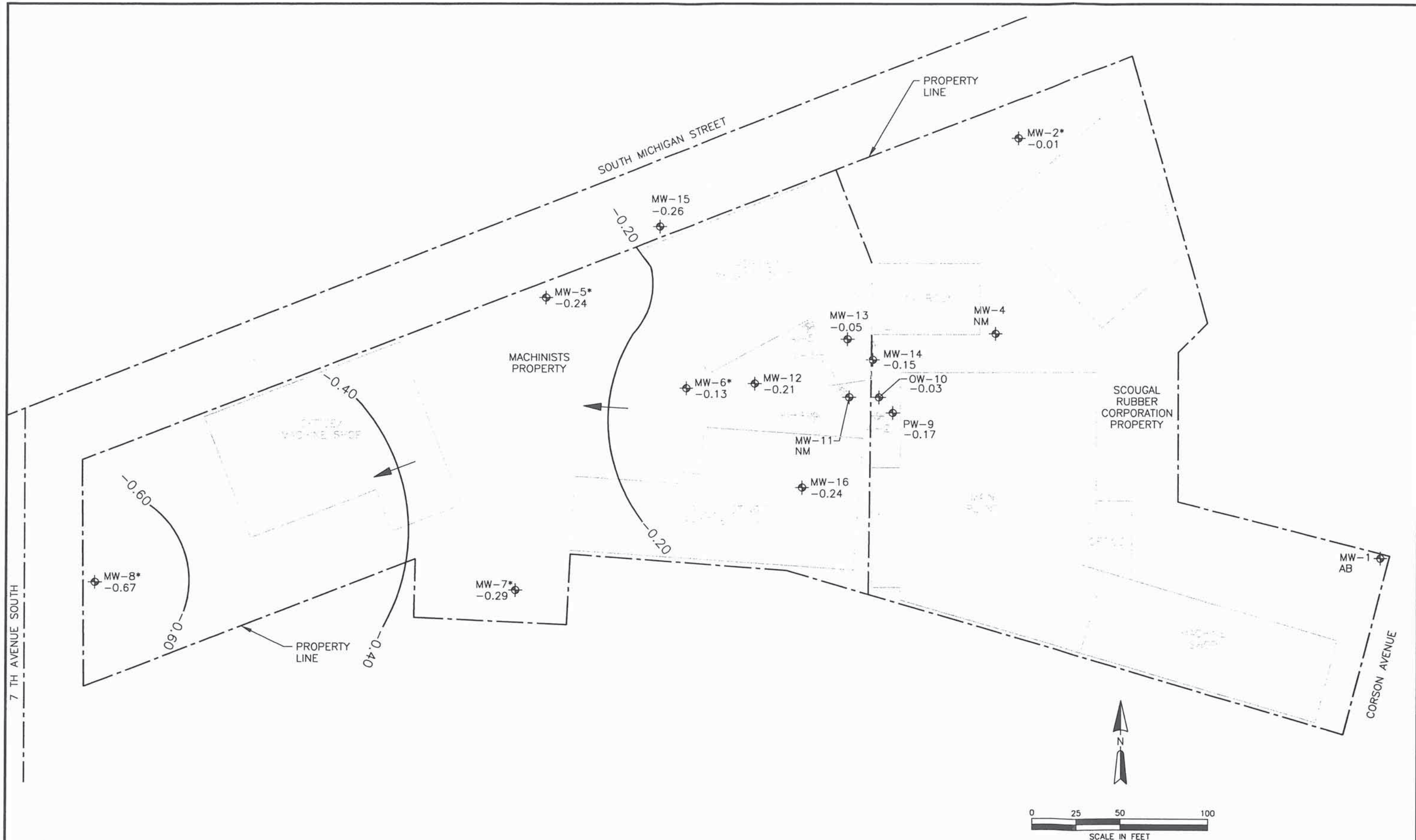
GROUNDWATER CONTOUR MAP
JULY 15, 1997

DATE: 06/20/01

DRWN: N.S.

FILE: 2417s007s

FIGURE D-11



DATUM: CITY OF SEATTLE



SRC00-02417-400

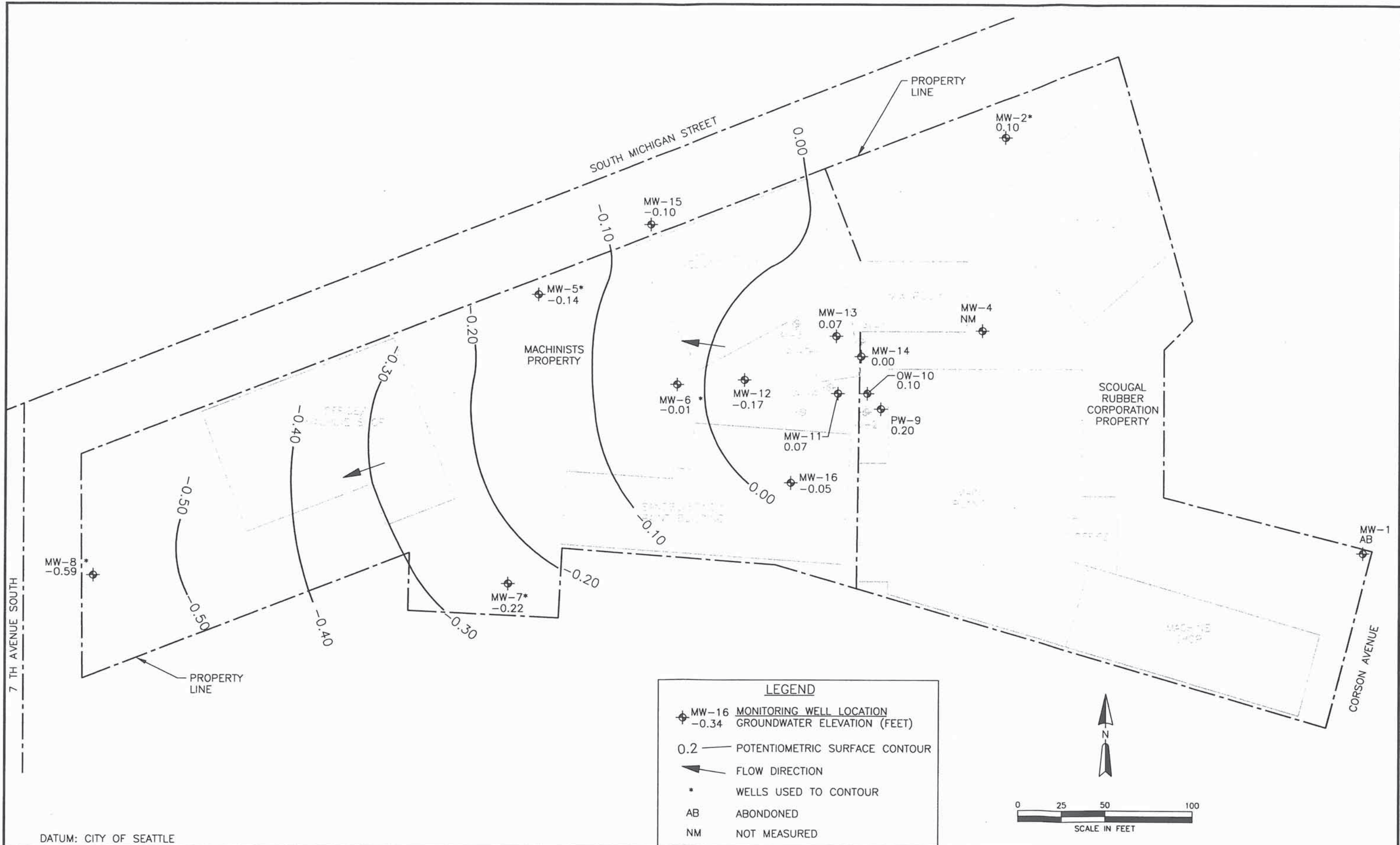
GROUNDWATER CONTOUR MAP
NOVEMBER 20, 1997

DATE: 06/20/01

DRWN: N.S.

FILE: 2417s006s

FIGURE D-12



SRC00-02417-400

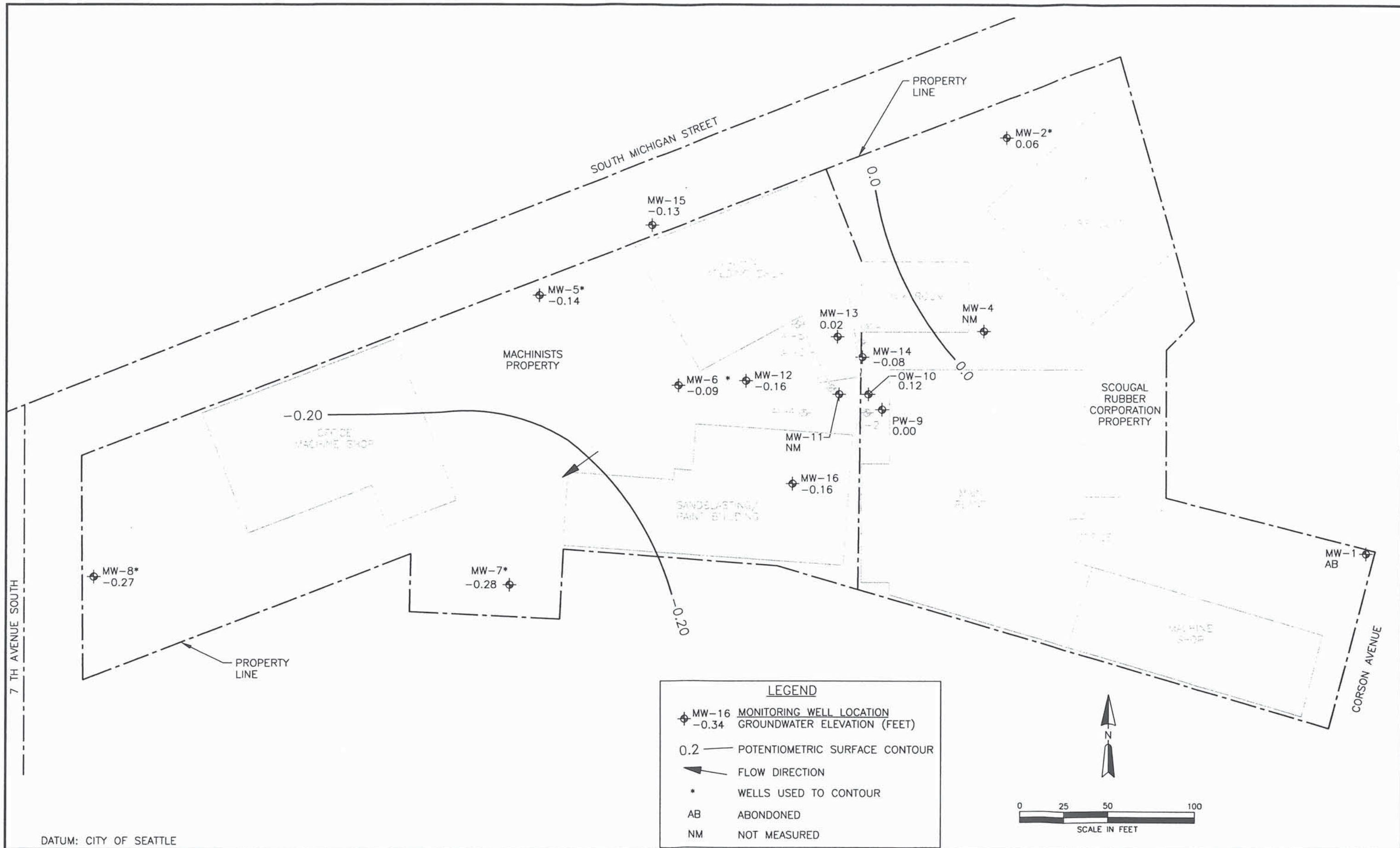
GROUNDWATER CONTOUR MAP
JANUARY 11, 2000

DATE: 06/20/01

DRWN: N.S.

FILE: 2417s019s

FIGURE D-13



SRC00-02417-400

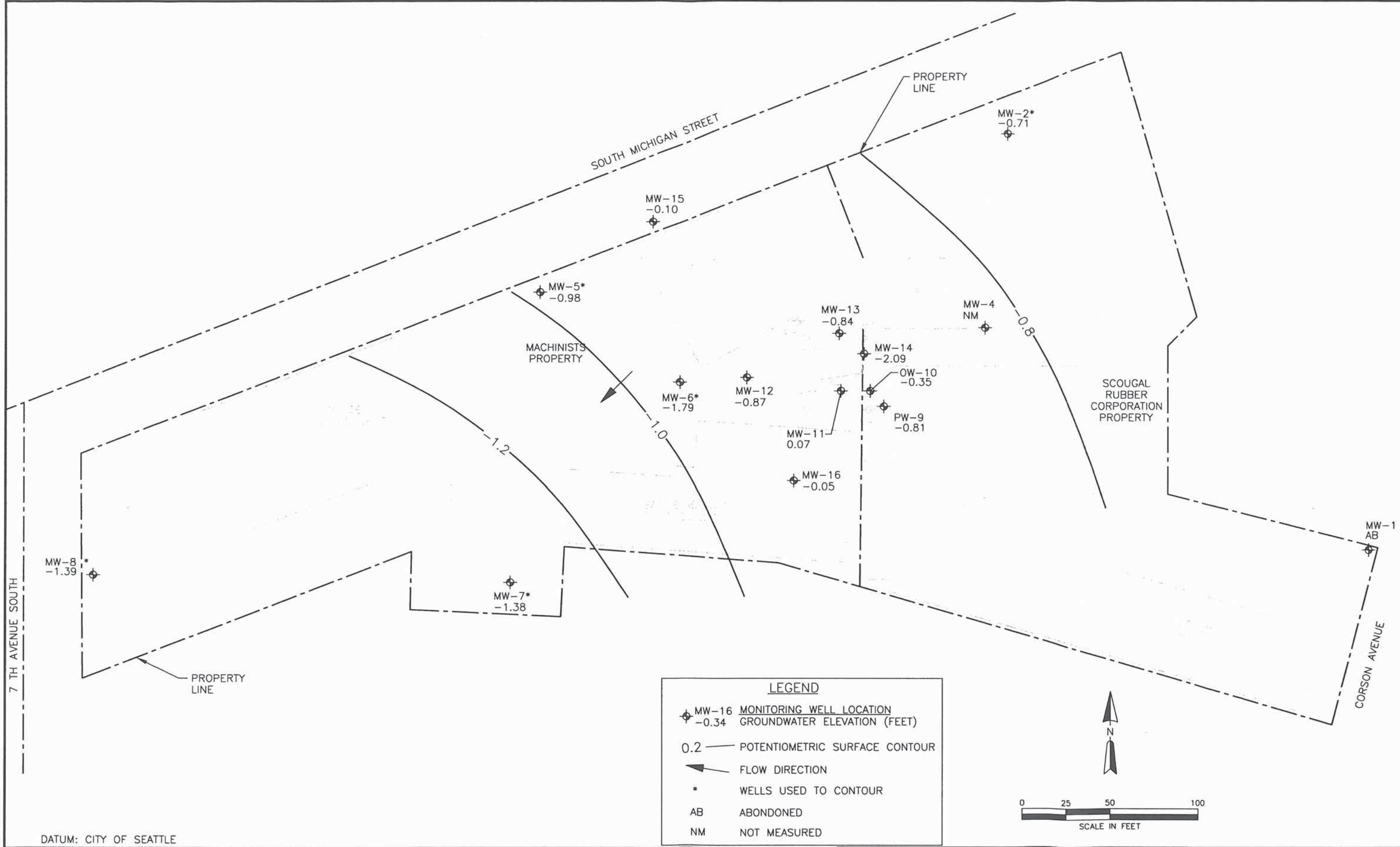
GROUNDWATER CONTOUR MAP
MAY 10, 2000

DATE: 06/20/01

DRWN: N.S.

FILE: 2417s005s

FIGURE D-14



SRC00-02417-400
 DATE: 06/27/01 DRWN: N.S. FILE: 2417s028

GROUNDWATER CONTOUR MAP
 JUNE 6, 2001

FIGURE D-15