TASK 2 -FINAL REPORT

YAKIMA RAILROAD AREA REMEDIAL INVESTIGATION
INTERIM ACTION SOIL REMOVAL/
GROUNDWATER INVESTIGATION
SOUTHGATE LAUNDRY
SOUTH THIRD AVENUE AND NOB HILL BLVD.
YAKIMA, WASHINGTON

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YAKIMA, WASHINGTON

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1.0 INTRODUCTION

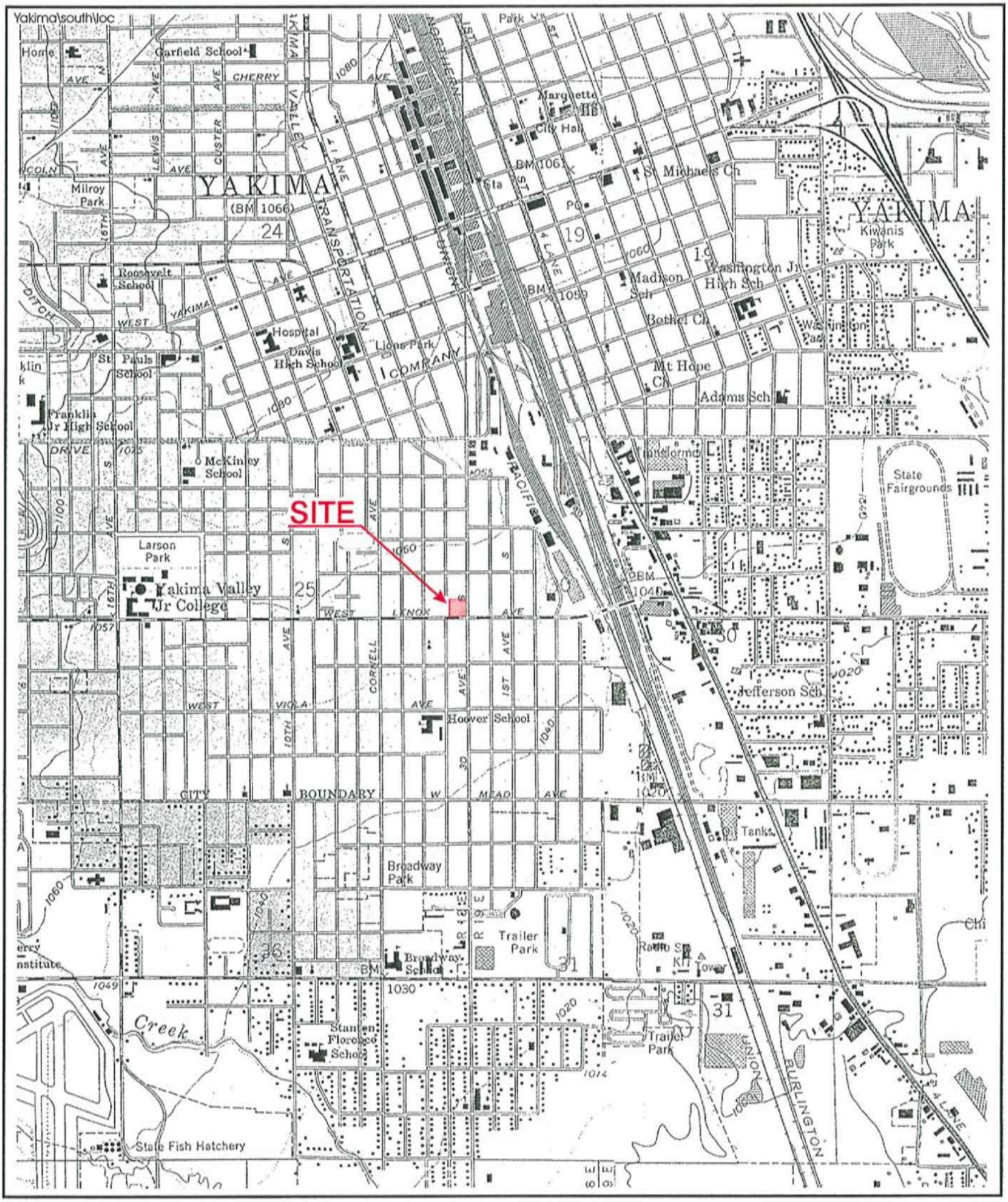
The Noel Corporation retained Maxim Technologies, Inc. (Maxim) to conduct investigation, remediation and monitoring activities at the Southgate Laundry facility in Yakima, Washington. The Southgate Laundry facility, owned by the Noel Corporation, is located within the Yakima Railroad Area (YRRA) which was established by the Washington State Department of Ecology (Ecology) in response to the discovery of tetrachloroethylene (PCE) in the groundwater beneath the area. Ecology has identified the Southgate Laundry facility as a Potential Liable Party (PLP) because of the presence of PCE at the site soil (Ecology, 1996). The Noel Corporation entered into an Agreed Order with Ecology to conduct Remedial Investigations (RI) at the site. Maxim personnel conducted these activities according to our proposal dated November 29, 1995 and requirements of Ecology's *YRRA Remedial Investigation (RI) Work Plan,* (Ecology, no date). A Draft Report summarizing these activities was submitted to Ecology in February 1997 (Maxim, 1997). This Final RI Report summarizes all activities conducted at the site and fulfills Ecology's requirements in accordance with the Agreed Order.

1.1 SITE DESCRIPTION

The Southgate Laundry facility is one of several businesses occupying the Southgate Shopping Center. The shopping center is located on the northwest corner at the intersection of South Third Avenue and West Nob Hill Boulevard in the southeast portion of Yakima, Washington (Figure 1). The Southgate Shopping Center is located approximately two miles west of the Yakima River and is situated on an irregularly shaped parcel approximately 4.5 acres in size. Eight businesses, a bank, and a paved parking lot are located within the parcel. The shopping center occupies most of the northern and western portions of the parcel and contains the following businesses: *Some Bagels*, *Crawford and Company*, *Farmers Insurance*, *Northwest Rent-to-Own, Ring 4 Video, H & R Block, Southgate Cleaners and Self Service Laundry*, and *Wray's Thriftway* grocery store (Figure 2). Several dry wells exist on the shopping center property to collect precipitation runoff from the buildings and parking lot. The site is served by city water, sewer, and other public utilities (Slagle, 1996).

Groundwater depths beneath the site range between approximately 21 and 35 ft below ground surface and groundwater generally flows to the east-southeast. Leakage from irrigation waters in the Yakima Valley influences depth and flow direction in the area. However, results of monitoring events conducted at the Southgate Laundry facility did not indicate definite effects of the irrigation system on groundwater in the area of the facility.

The facility is underlain by the Yakima Gravels which consist of unconsolidated silty and sandy gravel mixtures (approximately 50% boulders, cobbles and pebbles and 50% fines). The soils are classified as GW, GM and SM in the Unified Soil Classification System (USCS). Basalt boulders, cobbles and pebbles dominate the gravel fraction. The color of the gravels is mostly brown to black.



From USGS 7.5' Yakima West Quad

N

0 Feet 2000

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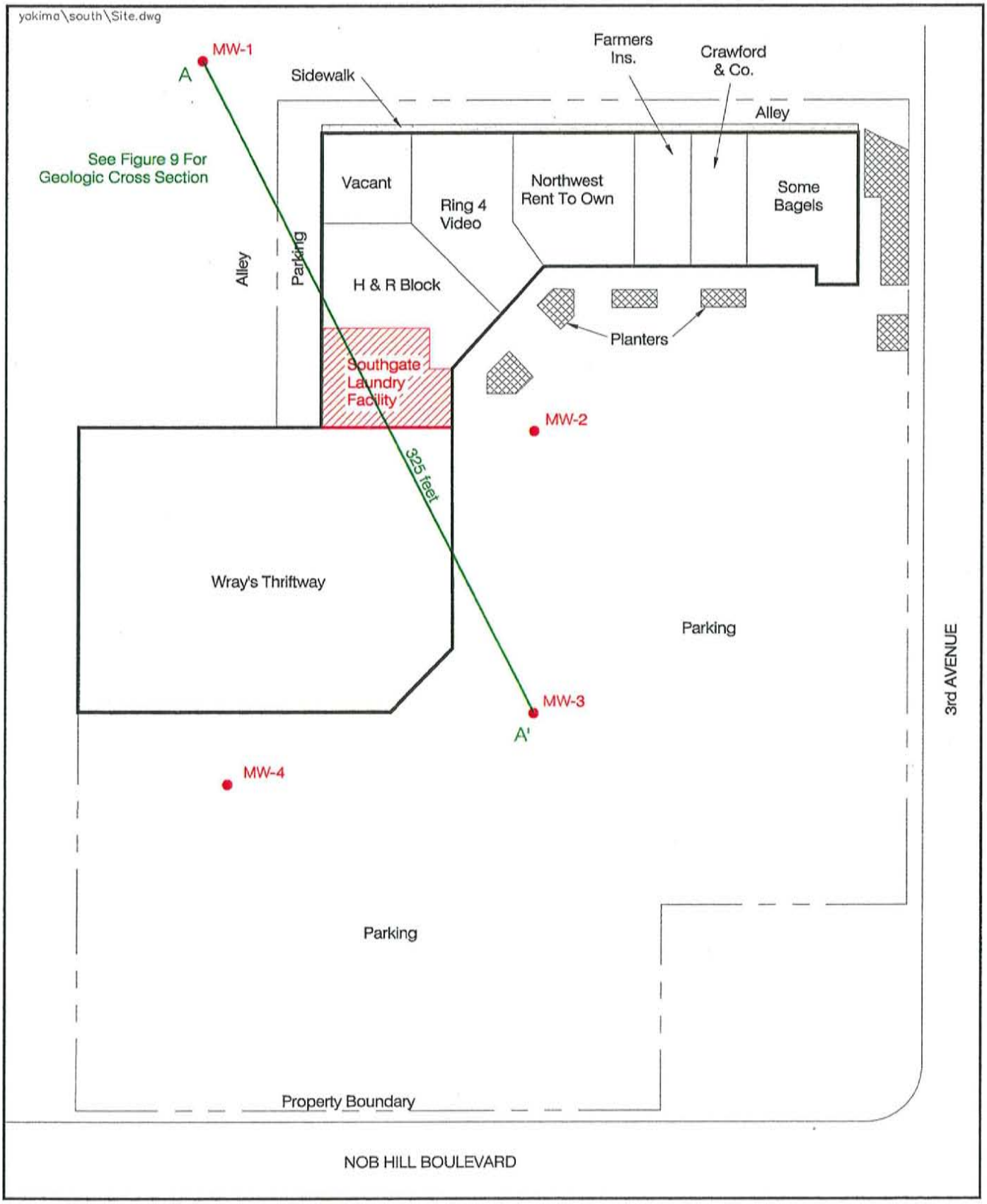
Location Map
Southgate Laundry
Yakima, Washington
FIGURE 1



N

0 Feet 60

● Monitoring Well

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Site Map
Southgate Laundry
Yakima, Washington
FIGURE 2

1.2 SITE HISTORY

The Southgate Laundry facility and the Southgate shopping center were constructed in 1978. Prior to that time, the site was within a residential area composed of single family houses and empty lots. A Sanborn Fire Insurance map from 1920 shows a single-family dwelling near the northeast corner of the site and an irrigation canal on the east side of the parcel.

The Southgate Laundry facility has been in the dry cleaning business since 1978. In 1978, release of PCE near the self-serve dry cleaning machine was recorded. The Southgate Laundry site has been under consideration by the U.S. EPA and Ecology since January 1989. A summary of site investigations and regulatory actions is presented in Table 1.

1.3 PROJECT OBJECTIVES

Maxim developed the objectives of this investigation in accordance with the Ecology's *YRRA RI Work Plan* (Ecology, no date). The scope of the investigation was based on the findings of previous investigations and the requirements under of the Agreed Order for Remedial Investigations issued by Ecology (Ecology, 1996). These objectives include the following:

- research the past history of the site to identify any past practices or site features which could potentially cause adverse impacts to the environment;
- conduct a soil vapor assessment to determine the extent of PCE contamination in the vadose zone;
- evaluate the general hydrogeologic characteristics of the site including direction and gradient of groundwater flow;
- characterize PCE in soil and groundwater beneath the site;
- remediate potential sources of contamination to soil and/or groundwater remaining at the site; and,
- provide recommendations for additional investigation, remediation or monitoring activities at the site, if necessary.

TABLE 1
SUMMARY OF SITE INVESTIGATIONS AND REGULATORY ACTIONS
SOUTHGATE LAUNDRY FACILITY

DATE	INVESTIGATION/COMPLIANCE ACTION
January 1989	EPA conducts a site assessment to determine hazard ranking of the Southgate Laundry Site
November 1989	EPA Screening Site Inspection Report concludes that evidence of past on-site releases have not been identified and all waste appears to be managed properly.
January 1990	EPA notifies Southgate Laundry that the site will not be considered for the EPA Superfund Program and is referred to the State of Washington for further consideration.
February 1991	Ecology notifies Southgate Laundry that the site has been selected for a site hazard assessment.
August 1991	Ecology site hazard assessment of the Southgate Laundry facility is completed and receives a ranking of 3 out of 5.
November 1992	Ecology conducts a site investigation and soil sampling event at Southgate Laundry.
February 1993	Ecology issues a Notice of Potential Liability for the Release of Hazardous Substances to Noel Canning Corporation for the Southgate Laundry site.
May 1994	Ecology conducts a site investigation and soil sampling event at Southgate Laundry. PCE contamination is reported in soil samples.
August 1994	Ecology reissues a Notice of Potential Liability for the Release of Hazardous Substances to Noel Canning Corporation for the Southgate Laundry site based on findings from the 1994 site investigation and soil sampling.
January 1996	Ecology issues an Agreed Order to Noel Corporation to conduct a Remedial Investigation (RI). The Noel Corporation retains Maxim to conduct an RI.
March 1996	Maxim prepares a site history and conducts a soil vapor/soil material assessment. The assessment discovered PCE contamination in soil and vapor underlying Southgate Laundry and in front and back of the facility.
April 1996	Four groundwater monitoring wells are installed. Groundwater is encountered at approx. 34 ft below surface. Quarterly groundwater monitoring is commenced. PCE contamination is measured in two down-gradient monitoring wells (MW-2 and MW-3).
July 1996	Maxim completes RI Task 1 Report of Yakima Railroad Area Investigation Site History/Soil Vapor Assessment.
February 1997	Maxim completes RI Task 2 draft Report of Yakima Railroad Area Investigations Soil/Groundwater Investigation and Analysis
July 1997	Maxim conducts soil sampling and interim action soil removal in the back of Southgate Laundry
September 1997	Maxim conducts soil sampling and interim action soil removal at the two "hot spots" inside Southgate Laundry.

2.0 METHODS

Requirements for Remedial Investigation of PCE and other hazardous substances (as defined by RCW 70.105D.020(3)) are outlined in Ecology's *YRRA RI Work Plan* ("Work Plan"). This Work Plan dictated the overall approach, methods and procedures used for this project. Components of the Work Plan which were met by work completed at the site by Maxim personnel during the past approximately 12 month period include the following:

- Completion of *Task 1 Site History/Soil Vapor Assessment* (Maxim, 1996) and submittal to Ecology in July 1996;
- Characterization of soil by collection and analysis of soil samples from borings;
- Characterization of groundwater by installation of four groundwater monitoring wells at the site;
- Groundwater monitoring, four rounds of quarterly sampling in April 1996, July 1996, October 1996 and February 1997. The samples were analyzed for VOCs;
- Preparation of *Task 2 Draft Report* (Maxim, 1997) integrating all data collected between February 1996 and February 1997;
- Further soil characterization and Interim Action in contaminated areas described in Tasks 1 and 2. This characterization was possible only subsequent to the closure of Southgate Laundry operation and included the collection of soil samples and soil removal both from the back of the facility and "hot spots" beneath the floor inside the facility.
- The collection of two additional quarterly groundwater sampling rounds in September 1997 and December 1997, subsequent to soil removal at the Southgate Laundry facility.
- Preparation of this *Task 2 Final Report* summarizing all remedial investigations/interim action soil removal and groundwater sampling conducted throughout the investigation

This section describes the methods and procedures used to conduct the Southgate Laundry soil investigation and interim action soil removal. All work conducted during the Soil Investigation was completed in accordance with the Yakima Railroad Area (YRRA) Work Plan for remedial investigation activities (Ecology, no date) and Maxim's standard operating procedures included in Appendix G.

To achieve objectives listed in Section 1.3 of this report, Maxim personnel conducted soil investigations in March and August 1996, installed four monitoring wells in April 1996, and conducted four rounds of groundwater monitoring in April, July, October 1996 and February 1997. Investigations were extended in 1997 when Maxim personnel collected 16 samples from soil in the back of Southgate Laundry facility in July 1997, and 22 soil samples from beneath the floor inside Southgate Laundry facility in September 1997.

Additionally, Maxim personnel conducted two additional rounds of quarterly groundwater sampling at the site in September 1997 and December 1997.

The methods used by Maxim personnel to complete the majority of the aforementioned tasks are described in the following sections.

2.1 REMEDIAL INVESTIGATIONS SOIL SAMPLE COLLECTION AND ANALYSIS

Maxim personnel directed the collection of 22 soil material samples for analysis at the site. Samples were collected beneath the concrete floor, in front beneath the side walk, in the asphalt parking lots in the front and back, and in soil along the property boundary to the west. There were two rounds of sampling beneath the concrete floor. The first round was conducted in March 1996 and the second round was conducted in August 1996. Prior to each round, holes were cut in the concrete floor. Soil material samples were collected from depths of 0.5 to 8.5 feet below ground surface.

2.1.1 Borehole and Sample Location Rationale

Soil sample locations were selected to achieve four goals: (1) to comply with the sampling analysis sampling plan (SAP) developed by Ecology (Ecology, 1995); (2) to delineate the lateral and vertical extent of target volatile organic compounds (VOCs) in the vadose zone; (3) to confirm the analysis results from the soil vapor assessment, and (4) identify potential source areas. Soil samples collected in March 1996 were concurrent with the soil vapor assessment and were analyzed on-site to facilitate selection of appropriate soil boring locations. Soil samples collected in August 1996 were analyzed off-site. These soil samples were collected after analyzing the data from the March 1996 sampling event.

To accomplish these objectives, Maxim personnel directed the collection of 22 soil samples from locations plotted on a 20-foot grid system throughout the facility and adjacent parking areas. The grid system would adequately characterize the soil in accordance with Ecology's SAP described in *Guidelines on Sampling and data Analysis Methods* (Ecology, 1995). Soil samples were collected beneath the floor of Southgate Laundry facility, H&R Block and Wray's Thriftway, from material underlying the asphalt parking lot and concrete sidewalk east of the facility, and from soil underlying the asphalt parking lot west of the facility (Table 2). Soil sample collection locations and depths and sample PCE concentrations are shown on Figure 3.

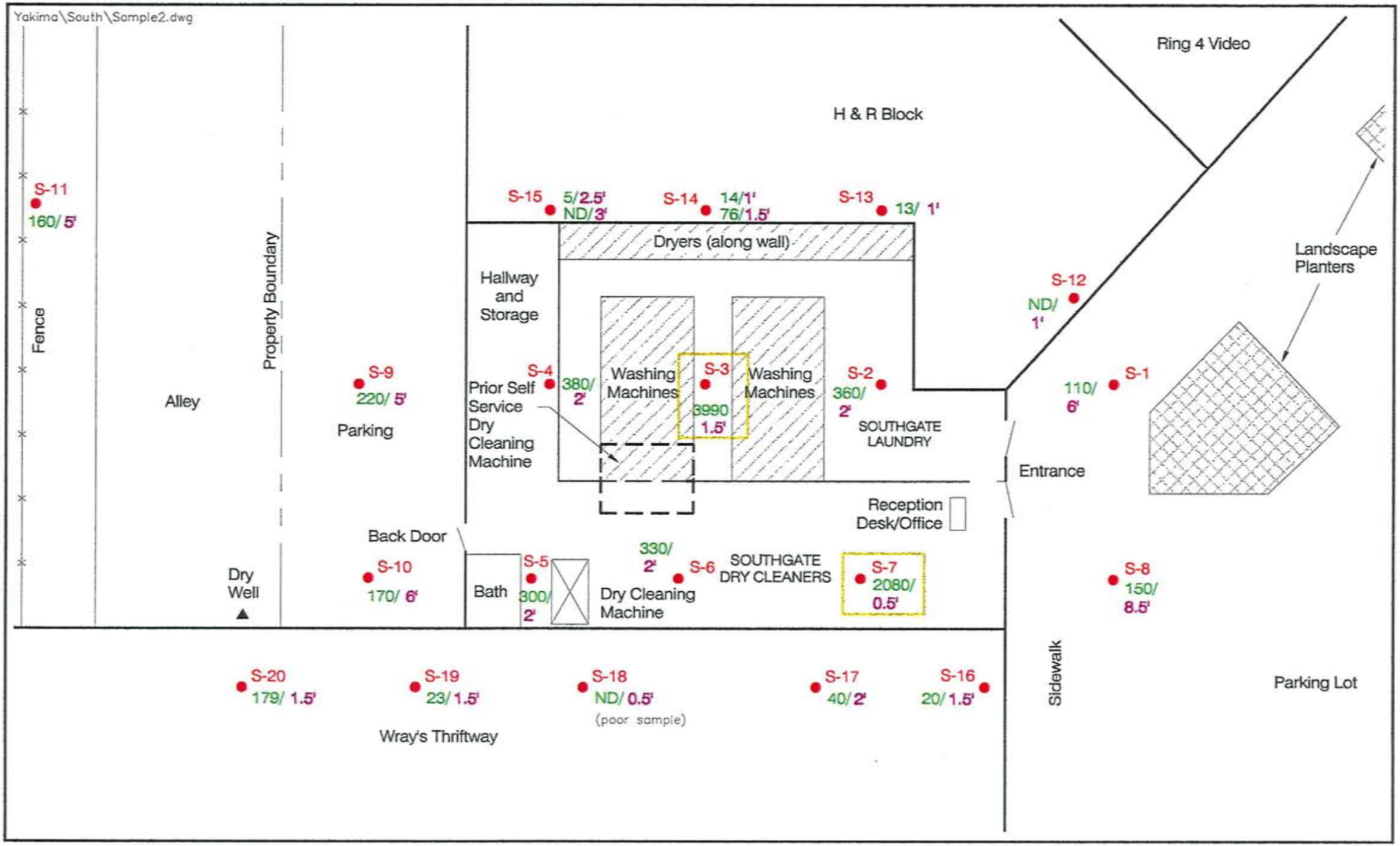
2.1.2 Sample Depth and Soil Sampling Rationale

Sample collection depths for soil both in March 1996 and August 1996 were determined by the depth-of-refusal for the sample drive point. Soil samples were collected at depths ranging from 0.5 feet to eight feet below ground surface. Soil sample S-7 was collected in the confined space between two concrete slabs.

The 11 soil samples collected in March 1996 were collected to facilitate comparison with soil vapor sample results. Both soil material and soil vapor samples were collected from the same drill hole at locations that were drilled through an indoor concrete floor. Soil material samples at these boreholes were collected via

TABLE 2
REMEDIAL INVESTIGATION
SUMMARY OF BOREHOLE AND SOIL SAMPLE COLLECTION DATA
SOUTHGATE LAUNDRY FACILITY

Sample ID	Sample Depth	Borehole Location	Sample Medium
S-1	6.0	Sidewalk east of the Southgate Laundry	soil
S-2	2.0	Inside Southgate Laundry facility	soil
S-3	1.5	Inside Southgate Laundry facility	soil
S-4	2.0	Inside Southgate Laundry facility	soil
S-5	2.0	Inside Southgate Laundry facility	soil
S-6	2.0	Inside Southgate Laundry facility	soil
S-7	0.5	Inside Southgate Laundry facility	soil
S-8	8.5	Parking lot east of the Southgate Laundry	soil
S-9	5.0	Parking area west of the Southgate Laundry	soil
S-10	6.0	Parking area west of the Southgate Laundry	soil
S-11	5.0	Background sample approx. 45 feet west of Southgate Laundry	soil
S-12	1.0	Inside H&R Block	soil
S-13	1.0	Inside H&R Block	soil
S-14	1.0 1.5	Inside H&R Block Inside H&R Block	soil soil
S-15	2.5 3.0	Inside H&R Block Inside H&R Block	soil soil
S-16	1.5	Inside Wray's Thriftway	soil
S-17	2.0	Inside Wray's Thriftway	soil
S-18	0.5	Inside Wray's Thriftway	soil
S-19	1.5	Inside Wray's Thriftway	soil
S-20	1.5	Inside Wray's Thriftway	soil



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Remedial Investigations
PCE Concentrations and
Sample Depths
Southgate Laundry
Yakima, Washington
FIGURE 3

angle-drilling from the original borehole to obtain an undisturbed sample. The rationale for collecting soil material samples in addition to the soil vapor samples was to determine:

1) potential existence of a correlation between soil material and soil vapor at the site, and

2) additional information required for developing an appropriate sampling and analysis plan to conduct a YRRA Soil/Groundwater Investigation and Analysis.

Laboratory analysis results of the 11 soil samples collected in March 1996 reported PCE contamination at the boundaries of facility. Because PCE contamination was present in soil at the boundaries of the facility, additional soil sampling was necessary to determine the extent of PCE contamination at the adjacent businesses (H&R Block and Wray's Thriftway). In August 1996, additional 11 soil samples were collected from H&R Block and Wray's Thriftway. Soil material sample depths ranged from 0.5 to 3.0 feet below ground surface.

2.1.3 Soil Sampling Procedures

March 1996 Soil Sampling Event (Samples 1-11). Soil samples were collected using a small-diameter drive point. Sample collection was conducted using a Transglobal Environmental Geosampling (TEG) Strataprobe™ unit. The Strataprobe is a direct-push hydraulic and percussion drive-point sampling system. Discrete soil samples were collected using a retractable piston sampler with a split spoon. A two-inch diameter coring tube was driven to depth-of-refusal. Samples were collected in 4 oz. glass jars, were immediately capped, sealed and hand delivered to the on-site mobile laboratory for analysis.

August 1996 Soil Sampling Event (Samples 12-20). Soil samples were collected using a hand-auger. The hand auger is a direct-push manual drive-point sampler. Discrete soil samples were collected with a two-inch diameter coring tube driven to depth of refusal. In two locations inside H&R Block (S-14 and S-15) soil samples were collected from two depths intervals. The field decision to collect soil samples from two depth intervals at S-14 and S-15 was in response to the relatively soft soil material encountered in these two locations, enabling the collection of additional soil samples. Samples were collected in 4 oz. glass jars. The jars were immediately capped and placed in an ice-filled cooler. The samples were shipped to Maxim's Billings laboratory for analysis.

Decontamination procedures were followed before sample collection at each location. All external probe/auger parts, drive rod and samplers were cleaned of excess dirt and moisture before sampling. Non-disposable soil samplers and drive rods were washed before reuse.

2.1.4 Soil Analytical Procedures

March 1996 Soil Sampling Event (Samples 1-11). Sample analysis was conducted in TEG's stationary laboratory in Lacey, Washington. Soil material samples were analyzed for a suite of 15 halogenated hydrocarbons by a gas chromatograph (GC) using EPA Method 8010 plus BTEX using EPA Method 8020.

Reporting limits in soil by EPA Methods 8010/8020 are 50 ppb. All constituents of analysis are listed in Appendix G.

August 1996 Soil Sampling Event (Samples 12-20). Sample analysis was conducted in Maxim's laboratory in Billings, Montana. The laboratory is certified by Washington Department of Ecology to analyze volatile organic compounds by a gas chromatograph/mass spectrometer (GC/MS) using EPA Method 8260. Soil samples were analyzed for the full VOCs suite reported by EPA Method 8260. Reporting limits in soil by EPA Method 8260 are 5 ppb.

2.1.5 Applicability and Limitations of Equipment Used

Strataprobe. The percussion-driven, small diameter drive point of the Strataprobe is designed to collect soil, groundwater and soil vapor samples to depths of fifty feet in most types of soil. Compared to conventional boring methods, the use of a small-diameter drive point unit such as the Strataprobe significantly reduces cost, time, and hazardous waste associated with subsurface site investigations. The advantages of using the Strataprobe include: reduced cuttings, continuous coring, ability to sample discrete intervals for soil vapor, disposable split spoon liners, easy decontamination procedures, and more flexibility in choice of sample locations. The limitations of using the smaller drive-point unit include: less driving capacity than a conventional drill rig so depth of borehole is limited by the nature of the subsurface material, and the sample interval is longer (less discrete) due to a smaller diameter borehole sampler.

Hand-Auger. The hand-auger used is designed to collect soil samples to ten feet in most types of soil. Compared to the StrataProbe, the use of a hand-auger reduces cost and there is no need to mobilize a unit. The limitations of using the hand-auger include: increased cuttings, non disposable coring device, less driving capacity than a StrataProbe so depth of borehole is limited by the nature of the subsurface material, and the sample interval is longer (less discrete) due to a smaller diameter borehole sampler compared to a conventional drill rig.

2.1.6 Quality Assurance/Quality Control

Field and sample handling procedures were conducted in accordance with the *Yakima Railroad Area Work Plan* (Ecology, no date) and Maxim SOPs (Appendix D). Three Quality Assurance/Quality Control (QA/QC) samples were collected for soil analysis: two duplicates and one method blank. A chain-of-custody was maintained from sample collection to laboratory analysis and is included in Appendix B.

All soil samples analyzed are described in Section 3.1. of this document. Soil samples analyzed by EPA Method 8010 (by TEG) were analyzed to an MDL of 0.05 mg/kg (50 ppb). Soil samples analyzed by EPA Method 8260 (by Maxim's Laboratory)were analyzed to an MDL of 0.005 mg/kg (5 ppb). A complete list of sample analytes are provided in the laboratory reports (Appendix B). Maxim's and TEG Northwest laboratories quality assurance and quality control procedures are conducted following guidelines and objectives which meet or exceed certification/accreditation requirements of Washington Department of Ecology. The Quality Control Program is a consistent set of procedures which assures data quality though

the use of appropriate blanks, replicate analyses, surrogate spikes, and matrix spikes and the use of reference standards that meet or exceed EPA standards.

2.2 SITE SAFETY PROCEDURES

Before initiating investigative activities at the site, Maxim personnel developed a site safety plan that addressed all safety aspects of potential contaminants and site operations. The plan contained information concerning known or suspected hazards, routine and special safety procedures to be followed, and other instructions for safeguarding the health of field personnel. A utility survey was conducted prior to beginning work at the site. All on-site personnel were required to wear appropriate personal protective equipment including hard hats, hearing protection, safety glasses, disposable nitrile gloves and a half-mask respirator with a high-efficiency particulate air (HEPA) and solvent filter during the initial part of the investigation and during exposure to contents in the concrete vault.

All field personnel had received the OSHA 40-hour Hazardous Material Protection Training and an 8-hour refresher course within 12 months of the site investigation and were briefed concerning potential site-specific hazards before field work began. Individuals in the work area were cleared for respirator use and fit tested for a respirator on-site and in accordance with OSHA requirements. Hand and face washing was required prior to eating, drinking, or smoking after entering an area containing suspected hazardous substances.

3.0 REMEDIAL INVESTIGATION RESULTS

This section presents the results of our soil material assessment of the Southgate Laundry site. Analytical results from this investigation and comparison between soil vapor assessment and soil sample analysis results are presented. The estimated lateral extent of soil contamination is also described.

3.1 SOIL ASSESSMENT

Results of soil material analysis collected in March 1996 and August 1996 are provided in Table 3. One constituent of analysis (PCE) was detected in all except three soil material samples collected from the site and adjoining properties. Concentrations of PCE ranged from approximately 300 to 3,990 μg/kg in material samples collected from soil underlying the facility at depths of 1.5 to 2.0 feet below the concrete floor. A high concentration of PCE (2,080 μg/kg) was measured in sample S-7 collected from soil material in the dry-cleaners side of the building. Soil material samples containing the highest concentrations of PCE were collected from soil underlying the center of the facility. Soil material samples containing the lowest concentrations of PCE were found in soil underlying H&R Block and Wray's Thriftway.

PCE concentrations at H&R Block and Wray's Thriftway, adjoining Southgate Laundry facility, range from below detection limits (ND) to 179 μg/kg. The highest PCE concentration (179 μg/kg) was measured at S-20 at Wray's Thriftway. Soil sample S-20 is located directly south of the dry well at the back of Southgate Laundry. Except for S-20 all other soil samples collected at Wray Thriftway were well below 50 μg/kg (Method B/protective of groundwater cleanup levels). At H&R Block the highest PCE concentration (76 μg/kg) was measured in S-14 at 1.5 foot below ground surface. All other soil samples analysis results at H&R Block reported PCE concentrations ranging between below detection limits (ND) and 14 μg/kg, well below cleanup levels.

3.2 CORRELATION BETWEEN SOIL VAPOR AND SOIL MATERIAL SAMPLE RESULTS

Soil material samples collected and analyzed in the March 1996 sampling event were compared to the soil vapor samples to determine if there was a correlation in PCE concentration between soil vapor and soil material. Results of both soil vapor and soil material analysis are discussed in our Task 1 Report. Vapor and material sample results did not closely correlate in that the concentration of PCE in one phase could not be used to accurately predict the concentration in another phase. However, the soil vapor survey, a qualitative tool, was useful to help guide our soil sampling program. In all locations where soil vapor contained a concentration of PCE greater than 50 μg/L, the soil also contained higher concentrations of PCE (greater than 250 μg/kg).

3.3 LATERAL AND VERTICAL EXTENT OF PCE CONTAMINATION IN SOIL

Most of the contamination is present beneath the floor or the Southgate Laundry facility. PCE contamination decreases laterally towards H&R Block and towards Wray's Thriftway. PCE contamination beneath H&R

TABLE 3
REMEDIAL INVESTIGATIONS
PCE CONCENTRATIONS IN SOIL SAMPLES
SOUTHGATE LAUNDRY FACILITY

Sample Number	Location	Depth beneath Concrete/ Asphalt (feet)	PCE Concentrations in Soil Material (µg/kg)[1]	Method of Collection	Date of Collection
S-1	Southgate front (ext.)	6.0	110	Strataprobe	3/22/96
S-2	Southgate laundry	2.0	360	Strataprobe	3/22/96
S-3	Southgate laundry	1.5	3,990	Strataprobe	3/22/96
S-4	Southgate laundry	2.0	380	Strataprobe	3/22/96
S-5	Southgate dry cleaners	2.0	300	Strataprobe	3/22/96
S-6	Southgate dry cleaners	2.0	330	Strataprobe	3/22/96
S-7	Southgate dry cleaners	0.5	2,080	Strataprobe	3/22/96
S-8	Southgate front	8.5	150	Strataprobe	3/22/96
S-9	Southgate back	5.0	220	Strataprobe	3/22/96
S-10	Southgate back	6.0	170	Strataprobe	3/22/96
S-11	Southgate back	5.0	160	Strataprobe	3/22/96
S-12	H&R	1.0	ND[2]	Hand-auger	8/13/96
S-13	H&R	1.0	13	Hand-auger	8/13/96
S-14 S-14	H&R	1.0 1.5	14 76	Hand-auger	8/13/96
S-15 S-15	H&R	2.5 3.0	5 ND	Hand-auger	8/13/96
S-16	Wray	1.5	20	Hand-auger	8/13/96
S-17	Wray	2.0	40	Hand-auger	8/13/96
S-18	Wray	0.5	ND	Hand-auger	8/13/96
S-19	Wray	1.5	23	Hand-auger	8/13/96
S-20	Wray	1.5	179	Hand-auger	8/13/96

[1] Samples analyzed by EPA Methods 8010 with laboratory detection limit of 50µg/kg (ppb) or 8260 with laboratory detection limit of 5µg/kg (ppb).
[2] ND - Not detected

Block was measured in S-14, directly north of S-3 (in Southgate Laundry). S-3 is located adjacent to the PCE release that occurred in 1978. PCE contamination in Wray's Thriftway was measured in S-20 located directly south of the dry well. This dry well at the back of Southgate Laundry may have received discarded PCE in the past.

Because an active dry cleaning operation was present at the Southgate Laundry during our Remedial Investigation, soil sampling activities were limited. It was not possible to excavate inside the facility to determine the vertical extent of PCE contamination. Therefore, additional soil sampling occurred during the Interim Action activities.

3.4 SUMMARY OF SOIL REMEDIAL INVESTIGATION RESULTS

Based on environmental data collected at the Southgate Laundry facility from March 1996 through August 1996, the following findings are evident:

- Soil beneath the Southgate Laundry facility and surrounding area is contaminated with PCE to at least two feet below ground surface. PCE contamination decreases laterally towards the adjacent businesses, H&R Block and Wray's Thriftway. PCE contamination is present in front and back of the Southgate Laundry facility. The highest concentrations of PCE in soil vapor and soil material were measured in two "Hot Spot"samples collected at the center of the facility, near the removed self-service dry cleaning machines, and between two concrete slabs inside Southgate dry cleaners.

- Soil material sample analysis indicates that the source of PCE contamination in soil vapor underlying the Southgate Laundry facility is likely to be from the ground surface and that areas having higher PCE concentrations in soil vapor correspond roughly with areas of higher PCE concentrations in soil material. A potential source of PCE contamination is historic uncontrolled solvent release(s) from dry cleaning operations at the Southgate Laundry facility. The PCE releases penetrated the concrete floor and contaminated the underlying soil. "Source control" activities will be necessary to reduce PCE contamination in the site soil.

- One soil gas sample (SG-7) reported low but detectable concentrations TCE, carbon tetrachloride, and cis-1,2 dichloroethene in addition to PCE. These potential contaminants need to be addressed as well through remedial action.

- Due to access difficulties during Remedial Investigations, the vertical profile determining distribution of PCE with depth was not satisfactorily addressed and needed to be addressed concurrently with interim action soil removal activities.

- At least one of the sampling events conducted at the site reported concentrations PCE above EPA drinking water standards in each of the monitoring wells (see Chapter 6.0 of this report). The presence of PCE contamination in the upgradient well indicates an off-site source of contamination contributing to the PCE problem. However, the higher concentration of PCE in down-gradient wells MW-2 and MW-3 indicates that on-site sources also contributed to PCE contamination at the site.

4.0 EVALUATION OF REMEDIAL ACTION OPTIONS AND IMPLEMENTATION

Upon receipt of soil and groundwater laboratory analytical results, Mr. Slagle, Noel Corporation Project Coordinator, Messrs. Weigand and Gilbert, Noel Corporation Corporate attorneys, Mr. Sam Kim, Southgate Laundry tenant, Rachel Tauman (Maxim) and Mr. Rick Roeder, Ecology Site Manager, conducted a series of meetings and phone consultations to discuss the results and available options. Laboratory analyses results confirmed PCE contamination in soil and groundwater underlying the Southgate Laundry facility. Laboratory analyses results are presented in Tables 3 and 7 and on Figures 3 and 10. The laboratory results confirmed the PCE contamination under the building. In addition, low but detectable PCE contamination was measured in soil samples from the front and back of the facility and the adjoining properties. The meeting parties concluded that additional soil sampling to determine the vertical distribution of PCE and Interim Action would be necessary to address remediation of PCE contaminated soil. Since the most highly contaminated soil was measured under the concrete floor inside the building, any Interim Action at the site would include the interior of the property. Site areas selected for remediation were based on the results of the investigation as presented in Section 3.0 of this report and on the above described meetings with Ecology.

Maxim personnel evaluated remediation alternatives consistent with MTCA criteria (WAC 173-340-360(4)(a)) which include the following:

(i) Overall protectiveness of human health and the environment;
(ii) Long term effectiveness;
(iii) Short term effectiveness;
(iv) Permanent reduction of toxicity, mobility and volume;
(v) Ability to implement;
(vi) Cleanup costs; and,
(vii) Community concerns.

These criteria, along with the existing and proposed site use, were considered during evaluation of remediation alternatives. Alternatives evaluated by Maxim personnel included the following:

1. Excavation of contaminated soil and off-site disposal (landfill);
2. Soil Vapor Extraction, a vapor phase, in-situ system; and,
3. C-Sparger, an ozone sparging system for treating contaminated groundwater.

The treatment method involving soil vapor extraction was considered less feasible for the project conditions. First, soil removal options with treatment or disposal are preferable over in-situ treatment methods where operations at the site and adjoining businesses will be disrupted during installation and operation of the system. Second, soil vapor extraction would have a incomplete impact on the soil "Hot Spots". Third, the time required to complete the alternative in-situ soil vapor extraction methods did not meet the project timetable.

The treatment method involving the ozone C-Sparger was also considered less feasible for the project conditions. First, the installation of a C-Sparger system did not appear warranted for the concentrations of PCE measured in groundwater underlying the site. Second, soil removal options with treatment or disposal are preferable over in-situ treatment methods where operations at the site and adjoining businesses will be disrupted during installation and operation. Third, the time required to complete the C-Sparger alternative method did not meet the project timetable for the following reason: the C-Sparger, a new technology, has been only recently installed (spring/summer, 1997) in one YRRA facility and has not had a long enough track record to determine its success in the YRRA. Therefore, a waiting time would have been required prior to installation of the C-Sparger system to insure its feasibility in this application. The Noel Corporation has already lost substantial revenue from this site and is attempting to lease the space. The Noel Corporation is not able to wait and find out whether the C-Sparger works in the YRRA and if it does, once again disrupt the businesses during installation.

The treatment method involving soil removal with disposal is preferable over in-situ treatment methods where business operations at the site will be disrupted during installation. Other advantages of soil removal are: 1) the time required to complete the treatment method involving soil removal meets the project time table; 2) this treatment method is the most commonly used and Ecology approved method for removing PCE sources in the YRRA; and 3) the soil removal and disposal method has been proven a successful remedial method in many other YRRA facilities. Therefore, the remediation method of excavation and disposal was chosen.

In order to accomplish soil removal beneath the building in a timely fashion, Mr. Kim, the tenant, was requested to temporarily vacate the property or endure the inconvenience of moving the dry cleaning operations from one side of the building to the other during Interim Action activities. The Noel Corporation did everything possible to ensure Interim Action activities would be implemented in accordance with the project time table. Unfortunately, lingering problems with the tenant resulted in approximately a one year delay in commencing the soil removal program at the site. The tenant finally vacated the property in late June, 1997, and the dry cleaners and laundry were shut down permanently.

On June 3, 1997, in a meeting between Mr. Slagle, Mr. Weigand, Mr. Gilbert, Ms. Tauman and Mr. Roeder, the parties agreed that the "Noel Corporation will begin cleanup of the PERC contamination on the property by excavating and removing the contaminated soils beneath the Southgate Cleaners....Upon completion of this process, the Noel Corporation will continue to monitor PERC levels from the existing test well sites." A copy of the agreement letter between the Noel Corporation and Ecology dated June 3, 1997, is contained in Appendix F.

Interim Action soil removal commenced on July 15, 1997, and was completed in September 1997.

5.0 INTERIM ACTION SOIL REMEDIATION ACTIVITIES AND RESULTS

Two areas were targeted for additional soil investigations and soil removal. The first area was located in the back of the facility and included the dry well. The second area was inside the building and included the two "Hot Spot" areas beneath the concrete floor. "Hot Spots" areas in this investigation are areas with PCE concentrations greater than 0.5 mg/kg (500 ppb). The first "Hot Spot" was located in the dry cleaners side. The second "Hot Spot" was located in the self-serve laundry side. The location of the excavated areas are shown on Figures 3,4,6 and are described below. The lateral and vertical extent of the excavations was determined by the physical constraints in each area.

This section summarizes additional test pit soil sampling conducted concurrently with soil remediation activities in July and September 1997. An outline of the excavated areas, confirmational soil sample locations, and stockpiled soil sample locations are presented in Figures 3-8. Laboratory analysis results of confirmational soil and stockpile samples are summarized in Tables 5-7. Laboratory reports of the soil sample analyses are contained in Appendix E.

Maxim's project manager supervised the excavation of the test pits inside and outside of the facility. The contractor, Speed Lewis (contracted directly with the Noel Corporation), excavated the test pits and transported PCE contaminated soil to Rabanco Landfill.

Because of the physical constraints at the site including the proximity to utility lines and the building foundation, it was not possible to remove all the contaminated soil from the site. As a result, the use of an on-site mobile laboratory to help guide the excavation, segregate the excavated stockpiles and ensure/confirm proper site remediation was not warranted. Sixteen soil samples were collected from the exterior and 26 soil samples were collected from inside the building. This extensive sampling was implemented to provide for a statistically sound sampling program. All soil sample jars were sealed, packed in ice and shipped in a cooler to Transglobal Environmental Geosciences (TEG). TEG analyzed the soil samples upon arrival to prevent VOC losses. The soil samples were analyzed for PCE using EPA Methods 8010/8020.

There was no attempt to segregate the stockpiles. All excavated soils were loaded onto a dump trucks and transported to Rabanco landfill for disposal. Detailed activities for each area are described below.

5.1 EXTERIOR AREA INVESTIGATION/REMEDIATION AND RESULTS

There were three reasons for conducting additional soil investigations concurrently with Interim Action and the deciding to dispose of excavated stockpile soils in this area:

1) PCE concentrations of 220 μg/kg, 170 μg/kg and 160 μg/kg were measured in soil samples S-9, S-10 and S-11 respectively during our Remedial Investigation activities (Figure 3).

2) Due to access difficulties during the Remedial Investigation, the vertical profile of PCE with depth was not satisfactorily determined in the Remedial Investigation.

3) The dry well in the alley at the back of Southgate Laundry may have received discarded PCE in the past and therefore could have contributed to the PCE problem at the site. We decided that even if PCE contamination was not measured around and beneath the dry well, it should be excavated and removed. Good "house keeping" practices dictated that decision. The removal of the dry well would prevent "dumping" and other problems associated with the presence of a dry well.

Interim Action activities at the exterior occurred between July 15 and 17, 1997. Maxim Personnel directed the excavation of two test pits, TP-1 and TP-2. We collected fourteen samples from test pit TP-1 (and the associated stockpile) and two samples from TP-2. The location of the test pits and sample analysis results are shown on Figures 4 and 5. Laboratory analysis results are summarized in Table 4 and laboratory data sheets are found in Appendix E.

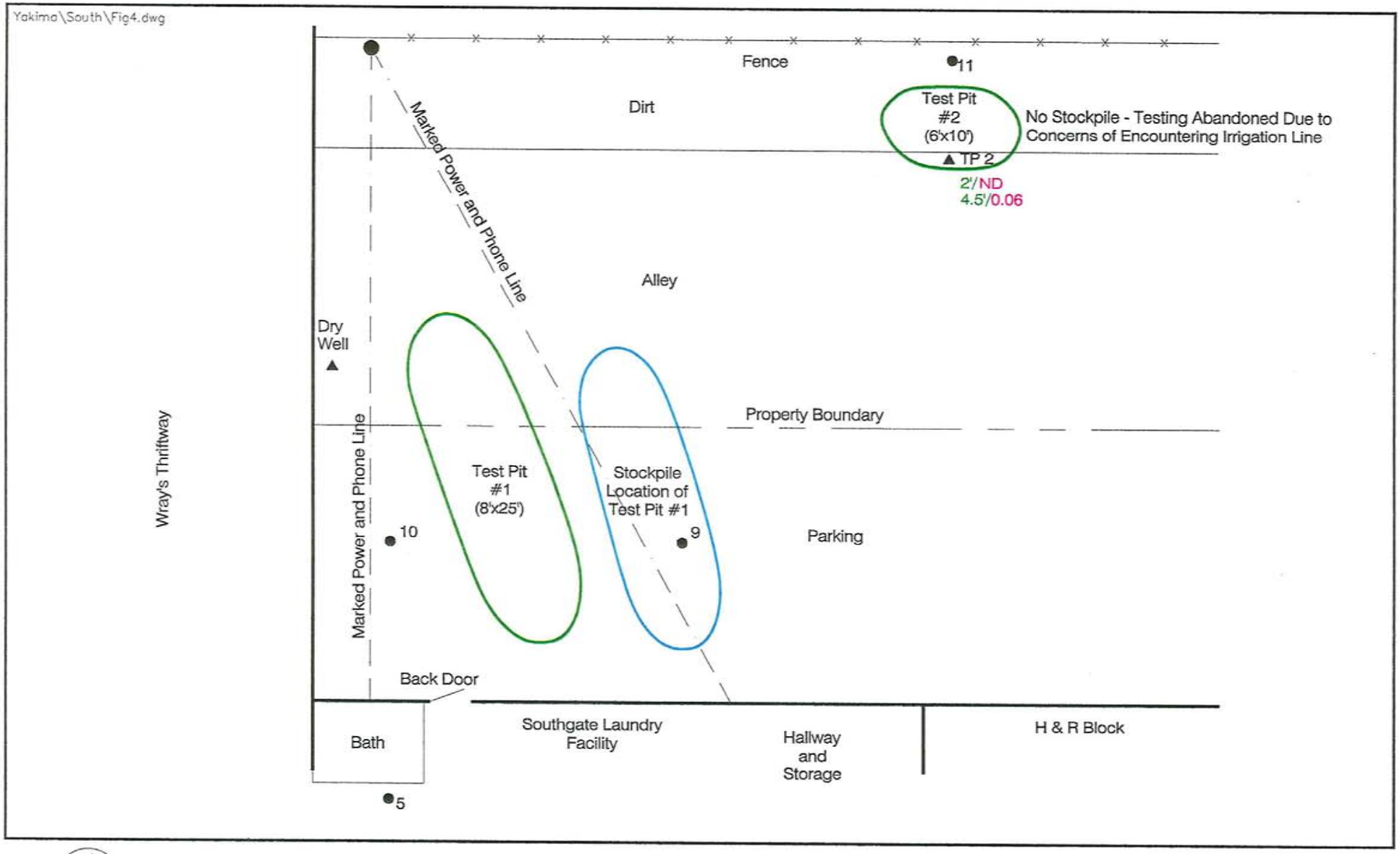
5.1.1 Exterior Test Pit TP-1 / Stockpile #1

The lateral and vertical extent of the excavated area from TP-1 included all soil from the area between the power lines, the dry well, soil from beyond the dry well and soil within 3.5 feet of the back door of the dry cleaners (Figure 4). All that was possible to excavate was removed. The dimensions of the resulting excavation were 25 feet by 8 feet ranging in depth from 7 feet to 13 feet. The top foot of the excavation consisted of asphalt and debris. From two feet below ground surface to 13 feet, the excavated material was well graded Yakima Gravels consisting primarily of dark and dry unconsolidated sands and silty sands (approximately 60%), cobbles and gravels (40%). A soil boring log from TP-1 is shown on Figure 5. Because the excavation was confined to the area between the power lines, it was not possible to expand the excavation laterally which resulted in steep side-walls and heavy sloughing into TP-1 throughout the operation.

Five of the 11 test pit samples contained PCE. Concentrations of PCE in samples of excavated soil ranged from 0.04 mg/kg (40 ppb), in Sample TP-1#2, to 0.05 mg/kg (50 ppb), in sample TP-1#2. The remaining six samples, including a soil sample collected beneath the dry well, did not contain measurable concentrations of PCE.

The excavated soil from TP-1 was placed in a stockpile adjacent to TP-1 (Figure 5). The stockpiled soil was placed on 6 mil black plastic ground cover. The stockpiled soil was also covered with the black plastic.

Laboratory analysis results of 3 stockpile samples reported low but detectable concentrations of PCE ranging from 0.06 mg/kg to 0.08 mg/kg. Laboratory analysis results of soil and stockpiled soil from TP-1 are summarized in Table 4 and contained in Appendix E.



N

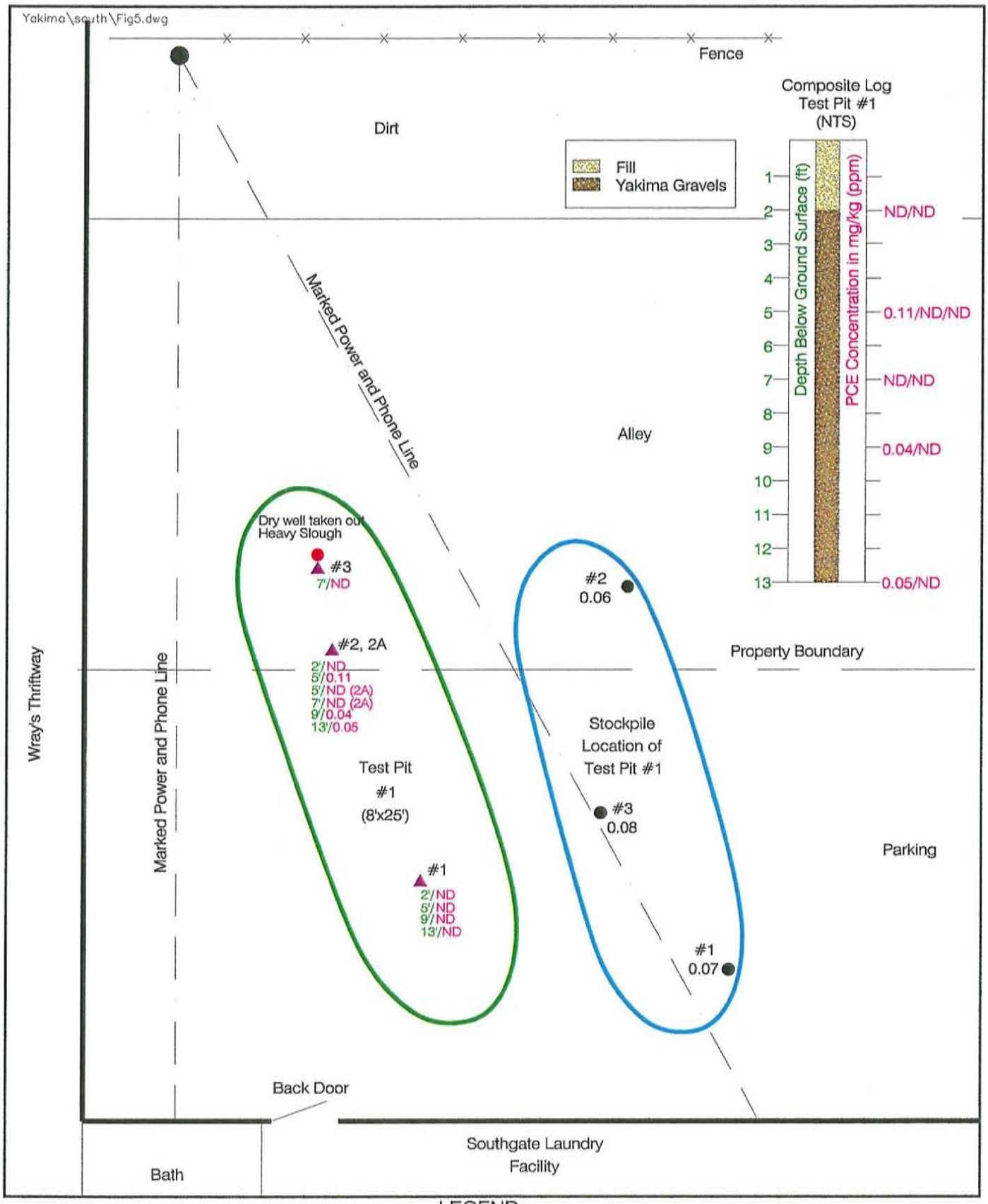
0 Feet 10

● Sample Location

4.5'/0.06 Depth/PCE in mg/kg (ppm)

MAXIM 9732804.100

Exterior Interim Action - July 1997
Location of Test Pits and Stockpile Areas
Southgate Laundry
Yakima, Washington
FIGURE 4



LEGEND

0.07 ● Stockpile Sample Location
PCE Concentration in mg/kg (ppm)

6'/0.64 ▲ Test Pit Sample Location
Depth Below Ground Surface (ft)
PCE Concentration in mg/kg (ppm)

● Dry Well (Excavated)

N

0 Feet 6

January, 1998

Exterior Interim Action
Soil Excavation and Results
Southgate Laundry
Yakima, Washington
FIGURE 5

MAXIM 9732804.100

TABLE 4
EXTERIOR INTERIM ACTION
PCE CONCENTRATIONS IN SOIL SAMPLES AND STOCKPILES
SOUTHGATE LAUNDRY FACILITY

Sample Number	Depth in feet below ground Surface	Tetrachloroethene (PCE) in mg/kg (and ppb[1])	Date Collected
Test Pit-1 (TP-1)			
TP-1 #1	2	ND[2]	7/15/97
TP-1 #1	5	ND	7/15/97
TP-1 #1	9	ND	7/15/97
TP-1 #1	13	ND	7/15/97
TP-1 #2	2	ND	7/15/97
TP-1 #2	5	0.11 (110)	7/15/97
TP-1 #2	9	0.04 (40)	7/15/97
TP-1 #2	9 (duplicate)	0.05 (50)	7/15/97
TP-1 #2	13	0.05 (50)	7/15/97
TP-1 #2A	5	ND	7/17/97
TP-1 #2A	7	ND	7/17/97
TP-1 #2A	7 (duplicate)	ND	7/17/97
TP-1 #3	7	ND	7/15/97
Stockpile Samples from Test Pit-1 (TP-1)			
#1	composite	0.07 (70)	7/15/97
#2	composite	0.06 (60)	7/15/97
#3	composite	0.08 (80)	7/15/97
Test Pit-2 (TP-2)			
TP-2 #1	2	ND	7/15/97
TP-2 #2	4.5	0.06 (60)	7/15/97
TP-2 #2	4.5 (duplicate)	0.05 (50)	7/15/97

[1] Samples analyzed by EPA Method 8010 with laboratory detection limit of 0.05 mg/kg (50 ppb)

[2] ND - Not detected

Although the concentrations of PCE in TP-1 and the associated stockpile were at and below MTCA Method B/groundwater protection of 80 ppb, this soil was transported to Rabanco landfill for disposal on September 11, 1997. Drill cuttings from the monitoring wells previously installed at the site were added to the stockpile. There were approximately 12 drums filled with drill cuttings. Forty-three yards of soil from TP-1 and associated drill cuttings were disposed of at Rabanco Landfill. Central Pre-Mix supplied the Noel Corporation with native pit run gravel to backfill the excavation. Disposal and backfill documents are in Appendix B.

5.1.2 Exterior Test Pit TP-2

Maxim personnel directed the excavation of TP-2. TP-2 was located in the alley adjacent to the former S-11 sampling point (Figure 4). The dimensions of the resulting excavation were 10 feet by 8 feet and 4.5 feet deep. The excavated soils were similar in texture to soils in TP-1. The attempt and effort to excavate TP-2 was abandoned at 4.5 feet because the contractor was concerned about encountering the wood-stave irrigation line beneath the alley. Only two soil samples were collected from TP-2. Concentrations of PCE in the two samples were measured at below detection limits (at 2 feet) and 0.06 mg/kg at 4.5 feet. The excavated soil was placed back in the pit.

5.2 INTERIOR AREA "HOT SPOTS" INVESTIGATION/REMEDIATION AND RESULTS

Laboratory analysis results from the Remedial Investigation inside Southgate laundry and dry-cleaners reported PCE contamination in all soil samples collected beneath the concrete floor. The most highly contaminated areas inside the facility were the two "Hot Spots" (Figure 3). In the first "Hot Spot" (S-7), located on the dry-cleaners side, PCE concentration in soil was measured at 2.08 mg/kg (2080 ppb). In the second "Hot Spot" (S-3), located in the self-serve laundry area PCE concentration in soil was measured at 3.9 mg/kg (3990 ppb).

In both "Hot Spot" areas, PCE was also detected in soil gas samples collected during the soil gas survey (Maxim, Site History Report, 1996). In the first "Hot Spot" in the dry cleaners side, in addition to PCE soil gas, low but measurable amounts of trichloroethene (TCE), cis-1,2 dichloroethene and carbon tetrachloride were also reported. These constituents were found only in the soil gas survey in SG-7 and were not reported in any of the other soil-gas or soil samples.

There were two reasons for the additional investigations conducted concurrently with Interim Actions inside the facility:

1) As per the above discussion, the presence of other constituents in addition to PCE in soil gas sample SG-7, required further investigation to confirm their presence or absence in the soil.

2) Due to access difficulties during the Remedial Investigation, the vertical profile of PCE with depth was not satisfactorily addressed in the Remedial Investigation.

Prior to Interim Action activities, the Noel Corporation gutted the entire interior so that excavating equipment could enter and operate inside the building. Because of concerns to the integrity of the building foundation and adjoining businesses soil removal inside the building was limited to the two "Hot Spots" (Figure 4). Prior to excavating the test pits beneath the "Hot Spots", contractors cut out approximately a 7 foot square concrete slab floor above each "Hot Spot" area. The two areas are shown on Figure 6. The size of the concrete floor slab removed from each "Hot Spot" was dictated by the distance from load bearing walls, building foundation and the ability to accommodate the bucket of a small excavator.

Interim Action inside the building occurred on September 9, 1997. The contractor, Speed Lewis, provided personnel and equipment for the operation. Maxim personnel directed the excavation of the two test pits beneath the "Hot Spot" areas.

5.2.1 "Hot Spot" TP-1/Stockpile #1 (dry-cleaners side)

The lateral and vertical extent of the excavated area of TP-1 is shown on Figure 7. The excavation included all soil from a 6.7 foot by 6.7 foot square area. The excavation depth ranged in depth from 4 feet to 8.5 feet. The top two feet of the excavation consisted of concrete debris and clay. From 2 feet below ground surface to 8.5 feet the Yakima Gravels were encountered consisting primarily of black-brown dry unconsolidated sands (approximately 70%), cobbles and gravels (30%). PCE odor was present at around 5.5 feet. A soil boring log from TP-1 is shown on Figure 7. Because the excavation was confined, it was not possible to expand the excavation laterally which resulted in steep side walls and heavy sloughing into TP-1 throughout the operation. The heavy sloughing prevented collection of samples with the back hoe beneath 7 feet. A hand-auger was used to collect the deepest soil sample at 8.5 feet.

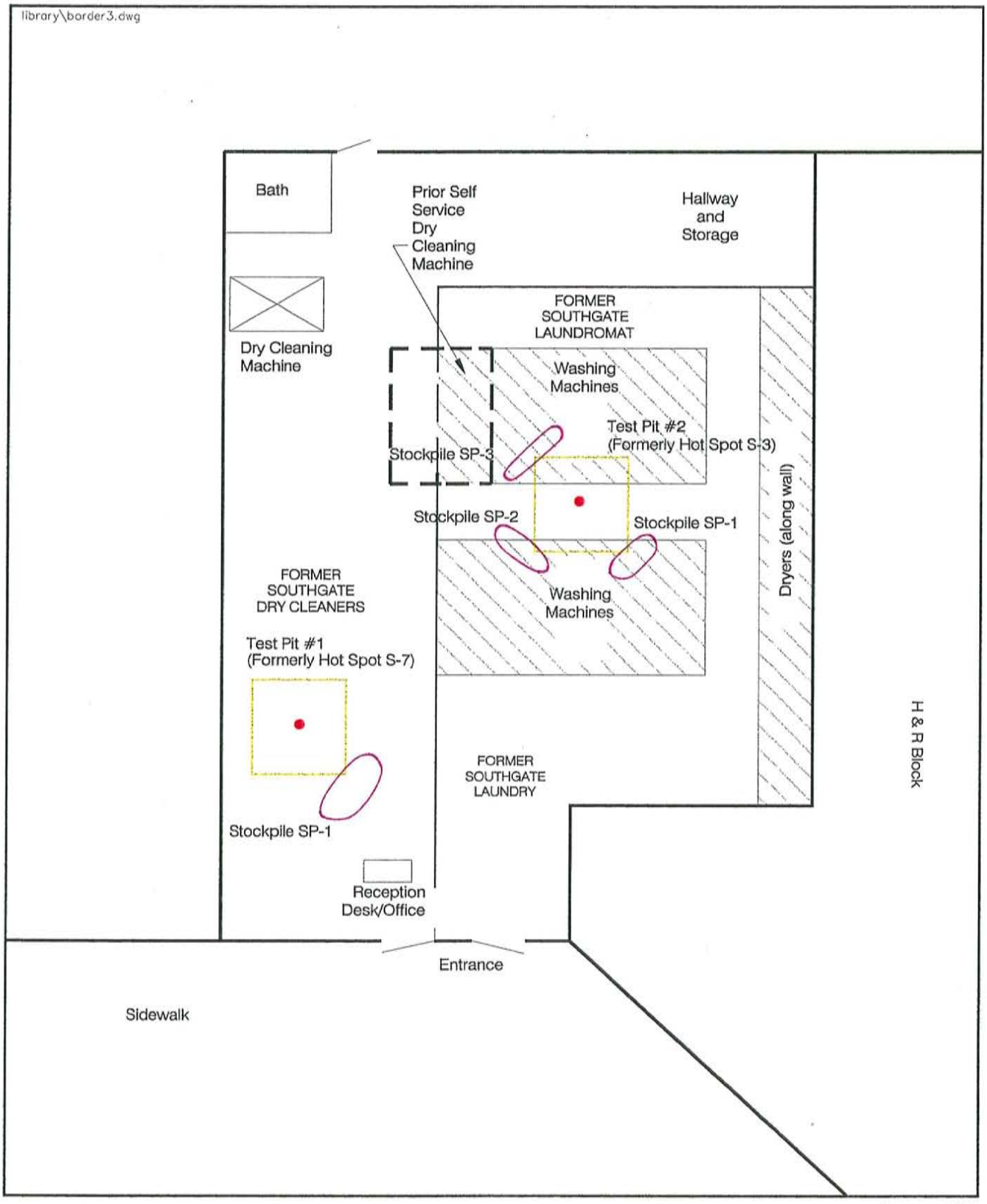
All seven samples collected in TP-1 contained PCE. Concentrations of PCE in samples of excavated soil ranged from 0.61 mg/kg (610 ppb), in the east area at 5 feet, to 1.15 mg/kg (1150 ppb), in the center area at 7 feet. No PCE breakdown products or other constituents of concern were reported. This sampling program confirmed the absence of any other constituents of concern reported from soil gas sample SG-7 collected from the site in our prior investigation.

The excavated soil from TP-1 was placed in a stockpile adjacent to TP-1 (Figure 7). Laboratory analysis results of three stockpile samples reported PCE in all stockpile samples ranging from 0.85 mg/kg to 0.91 mg/kg. Laboratory analysis results of soil and stockpiled soil samples from TP-1 are summarized in Table 5 and laboratory data sheets are contained in Appendix E.

5.2.2 "Hot Spot" TP-2 /Stockpiles (laundry side)

The lateral and vertical extent of the excavated area from TP-2 is shown on Figure 8. The excavation included all soil from a 7 foot by 8 foot area. The excavation depth ranged from 3 feet to 8.5 feet. The top 2.5 feet of the excavation consisted of clay mixed with sand and gravel. From 2.5 feet to 8.5 feet the Yakima Gravels consisted primarily of dark and moist sands (approximately 65%), cobbles and gravels (35%) and clay (5%). There was no PCE odor. A soil boring log from TP-2 is shown on Figure 8. As in TP-1, because

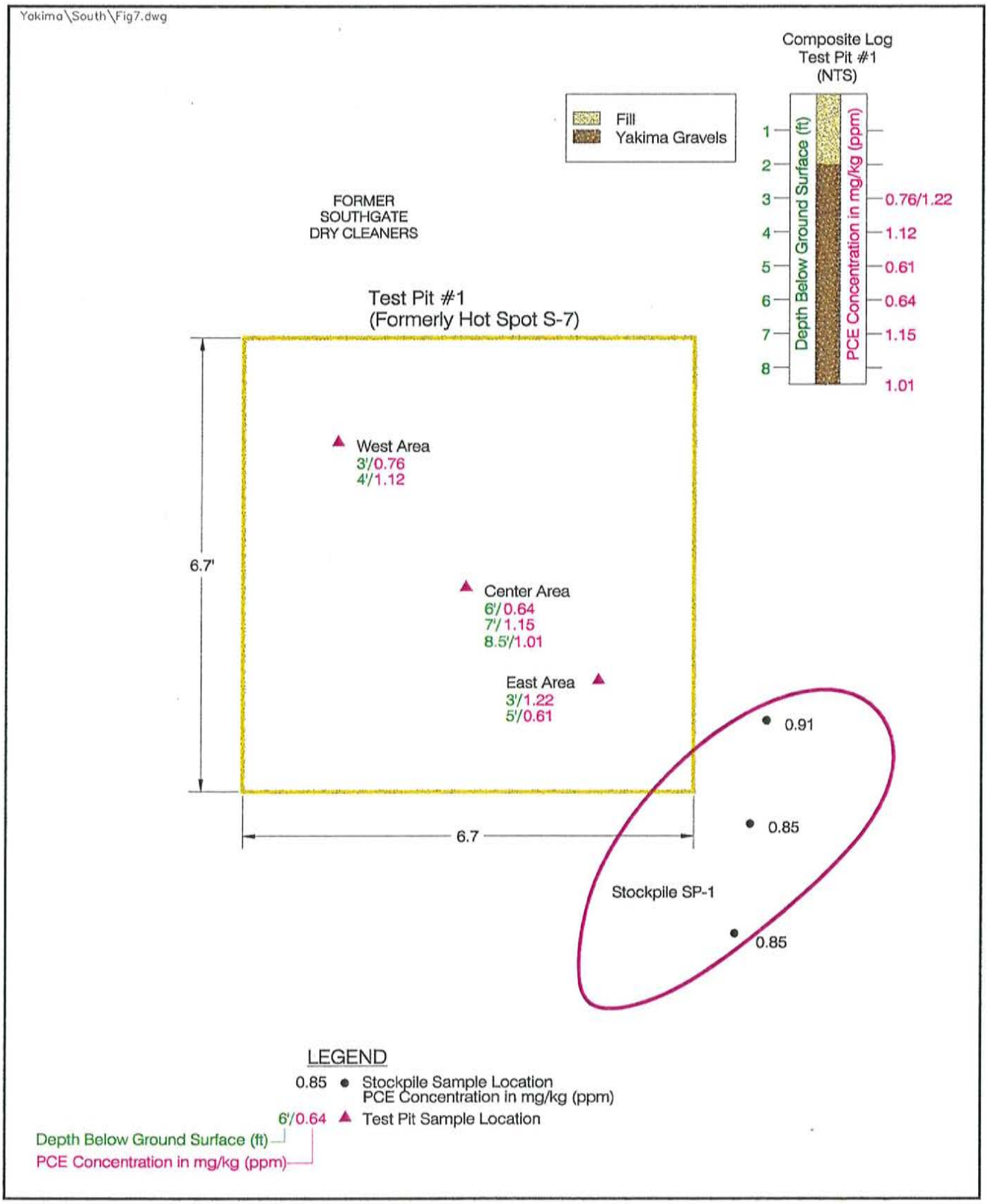
figure 6



January, 1998

Interior Interim Action (Sept. 1997)
Location of Test Pits and Stockpiles
Southgate Laundry
Yakinma, Washington
FIGURE 6

MAXIM 9732804.100



January, 1998

Interior Interim Action Confirmation Soil Sample Analysis
Results of Test Pit-1 and Associated Stockpile SP-1
Southgate Laundry
Yakima, Washington
FIGURE 7

N

0 Feet 2

MAXIM 9732804.100

TABLE 5
INTERIOR INTERIM ACTION
PCE CONCENTRATIONS IN TEST PIT-1 SOIL AND STOCKPILES
SOUTHGATE LAUNDRY FACILITY

Sample Number[1]	Depth in feet below ground Surface	Tetrachloroethene (PCE) in mg/kg (and ppb[2])	Date Collected
Test Pit-1 (TP-1) dry cleaners side			
TP-1 east area	3	1.22 (1220)	9/9/97
TP-1 west area	3	0.76 (760)	9/9/97
TP-1 west area	4	1.12 (1120)	9/9/97
TP-1 east area	5	0.61 (610)	9/9/97
TP-1 center area	6	0.64 (640)	9/9/97
TP-1 center area	7	1.15 (1150)	9/9/97
TP-1 center area	8.5	1.01 (1010)	9/9/97
Stockpile Samples (SP) from Test Pit TP-1			
SP-1 #1	composite	0.85 (850)	9/9/97
SP-1 #2	composite	0.85 (850)	9/9/97
SP-1 #3	composite	0.91 (910)	9/9/97

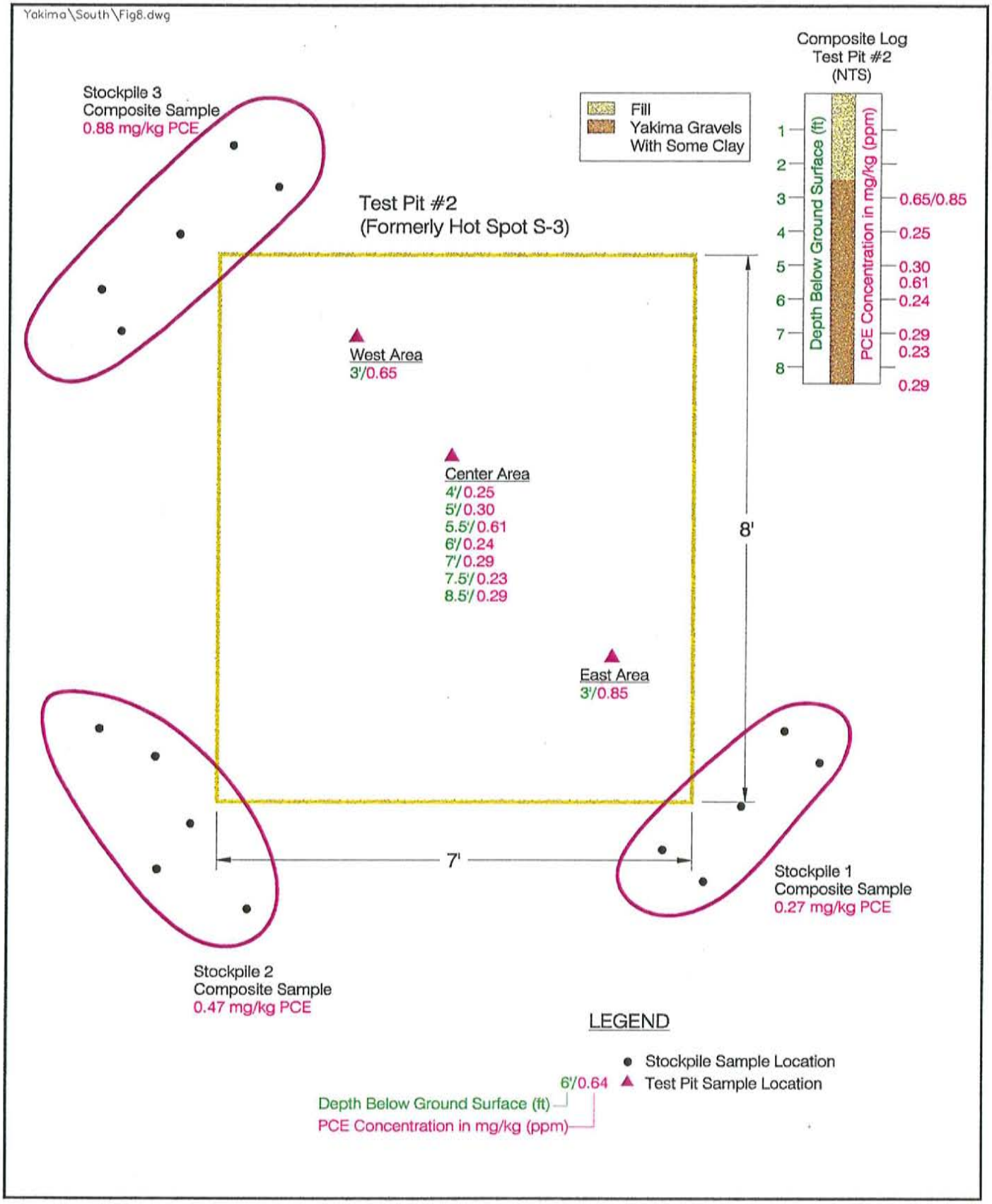
[1] samples are reported in the order collected

[2] Samples analyzed by EPA Method 8010 with laboratory detection limit of 0.05 mg/kg (50 ppb)

the excavation was confined, it was not possible to expand the excavation laterally. There was a lot less sloughing in comparison to TP-1. Also, in TP-2 sloughing began at a deeper level (at 7 feet) allowing us to collect soil samples with relative ease in comparison to TP-1 and without utilizing the hand-auger.

All eight samples collected in TP-2 contained PCE. Concentrations of PCE in samples of excavated soil ranged from 0.23 mg/kg (230 ppb) in the center area at 7.5 feet, to 0.85 mg/kg (850 ppb) in the east area at 3 feet. PCE concentrations decreased with depth. No PCE breakdown products or other constituents of concern were reported. This sampling program confirmed the absence of any other constituents of concern reported from soil gas sample SG-7 collected from the site in our prior investigation.

The excavated soil from TP-2 was placed in three stockpiles adjacent to the TP-2 (Figure 8). Three stockpile areas were constructed because of the difficulty of maneuvering the back hoe in this tight area. Three



January, 1998

Interior Interim Action Confirmation Soil Sample Analysis
Results of Test Pit TP-2 and Associated Stockpiles
Southgate Laundry
Yakima, Washington
FIGURE 8

N

0 Feet 2

MAXIM 9732804.100

composite stockpile samples were collected, one composite sample from each stockpile. Laboratory analysis results of three stockpile samples reported PCE in all samples ranging from 0.27 mg/kg to 0.88 mg/kg. Laboratory analysis results of soil and stockpiled soil from TP-2 are summarized in Table 6 and laboratory data sheets are found in Appendix E.

The stockpiled soil was transported to Rabanco Landfill for disposal on September 11-12, 1997. Thirty yards of PCE contaminated soil from the interior of Southgate Laundry was disposed of at Rabanco Landfill. Central Pre-Mix supplied the Noel Corporation with native pit run gravel to backfill the excavation. Disposal and backfill documents are contained in Appendix B.

TABLE 6
INTERIOR INTERIM ACTION
PCE CONCENTRATIONS IN TEST PIT-2 SOIL AND STOCKPILES
SOUTHGATE LAUNDRY FACILITY

Sample Number[1]	Depth in feet below ground Surface	Tetrachloroethene (PCE) in mg/kg (and ppb_2)	Date Collected
Test Pit-2 (TP-2) laundry side			
TP-2 east area	3	0.85 (850)	9/9/97
TP-2 west area	3	0.65 (650)	9/9/97
TP-2 center area	4	0.25 (250)	9/9/97
TP-2 center area	5	0.30 (300)	9/9/97
TP-2 center area	5 (duplicate)	0.39 (390)	9/9/97
TP-2 center area	5.5	0.61 (610)	9/9/97
TP-2 center area	5.5 (duplicate)	0.83 (830)	9/9/97
TP-2 center area	6	0.24 (240)	9/9/97
TP-2 center area	7	0.29 (290)	9/9/97
TP-2 center area	7.5	0.23 (230)	9/9/97
TP-2 center area	8.5	0.29 (290)	9/9/97
Stockpile Samples from test Pit-2 (TP-2)			
SP#1	composite	0.27 (270)	9/9/97
SP#2	composite	0.47 (470)	9/9/97
SP#2	composite (duplicate)	0.56 (560)	9/9/97
SP#3	composite	0.88 (880)	9/9/97

[1] samples are reported in the order collected

[2] Samples analyzed by EPA Method 8010 with laboratory detection limit of 0.05 mg/kg (50 ppb)

6.0 GROUNDWATER INVESTIGATIONS

Maxim installed four groundwater monitoring wells at the Southgate Laundry Facility in April 1996. The wells were installed to provide information necessary to evaluate groundwater quality and groundwater flow direction and can be used to determine hydraulic properties of saturated subsurface sediments.

6.1 WELL INSTALLATION

Maxim's personnel supervised the drilling and installation of the four groundwater monitoring wells in April 1996 at the Southgate Laundry facility. The four groundwater monitoring wells are located so that one well (MW-1) is located hydraulically up-gradient and three (MW-2, MW-3 and MW-4) are located hydraulically down-gradient from the site (Figure 2). Maxim personnel directed the drilling contractor, R&R drilling, to install the wells using an ODEX air rotary drill rig. Drill cuttings were examined and lithologic characteristics were recorded on borehole logs during drilling (Appendix A). The wells were drilled to 45 ft below ground surface in accordance with YRRA work plan requirements. Groundwater was encountered at 34 feet below ground surface. Installation of the four groundwater monitoring wells enabled Maxim personnel to evaluate groundwater chemistry and flow beneath the site in accordance with requirements of the Work Plan.

Drill cuttings were examined continuously while drilling each well and lithologic characteristics were recorded on borehole logs (Appendix A). A total of three soil samples were also collected with a split-spoon sampler while drilling MW-1 and MW-4. These samples were submitted for laboratory analysis of volatile organic compounds using EPA Method 8260. Recovery of split spoon samples while drilling the monitoring wells was relatively poor and VOCs which might have been present in cuttings samples were suspected of being volatilized by the air rotary system. Laboratory analysis results for these three soil samples are contained in Appendix A. (ALL 3 ARE ND)

Borings MW-1, MW-2, MW-3 and MW-4 were advanced until approximately 10 feet of groundwater was penetrated (total depth of 45 feet below ground surface) and were completed as monitoring wells. The monitoring wells were constructed of two-inch diameter flush-threaded PVC. A 30 foot section of factory slotted PVC screen (0.020 inch slots) was incorporated into the lower section of the casing column in each monitoring well. The annular space between the borehole and the screened section was backfilled with inert silica sand. The annular space above the sand filter pack was backfilled with granular bentonite. The well was completed at the surface by concreting a flush mount well protector around the well casing. After completion, the wells were developed using a polyethylene disposable bailer to remove drilling debris and ensure adequate hydraulic communication between the water bearing formation and well bore.

Following completion and development activities, a site survey was prepared. The survey was conducted by PLSA Engineering under the direction of the Noel Corporation. Ecology's requirements for the survey as outlined in the workplan were provided to PLSA Engineering by the Noel Corporation. The well elevations are used along with the static water level measurements to calculate groundwater elevations and gain hydrogeologic information for the site.

6.2 SAMPLE COLLECTION AND ANALYSIS

Six rounds of groundwater sampling were completed during April 1996, July 1996, October 1996, February 1997, September 1997 and December 1997. Maxim personnel measured the static water level in the wells using a decontaminated electric well probe during each event. Three bore volumes of groundwater were then removed from each well to ensure that the water being sampled was representative of the formation water. Groundwater samples were collected using disposable bailers. The water samples were immediately transferred to 40 milliliter vials. The samples were placed in an ice-filled cooler and shipped to a laboratory for analysis. Groundwater sampling field forms are contained in Appendix C.

6.2.1 Groundwater Sample Analysis

Maxim's Billings analytical laboratory analyzed the groundwater samples collected in April 1996, and July 1996. Samples collected from all four wells were analyzed for contaminants of concern (COCs) including VOCs according to EPA Method 8260. The full GC/MS VOCs scan used in EPA Method 8260 analyzes a wide range of potential contaminants in addition to PCE with a PCE reporting limit of 1 part per billion (ppb). Because PCE was the only measured contaminant of concern in both sampling rounds, in subsequent groundwater sampling rounds EPA Method 8010 was used to analyze the groundwater. EPA Method 8010 analyzes a shorter list of constituents but does include all previously identified contaminants of concern. The reporting limits for EPA Method 8010 is also 1 ppb. The October 1996, February 1997, September 1997 and December 1997 groundwater samples were analyzed by Transglobal Environmental Geosciences (TEG) laboratory.

6.2.2 Quality Assurance/Quality Control

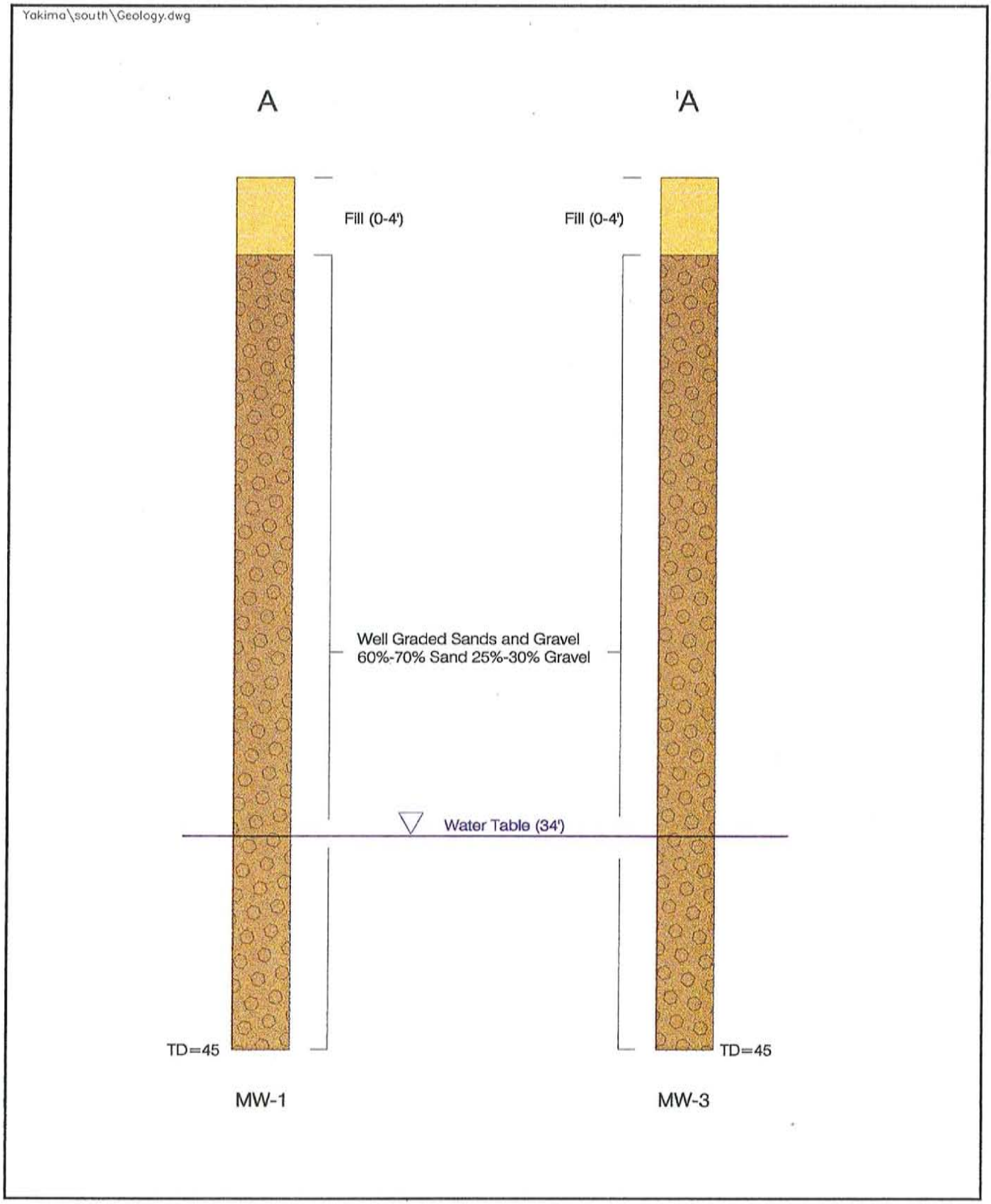
In each sampling event, a duplicate groundwater sample (blind duplicate) and a travel blank were provided to the analytical laboratory for the purpose of quality assurance/quality control (QA/QC).

Chain-of custody forms were completed prior to sample shipment. Information including station identification number, well depth, pH, conductance, temperature, static water level, and date and time of sample collection was recorded on the field forms (Appendix C).

6.3 RESULTS OF GROUNDWATER INVESTIGATIONS

6.3.1 Results of Well Borehole Investigation

The four borings drilled for monitoring well installation encountered a relatively permeable unit from approximately four feet below ground surface to the total depth. The top four feet is primarily fill consisting of silty clay and sand. The fill is underlain by silty and sandy gravels, approximately 60%-70% sands, 20%-30% gravels, pebbles and some cobbles. Groundwater was intercepted at approximately 34 feet below ground surface during April 1996. Monitoring well logs are presented in Appendix A. Cross-section, A-A showing sub-surface site conditions is presented in Figure 9.



Geologic Cross Section A-A'
Southgate Laundry
Yakima, Washington
FIGURE 9

MAXIM 9732804.100

6.3.2 Results of Monitoring Well Soil Sample Analysis

Maxim personnel attempted to collect soil samples every five feet while drilling MW-1, M-2, MW-3 and MW-4. A split spoon was placed in the hole every five feet from five to 30 feet below ground surface. Of 24 split spoons, only three split spoons had any soil recovery because of poor sample recovery. The three samples were analyzed for VOCs using EPA Method 8260. Concentrations of VOCs in all soil samples collected during monitoring well drilling were below laboratory detection limits (ND). Laboratory analysis results for these three split spoon samples are contained in Appendix A.

6.3.3 Results of Static Water Level Measurements

Static water level measurements were recorded in all four monitoring wells during each quarterly sampling event Table 7. Groundwater contour maps of each event are presented in Figure 10 and a hydrograph of all four wells is presented in Figure 11.

The static water level measurements indicated that groundwater elevations range from 21 to 34 ft below ground surface. The hydrographs show that the highest water levels occur during the spring and summer time and the lowest water levels occur during the winter. Groundwater flow direction is consistently to the southeast throughout the year. Groundwater gradients vary from 0.2 to 0.6 percent depending upon season.

6.3.4 Results of Groundwater Quality Investigation

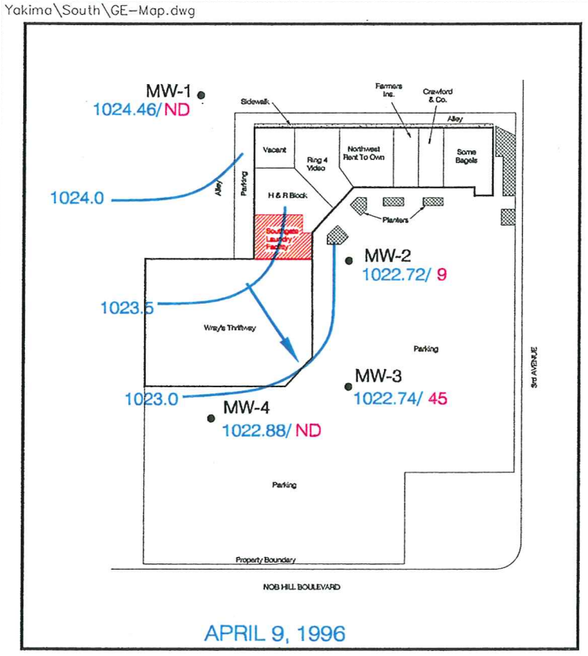
Groundwater quality analysis results for the four sampling events conducted at the Southgate Laundry facility are presented in Figure 10 and Figure 11 and summarized in Table 7. Laboratory analysis reports for the water samples are contained in Appendix C.

Detectable levels of PCE were reported in water samples collected from the six groundwater sampling rounds. All monitoring wells reported detectable levels of PCE. PCE concentrations of 9 parts per billion (ppb), 57 ppb, 52 ppb, 11.9 ppb 20 ppb and 16 ppb were reported from MW-2 in April, July, October 1996, February 1997, September 1997 and December 1997 respectively. MW-2 is located adjacent to and down-gradient from Southgate Laundry. PCE concentrations of 45 ppb, 62 ppb, 62 ppb and 107 ppb were reported from MW-3, also a down-gradient monitoring well, in April, July, October 1996 and February 1997 respectively. In September 1997 and December 1997 PCE concentrations in MW-3 were 31 ppb and 8.2 ppb respectively, substantially lower than the concentrations from the first four sampling events. PCE concentrations ranging from below detection limits (ND) to 6.3 ppb were reported in MW-4. MW-4 was installed as a down-gradient well in accordance with the Work Plan. At this site, however, groundwater flow direction during our quarterly sampling events did not shift throughout the year, and the flow was consistently to the southeast. As a result, MW-4 was a cross-gradient well instead of a down-gradient well. The concentrations measured in MW-4 are generally below the U.S EPA drinking water standard of 5 ppb. The hydraulically up-gradient monitoring well MW-1 reported PCE concentrations between below detection limits (ND) and 9.5 ppb, and were generally below the EPA drinking water standard.

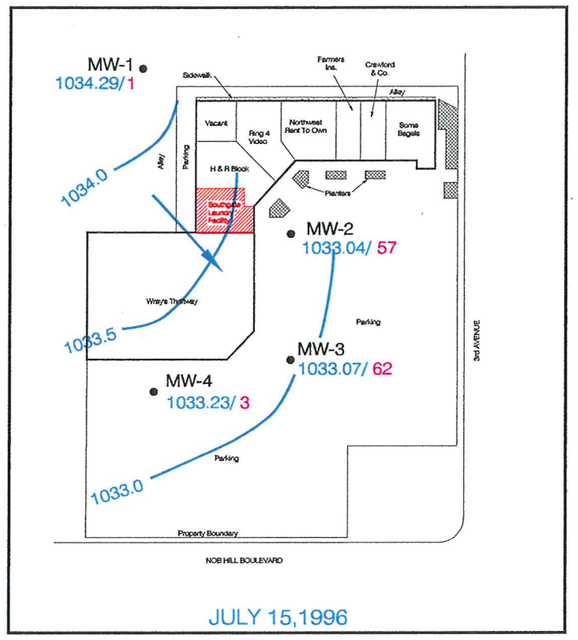
TABLE 7
QUARTERLY GROUNDWATER MONITORING AND ANALYSIS RESULTS
SOUTHGATE LAUNDRY FACILITY

Well No.	Ground Elevation (ft)	DTW	Water Table Elevation (ft)	PCE (ppb)	Date Collected
MW-1	1056.90	32.44	1024.46	ND	4/9/96
		22.61	1034.29	1	7/15/96
		22.93	1033.97	1.4 (1.2 blind dup)	10/10/96
		29.99	1026.91	9.5	2/5/97
		22.21	1034.69	ND	9/18/97
		29.82	1027.08	1.7	12/3/97
MW-2	1056.47	33.75	1022.72	9 (10 blind dup.)	4/9/96
		23.43	1033.04	57	7/15/96
		23.87	1032.60	52	10/10/96
		30.45	1026.02	11.9	2/5/97
		23.18	1033.29	20	9/18/97
		30.31	1026.16	16	12/3/97
MW-3	1054.77	32.03	1022.74	45	4/9/96
		21.70	1033.07	62 (53 blind dup.)	7/15/96
		22.07	1032.70	62 (54 blind dup.)	10/10/96
		28.63	1026.14	107 (106 blind)	2/5/97
		21.39	1033.38	31 (37 blind dup.)	9/18/97
		28.47	1026.30	8.2 (9 blind/split with Ecology)	12/3/97
MW-4	1055.31	32.43	1022.88	ND	4/9/96
		22.08	1033.23	3.0	7/15/96
		22.49	1032.82	2.6	10/10/96
		29.05	1026.26	6.3	2/5/97
		21.89	1033.42	3.0	9/18/97
		29.00	1026.31	2.0	12/3/97

Yakima\South\GE-Map.dwg



APRIL 9, 1996



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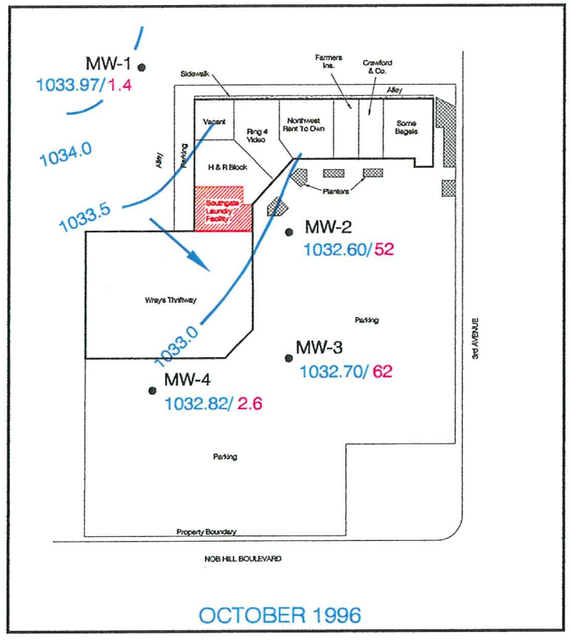
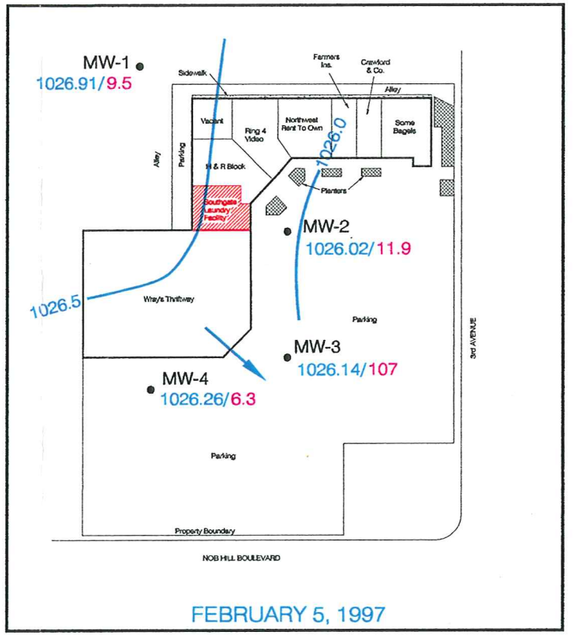


OCTOBER 1996



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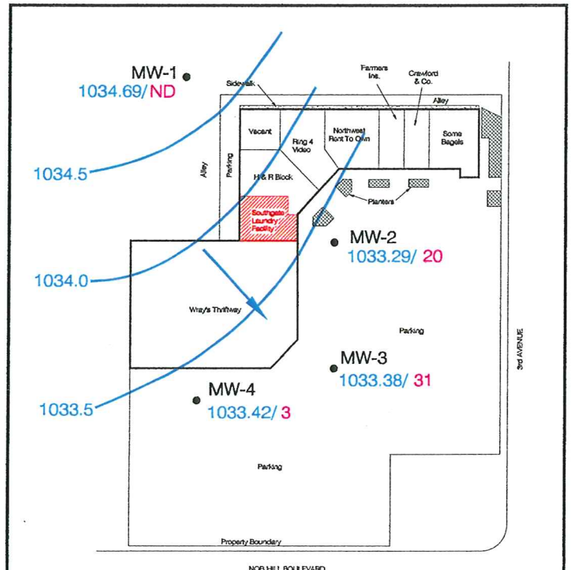
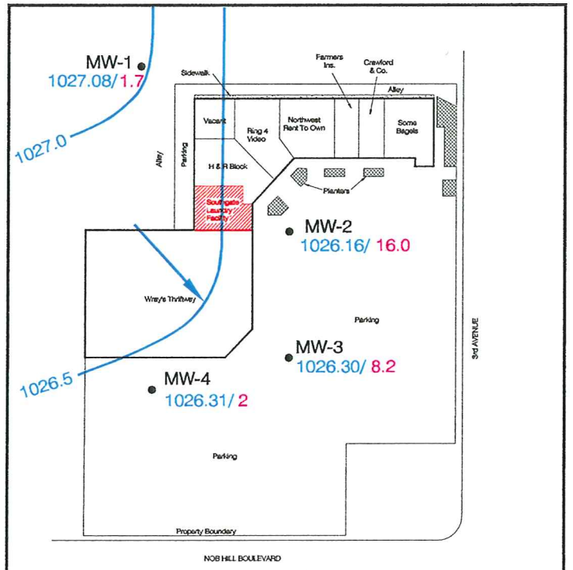


September 18, 1997



December 3,1997

N

0 Feet 150

MAXIM 9732804.100

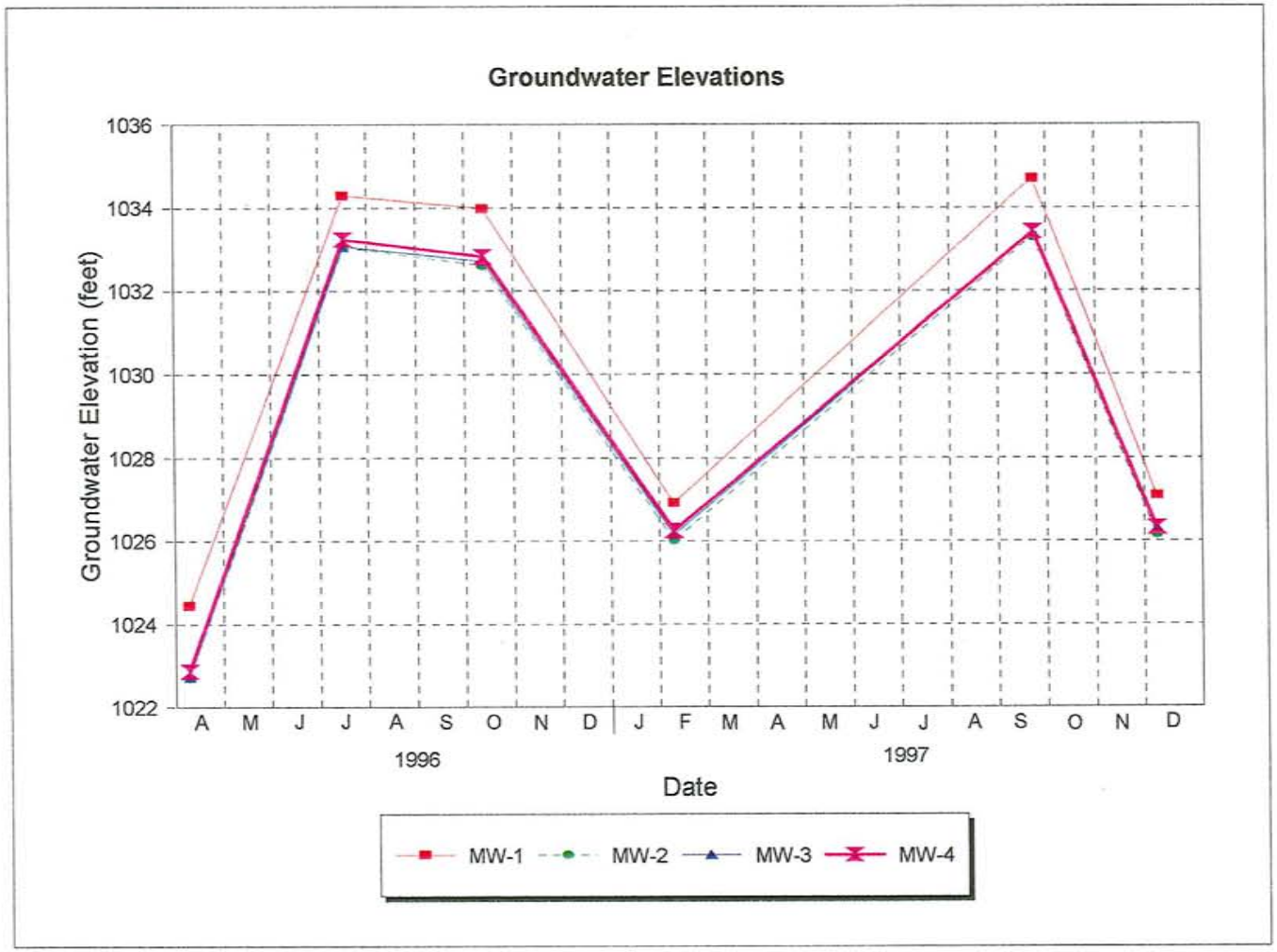
Groundwater Elevation Equipotential Line (ft.)

1022.74/ 45 Groundwater Elevation (ft.)/ PCE Concentration In Groundwater (ppb)

Groundwater Flow Direction

Groundwater Elevation Map
And PCE Concentrations In Groundwater
Southgate Laundry
Yakima, Washington
FIGURE 10

\946-04\Qpro.dwg



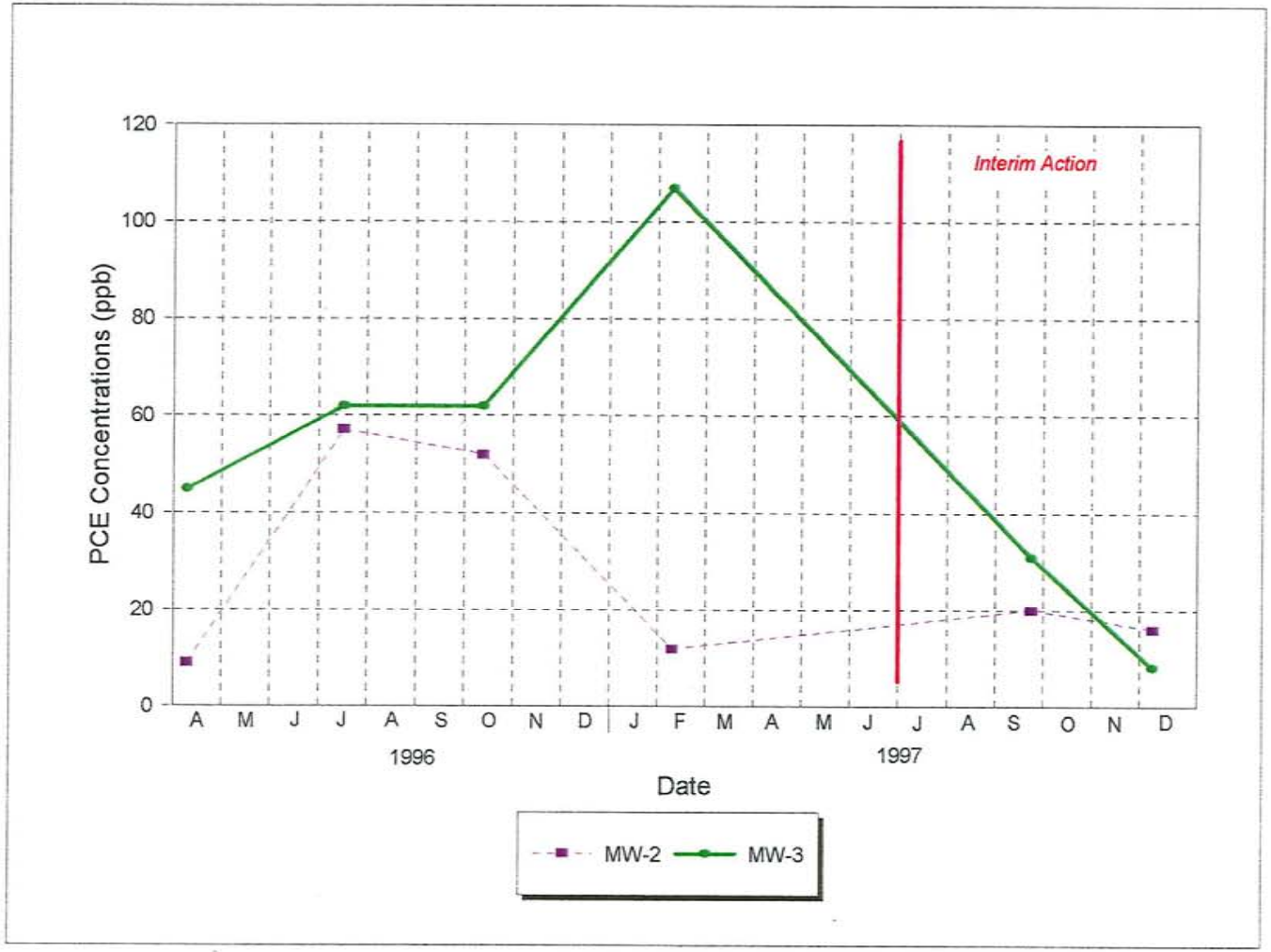
Hydrograph of Water Levels
Southgate Laundry
Yakima, Washington
FIGURE 11

MAXIM 5809500946-04

The presence of PCE contamination in the upgradient well indicates an off-site source of contamination contributing to the PCE problem. However, the higher concentration of PCE in down-gradient well MW-3 (up to 107 ppb) indicates that on-site sources also contributed to PCE contamination at the site. A substantial decline in PCE concentrations is reported in the two downgradient wells MW-2 and MW-3. A graph of PCE concentrations in samples taken from MW-2 and MW-3 is presented in Figure 12. PCE concentrations in MW-3 declined from 107 ppb in February 1997, to 31 ppb in September and 8.2 ppb in December 1997. This substantial decline in PCE contamination occurred subsequent to Interim Action soil removal activities (conducted in July and September 1997), suggesting "source control" activities have been successful in improving the groundwater quality beneath the site. Chloroform and dichlorodifluoromethane were also detected in the groundwater samples collected in April 1996 and July 1996, respectively. Dichlorodifluoromethane is not a regulated contaminant and chloroform concentrations did not exceed the U.S. EPA drinking water standard for trihalomethanes (100 µg/l).

The field QA/QC samples analyzed during the four sampling events have indicated that sample collection and handling was properly executed.

\946-04\Qpro.dwg



Graph of PCE Concentrations In Groundwater
Southgate Laundry
Yakima, Washington
FIGURE 12

MAXIM 5809500946-04

7.0 SUMMARY AND CONCLUSIONS

Based on environmental data collected at the Southgate Laundry facility from March 1996 through December 1997, the following findings are evident:

- Soil samples collected during Remedial Investigation in the back exterior of the dry cleaners reported PCE contamination. A test pit (TP-1) excavated in the back concurrent with Interim Action activities reported PCE concentrations below detection limits (ND) in most samples and a few concentrations at or well below 80 ppb (Ecology's MTCA Method B/groundwater protection level). Although it was not possible to excavate a larger test pit to verify that the entire back exterior was not contaminated with PCE, the low concentrations of PCE measured in the "prime dumping suspect areas" of the dry well and the back door of the dry cleaners suggest that soil in back exterior of Southgate Laundry was not significantly impacted with PCE. Although the concentrations of PCE in TP-1 and the associated stockpile were at and well below 80 ppb, 43 cubic yards of exterior soil (including drill cuttings from monitor well installation) were transported to Rabanco Landfill for disposal.

- Additional soil samples collected during Interim Action confirmed the absence of TCE, carbon tetrachloride, and cis-1,2 dichloroethene measured in single soil gas sample (SG-7). The absence of these constituents confirms that PCE is the only contaminant of concern at the site.

- Interim Action activities have likely dissipated the vapor gasses trapped beneath the concrete floor.

- Interim Action soil removal activities were conducted beneath two "Hot Spot" areas inside the building. Thirty yards of PCE contaminated soil was transported to Rabanco Landfill. The vertical profile in the laundry area "Hot Spot" (TP-2) shows a decrease in PCE concentrations with depth, from 0.85 mg/kg at 3 feet down to 0.29 mg/kg at 8.5 feet. The "Hot Spot" area in the dry cleaners side (TP-1) reported PCE contamination to 8.5 feet. The vertical profile in this dry cleaners "Hot Spot" reported a more uniform distribution of PCE with an average of 0.93 mg/kg. PCE concentrations of 1.01 mg/kg were measured at 8.5 feet. PCE contamination decreases laterally towards the adjacent businesses, H&R Block and Wray's Thriftway. No PCE breakdown products (TCE, DCE, vinyl chloride) were reported in any of the soil samples.

- The Yakima Gravels, consisting of unconsolidated open-framework silty to cobbly sediments, underlie the site. Near-surface groundwater occurs in these sediments at depths fluctuating from 22 to 34 feet which is deeper than most of the other YRRA facilities. Groundwater flows consistently toward the southeast under a gradient which appears to vary between 0.2 and 0.6 percent.

- At least one of the six sampling events conducted at the site reported concentrations PCE above EPA drinking water standards of 5 ppb in each of the monitoring wells. The presence of PCE contamination in the upgradient well indicates an off-site source of contamination contributing to the PCE problem. However, the higher concentration of PCE in down-gradient well MW-3 (up to 107 ppb) indicates that on-site sources also contributed to PCE contamination at the site. A substantial decline in PCE

concentrations is reported in the two downgradient wells MW-2 and MW-3. PCE concentrations in MW-3 declined from 107 ppb in February 1997, down to 31 ppb in September and 8.2 ppb in December 1997. This substantial decline in PCE contamination occurred subsequent to Interim Action soil removal activities, suggesting "source control" activities have been successful in improving the groundwater quality beneath the site. Chloroform and dichlorodifluoromethane were also detected in the groundwater samples in April 1996 and July 1996, respectively. Dichlorodifluoromethane is not a regulated contaminant and chloroform concentrations did not exceed the U.S. EPA drinking water standard for trihalomethanes (100 μg/l).

8.0 RECOMMENDATIONS

Contaminated soil associated with two former "Hot Spots" inside Southgate Laundry facility were identified and removed from the site. In addition, the dry cleaners operation at the site has been permanently shut down. Because of these "source control" activities, potential sources of groundwater contamination have been removed from the site. As a result of these activities the groundwater quality beneath the site has improved substantially. Based on these findings and conclusions, we provide the following recommendations for future activities and considerations at the site:

- Although PCE beneath the "Hot Spot" areas has been removed, inaccessible PCE contamination sources remain beneath the floor slab to depths greater than 8.5 feet. Unless groundwater quality shows significant deterioration we recommend leaving this contamination in place until the building is demolished.

- We recommend that the 1998 quarterly groundwater monitoring program currently in progress should be completed to confirm the groundwater quality improvement beneath the site.

- The owner should inform Ecology that there is off-site contamination that is affecting groundwater quality under the site and this additional source of contamination should be investigated by appropriate parties.

9.0 LIMITATIONS

This work was performed in accordance with the generally accepted practices of other consultants undertaking similar studies at this time and in the same geographical area. In completing this project, Maxim observed the degree of care and skill generally exercised by other consultants operating under similar circumstances and conditions. Maxim's findings and conclusions must be considered not as scientific certainties, but as opinions based on our professional judgement concerning the significance of the data gathered during the course of the evaluation. Other than this, no warranty is expressed or implied.

This study and report has been prepared on behalf of and for the exclusive use of Noel Corporation, solely for use in environmental evaluation of the Southgate Laundry site in Yakima, Washington. This report and the findings contained herein shall not, in whole or in part, be disseminated or conveyed to any other party, nor used by any other party in whole or in part, without the prior written consent of the Noel Corporation.

Report Prepared by:

Rachel Tauman
Project Manager

Report Reviewed by:

Bill Bucher
Senior Hydrogeologist/Engineer

10.0 REFERENCES

Ecology, 1996. Agreed Order No. DE 95TC-C239 to Roger Noel, President of Noel Corporation, and William L. Weigand, Jr., Attorney for Noel Corporation, by the State of Washington, Department of Ecology, January 5, 1996. Includes Yakima Railroad Area Work Plan by reference.

Ecology, 1995. Guidance on Sampling and data Analysis Methods, Publication No. 94-49.

Ecology, 1993. Model Toxics Control Act Soil Cleanup Standards WAC 173-340-740 (2) Table 2.

Ecology, no date. Yakima Railroad Area (YRRA) Work Plan Remedial Investigation (RI).

Maxim Technologies, 1996. Task 1 Yakima Railroad Area Remedial Investigation Site History/Soil Vapor Assessment, Southgate Laundry, Yakima, Washington.

Maxim Technologies, 1997. Task 2 Draft Report Yakima Railroad Area Remedial Investigation Soil/Groundwater Investigations and Analysis, Southgate Laundry, Yakima, Washington.

Slagle, Gary, 1996. Personal communication between Mr. Gary Slagle, Manager Noel Corporation, and Ms. Rachel Tauman, Maxim Technologies, Inc., Yakima, Washington.

APPENDIX A

BORING LOGS, GROUNDWATER MONITORING WELL CONSTRUCTION, WELL SURVEY

MONITORING WELL LITHOLOGIC AND COMPLETION LOG

MAXIM TECHNOLOGIES - ENVIRONMENTAL CONSULTING SERVICES

JOB NO. 5809500946-04 PROJECT: SOUTHGATE LAUNDRY FACILITY		WELL NO. MW-1
		LOGGED BY: Rachel Tauman
LEGAL LOCATION: SE1/4 NE1/4 S 25, T 13 N, R 18 E		DRILLING CONTRACTOR: R & R Drilling
DATE STARTED/COMPLETED: 4/7/96 - 4/7/96	DRILLING METHOD: Air Rotary	WELL CASING: 2-inch, Sch 40, flush threaded PVC
BOREHOLE DIAMETER:	MEASURING POINT: Top of PVC	WELL SCREEN:
TOTAL DEPTH: 45 ft	Height Relative to Ground Surface: -0.26'	SAND PACK: 10-20 mesh silica sand
DEPTH TO WATER: 32.44'	Elevation: 1056.47'	SEALANTS: Bentonite chips
Measurement Date: 4/9/96		WELL PROTECTOR: Flush mounted

REMARKS:

DEPTH (feet)	SAMPLE INTERVAL	HEAD SPACE (ppm)	SUBSURFACE MATERIAL DESCRIPTION	WELL CONSTRUCTION LOG
0				Flush Mounted Cap
2			0-4 'Fill, silty clay, moist	Concrete 0-1'
4				Bentonite chips, 1-13'
6	Split Spoon No. 1, No recovery.		5-25' Well graded sand and gravels, 60-70% Sand, 20-40% gravel. Rounded to subrounded. Mostly basalt. GM	2" PVC, Schedule 40, 0-15'
8				
10	Split spoon No. 2, No recovery.			
12				
14				10-20 Silica Sand, 13-45'
16	Split spoon No. 3, Recovery.			2" PVC screen, Schedule 40 15-45'
18				
20	Split spoon, No.4, No recovery			
22				
24				
26	Split spoon, No. 5, No Recovery			
28				
30	Split spoon, No. 6, No recovery.			
32			SWL 32.7' BGS	
34				
36				
38				
40				
42				
44				
			Total Depth Drilled 45'	

MONITORING WELL LITHOLOGIC AND COMPLETION LOG

MAXIM TECHNOLOGIES - ENVIRONMENTAL CONSULTING SERVICES

JOB NO. 5809500946-04 PROJECT: SOUTHGATE LAUNDRY FACILITY		WELL NO. MW-2
		LOGGED BY: Rachel Tauman
LEGAL LOCATION: SE1/4 NE1/4 S 25, T 13 N, R 18 E		DRILLING CONTRACTOR: R & R Drilling
DATE STARTED/COMPLETED: 4/7/96 - 4/7/96	DRILLING METHOD: Air Rotary	WELL CASING: 2-inch, Sch 40, flush threaded PVC
BOREHOLE DIAMETER:	MEASURING POINT: Top of PVC	WELL SCREEN:
TOTAL DEPTH: 45 ft	Height Relative to Ground Surface: -0.35'	SAND PACK: 10-20 mesh silica sand
DEPTH TO WATER: 34.8 ft	Elevation: 1056.47'	SEALANTS: Bentonite chips
Measurement Date: 4/7/96		WELL PROTECTOR: Flush mounted

REMARKS:

DEPTH (feet)	SAMPLE INTERVAL	HEAD SPACE (ppm)	SUBSURFACE MATERIAL DESCRIPTION	WELL CONSTRUCTION LOG
0				Flush Mounted Cap
2			0-4 'Fill, silty clay, moist	Concrete 0-1'
4				Bentonite chips, 1-13'
6	Split Spoon No. 1, No recovery.		5-25 Well graded sand and gravels, 60-70% Sand, 20-40% gravel. Rounded to subrounded. Mostly basalts. GM	2" PVC, Schedule 40, 0-15'
8				
10	Split spoon No. 2, No recovery			
12				
14				10-20 Silica Sand, 13-45'
16	Split spoon No. 3, No recovery.			2" PVC screen, Schedule 40 15-45'
18				
20	Split spoon, No.4, No recovery			
22				
24				
26	Split spoon, No. 5, No Recovery		25-28' Sand. ML	
28			28-45' Well-graded sand and gravel, some cobbles. Rounded to subrounded. Mostly Basalt. Clay lense at 39'. GM	
30	Split spoon, No. 6, No recovery.			
32				
34			SWL 34.8 ft.	
36				
38				
40				
42				
44				
			Total Depth Drilled 45'	

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MONITORING WELL LITHOLOGIC AND COMPLETION LOG

MAXIM TECHNOLOGIES - ENVIRONMENTAL CONSULTING SERVICES

JOB NO. 5809500946-04 PROJECT: SOUTHGATE LAUNDRY FACILITY		WELL NO. MW-3
		LOGGED BY: Rachel Tauman
LEGAL LOCATION: SE1/4 NE1/4 S 25, T 13 N, R 18 E		DRILLING CONTRACTOR: R & R Drilling
DATE STARTED/COMPLETED: 4/7/96 - 4/7/96	DRILLING METHOD: Air Rotary	WELL CASING: 2-inch, Sch 40, flush threaded PVC
BOREHOLE DIAMETER:	MEASURING POINT: Top of PVC	WELL SCREEN:
TOTAL DEPTH: 45 ft	Height Relative to Ground Surface: -0.48'	SAND PACK: 10-20 mesh silica sand
DEPTH TO WATER: 32.03 ft	Elevation: 1054.77'	SEALANTS: Bentonite chips
Measurement Date: 4/9/96		WELL PROTECTOR: Flush mounted

REMARKS:

DEPTH (feet)	SAMPLE INTERVAL	HEAD SPACE (ppm)	SUBSURFACE MATERIAL DESCRIPTION	WELL CONSTRUCTION LOG
0				Flush Mounted Cap
2			0-4 'Fill, silty clay, moist	Concrete 0-1'
4				Bentonite chips, 1-13'
6	Split Spoon No. 1, No recovery.		5-25' Well graded sand and gravels, 60-70% Sand, 20-40% gravel. Rounded to subrounded. Mostly basalt. GM	2" PVC, Schedule 40, 0-15'
8				
10	Split spoon No. 2, No recovery.			
12				
14				10-20 Silica Sand, 13-45'
16	Split spoon No. 3, No recovery.			2" PVC screen, Schedule 40 15-45'
18				
20	Split spoon, No.4, No recovery			
22				
24				
26	Split spoon, No. 5, No Recovery			
28				
30	Split spoon, No. 6, No recovery.			
32			SWL 32.51' BGS	
34				
36				
38				
40				
42				
44				
			Total Depth Drilled 45'	

MONITORING WELL LITHOLOGIC AND COMPLETION LOG

MAXIM TECHNOLOGIES - ENVIRONMENTAL CONSULTING SERVICES

JOB NO. 5809500946-04 PROJECT: SOUTHGATE LAUNDRY FACILITY		WELL NO. MW-4
		LOGGED BY: Rachel Tauman
LEGAL LOCATION: SE1/4 NE1/4 S 25, T 13 N, R 18 E		DRILLING CONTRACTOR: R & R Drilling
DATE STARTED/COMPLETED: 4/7/96 - 4/7/96	DRILLING METHOD: Air Rotary	WELL CASING: 2-inch, Sch 40, flush threaded PVC
BOREHOLE DIAMETER:	MEASURING POINT: Top of PVC	WELL SCREEN:
TOTAL DEPTH: 45 ft	Height Relative to Ground Surface: -0.26'	SAND PACK: 10-20 mesh silica sand
DEPTH TO WATER: 34.8 ft	Elevation: 1055.31'	SEALANTS: Bentonite chips
Measurement Date: 4/7/96		WELL PROTECTOR: Flush mounted

REMARKS:

DEPTH (feet)	SAMPLE INTERVAL	HEAD SPACE (ppm)	SUBSURFACE MATERIAL DESCRIPTION	WELL CONSTRUCTION LOG
0				Flush Mounted Cap
2			0-4 'Fill, clay and silt, most orange-brown	Concrete 0-1'
4			4-25' Well graded sand and gravels, 60-70% Sand, 20-35% gravel. Some cobbles. Rounded to subrounded. Mostly basalt. GM	Bentonite chips, 1-13'
6	Split Spoon No. 1, Recovery (poor).			2" PVC, Schedule 40, 0-15'
8				
10	Split spoon No. 2,			
12	Recovery (poor).			
14				10-20 Silica Sand, 13-45'
16	Split spoon No. 3, Recovery (poor).			2" PVC screen, Schedule 40 15-45'
18				
20	Split spoon, No.4,			
22	No recovery			
24				
26	Split spoon, No. 5, No Recovery			
28				
30	Split spoon, No. 6,			
32	No recovery.			
34				
36			SWL 34.8'	
38				
40				
42				
44				
			Total Depth Drilled 45'	

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WASHINGTON STATE DEPARTMENT OF ECOLOGY

Notification Number R 27601

NOTICE OF INTENT TO CONSTRUCT A MONITORING/RESOURCE PROTECTION WELL

This form must be received by the Department of Ecology with the required fees three days before your well(s) is constructed. *Complete both sides of this form. Submit one form for each job site. Submit one check or money order for each form, payable to the Department of Ecology, P.O. Box 5128, Lacey, WA 98503-0210. Do not send cash. Instructions for filling out this form are printed on the back.*

1. PROPERTY OWNER: NOEL CORP. PHONE NO.(509) 577-8552
2. ADDRESS: PO BOX 111 YAKIMA, WA 98907
3. AGENT (If different from #1): MAXIM TECHNOLOGY PHONE NO.(509) 577-8559
4. ADDRESS: PO BOX 2887 YAKIMA, WA 98907
5. JOB SITE/WELL LOCATION: SE ¼ of the NE ¼ Section 25 Township 13N Range 18 (E)WM or W.WM (circle one)
6. STREET ADDRESS (if known): 3rd & NOB HILL YAKIMA
7. LOCATION OF WELL(S): (please check county)

☐ ADAMS COUNTY	01-ERO	☐ GRAYS HARBOR COUNTY	14-SWR	☐ PIERCE COUNTY	27-SWR
☐ ASOTIN COUNTY	02-ERO	☐ ISLAND COUNTY	15-NWR	☐ SAN JUAN COUNTY	28-NWR
☐ BENTON COUNTY	03-CRO	☐ JEFFERSON COUNTY	16-SWR	☐ SKAGIT COUNTY	29-NWR
☐ CHELAN COUNTY	04-CRO	☐ KING COUNTY	17-NWR	☐ SKAMANIA COUNTY	30-SWR
☐ CLALLAM COUNTY	05-SWR	☐ KITSAP COUNTY	18-NWR	☐ SNOHOMISH COUNTY	31-NWR
☐ CLARK COUNTY	06-SWR	☐ KITTITAS COUNTY	19-CRO	☐ SPOKANE COUNTY	32-ERO
☐ COLUMBIA COUNTY	07-ERO	☐ KLICKITAT COUNTY	20-CRO	☐ STEVENS COUNTY	33-ERO
☐ COWLITZ COUNTY	08-SWR	☐ LEWIS COUNTY	21-SWR	☐ THURSTON COUNTY	34-SWR
☐ DOUGLAS COUNTY	09-CRO	☐ LINCOLN COUNTY	22-ERO	☐ WAHKIAKUM COUNTY	35-SWR
☐ FERRY COUNTY	10-ERO	☐ MASON COUNTY	23-SWR	☐ WALLA WALLA COUNTY	36-ERO
☐ FRANKLIN COUNTY	11-ERO	☐ OKANOGAN COUNTY	24-CRO	☐ WHATCOM COUNTY	37-NWR
☐ GARFIELD COUNTY	12-ERO	☐ PACIFIC COUNTY	25-SWR	☐ WHITMAN COUNTY	38-ERO
☐ GRANT COUNTY	13-ERO	☐ PEND OREILLE COUNTY	26-ERO	☒ YAKIMA COUNTY	39-CRO

8. AMOUNT ENCLOSED: Please fill out the portion below carefully. The return address label must contain the name and address of the person submitting the notification payment. This portion will be validated and returned to them as proof of payment. Send the entire form and check or money order payable to Dept. of Ecology, P.O. Box 5128, Lacey, WA 98503-0210. Do not send cash.

THIS NOTIFICATION NUMBER MUST BE PROVIDED TO YOUR WELL DRILLER: R 27601

AMOUNT OF PAYMENT: $40 per well

X 4 Number of wells to be constructed on this job site

$ 160.00 TOTAL DUE and AMOUNT ENCLOSED

Agency Validation

CI: _____

Date: _____

SUBMITTED BY (return address) ↓

NAME R & R DRILLING INC

MAILING ADDRESS P.O. BOX 535

CITY PUYALLUP STATE WA ZIP 98371

ECY 040-22 (7/93)

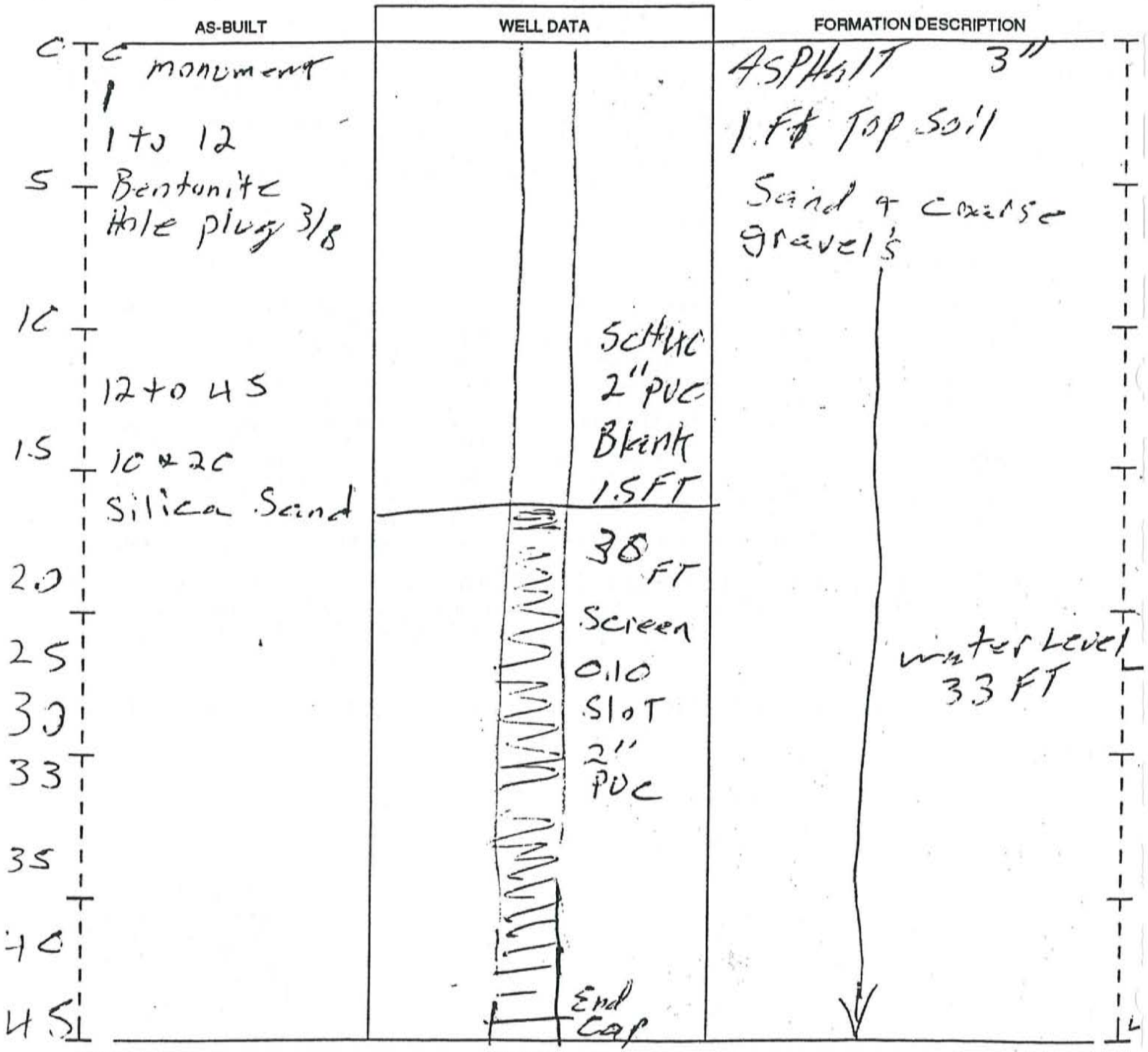
Continued on back →

RESOURCE PROTECTION WELL REPORT

START CARD NO. R2 7600

PROJECT NAME: NOSL Corp.
WELL IDENTIFICATION NO. MW-4
DRILLING METHOD: Air Rotary
DRILLER: Rick Carmel
FIRM: R&R Drilling
SIGNATURE: [signature]
CONSULTING FIRM: MAXIM
REPRESENTATIVE: Rachel

COUNTY: Yakima
LOCATION: SE¼ NE¼ Sec 25 Twn 13N R 18E
STREET ADDRESS OF WELL: 3rd & Hill Blvd
WATER LEVEL ELEVATION: 33
GROUND SURFACE ELEVATION:
INSTALLED: 4-4-96 2" PVC
DEVELOPED: Bailer



SCALE: 1" = _____ PAGE _____ OF _____

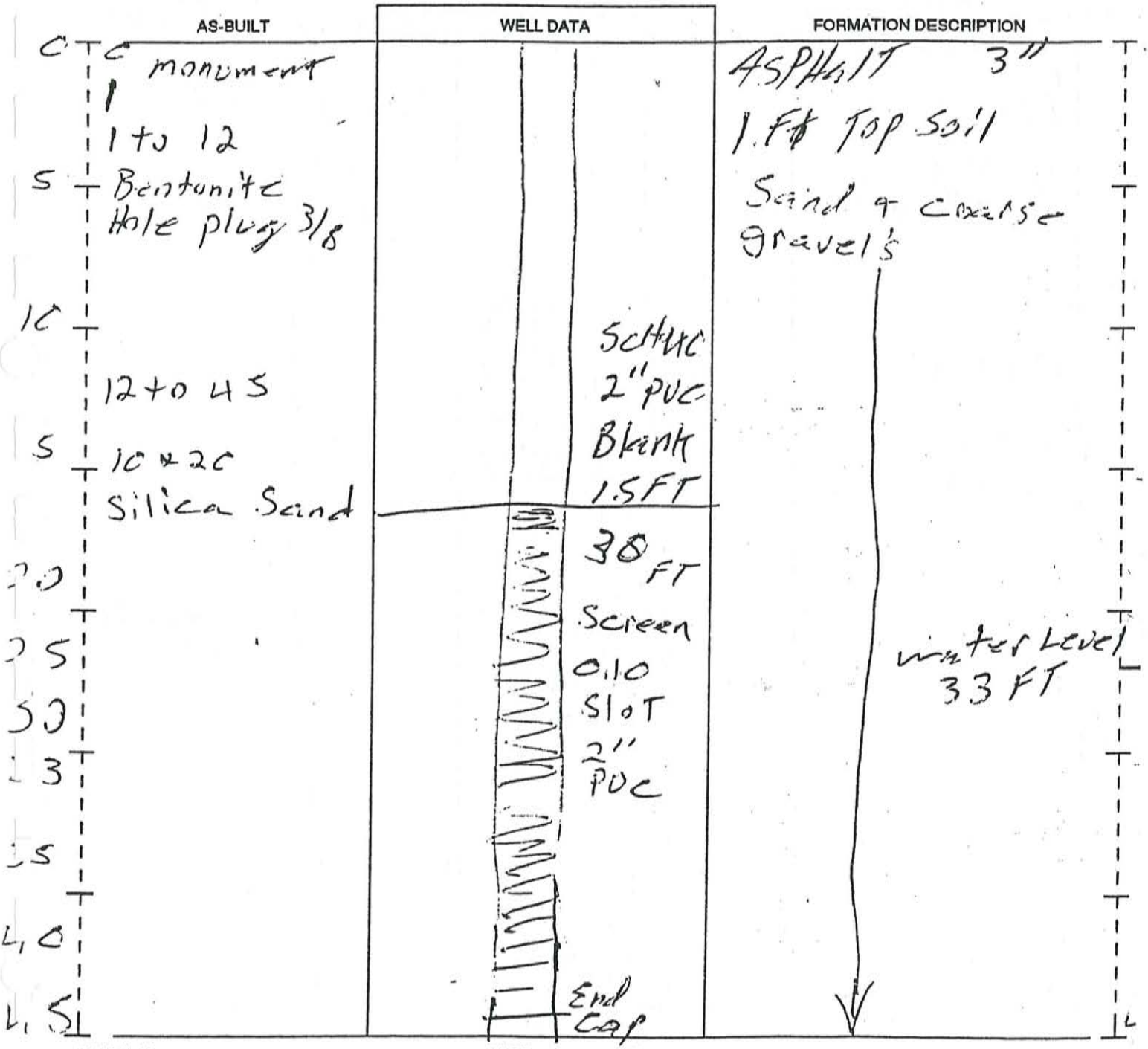
ECY 050-12 (Rev. 11/89)

RESOURCE PROTECTION WELL REPORT

START CARD NO. R2760

PROJECT NAME: NOSL Corp.
WELL IDENTIFICATION NO. MW-2
DRILLING METHOD: Air Rotary
DRILLER: Rick Carmel
FIRM: R&R Drilling
SIGNATURE: [signature]
CONSULTING FIRM: MAXIM
REPRESENTATIVE: Rachel

COUNTY: Yakima
LOCATION: SE¼ NE¼ Sec 25 Twn 13N R 19E
STREET ADDRESS OF WELL: 3rd & Wash Hill Blvd
WATER LEVEL ELEVATION: 33
GROUND SURFACE ELEVATION:
INSTALLED: 4-4-96 2" PVC
DEVELOPED: Bailer



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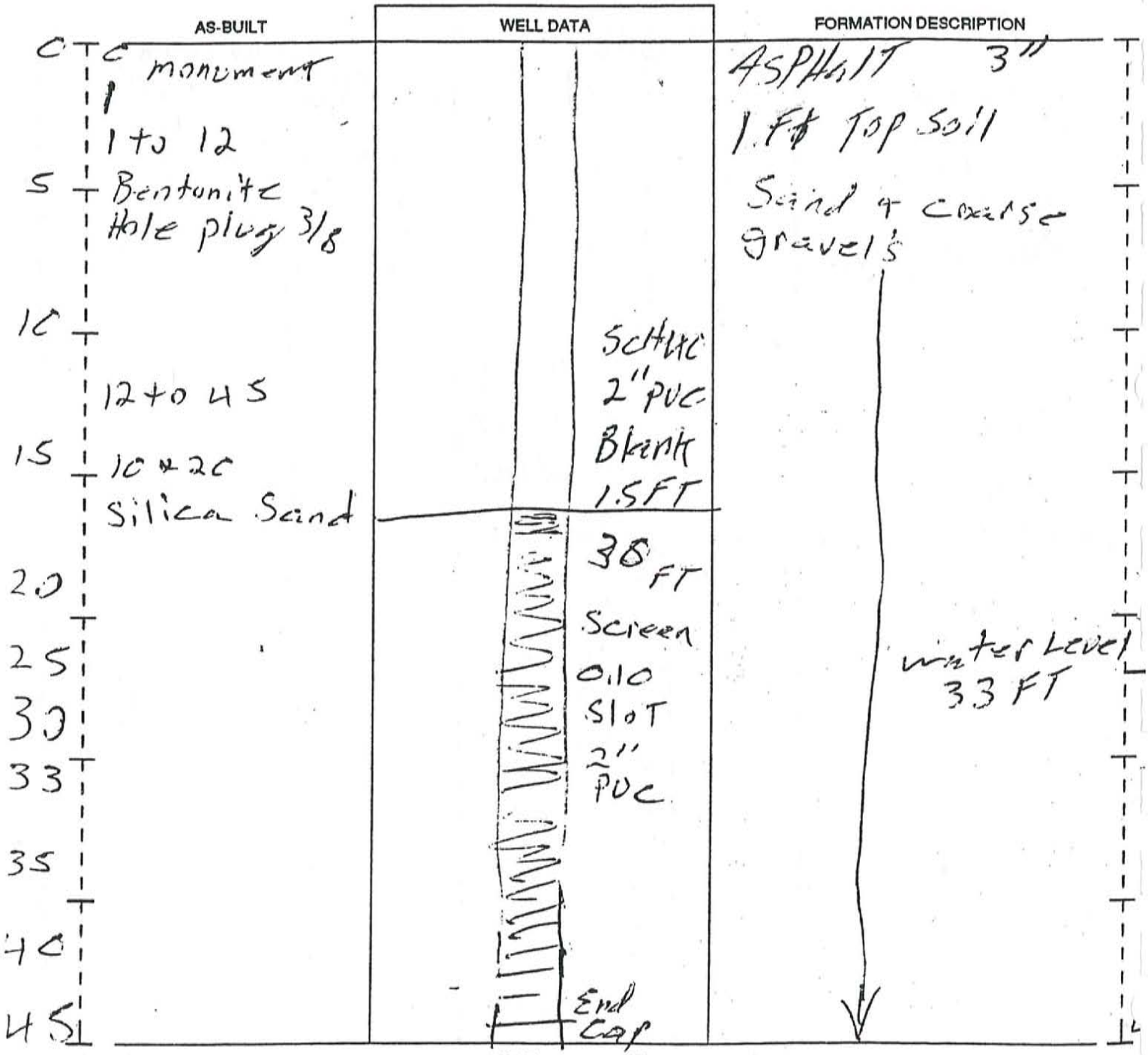
ECY 050-12 (Rev. 11/89)

RESOURCE PROTECTION WELL REPORT

START CARD NO. R2760

PROJECT NAME: NOEL Corp.
WELL IDENTIFICATION NO. MW-3
DRILLING METHOD: Air Rotary
DRILLER: Rick Carmel
FIRM: R&R Drilling
SIGNATURE: Robin A Liddell
CONSULTING FIRM: MAXIM
REPRESENTATIVE: Rachel

COUNTY: Yakima
LOCATION: SE¼ NE¼ Sec 25 Twn 13N R 18E
STREET ADDRESS OF WELL: 3rd & Nob Hill Blv
WATER LEVEL ELEVATION: 33
GROUND SURFACE ELEVATION:
INSTALLED: 4-7-96 2" PVC
DEVELOPED: Bailer



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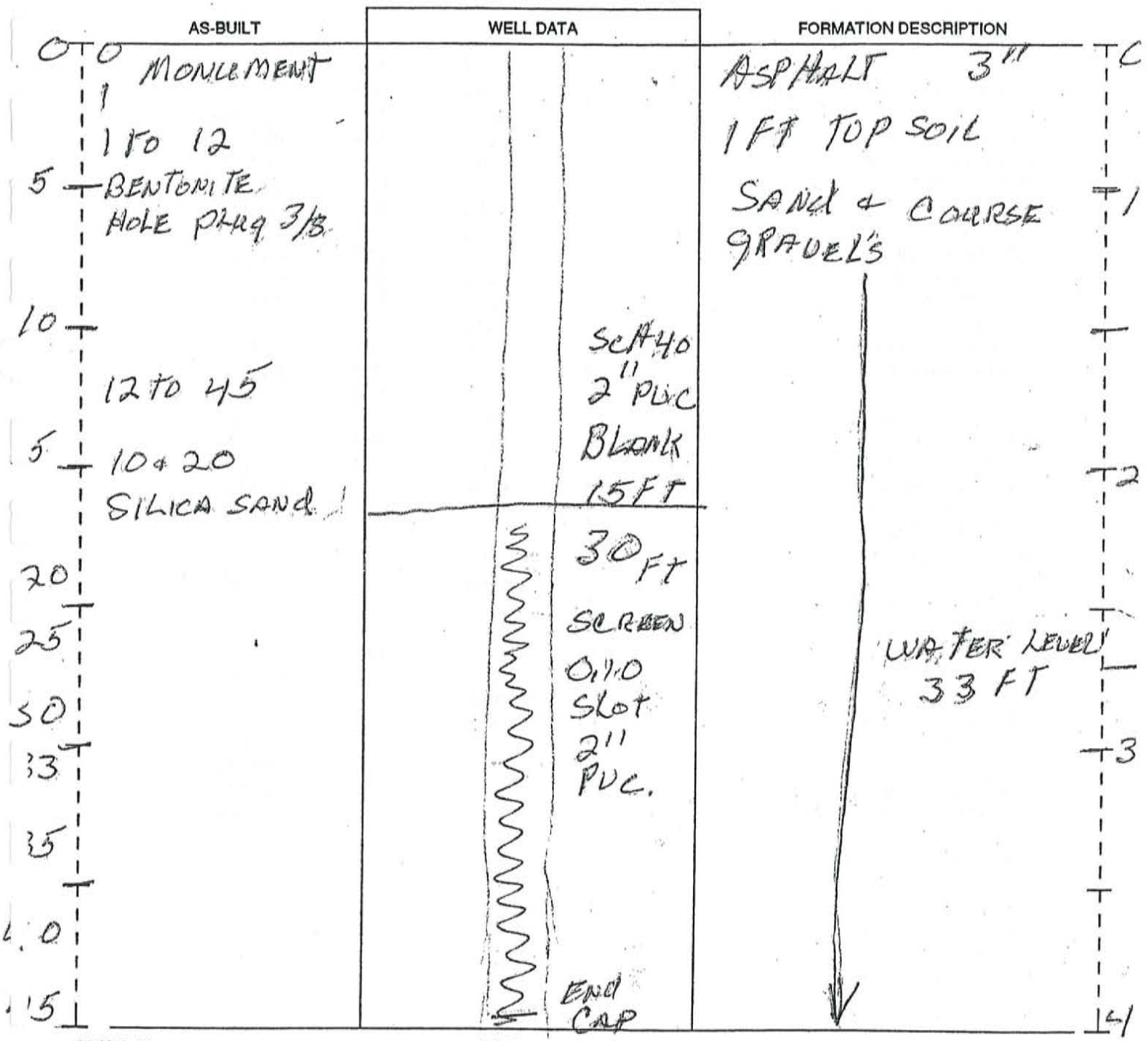
ECY 050-12 (Rev. 11/89)

RESOURCE PROTECTION WELL REPORT

START CARD NO. R2760 1

PROJECT NAME: NOEL CORP
WELL IDENTIFICATION NO. MW-4
DRILLING METHOD: AIR ROTARY
DRILLER: RICK CARMEL
FIRM: R+R DRILLING
SIGNATURE: Rodney A Sumski
CONSULTING FIRM: MARIM
REPRESENTATIVE: RACHEL

COUNTY: YAKIMA
LOCATION: SE¼ NE¼ Sec 25 Twn 13N R 18E
STREET ADDRESS OF WELL: 3RD + NOB HILL BLVD
WATER LEVEL ELEVATION: 33
GROUND SURFACE ELEVATION:
INSTALLED: 4-7-96 2" PVC
DEVELOPED: BAILER



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ECY 050-12 (Rev. 11/89)

Client Name: MAXIM - Yakima
Project No.: 95-932
Laboratory No.: 173226
Sample Name: MW-1 15'
Sample Date: 04/11/96
Collected by: ROB FARRELL
Time Sampled: 1535
Sample Type: SOIL

MW-1 Soil from 15' (8010)

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
EPA METHOD 8260				
Data File Number-Volatiles	0417961010			
Bromobenzene	<5	ug/kg	8260	04/17/96
Bromodichloromethane	<5	ug/kg	8260	04/17/96
Bromoform	<5	ug/kg	8260	04/17/96
Bromomethane	<5	ug/kg	8260	04/17/96
Carbon Tetrachloride	<5	ug/kg	8260	04/17/96
Chlorobenzene	<5	ug/kg	8260	04/17/96
Chloroethane	<5	ug/kg	8260	04/17/96
Chloroform	<5	ug/kg	8260	04/17/96
Chloromethane (Methyl chloride)	<5	ug/kg	8260	04/17/96
Dibromochloromethane	<5	ug/kg	8260	04/17/96
Dibromomethane	<5	ug/kg	8260	04/17/96
Dichlorodifluoromethane	<5	ug/kg	8260	04/17/96
1,2-Dichlorobenzene	<5	ug/kg	8260	04/17/96
1,3-Dichlorobenzene	<5	ug/kg	8260	04/17/96
1,4-Dichlorobenzene	<5	ug/kg	8260	04/17/96
1,1-Dichloroethane	<5	ug/kg	8260	04/17/96
1,2-Dichloroethane	<5	ug/kg	8260	04/17/96
1,1-Dichloroethene	<5	ug/kg	8260	04/17/96
c-1,2-Dichloroethene	<5	ug/kg	8260	04/17/96
t-1,2-Dichloroethene	<5	ug/kg	8260	04/17/96
1,2-Dichloropropane	<5	ug/kg	8260	04/17/96
Methylene chloride	<25	ug/kg	8260	04/17/96
1,1,1,2-Tetrachloroethane	<5	ug/kg	8260	04/17/96
1,1,2,2-Tetrachloroethane	<5	ug/kg	8260	04/17/96
Tetrachloroethene	<5	ug/kg	8260	04/17/96
1,1,1-Trichloroethane	<5	ug/kg	8260	04/17/96
1,1,2-Trichloroethane	<5	ug/kg	8260	04/17/96
Trichloroethene	<5	ug/kg	8260	04/17/96
Trichlorofluoromethane	<5	ug/kg	8260	04/17/96
Vinyl chloride	<5	ug/kg	8260	04/17/96
1,2-Dichloroethane-d4 (Surrogate)	97	%	8260	04/17/96
Toluene-d8 (Surrogate)	98	%	8260	04/17/96
4-Bromofluorobenzene (Surrogate)	104	%	8260	04/17/96
VOLATILE ORGANIC COMPOUNDS				
Benzyl chloride	(1)	ug/kg	8260	04/17/96
c-1,3-Dichloropropene	<5	ug/kg	8260	04/17/96
t-1,3-Dichloropropene	<5	ug/kg	8260	04/17/96
2-Chloroethyl vinyl ether	<50	ug/kg	8260	04/17/96

Client Name: MAXIM - TRI-CITIES, WA
Project No.: 87-921
Laboratory No.: 173226
Sample Name: MW-1 15'
Sample Date: 04/09/96
Collected by: ROB FARRELL
Time Sampled: 1535
Sample Type: SOIL

MW-1 Soil from 15' (8260)

DRAFT

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
EPA METHOD 8260				
Data File Number-Volatiles	0417961010		8260	04/17/96
Benzene	<5	ug/kg	8260	04/17/96
Bromobenzene	<5	ug/kg	8260	04/17/96
Bromochloromethane	<5	ug/kg	8260	04/17/96
Bromodichloromethane	<5	ug/kg	8260	04/17/96
Bromoform	<5	ug/kg	8260	04/17/96
Bromomethane	<5	ug/kg	8260	04/17/96
n-Butylbenzene	<5	ug/kg	8260	04/17/96
sec-Butylbenzene	<5	ug/kg	8260	04/17/96
t-Butylbenzene	<5	ug/kg	8260	04/17/96
Carbon Tetrachloride	<5	ug/kg	8260	04/17/96
Chlorobenzene	<5	ug/kg	8260	04/17/96
Chloroethane	<5	ug/kg	8260	04/17/96
Chloroform	<5	ug/kg	8260	04/17/96
Chloromethane (Methyl chloride)	<5	ug/kg	8260	04/17/96
2-Chlorotoluene	<5	ug/kg	8260	04/17/96
4-Chlorotoluene	<5	ug/kg	8260	04/17/96
Dibromochloromethane	<5	ug/kg	8260	04/17/96
1,2-Dibromo-3-chloropropane	<25	ug/kg	8260	04/17/96
1,2-Dibromoethane	<5	ug/kg	8260	04/17/96
Dibromomethane	<5	ug/kg	8260	04/17/96
Dichlorodifluoromethane	<5	ug/kg	8260	04/17/96
1,2-Dichlorobenzene	<5	ug/kg	8260	04/17/96
1,3-Dichlorobenzene	<5	ug/kg	8260	04/17/96
1,4-Dichlorobenzene	<5	ug/kg	8260	04/17/96
1,1-Dichloroethane	<5	ug/kg	8260	04/17/96
1,2-Dichloroethane	<5	ug/kg	8260	04/17/96
1,1-Dichloroethene	<5	ug/kg	8260	04/17/96
c-1,2-Dichloroethene	<5	ug/kg	8260	04/17/96
t-1,2-Dichloroethene	<5	ug/kg	8260	04/17/96
1,2-Dichloropropane	<5	ug/kg	8260	04/17/96
1,3-Dichloropropane	<5	ug/kg	8260	04/17/96
2,2-Dichloropropane	<25	ug/kg	8260	04/17/96
1,1-Dichloropropene	<5	ug/kg	8260	04/17/96
Ethylbenzene	<5	ug/kg	8260	04/17/96
Hexachlorobutadiene	<10	ug/kg	8260	04/17/96
Cumene (Isopropylbenzene)	<5	ug/kg	8260	04/17/96
Isopropyltoluene	<5	ug/kg	8260	04/17/96
Methylene chloride	<25	ug/kg	8260	04/17/96
Naphthalene	<5	ug/kg	8260	04/17/96
n-Propylbenzene	<5	ug/kg	8260	04/17/96
Styrene	<5	ug/kg	8260	04/17/96

Client Name: MAXIN - TRI-CITIES, WA
Project No.: 87-921
Laboratory No.: 173226
Sample Name: MW-1 15'
Sample Date: 04/09/96
Collected by: ROB FARRELL
Time Sampled: 1535
Sample Type: SOIL

DRAFT

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
1,1,1,2-Tetrachloroethane	<5	ug/kg	8260	04/17/96
1,1,2,2-Tetrachloroethane	<5	ug/kg	8260	04/17/96
Tetrachloroethene	<5	ug/kg	8260	04/17/96
Toluene	<5	ug/kg	8260	04/17/96
1,2,3-Trichlorobenzene	<5	ug/kg	8260	04/17/96
1,2,4-Trichlorobenzene	<5	ug/kg	8260	04/17/96
1,1,1-Trichloroethane	<5	ug/kg	8260	04/17/96
1,1,2-Trichloroethane	<5	ug/kg	8260	04/17/96
Trichloroethene	<5	ug/kg	8260	04/17/96
Trichlorofluoromethane	<5	ug/kg	8260	04/17/96
1,2,3-Trichloropropane	<5	ug/kg	8260	04/17/96
1,2,4-Trimethylbenzene	<5	ug/kg	8260	04/17/96
1,3,5-Trimethylbenzene	<5	ug/kg	8260	04/17/96
Vinyl chloride	<5	ug/kg	8260	04/17/96
Total xylenes	<5	ug/kg	8260	04/17/96
1,2-Dichloroethane-d4 (Surrogate)	97	%	8260	04/17/96
Toluene-d8 (Surrogate)	98	%	8260	04/17/96
4-Bromofluorobenzene (Surrogate)	104	%	8260	04/17/96

Client Name: MAXIM - Yakima
Project No.: 95-932
Laboratory No.: 173224
Sample Name: MW-4 5'
Sample Date: 04/09/96
Collected by: ROB FARRELL
Time Sampled: 1010
Sample Type: SOIL

MW-4 soil from 5' (8010)

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
EPA METHOD 8260				
Data File Number-Volatiles	0417961008			
Bromobenzene	<5	ug/kg	8260	04/17/96
Bromodichloromethane	<5	ug/kg	8260	04/17/96
Bromoform	<5	ug/kg	8260	04/17/96
Bromomethane	<5	ug/kg	8260	04/17/96
Carbon Tetrachloride	<5	ug/kg	8260	04/17/96
Chlorobenzene	<5	ug/kg	8260	04/17/96
Chloroethane	<5	ug/kg	8260	04/17/96
Chloroform	<5	ug/kg	8260	04/17/96
Chloromethane (Methyl chloride)	<5	ug/kg	8260	04/17/96
Dibromochloromethane	<5	ug/kg	8260	04/17/96
Dibromomethane	<5	ug/kg	8260	04/17/96
Dichlorodifluoromethane	<5	ug/kg	8260	04/17/96
1,2-Dichlorobenzene	<5	ug/kg	8260	04/17/96
1,3-Dichlorobenzene	<5	ug/kg	8260	04/17/96
1,4-Dichlorobenzene	<5	ug/kg	8260	04/17/96
1,1-Dichloroethane	<5	ug/kg	8260	04/17/96
1,2-Dichloroethane	<5	ug/kg	8260	04/17/96
1,1-Dichloroethene	<5	ug/kg	8260	04/17/96
c-1,2-Dichloroethene	<5	ug/kg	8260	04/17/96
t-1,2-Dichloroethene	<5	ug/kg	8260	04/17/96
1,2-Dichloropropane	<5	ug/kg	8260	04/17/96
Methylene chloride	<25	ug/kg	8260	04/17/96
1,1,1,2-Tetrachloroethane	<5	ug/kg	8260	04/17/96
1,1,2,2-Tetrachloroethane	<5	ug/kg	8260	04/17/96
Tetrachloroethene	<5	ug/kg	8260	04/17/96
1,1,1-Trichloroethane	<5	ug/kg	8260	04/17/96
1,1,2-Trichloroethane	<5	ug/kg	8260	04/17/96
Trichloroethene	<5	ug/kg	8260	04/17/96
Trichlorofluoromethane	<5	ug/kg	8260	04/17/96
Vinyl chloride	<5	ug/kg	8260	04/17/96
1,2-Dichloroethane-d4 (Surrogate)	96	%	8260	04/17/96
Toluene-d8 (Surrogate)	99	%	8260	04/17/96
4-Bromofluorobenzene (Surrogate)	104	%	8260	04/17/96
VOLATILE ORGANIC COMPOUNDS				
Benzyl chloride	(1)	ug/kg	8260	04/17/96
c-1,3-Dichloropropene	<5	ug/kg	8260	04/17/96
t-1,3-Dichloropropene	<5	ug/kg	8260	04/17/96
2-Chloroethyl vinyl ether	<50	ug/kg	8260	04/17/96

Soil @ MW-4 @ 5' (8260)

DRAFT

Client Name: MAXIM - TRI-CITIES, MA
Project No.: 87-921
Laboratory No.: 173284
Sample Name: MW-4 5'
Sample Date: 04/09/96
Collected by: ROB FARRELL
Time Sampled: 1010
Sample Type: SOIL

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
EPA METHOD 8260				
Data File Number-Volatiles	041796100B		8260	04/17/96
Benzene	<5	ug/kg	8260	04/17/96
Bromobenzene	<5	ug/kg	8260	04/17/96
Bromochloromethane	<5	ug/kg	8260	04/17/96
Bromodichloromethane	<5	ug/kg	8260	04/17/96
Bromoform	<5	ug/kg	8260	04/17/96
Bromomethane	<5	ug/kg	8260	04/17/96
n-Butylbenzene	<5	ug/kg	8260	04/17/96
sec-Butylbenzene	<5	ug/kg	8260	04/17/96
t-Butylbenzene	<5	ug/kg	8260	04/17/96
Carbon Tetrachloride	<5	ug/kg	8260	04/17/96
Chlorobenzene	<5	ug/kg	8260	04/17/96
Chloroethane	<5	ug/kg	8260	04/17/96
Chloroform	<5	ug/kg	8260	04/17/96
Chloromethane (Methyl chloride)	<5	ug/kg	8260	04/17/96
2-Chlorotoluene	<5	ug/kg	8260	04/17/96
4-Chlorotoluene	<5	ug/kg	8260	04/17/96
Dibromochloromethane	<5	ug/kg	8260	04/17/96
1,2-Dibromo-3-chloropropane	<25	ug/kg	8260	04/17/96
1,2-Dibromoethane	<5	ug/kg	8260	04/17/96
Dibromomethane	<5	ug/kg	8260	04/17/96
Dichlorodifluoromethane	<5	ug/kg	8260	04/17/96
1,2-Dichlorobenzene	<5	ug/kg	8260	04/17/96
1,3-Dichlorobenzene	<5	ug/kg	8260	04/17/96
1,4-Dichlorobenzene	<5	ug/kg	8260	04/17/96
1,1-Dichloroethane	<5	ug/kg	8260	04/17/96
1,2-Dichloroethane	<5	ug/kg	8260	04/17/96
1,1-Dichloroethene	<5	ug/kg	8260	04/17/96
c-1,2-Dichloroethene	<5	ug/kg	8260	04/17/96
t-1,2-Dichloroethene	<5	ug/kg	8260	04/17/96
1,2-Dichloropropane	<5	ug/kg	8260	04/17/96
1,3-Dichloropropane	<5	ug/kg	8260	04/17/96
2,2-Dichloropropane	<25	ug/kg	8260	04/17/96
1,1-Dichloropropene	<5	ug/kg	8260	04/17/96
Ethylbenzene	<5	ug/kg	8260	04/17/96
Hexachlorobutadiene	<10	ug/kg	8260	04/17/96
Cumene (Isopropylbenzene)	<5	ug/kg	8260	04/17/96
Isopropyltoluene	<5	ug/kg	8260	04/17/96
Methylene chloride	<25	ug/kg	8260	04/17/96
Naphthalene	<5	ug/kg	8260	04/17/96
n-Propylbenzene	<5	ug/kg	8260	04/17/96
Styrene	<5	ug/kg	8260	04/17/96

Client Name: MAXIM - TRI-CITIES, WA
Project No.: 87-921
Laboratory No.: 173224
Sample Name: MW-4 5'
Sample Date: 04/09/96
Collected by: ROB FARRELL
Time Sampled: 1010
Sample Type: SOIL

DRAFT

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
1,1,1,2-Tetrachloroethane	<5	ug/kg	8260	04/17/96
1,1,2,2-Tetrachloroethane	<5	ug/kg	8260	04/17/96
Tetrachloroethene	<5	ug/kg	8260	04/17/96
Toluene	<5	ug/kg	8260	04/17/96
1,2,3-Trichlorobenzene	<5	ug/kg	8260	04/17/96
1,2,4-Trichlorobenzene	<5	ug/kg	8260	04/17/96
1,1,1-Trichloroethane	<5	ug/kg	8260	04/17/96
1,1,2-Trichloroethane	<5	ug/kg	8260	04/17/96
Trichloroethene	<5	ug/kg	8260	04/17/96
Trichlorofluoromethane	<5	ug/kg	8260	04/17/96
1,2,3-Trichloropropane	<5	ug/kg	8260	04/17/96
1,2,4-Trimethylbenzene	<5	ug/kg	8260	04/17/96
1,3,5-Trimethylbenzene	<5	ug/kg	8260	04/17/96
Vinyl chloride	<5	ug/kg	8260	04/17/96
Total xylenes	<5	ug/kg	8260	04/17/96
1,2-Dichloroethane-d4 (Surrogate)	96	%	8260	04/17/96
Toluene-d8 (Surrogate)	99	%	8260	04/17/96
4-Bromofluorobenzene (Surrogate)	104	%	8260	04/17/96

Client Name: MAXIM - Yakima
Project No.: 95-932
Laboratory No.: 173225
Sample Name: M-4 15'
Sample Date: 04/09/96
Collected by: ROB FARRELL
Time Sampled: 1125
Sample Type: SOIL

MW-4 Soil from 15' (8010)

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
EPA METHOD 8260				
Data File Number-Volatiles	0417961009			
Bromobenzene	<5	ug/kg	8260	04/17/96
Bromodichloromethane	<5	ug/kg	8260	04/17/96
Bromoform	<5	ug/kg	8260	04/17/96
Bromomethane	<5	ug/kg	8260	04/17/96
Carbon Tetrachloride	<5	ug/kg	8260	04/17/96
Chlorobenzene	<5	ug/kg	8260	04/17/96
Chloroethane	<5	ug/kg	8260	04/17/96
Chloroform	<5	ug/kg	8260	04/17/96
Chloromethane (Methyl chloride)	<5	ug/kg	8260	04/17/96
Dibromochloromethane	<5	ug/kg	8260	04/17/96
Dibromomethane	<5	ug/kg	8260	04/17/96
Dichlorodifluoromethane	<5	ug/kg	8260	04/17/96
1,2-Dichlorobenzene	<5	ug/kg	8260	04/17/96
1,3-Dichlorobenzene	<5	ug/kg	8260	04/17/96
1,4-Dichlorobenzene	<5	ug/kg	8260	04/17/96
1,1-Dichloroethane	<5	ug/kg	8260	04/17/96
1,2-Dichloroethane	<5	ug/kg	8260	04/17/96
1,1-Dichloroethene	<5	ug/kg	8260	04/17/96
c-1,2-Dichloroethene	<5	ug/kg	8260	04/17/96
t-1,2-Dichloroethene	<5	ug/kg	8260	04/17/96
1,2-Dichloropropane	<5	ug/kg	8260	04/17/96
Methylene chloride	<25	ug/kg	8260	04/17/96
1,1,1,2-Tetrachloroethane	<5	ug/kg	8260	04/17/96
1,1,2,2-Tetrachloroethane	<5	ug/kg	8260	04/17/96
Tetrachloroethene	<5	ug/kg	8260	04/17/96
1,1,1-Trichloroethane	<5	ug/kg	8260	04/17/96
1,1,2-Trichloroethane	<5	ug/kg	8260	04/17/96
Trichloroethene	<5	ug/kg	8260	04/17/96
Trichlorofluoromethane	<5	ug/kg	8260	04/17/96
Vinyl chloride	<5	ug/kg	8260	04/17/96
1,2-Dichloroethane-d4 (Surrogate)	102	%	8260	04/17/96
Toluene-d8 (Surrogate)	99	%	8260	04/17/96
4-Bromofluorobenzene (Surrogate)	105	%	8260	04/17/96
VOLATILE ORGANIC COMPOUNDS				
Benzyl chloride	(1)	ug/kg	8260	04/17/96
c-1,3-Dichloropropene	<5	ug/kg	8260	04/17/96
t-1,3-Dichloropropene	<5	ug/kg	8260	04/17/96
2-Chloroethyl vinyl ether	<50	ug/kg	8260	04/17/96

Client Name: MAXIM - TRI-CITIES, WA
Project No.: 87-921
Laboratory No.: 173225
Sample Name: M-4 15'
Sample Date: 04/09/96
Collected by: ROB FARRELL
Time Sampled: 1125
Sample Type: SOIL

MW-4 Soil from 15' (8260)

DRAFT

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
EPA METHOD 8260				
Data File Number-Volatiles	0417961009		8260	04/17/96
Benzene	<5	ug/kg	8260	04/17/96
Bromobenzene	<5	ug/kg	8260	04/17/96
Bromochloromethane	<5	ug/kg	8260	04/17/96
Bromodichloromethane	<5	ug/kg	8260	04/17/96
Bromoform	<5	ug/kg	8260	04/17/96
Bromomethane	<5	ug/kg	8260	04/17/96
n-Butylbenzene	<5	ug/kg	8260	04/17/96
sec-Butylbenzene	<5	ug/kg	8260	04/17/96
t-Butylbenzene	<5	ug/kg	8260	04/17/96
Carbon Tetrachloride	<5	ug/kg	8260	04/17/96
Chlorobenzene	<5	ug/kg	8260	04/17/96
Chloroethane	<5	ug/kg	8260	04/17/96
Chloroform	<5	ug/kg	8260	04/17/96
Chloromethane (Methyl chloride)	<5	ug/kg	8260	04/17/96
2-Chlorotoluene	<5	ug/kg	8260	04/17/96
4-Chlorotoluene	<5	ug/kg	8260	04/17/96
Dibromochloromethane	<5	ug/kg	8260	04/17/96
1,2-Dibromo-3-chloropropane	<25	ug/kg	8260	04/17/96
1,2-Dibromoethane	<5	ug/kg	8260	04/17/96
Dibromomethane	<5	ug/kg	8260	04/17/96
Dichlorodifluoromethane	<5	ug/kg	8260	04/17/96
1,2-Dichlorobenzene	<5	ug/kg	8260	04/17/96
1,3-Dichlorobenzene	<5	ug/kg	8260	04/17/96
1,4-Dichlorobenzene	<5	ug/kg	8260	04/17/96
1,1-Dichloroethane	<5	ug/kg	8260	04/17/96
1,2-Dichloroethane	<5	ug/kg	8260	04/17/96
1,1-Dichloroethene	<5	ug/kg	8260	04/17/96
c-1,2-Dichloroethene	<5	ug/kg	8260	04/17/96
t-1,2-Dichloroethene	<5	ug/kg	8260	04/17/96
1,2-Dichloropropane	<5	ug/kg	8260	04/17/96
1,3-Dichloropropane	<5	ug/kg	8260	04/17/96
2,2-Dichloropropane	<25	ug/kg	8260	04/17/96
1,1-Dichloropropene	<5	ug/kg	8260	04/17/96
Ethylbenzene	<5	ug/kg	8260	04/17/96
Hexachlorobutadiene	<10	ug/kg	8260	04/17/96
Cumene (Isopropylbenzene)	<5	ug/kg	8260	04/17/96
Isopropyltoluene	<5	ug/kg	8260	04/17/96
Methylene chloride	<25	ug/kg	8260	04/17/96
Naphthalene	<5	ug/kg	8260	04/17/96
n-Propylbenzene	<5	ug/kg	8260	04/17/96
Styrene	<5	ug/kg	8260	04/17/96

Client Name: MAXIN - TRI-CITIES, WA
Project No.: 87-921
Laboratory No.: 173225
Sample Name: M-4 15'
Sample Date: 04/09/96
Collected by: ROB FARRELL
Time Sampled: 1125
Sample Type: SOIL

DRAFT

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
1,1,1,2-Tetrachloroethane	<5	ug/kg	8260	04/17/96
1,1,2,2-Tetrachloroethane	<5	ug/kg	8260	04/17/96
Tetrachloroethene	<5	ug/kg	8260	04/17/96
Toluene	<5	ug/kg	8260	04/17/96
1,2,3-Trichlorobenzene	<5	ug/kg	8260	04/17/96
1,2,4-Trichlorobenzene	<5	ug/kg	8260	04/17/96
1,1,1-Trichloroethane	<5	ug/kg	8260	04/17/96
1,1,2-Trichloroethane	<5	ug/kg	8260	04/17/96
Trichloroethene	<5	ug/kg	8260	04/17/96
Trichlorofluoromethane	<5	ug/kg	8260	04/17/96
1,2,3-Trichloropropane	<5	ug/kg	8260	04/17/96
1,2,4-Trimethylbenzene	<5	ug/kg	8260	04/17/96
1,3,5-Trimethylbenzene	<5	ug/kg	8260	04/17/96
Vinyl chloride	<5	ug/kg	8260	04/17/96
Total xylenes	<5	ug/kg	8260	04/17/96
1,2-Dichloroethane-d4 (Surrogate)	102	%	8260	04/17/96
Toluene-d8 (Surrogate)	99	%	8260	04/17/96
4-Bromofluorobenzene (Surrogate)	105	%	8260	04/17/96

CHAIN OF CUSTODY RECORD

MAXIM TECHNOLOGIES INC

Project or Site Name: Southgate Laundry

Project Number: 5609500946.04

Sampler Name (Printed): Rob Farrell

- [ ] Billings, MT
- [ ] Boise, ID
- [ ] Great Falls, MT
- [ ] Helena, MT
- [ ] Missoula, MT
- [x] Yakima, WA

Contact or Report to: Rachel Tauman (509) 577-8592

Contact Address or Location:

Sampler Signature: Rob Farrell

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED: 8010	NOTES	LAB NUMBER
4-9-96	10:10	MW-4 @ 5'	Grab	Soil	1 4oz jar	X	8010	173224
4-9-96	11:25	M-4 @ 15'	Grab	Soil	1 4oz jar	X	8010	25
4-11-96	15:35	MW-1 @ 15'	Grab	Soil	1 4oz JAR	X	8010	26
4-15-96	10:10	MW-1		wtr	4 viles	X	8010 ; HCl preservative	27
4-15-96	11:35	MW-2		wtr		X	8010	28
4-15-96	13:40	MW-3		wtr		X	8010	29
4-15-96	15:15	MW-4		wtr		X	8010	30
4-15-96		blind dup		wtr		X	8010	31
4-15-96		Trip blank		wtr	2 viles	X	blank source other than our lab; 8010	32
							MS 173228 MW-2 4/15 1135	33
							MSD	34

Notes: Use method 8260 or equivalent for compounds in the Method 8010 list.

Relinquished by	Date	Time	Received by
Rob Farrell	4-15-96	1615	[illegible]
[illegible]	4/16/96	0945	H Cleveland

Remarks: 8010 VOCS
4 wells x 4 viles each
1 blind dup
1 Trip blank
3 Soil Samples

Relinquished Unknown

Cooler temp 10.0°C

MAXIM TECHNOLOGIES INC

receipt.lst

SAMPLE RECEIPT CHECKLIST

Client Name: M - Yakima

Project: Southgate Laundry

Laboratory number(s): 173224 -32

Checklist completed by: GB / 4/16 (Initials / Date)

Date/Time Received: 4/16/96 0945 (Date / Time)

Received by: [signature]

Carrier name: FedX

Logged in by: GB 4/16 (Initials / Date)

Sample Type: Soil/Water

		YES	NO
1.	Shipping container in good condition?	✓	
2.	Custody seals present on shipping container?		✓
3.	Condition: Intact _____ Broken _____		
4.	Chain of custody present?	✓	
5.	Chain of custody signed when relinquished and received?		✓
6.	Chain of custody agrees with sample labels?	✓	
7.	Custody seals on sample bottles?		✓
8.	Condition: Intact _____ Broken _____		
9.	Samples in proper container/bottle?	✓	
10.	Samples intact?	✓	
11.	Sufficient sample volume for indicated test?	✓	
12.	VOA vials have zero headspace?	✓	
13.	Trip Blank received?	✓	
14.	(Ice/Frozen) Blue Ice present in shipping container? (circle one)	✓	
15.	Container temperature 1. 10.4°C 2. _____ 3. _____		

		YES	NO
16.	All samples rec'd within holding time?	✓	
	Preservation		
17.	pH check performed by: _______		
18.	Metals bottle(s) pH <2?	N	A
19.	Nutrient bottle(s) pH <2?		
20.	Cyanide bottle(s) pH >12?		
21.	Sulfide bottle(s) pH >9?		
22.	Oil & grease bottle(s) pH <2?		
23.	TOC bottle(s) pH <2?		
24.	DRO/418.1 bottle(s) pH <2?		
25.	Phenolics bottle(s) pH <2?		
26.	Volatiles (VOA) pH <2? (VOA pH checked by analyst)		
27.	Client contacted?		
28.	Person contacted		
29.	Date contacted		
30.	Contacted by		
31.	Regarding?		

Any NO response must be detailed in the comments section below. If items are not applicable, they should be marked NA.

COMMENTS: #5 See CofC GB

MONITORING WELL LISTING AT 3RD AVE. AND NOB HILL BLVD.

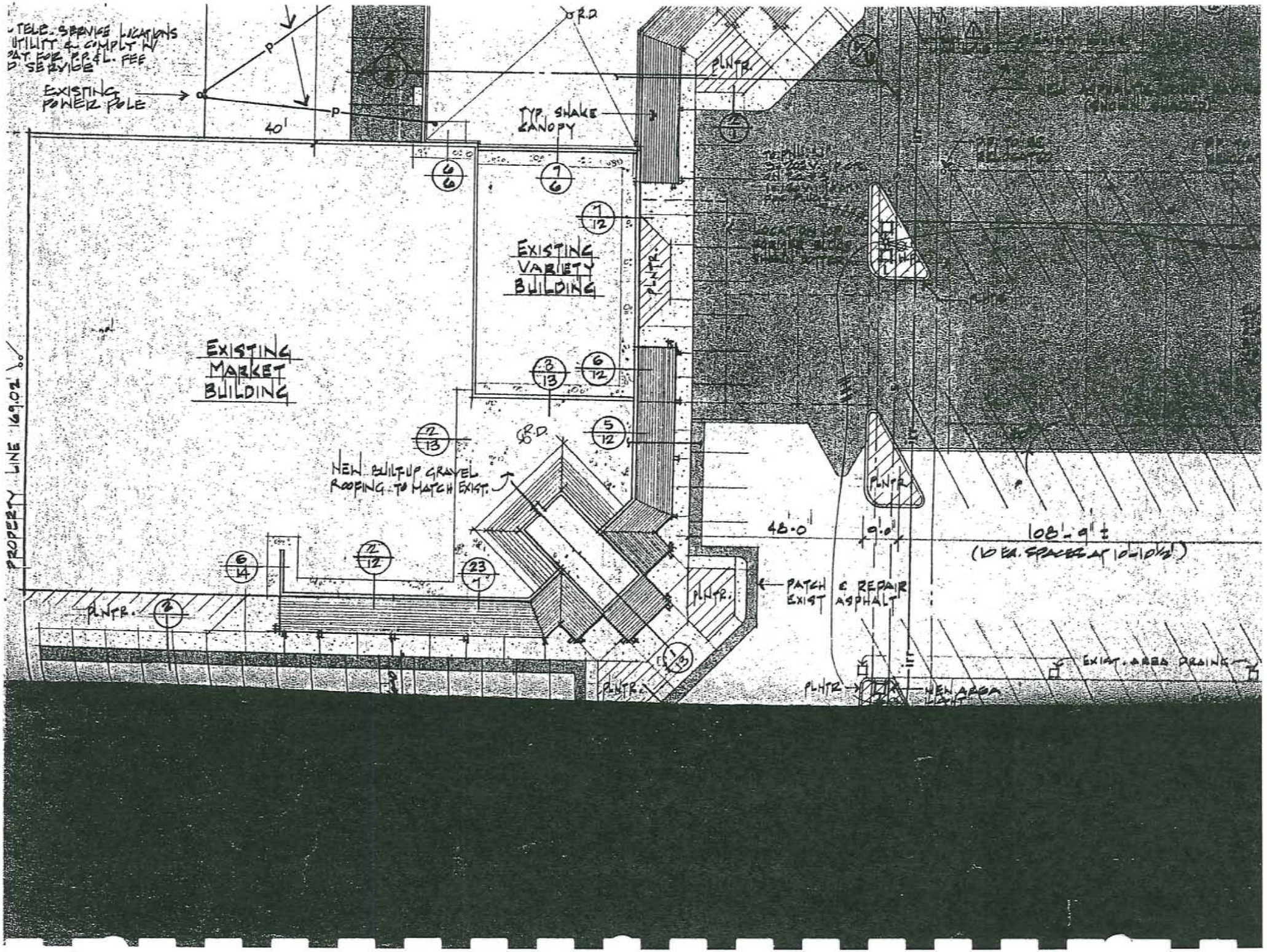
MONITORING WELL	STATE PLANE COORDINATES	ELEVATION		
SOUTHEAST	N=456736.3 E=1637838.0	SOUTH RIM = TOP PVC =	1055.25 1054.77	MW-3
SOUTHWEST	N=456717.9 E=1637700.7	SOUTH RIM = TOP PVC =	1055.57 1055.31	MW-4
MIDDLE	N=456866.4 E=1637817.4	SOUTH RIM = TOP PVC =	1056.82 1056.47	MW-2
NORTH	N=457023.1 E=1637695.4	SOUTH RIM = TOP PVC =	1057.16 1056.90	MW-1

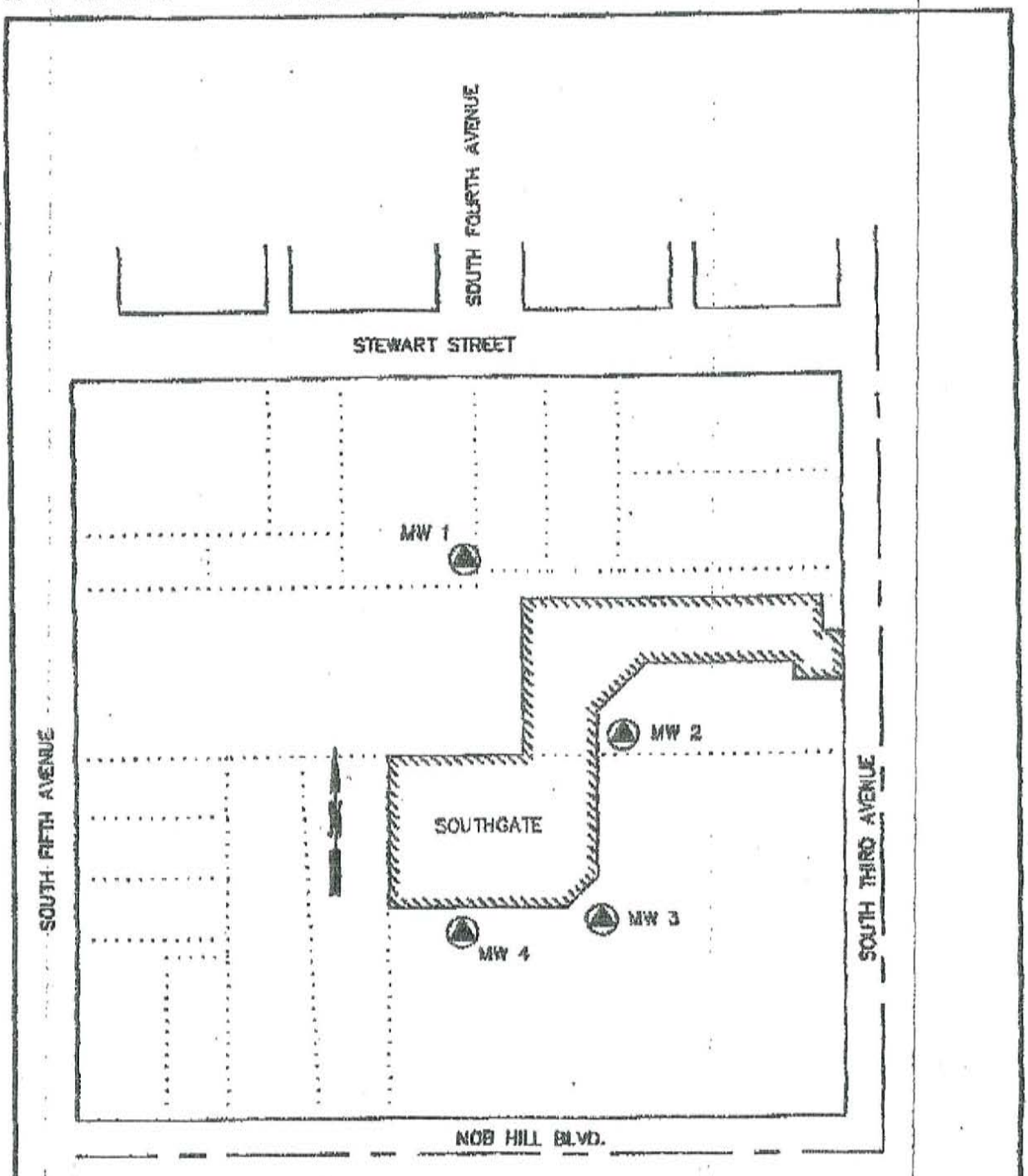
TO CONVERT state plane coordinates to actual ground coordinates scale using the factor of 1.000135034

Elevation is based on National Geodetic Vertical datum of 1988 (NGVD) 1991 adjusted, from City of Yakima GPS - control point number 593 having an elevation of 1057.41.

Horizontal datum is based on Washington State Plane Coordinate System (Lambert Projection) South Zone, North American Datum of 1983 (NAD 83) 1991 adjusted, established from City of Yakima GPS - control point numbers 734 and 835.

State Plane coordinates converted to latitide and longitude using U.S. Army Corps of Engineers CORPSCON program.


TELE. SERVICE LOCATIONS
UTILITY & COMPLTN W/
SAT. FOR P.P.&L. FEE
D SERVICE
EXISTING
POWER POLE
40'
TYP. SHAKE
CANOPY
PLNTR.
EXISTING
VARIETY
BUILDING
EXISTING
MARKET
BUILDING
PROPERTY LINE 169.02'
NEW BUILTUP GRAVEL
ROOFING TO MATCH EXIST.
48'-0"
9'-0"
108'-9" ±
(10 EA. SPACES AT 10'-10½")
PATCH & REPAIR
EXIST ASPHALT
EXIST. AREA DRAIN
NEW AREA



WELL NO.	NORTHING	EASTING	TOP SQ. RIM EL.	TOP PVC EL.
1	457023.1	1837695.4	1057.16	1056.90
2	456866.4	1837817.4	1056.82	1056.47
3	456736.3	1837838.0	1055.25	1054.77
4	456717.8	1837700.7	1055.57	1055.31

PLSA

MONITORING WELL LOCATION
FOR
NOEL CORPORATION
AT SOUTHGATE SHOPPING CENTER

APPENDIX B

CONTAMINATED SOIL DISPOSAL AND BACKFILL DOCUMENTS

Confirmation No. 97-1257
Billing Acct. No. 12299
Product Code LL

BILL OF LADING
CONTAMINATED SOIL

REGIONAL DISPOSAL COMPANY
200 - 112th Avenue NE, Suite 300
Bellevue, WA 98004
Telephone: (206) 646-3400 / Fax: (206) 646-3460

This Bill of Lading supplements the Master Service Agreement ("Agreement") entered into by Noel Corporation ("Customer") and Regional Disposal Company ("RDC") on 8/20/97 (date). The terms herein are made a part of the Agreement. In the event of conflict between this Bill of Lading and the Agreement, the terms of the Agreement prevail.

RDC hereby authorizes the Waste ("Waste") described in Confirmation No. 97-1257, signed by Customer on 8/20/97 (date), for disposal at Roosevelt Regional Landfill. Customer shall present a copy of this Bill of Lading with each shipment delivered.

Location of Waste: 1020 S 3rd Ave, Yakima, WA

Method of Shipment: Truck - self

Additional Fees (e.g., laboratory fees, transportation fees, special handling fees, etc. If none, so state):

none

PERFORMANCE DATE

FOR RDC TRANSPORTATION: Customer shall make the Waste available for shipment no later than n/a (date). RDC shall transport the Waste no later than n/a (date), unless RDC notifies the Customer in writing that Waste transport shall be suspended or canceled due to RDC's exercise of its right to inspect or analyze the Waste (as provided in the Agreement).

FOR CUSTOMER TRANSPORTATION: Customer shall begin delivery of the Waste at [*check one*]:

☒ Roosevelt Regional Landfill. ☐ Seattle Transfer Station located at Third and Lander.

Waste delivery shall begin no later than 8/21/97 (date), and shall complete delivery of the Waste no later than 9/2/97 (date), unless RDC notifies Customer in writing to suspend or cancel the waste delivery due to RDC's exercise of its right to inspect or analyze the Waste (As provided in the Agreement).

CUSTOMER	**REGIONAL DISPOSAL COMPANY**
X Larry A. Estes Signature	Kelsey Miller Signature
X LARRY G. ESTES V.P./SEC Printed Name and Title	Kelsey Miller - Proj Coordinator Printed Name and Title
X 8-20-97 Date	8.20.97 Date

ALL TRUCKS MUST HAVE A COPY OF THIS BILL OF LADING WHEN DELIVERING WASTE TO THE TRANSFER STATION OR TO THE LANDFILL.

Revised: 1/26/96

RABANCO REGIONAL DISPOSAL CO.

P.O. Box 338
Roosevelt, WA 99356
(509) 384-5641

Recycled

TICKET NUMBER 347472

*** COMPLETED WEIGHT TICKET ***

TRUCK ID: 1 Ken-Blu-Lewis Con. ACCOUNT: 12299 Cash - Landfill

COMMODITY: 66 Contaminated Soil
SOURCE: Yakima, WA
JOB ID: 97-1257
CONTAINER #: SEAL #:

CUSTOMER TICKET #: CUSTOMER WEIGHT: 0 LBS
COMMENTS:

	WEIGHT	TIME	DATE
IN:	92860 LBS	10:19	09/12/97
OUT:	33380 LBS	10:35	09/12/97

NET WEIGHT: 59480 LBS / 29.740 TONS

59480 29.740

Weighmaster - GAIL

Driver

600.81

I HAVE READ AND AGREE TO THE CONDITIONS ON THE REVERSE SIDE.

DRIVER COPY

RABANCO REGIONAL DISPOSAL CO.

P.O. Box 338
Roosevelt, WA 99356
(509) 384-5641

TICKET NUMBER 347213 *** COMPLETED WEIGHT TICKET ***

VEH ID: 1 Ken-Bilt-Lewis Con. ACCOUNT: 1284 Cash - Landfill

COMMODITY: 66 Contaminated Soil
ORIGIN: Yakima, WA
JOB ID: 97-1257
CONTAINER #: SEAL #:

CUSTOMER TICKET #: CUSTOMER WEIGHT: 0 LBS
COMMENTS:

	WEIGHT	TIME	DATE
1st:	76580 LBS	10:50	05/11/97
2nd:	33420 LBS	12:35	05/11/97

NET WEIGHT: 43140 LBS = 21.570 TONS

43140 21.570

Weighmaster - RRL

Driver

435.76

Recycled

I HAVE READ AND AGREE TO THE CONDITIONS ON THE REVERSE SIDE.

DRIVER COPY

RABANCO REGIONAL DISPOSAL CO.

P.O. Box 338
Roosevelt, WA 99356
(509) 384-5641

TICKET NUMBER 347214

*** COMPLETED WEIGHT TICKET ***

TRUCK ID: 2 Ken-Bilt/Vel-LewisON ACCOUNT: 12299 Cash - Landfill

COMMODITY: 66 Contaminated Soil
SOURCE: Yakima, WA
JOB ID: 97-1257
CONTAINER #: SEAL #:

CUSTOMER TICKET #: CUSTOMER WEIGHT: 0 LBS
COMMENTS:

	WEIGHT	TIME	DATE
1:	71340 LBS	10:50	09/11/97
2:	30200 LBS	11:06	09/11/97

NET WEIGHT: 43140 LBS. 21.570 TONS

43140 21.570

Weighmaster - RAIL

Driver

435.26

Recycled

I HAVE READ AND AGREE TO THE CONDITIONS ON THE REVERSE SIDE.

DRIVER COPY

CENTRAL PRE-MIX CONCRETE CO

P.O. BOX 9575
YAKIMA, WA. 98908
TELEPHONE (509) 248-2041 FAX(509)453-3344

FACSIMILIE TRANSMISSION COVER PAGE

TO:	GARY SLAGLE
COMPANY:	NOEL CORPORATION
FAX NUMBER:	248-2843
FROM:	WALT JACKSON
DATE:	8-28-97

NUMBER OF PAGES, INCLUDING THIS COVER PAGE, BEING TRANSMITTED

IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL (509) 453-3344.

COMMENTS:

THIS IS TO CONFIRM, AS WE DISCUSSED DURING OUR CONVERSATION OF 8/27/97, THAT THE PIT RUN GRAVEL YOUR FIRM PURCHASED FROM OUR SELAH SITE ON 8/21/97 WAS NATIVE PIT RUN GRAVEL.

APPENDIX C

LABORATORY RESULTS OF GROUNDWATER SAMPLES AND SAMPLING FORMS

Client Name: MAXIM - Yakima
Project No.: 95-932
Laboratory No.: 173227
Sample Name: MW-1
Sample Date: 04/15/96
Collected by: ROB FARRELL
Time Sampled: 1010
Sample Type: WATER

MW-1 8010

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
EPA METHOD 8260				
Data File Number-Volatiles	0416961013			
Bromobenzene	<1	ug/l	8260	04/17/96
Bromodichloromethane	<1	ug/l	8260	04/17/96
Bromoform	<1	ug/l	8260	04/17/96
Bromomethane	<1	ug/l	8260	04/17/96
Carbon Tetrachloride	<1	ug/l	8260	04/17/96
Chlorobenzene	<1	ug/l	8260	04/17/96
Chloroethane	<1	ug/l	8260	04/17/96
Chloroform	1	ug/l	8260	04/17/96
Chloromethane (Methyl chloride)	<1	ug/l	8260	04/17/96
Dibromochloromethane	<1	ug/l	8260	04/17/96
Dibromomethane	<1	ug/l	8260	04/17/96
Dichlorodifluoromethane	<1	ug/l	8260	04/17/96
1,2-Dichlorobenzene	<1	ug/l	8260	04/17/96
1,3-Dichlorobenzene	<1	ug/l	8260	04/17/96
1,4-Dichlorobenzene	<1	ug/l	8260	04/17/96
1,1-Dichloroethane	<1	ug/l	8260	04/17/96
1,2-Dichloroethane	<1	ug/l	8260	04/17/96
1,1-Dichloroethene	<1	ug/l	8260	04/17/96
c-1,2-Dichloroethene	<1	ug/l	8260	04/17/96
t-1,2-Dichloroethene	<1	ug/l	8260	04/17/96
1,2-Dichloropropane	<1	ug/l	8260	04/17/96
Methylene chloride	<5	ug/l	8260	04/17/96
1,1,1,2-Tetrachloroethane	<1	ug/l	8260	04/17/96
1,1,2,2-Tetrachloroethane	<1	ug/l	8260	04/17/96
Tetrachloroethene	<1	ug/l	8260	04/17/96
1,1,1-Trichloroethane	<1	ug/l	8260	04/17/96
1,1,2-Trichloroethane	<1	ug/l	8260	04/17/96
Trichloroethene	<1	ug/l	8260	04/17/96
Trichlorofluoromethane	<1	ug/l	8260	04/17/96
Vinyl chloride	<1	ug/l	8260	04/17/96
1,2-Dichloroethane-d4 (Surrogate)	94	%	8260	04/16/96
Toluene-d8 (Surrogate)	99	%	8260	04/16/96
4-Bromofluorobenzene (Surrogate)	100	%	8260	04/16/96
VOLATILE ORGANIC COMPOUNDS				
Benzyl chloride	(1)	ug/l	8260	04/17/96
c-1,3-Dichloropropene	<1	ug/l	8260	04/17/96
t-1,3-Dichloropropene	<1	ug/l	8260	04/17/96
2-Chloroethyl vinyl ether	<10	ug/l	8260	04/17/96

Client Name: MAXIM - Yakima
Project No.: 95-932
Laboratory No.: 173228
Sample Name: MW-2
Sample Date: 04/15/96
Collected by: ROB FARRELL
Time Sampled: 1135
Sample Type: WATER

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
EPA METHOD 8260				
Data File Number-Volatiles	0416961010			
Bromobenzene	<1	ug/l	8260	04/17/96
Bromodichloromethane	<1	ug/l	8260	04/17/96
Bromoform	<1	ug/l	8260	04/17/96
Bromomethane	<1	ug/l	8260	04/17/96
Carbon Tetrachloride	<1	ug/l	8260	04/17/96
Chlorobenzene	<1	ug/l	8260	04/17/96
Chloroethane	<1	ug/l	8260	04/17/96
Chloroform	1	ug/l	8260	04/17/96
Chloromethane (Methyl chloride)	<1	ug/l	8260	04/17/96
Dibromochloromethane	<1	ug/l	8260	04/17/96
Dibromomethane	<1	ug/l	8260	04/17/96
Dichlorodifluoromethane	<1	ug/l	8260	04/17/96
1,2-Dichlorobenzene	<1	ug/l	8260	04/17/96
1,3-Dichlorobenzene	<1	ug/l	8260	04/17/96
1,4-Dichlorobenzene	<1	ug/l	8260	04/17/96
1,1-Dichloroethane	<1	ug/l	8260	04/17/96
1,2-Dichloroethane	<1	ug/l	8260	04/17/96
1,1-Dichloroethene	<1	ug/l	8260	04/17/96
c-1,2-Dichloroethene	<1	ug/l	8260	04/17/96
t-1,2-Dichloroethene	<1	ug/l	8260	04/17/96
1,2-Dichloropropane	<1	ug/l	8260	04/17/96
Methylene chloride	<5	ug/l	8260	04/17/96
1,1,1,2-Tetrachloroethane	<1	ug/l	8260	04/17/96
1,1,2,2-Tetrachloroethane	<1	ug/l	8260	04/17/96
Tetrachloroethene	9	ug/l	8260	04/17/96
1,1,1-Trichloroethane	<1	ug/l	8260	04/17/96
1,1,2-Trichloroethane	<1	ug/l	8260	04/17/96
Trichloroethene	<1	ug/l	8260	04/17/96
Trichlorofluoromethane	<1	ug/l	8260	04/17/96
Vinyl chloride	<1	ug/l	8260	04/17/96
1,2-Dichloroethane-d4 (Surrogate)	91	%	8260	04/16/96
Toluene-d8 (Surrogate)	99	%	8260	04/16/96
4-Bromofluorobenzene (Surrogate)	100	%	8260	04/16/96
VOLATILE ORGANIC COMPOUNDS				
Benzyl chloride	(1)	ug/l	8260	04/17/96
c-1,3-Dichloropropene	<1	ug/l	8260	04/17/96
t-1,3-Dichloropropene	<1	ug/l	8260	04/17/96
2-Chloroethyl vinyl ether	<10	ug/l	8260	04/17/96

MW-1 8260

Client Name: MAXIM - TRI-CITIES, WA
Project No.: 87-921
Laboratory No.: 173227
Sample Name: MW-1
Sample Date: 04/15/96
Collected by: ROB FARRELL
Time Sampled: 1010
Sample Type: WATER

DRAFT

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
EPA METHOD 8260				
Data File Number-Volatiles	0416961D13		8260	04/16/96
Benzene	<1	ug/l	8260	04/16/96
Bromobenzene	<1	ug/l	8260	04/16/96
Bromochloromethane	<1	ug/l	8260	04/16/96
Bromodichloromethane	<1	ug/l	8260	04/16/96
Bromoform	<1	ug/l	8260	04/16/96
Bromomethane	<1	ug/l	8260	04/16/96
n-Butylbenzene	<1	ug/l	8260	04/16/96
sec-Butylbenzene	<1	ug/l	8260	04/16/96
t-Butylbenzene	<1	ug/l	8260	04/16/96
Carbon Tetrachloride	<1	ug/l	8260	04/16/96
Chlorobenzene	<1	ug/l	8260	04/16/96
Chloroethane	<1	ug/l	8260	04/16/96
Chloroform	1	ug/l	8260	04/16/96
Chloromethane (Methyl chloride)	<1	ug/l	8260	04/16/96
2-Chlorotoluene	<1	ug/l	8260	04/16/96
4-Chlorotoluene	<1	ug/l	8260	04/16/96
Dibromochloromethane	<1	ug/l	8260	04/16/96
1,2-Dibromo-3-chloropropane	<5	ug/l	8260	04/16/96
1,2-Dibromoethane	<1	ug/l	8260	04/16/96
Dibromomethane	<1	ug/l	8260	04/16/96
Dichlorodifluoromethane	<1	ug/l	8260	04/16/96
1,2-Dichlorobenzene	<1	ug/l	8260	04/16/96
1,3-Dichlorobenzene	<1	ug/l	8260	04/16/96
1,4-Dichlorobenzene	<1	ug/l	8260	04/16/96
1,1-Dichloroethane	<1	ug/l	8260	04/16/96
1,2-Dichloroethane	<1	ug/l	8260	04/16/96
1,1-Dichloroethene	<1	ug/l	8260	04/16/96
c-1,2-Dichloroethene	<1	ug/l	8260	04/16/96
t-1,2-Dichloroethene	<1	ug/l	8260	04/16/96
1,2-Dichloropropane	<1	ug/l	8260	04/16/96
1,3-Dichloropropane	<1	ug/l	8260	04/16/96
2,2-Dichloropropane	<5	ug/l	8260	04/16/96
1,1-Dichloropropene	<1	ug/l	8260	04/16/96
Ethylbenzene	<1	ug/l	8260	04/16/96
Hexachlorobutadiene	<2	ug/l	8260	04/16/96
Cumene (Isopropylbenzene)	<1	ug/l	8260	04/16/96
Isopropyltoluene	<1	ug/l	8260	04/16/96
Methylene chloride	<5	ug/l	8260	04/16/96
Naphthalene	<1	ug/l	8260	04/16/96
n-Propylbenzene	<1	ug/l	8260	04/16/96
Styrene	<1	ug/l	8260	04/16/96

Client Name: MAXIM - TRI-CITIES, WA
Project No.: 87-921
Laboratory No.: 173227
Sample Name: MW-1
Sample Date: 04/15/96
Collected by: ROB FARRELL
Time Sampled: 1010
Sample Type: WATER

DRAFT

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
1,1,1,2-Tetrachloroethane	<1	ug/l	8260	04/16/96
1,1,2,2-Tetrachloroethane	<1	ug/l	8260	04/16/96
Tetrachloroethene	<1 *	ug/l	8260	04/16/96
Toluene	<1	ug/l	8260	04/16/96
1,2,3-Trichlorobenzene	<1	ug/l	8260	04/16/96
1,2,4-Trichlorobenzene	<1	ug/l	8260	04/16/96
1,1,1-Trichloroethane	<1	ug/l	8260	04/16/96
1,1,2-Trichloroethane	<1	ug/l	8260	04/16/96
Trichloroethene	<1	ug/l	8260	04/16/96
Trichlorofluoromethane	<1	ug/l	8260	04/16/96
1,2,3-Trichloropropane	<1	ug/l	8260	04/16/96
1,2,4-Trimethylbenzene	<1	ug/l	8260	04/16/96
1,3,5-Trimethylbenzene	<1	ug/l	8260	04/16/96
Vinyl chloride	<1	ug/l	8260	04/16/96
Total xylenes	<1	ug/l	8260	04/16/96
1,2-Dichloroethane-d4 (Surrogate)	94	%	8260	04/16/96
Toluene-d8 (Surrogate)	99	%	8260	04/16/96
4-Bromofluorobenzene (Surrogate)	100	%	8260	04/16/96

* detected @ 0.7 µg/l, this is below our reporting limit.

Client Name: MAXIM - TRI-CITIES, WA
Project No.: 87-921
Laboratory No.: 173228
Sample Name: MW-2
Sample Date: 04/15/96
Collected by: ROB FARRELL
Time Sampled: 1135
Sample Type: WATER

MW-2 8260

DRAFT

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
EPA METHOD 8260				
Data File Number-Volatiles	0416961010		8260	04/16/96
Benzene	<1	ug/l	8260	04/16/96
Bromobenzene	<1	ug/l	8260	04/16/96
Bromochloromethane	<1	ug/l	8260	04/16/96
Bromodichloromethane	<1	ug/l	8260	04/16/96
Bromoform	<1	ug/l	8260	04/16/96
Bromomethane	<1	ug/l	8260	04/16/96
n-Butylbenzene	<1	ug/l	8260	04/16/96
sec-Butylbenzene	<1	ug/l	8260	04/16/96
t-Butylbenzene	<1	ug/l	8260	04/16/96
Carbon Tetrachloride	<1	ug/l	8260	04/16/96
Chlorobenzene	<1	ug/l	8260	04/16/96
Chloroethane	<1	ug/l	8260	04/16/96
Chloroform	1	ug/l	8260	04/16/96
Chloromethane (Methyl chloride)	<1	ug/l	8260	04/16/96
2-Chlorotoluene	<1	ug/l	8260	04/16/96
4-Chlorotoluene	<1	ug/l	8260	04/16/96
Dibromochloromethane	<1	ug/l	8260	04/16/96
1,2-Dibromo-3-chloropropane	<5	ug/l	8260	04/16/96
1,2-Dibromoethane	<1	ug/l	8260	04/16/96
Dibromomethane	<1	ug/l	8260	04/16/96
Dichlorodifluoromethane	<1	ug/l	8260	04/16/96
1,2-Dichlorobenzene	<1	ug/l	8260	04/16/96
1,3-Dichlorobenzene	<1	ug/l	8260	04/16/96
1,4-Dichlorobenzene	<1	ug/l	8260	04/16/96
1,1-Dichloroethane	<1	ug/l	8260	04/16/96
1,2-Dichloroethene	<1	ug/l	8260	04/16/96
1,1-Dichloroethene	<1	ug/l	8260	04/16/96
c-1,2-Dichloroethene	<1	ug/l	8260	04/16/96
t-1,2-Dichloroethene	<1	ug/l	8260	04/16/96
1,2-Dichloropropane	<1	ug/l	8260	04/16/96
1,3-Dichloropropane	<1	ug/l	8260	04/16/96
2,2-Dichloropropane	<5	ug/l	8260	04/16/96
1,1-Dichloropropene	<1	ug/l	8260	04/16/96
Ethylbenzene	<1	ug/l	8260	04/16/96
Hexachlorobutadiene	<2	ug/l	8260	04/16/96
Cumene (Isopropylbenzene)	<1	ug/l	8260	04/16/96
Isopropyltoluene	<1	ug/l	8260	04/16/96
Methylene chloride	<5	ug/l	8260	04/16/96
Naphthalene	<1	ug/l	8260	04/16/96
n-Propylbenzene	<1	ug/l	8260	04/16/96
Styrene	<1	ug/l	8260	04/16/96

Client Name: MAXIM - TRI-CITIES, WA
Project No.: 87-921
Laboratory No.: 173228
Sample Name: MW-2
Sample Date: 04/15/96
Collected by: ROB FARRELL
Time Sampled: 1135
Sample Type: WATER

DRAFT

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
1,1,1,2-Tetrachloroethane	<1	ug/l	8260	04/16/96
1,1,2,2-Tetrachloroethane	<1	ug/l	8260	04/16/96
Tetrachloroethene	9	ug/l	8260	04/16/96
Toluene	<1	ug/l	8260	04/16/96
1,2,3-Trichlorobenzene	<1	ug/l	8260	04/16/96
1,2,4-Trichlorobenzene	<1	ug/l	8260	04/16/96
1,1,1-Trichloroethane	<1	ug/l	8260	04/16/96
1,1,2-Trichloroethane	<1	ug/l	8260	04/16/96
Trichloroethene	<1	ug/l	8260	04/16/96
Trichlorofluoromethane	<1	ug/l	8260	04/16/96
1,2,3-Trichloropropane	<1	ug/l		
1,2,4-Trimethylbenzene	<1	ug/l	8260	04/16/96
1,3,5-Trimethylbenzene	<1	ug/l	8260	04/16/96
Vinyl chloride	<1	ug/l	8260	04/16/96
Total xylenes	<1	ug/l	8260	04/16/96
1,2-Dichloroethane-d4 (Surrogate)	91	%	8260	04/16/96
Toluene-d8 (Surrogate)	99	%	8260	04/16/96
4-Bromofluorobenzene (Surrogate)	100	%	8260	04/16/96

Blind dup MW-2

Client Name: MAXIM - Yakima
Project No.: 95-932
Laboratory No.: 173231
Sample Name: BLIND DUP (MW-2)
Sample Date: 04/15/96
Collected by: ROB FARRELL
Time Sampled: NONE GIVEN
Sample Type: WATER

MW-2

8010

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
EPA METHOD 8260				
Data File Number-Volatiles	0416961016			
Bromobenzene	<1	ug/l	8260	04/17/96
Bromodichloromethane	<1	ug/l	8260	04/17/96
Bromoform	<1	ug/l	8260	04/17/96
Bromomethane	<1	ug/l	8260	04/17/96
Carbon Tetrachloride	<1	ug/l	8260	04/17/96
Chlorobenzene	<1	ug/l	8260	04/17/96
Chloroethane	<1	ug/l	8260	04/17/96
Chloroform	1	ug/l	8260	04/17/96
Chloromethane (Methyl chloride)	<1	ug/l	8260	04/17/96
Dibromochloromethane	<1	ug/l	8260	04/17/96
Dibromomethane	<1	ug/l	8260	04/17/96
Dichlorodifluoromethane	<1	ug/l	8260	04/17/96
1,2-Dichlorobenzene	<1	ug/l	8260	04/17/96
1,3-Dichlorobenzene	<1	ug/l	8260	04/17/96
1,4-Dichlorobenzene	<1	ug/l	8260	04/17/96
1,1-Dichloroethane	<1	ug/l	8260	04/17/96
1,2-Dichloroethane	<1	ug/l	8260	04/17/96
1,1-Dichloroethene	<1	ug/l	8260	04/17/96
c-1,2-Dichloroethene	<1	ug/l	8260	04/17/96
t-1,2-Dichloroethene	<1	ug/l	8260	04/17/96
1,2-Dichloropropane	<1	ug/l	8260	04/17/96
Methylene chloride	<5	ug/l	8260	04/17/96
1,1,1,2-Tetrachloroethane	<1	ug/l	8260	04/17/96
1,1,2,2-Tetrachloroethane	<1	ug/l	8260	04/17/96
Tetrachloroethene	10	ug/l	8260	04/17/96
1,1,1-Trichloroethane	<1	ug/l	8260	04/17/96
1,1,2-Trichloroethane	<1	ug/l	8260	04/17/96
Trichloroethene	<1	ug/l	8260	04/17/96
Trichlorofluoromethane	<1	ug/l	8260	04/17/96
Vinyl chloride	<1	ug/l	8260	04/17/96
1,2-Dichloroethane-d4 (Surrogate)	94	%	8260	04/16/96
Toluene-d8 (Surrogate)	98	%	8260	04/16/96
4-Bromofluorobenzene (Surrogate)	100	%	8260	04/16/96
VOLATILE ORGANIC COMPOUNDS				
Benzyl chloride	(1)	ug/l	8260	04/17/96
c-1,3-Dichloropropene	<1	ug/l	8260	04/17/96
t-1,3-Dichloropropene	<1	ug/l	8260	04/17/96
2-Chloroethyl vinyl ether	<10	ug/l	8260	04/17/96

Blind dup MW-2

Client Name: MAXIM - TRI-CITIES, WA
Project No.: 87-921
Laboratory No.: 173231
Sample Name: BLIND DUP (MW-2)
Sample Date: 04/15/96
Collected by: ROB FARRELL
Time Sampled: NONE GIVEN
Sample Type: WATER

MW-2 8260

DRAFT

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
EPA METHOD 8260				
Data File Number-Volatiles	0416961016		8260	04/16/96
Benzene	<1	ug/l	8260	04/16/96
Bromobenzene	<1	ug/l	8260	04/16/96
Bromochloromethane	<1	ug/l	8260	04/16/96
Bromodichloromethane	<1	ug/l	8260	04/16/96
Bromoform	<1	ug/l	8260	04/16/96
Bromomethane	<1	ug/l	8260	04/16/96
n-Butylbenzene	<1	ug/l	8260	04/16/96
sec-Butylbenzene	<1	ug/l	8260	04/16/96
t-Butylbenzene	<1	ug/l	8260	04/16/96
Carbon Tetrachloride	<1	ug/l	8260	04/16/96
Chlorobenzene	<1	ug/l		
Chloroethane	<1	ug/l	8260	04/16/96
Chloroform	1	ug/l	8260	04/16/96
Chloromethane (Methyl chloride)	<1	ug/l	8260	04/16/96
2-Chlorotoluene	<1	ug/l	8260	04/16/96
4-Chlorotoluene	<1	ug/l	8260	04/16/96
Dibromochloromethane	<1	ug/l	8260	04/16/96
1,2-Dibromo-3-chloropropane	<2	ug/l	8260	04/16/96
1,2-Dibromoethane	<1	ug/l	8260	04/16/96
Dibromomethane	<1	ug/l	8260	04/16/96
Dichlorodifluoromethane	<1	ug/l	8260	04/16/96
1,2-Dichlorobenzene	<1	ug/l	8260	04/16/96
1,3-Dichlorobenzene	<1	ug/l	8260	04/16/96
1,4-Dichlorobenzene	<1	ug/l	8260	04/16/96
1,1-Dichloroethane	<1	ug/l	8260	04/16/96
1,2-Dichloroethane	<1	ug/l	8260	04/16/96
1,1-Dichloroethene	<1	ug/l	8260	04/16/96
c-1,2-Dichloroethene	<1	ug/l	8260	04/16/96
t-1,2-Dichloroethene	<1	ug/l	8260	04/16/96
1,2-Dichloropropane	<1	ug/l	8260	04/16/96
1,3-Dichloropropane	<1	ug/l	8260	04/16/96
2,2-Dichloropropane	<5	ug/l	8260	04/16/96
1,1-Dichloropropene	<1	ug/l	8260	04/16/96
Ethylbenzene	<1	ug/l	8260	04/16/96
Hexachlorobutadiene	<2	ug/l	8260	04/16/96
Cumene (Isopropylbenzene)	<1	ug/l	8260	04/16/96
Isopropyltoluene	<1	ug/l	8260	04/16/96
Methylene chloride	<5	ug/l	8260	04/16/96
Naphthalene	<1	ug/l	8260	04/16/96
n-Propylbenzene	<1	ug/l	8260	04/16/96
Styrene	<1	ug/l	8260	04/16/96

Client Name: MAXIM - TRI-CITIES, WA
Project No.: 87-921
Laboratory No.: 173231
Sample Name: BLIND DUP
Sample Date: 04/15/96
Collected by: ROB FARRELL
Time Sampled: NOSE GIVEN
Sample Type: WATER

DRAFT

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
1,1,1,2-Tetrachloroethane	<1	ug/l	8260	04/16/96
1,1,2,2-Tetrachloroethane	<1	ug/l	8260	04/16/96
Tetrachloroethene	10	ug/l	8260	04/16/96
Toluene	<1	ug/l	8260	04/16/96
1,2,3-Trichlorobenzene	<1	ug/l	8260	04/16/96
1,2,4-Trichlorobenzene	<1	ug/l	8260	04/16/96
1,1,1-Trichloroethane	<1	ug/l	8260	04/16/96
1,1,2-Trichloroethane	<1	ug/l	8260	04/16/96
Trichloroethene	<1	ug/l	8260	04/16/96
Trichlorofluoromethane	<1	ug/l	8260	04/16/96
1,2,3-Trichloropropane	<1	ug/l	8260	04/16/96
1,2,4-Trimethylbenzene	<1	ug/l	8260	04/16/96
1,3,5-Trimethylbenzene	<1	ug/l	8260	04/16/96
Vinyl chloride	<1	ug/l	8260	04/16/96
Total xylenes	<1	ug/l	8260	04/16/96
1,2-Dichloroethane-d4 (Surrogate)	94	%	8260	04/16/96
Toluene-d8 (Surrogate)	98	%	8260	04/16/96
4-Bromofluorobenzene (Surrogate)	100	%	8260	04/16/96

Client Name: MAXIM - Yakima
Project No.: 95-932
Laboratory No.: 173229
Sample Name: MW-3
Sample Date: 04/15/96
Collected by: ROB FARRELL
Time Sampled: 1340
Sample Type: WATER

MW-3 8010

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
EPA METHOD 8260				
Data File Number-Volatiles	0416961014			
Bromobenzene	<1	ug/l	8260	04/17/96
Bromodichloromethane	<1	ug/l	8260	04/17/96
Bromoform	<1	ug/l	8260	04/17/96
Bromomethane	<1	ug/l	8260	04/17/96
Carbon Tetrachloride	<1	ug/l	8260	04/17/96
Chlorobenzene	<1	ug/l	8260	04/17/96
Chloroethane	<1	ug/l	8260	04/17/96
Chloroform	<1	ug/l	8260	04/17/96
Chloromethane (Methyl chloride)	<1	ug/l	8260	04/17/96
Dibromochloromethane	<1	ug/l	8260	04/17/96
Dibromomethane	<1	ug/l	8260	04/17/96
Dichlorodifluoromethane	<1	ug/l	8260	04/17/96
1,2-Dichlorobenzene	<1	ug/l	8260	04/17/96
1,3-Dichlorobenzene	<1	ug/l	8260	04/17/96
1,4-Dichlorobenzene	<1	ug/l	8260	04/17/96
1,1-Dichloroethane	<1	ug/l	8260	04/17/96
1,2-Dichloroethane	<1	ug/l	8260	04/17/96
1,1-Dichloroethene	<1	ug/l	8260	04/17/96
c-1,2-Dichloroethene	<1	ug/l	8260	04/17/96
t-1,2-Dichloroethene	<1	ug/l	8260	04/17/96
1,2-Dichloropropane	<1	ug/l	8260	04/17/96
Methylene chloride	<5	ug/l	8260	04/17/96
1,1,1,2-Tetrachloroethane	<1	ug/l	8260	04/17/96
1,1,2,2-Tetrachloroethane	<1	ug/l	8260	04/17/96
Tetrachloroethene	45	ug/l	8260	04/17/96
1,1,1-Trichloroethane	<1	ug/l	8260	04/17/96
1,1,2-Trichloroethane	<1	ug/l	8260	04/17/96
Trichloroethene	<1	ug/l	8260	04/17/96
Trichlorofluoromethane	<1	ug/l	8260	04/17/96
Vinyl chloride	<1	ug/l	8260	04/17/96
1,2-Dichloroethane-d4 (Surrogate)	99	%	8260	04/16/96
Toluene-d8 (Surrogate)	99	%	8260	04/16/96
4-Bromofluorobenzene (Surrogate)	101	%	8260	04/16/96
VOLATILE ORGANIC COMPOUNDS				
Benzyl chloride	(1)	ug/l	8260	04/17/96
c-1,3-Dichloropropene	<1	ug/l	8260	04/17/96
t-1,3-Dichloropropene	<1	ug/l	8260	04/17/96
2-Chloroethyl vinyl ether	<10	ug/l	8260	04/17/96

MW-3 8260

DRAFT

Client Name: MAXIM - TRI-CITIES, WA
Project No.: 87-921
Laboratory No.: 173229
Sample Name: MW-3
Sample Date: 04/15/96
Collected by: ROB FARRELL
Time Sampled: 1340
Sample Type: WATER

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
EPA METHOD 8260				
Data File Number-Volatiles	0416961014		8260	04/16/96
Benzene	<1	ug/l	8260	04/16/96
Bromobenzene	<1	ug/l	8260	04/16/96
Bromochloromethane	<1	ug/l	8260	04/16/96
Bromodichloromethane	<1	ug/l	8260	04/16/96
Bromoform	<1	ug/l	8260	04/16/96
Bromomethane	<1	ug/l	8260	04/16/96
n-Butylbenzene	<1	ug/l	8260	04/16/96
sec-Butylbenzene	<1	ug/l	8260	04/16/96
t-Butylbenzene	<1	ug/l	8260	04/16/96
Carbon Tetrachloride	<1	ug/l	8260	04/16/96
Chlorobenzene	<1	ug/l	8260	04/16/96
Chloroethane	<1	ug/l	8260	04/16/96
Chloroform	<1 *	ug/l	8260	04/16/96
Chloromethane (Methyl chloride)	<1	ug/l	8260	04/16/96
2-Chlorotoluene	<1	ug/l	8260	04/16/96
4-Chlorotoluene	<1	ug/l	8260	04/16/96
Dibromochloromethane	<1	ug/l	8260	04/16/96
1,2-Dibromo-3-chloropropane	<5	ug/l	8260	04/16/96
1,2-Dibromoethane	<1	ug/l	8260	04/16/96
Dibromomethane	<1	ug/l	8260	04/16/96
Dichlorodifluoromethane	<1	ug/l	8260	04/16/96
1,2-Dichlorobenzene	<1	ug/l	8260	04/16/96
1,3-Dichlorobenzene	<1	ug/l	8260	04/16/96
1,4-Dichlorobenzene	<1	ug/l	8260	04/16/96
1,1-Dichloroethane	<1	ug/l	8260	04/16/96
1,2-Dichloroethene	<1	ug/l	8260	04/16/96
1,1-Dichloroethene	<1	ug/l	8260	04/16/96
c-1,2-Dichloroethene	<1	ug/l	8260	04/16/96
t-1,2-Dichloroethene	<1	ug/l	8260	04/16/96
1,2-Dichloropropane	<1	ug/l	8260	04/16/96
1,3-Dichloropropane	<1	ug/l	8260	04/16/96
2,2-Dichloropropane	<5	ug/l	8260	04/16/96
1,1-Dichloropropene	<1	ug/l	8260	04/16/96
Ethylbenzene	<1	ug/l	8260	04/16/96
Hexachlorobutadiene	<2	ug/l	8260	04/16/96
Cumene (Isopropylbenzene)	<1	ug/l	8260	04/16/96
Isopropyltoluene	<1	ug/l	8260	04/16/96
Methylene chloride	<5	ug/l	8260	04/16/96
Naphthalene	<1	ug/l	8260	04/16/96
n-Propylbenzene	<1	ug/l	8260	04/16/96
Styrene	<1	ug/l	8260	04/16/96

* detected below our reporting limit (0.9 µg/l)

Client Name: MAXIM - TRI-CITIES, WA
Project No.: 87-921
Laboratory No.: 173229
Sample Name: MW-3
Sample Date: 04/15/96
Collected by: ROB FARRELL
Time Sampled: 1340
Sample Type: WATER

DRAFT

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
1,1,1,2-Tetrachloroethane	<1	ug/l	8260	04/16/96
1,1,2,2-Tetrachloroethane	<1	ug/l	8260	04/16/96
Tetrachloroethene	45	ug/l	8260	04/16/96
Toluene	<1	ug/l	8260	04/16/96
1,2,3-Trichlorobenzene	<1	ug/l	8260	04/16/96
1,2,4-Trichlorobenzene	<1	ug/l	8260	04/16/96
1,1,1-Trichloroethane	<1	ug/l	8260	04/16/96
1,1,2-Trichloroethane	<1	ug/l	8260	04/16/96
Trichloroethene	<1	ug/l	8260	04/16/96
Trichlorofluoromethane	<1	ug/l	8260	04/16/96
1,2,3-Trichloropropane	<1	ug/l	8260	04/16/96
1,2,4-Trimethylbenzene	<1	ug/l	8260	04/16/96
1,3,5-Trimethylbenzene	<1	ug/l	8260	04/16/96
Vinyl chloride	<1	ug/l	8260	04/16/96
Total xylenes	<1	ug/l	8260	04/16/96
1,2-Dichloroethene-d4 (Surrogate)	99	%	8260	04/16/96
Toluene-d8 (Surrogate)	99	%	8260	04/16/96
4-Bromofluorobenzene (Surrogate)	101	%	8260	04/16/96

MW-4 8260

Client Name: MAXIM - TRI-CITIES, WA
Project No.: 87-921
Laboratory No.: 173230
Sample Name: MW-4
Sample Date: 04/15/96
Collected by: ROB FARRELL
Time Sampled: 1515
Sample Type: WATER

DRAFT

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
EPA METHOD 8260				
Data File Number-Volatiles	0416R61015		8260	04/16/96
Benzene	<1	ug/l	8260	04/16/96
Bromobenzene	<1	ug/l	8260	04/16/96
Bromochloromethane	<1	ug/l	8260	04/16/96
Bromodichloromethane	<1	ug/l	8260	04/16/96
Bromoform	<1	ug/l	8260	04/16/96
Bromomethane	<1	ug/l	8260	04/16/96
n-Butylbenzene	<1	ug/l	8260	04/16/96
sec-Butylbenzene	<1	ug/l	8260	04/16/96
t-Butylbenzene	<1	ug/l	8260	04/16/96
Carbon Tetrachloride	<1	ug/l	8260	04/16/96
Chlorobenzene	<1	ug/l	8260	04/16/96
Chloroethane	<1	ug/l	8260	04/16/96
Chloroform	1	ug/l	8260	04/16/96
Chloromethane (Methyl chloride)	<1	ug/l	8260	04/16/96
2-Chlorotoluene	<1	ug/l	8260	04/16/96
4-Chlorotoluene	<1	ug/l	8260	04/16/96
Dibromochloromethane	<1	ug/l	8260	04/16/96
1,2-Dibromo-3-chloropropane	<5	ug/l	8260	04/16/96
1,2-Dibromoethane	<1	ug/l	8260	04/16/96
Dibromomethane	<1	ug/l	8260	04/16/96
Dichlorodifluoromethane	<1	ug/l	8260	04/16/96
1,2-Dichlorobenzene	<1	ug/l	8260	04/16/96
1,3-Dichlorobenzene	<1	ug/l	8260	04/16/96
1,4-Dichlorobenzene	<1	ug/l	8260	04/16/96
1,1-Dichloroethane	<1	ug/l	8260	04/16/96
1,2-Dichloroethane	<1	ug/l	8260	04/16/96
1,1-Dichloroethene	<1	ug/l	8260	04/16/96
c-1,2-Dichloroethene	<1	ug/l	8260	04/16/96
t-1,2-Dichloroethene	<1	ug/l	8260	04/16/96
1,2-Dichloropropane	<1	ug/l	8260	04/16/96
1,3-Dichloropropane	<1	ug/l	8260	04/16/96
2,2-Dichloropropane	<5	ug/l	8260	04/16/96
1,1-Dichloropropene	<1	ug/l	8260	04/16/96
Ethylbenzene	<1	ug/l	8260	04/16/96
Hexachlorobutadiene	<2	ug/l	8260	04/16/96
Cumene (Isopropylbenzene)	<1	ug/l	8260	04/16/96
Isopropyltoluene	<1	ug/l	8260	04/16/96
Methylene chloride	<5	ug/l	8260	04/16/96
Naphthalene	<1	ug/l	8260	04/16/96
n-Propylbenzene	<1	ug/l	8260	04/16/96
Styrene	<1	ug/l	8260	04/16/96

Client Name: MAXIM - TRI-CITIES, WA
Project No.: 87-921
Laboratory No.: 173230
Sample Name: MW-4
Sample Date: 04/15/96
Collected by: ROB FARRELL
Time Sampled: 1515
Sample Type: WATER

DRAFT

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
1,1,1,2-Tetrachloroethane	<1	ug/l	8260	04/16/96
1,1,2,2-Tetrachloroethane	<1	ug/l	8260	04/16/96
Tetrachloroethene	<1	ug/l	8260	04/16/96
Toluene	<1	ug/l	8260	04/16/96
1,2,3-Trichlorobenzene	<1	ug/l	8260	04/16/96
1,2,4-Trichlorobenzene	<1	ug/l	8260	04/16/96
1,1,1-Trichloroethane	<1	ug/l	8260	04/16/96
1,1,2-Trichloroethane	<1	ug/l	8260	04/16/96
Trichloroethene	<1	ug/l	8260	04/16/96
Trichlorofluoromethane	<1	ug/l	8260	04/16/96
1,2,3-Trichloropropane	<1	ug/l	8260	04/16/96
1,2,4-Trimethylbenzene	<1	ug/l	8260	04/16/96
1,3,5-Trimethylbenzene	<1	ug/l	8260	04/16/96
Vinyl chloride	<1	ug/l	8260	04/16/96
Total xylenes	<1	ug/l	8260	04/16/96
1,2-Dichloroethane-d4 (Surrogate)	98	%	8260	04/16/96
Toluene-d8 (Surrogate)	99	%	8260	04/16/96
4-Bromofluorobenzene (Surrogate)	99	%	8260	04/16/96

Client Name: MAXIM - Yakima
Project No.: 95-932
Laboratory No.: 173230
Sample Name: MW-4
Sample Date: 04/15/96
Collected by: ROB FARRELL
Time Sampled: 1515
Sample Type: WATER

MW-4 8010

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
EPA METHOD 8260				
Data File Number-Volatiles	0416961015			
Bromobenzene	<1	ug/l	8260	04/17/96
Bromodichloromethane	<1	ug/l	8260	04/17/96
Bromoform	<1	ug/l	8260	04/17/96
Bromomethane	<1	ug/l	8260	04/17/96
Carbon Tetrachloride	<1	ug/l	8260	04/17/96
Chlorobenzene	<1	ug/l	8260	04/17/96
Chloroethane	<1	ug/l	8260	04/17/96
Chloroform	1	ug/l	8260	04/17/96
Chloromethane (Methyl chloride)	<1	ug/l	8260	04/17/96
Dibromochloromethane	<1	ug/l	8260	04/17/96
Dibromomethane	<1	ug/l	8260	04/17/96
Dichlorodifluoromethane	<1	ug/l	8260	04/17/96
1,2-Dichlorobenzene	<1	ug/l	8260	04/17/96
1,3-Dichlorobenzene	<1	ug/l	8260	04/17/96
1,4-Dichlorobenzene	<1	ug/l	8260	04/17/96
1,1-Dichloroethane	<1	ug/l	8260	04/17/96
1,2-Dichloroethane	<1	ug/l	8260	04/17/96
1,1-Dichloroethene	<1	ug/l	8260	04/17/96
c-1,2-Dichloroethene	<1	ug/l	8260	04/17/96
t-1,2-Dichloroethene	<1	ug/l	8260	04/17/96
1,2-Dichloropropane	<1	ug/l	8260	04/17/96
Methylene chloride	<5	ug/l	8260	04/17/96
1,1,1,2-Tetrachloroethane	<1	ug/l	8260	04/17/96
1,1,2,2-Tetrachloroethane	<1	ug/l	8260	04/17/96
Tetrachloroethene	<1	ug/l	8260	04/17/96
1,1,1-Trichloroethane	<1	ug/l	8260	04/17/96
1,1,2-Trichloroethane	<1	ug/l	8260	04/17/96
Trichloroethene	<1	ug/l	8260	04/17/96
Trichlorofluoromethane	<1	ug/l	8260	04/17/96
Vinyl chloride	<1	ug/l	8260	04/17/96
1,2-Dichloroethane-d4 (Surrogate)	98	%	8260	04/16/96
Toluene-d8 (Surrogate)	99	%	8260	04/16/96
4-Bromofluorobenzene (Surrogate)	99	%	8260	04/16/96
VOLATILE ORGANIC COMPOUNDS				
Benzyl chloride	(1)	ug/l	8260	04/17/96
c-1,3-Dichloropropene	<1	ug/l	8260	04/17/96
t-1,3-Dichloropropene	<1	ug/l	8260	04/17/96
2-Chloroethyl vinyl ether	<10	ug/l	8260	04/17/96

Client Name: MAXIM - Yakima
Project No.: 95-932
Laboratory No.: 173232
Sample Name: TRIP BLANK
Sample Date: NONE GIVEN
Collected by: NONE GIVEN
Time Sampled: NONE GIVEN
Sample Type: WATER

QA/QC Trip Blank
8010

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
EPA METHOD 8260				
Data File Number-Volatiles	0416961009			
Bromobenzene	<1	ug/l	8260	04/17/96
Bromodichloromethane	<1	ug/l	8260	04/17/96
Bromoform	<1	ug/l	8260	04/17/96
Bromomethane	<1	ug/l	8260	04/17/96
Carbon Tetrachloride	<1	ug/l	8260	04/17/96
Chlorobenzene	<1	ug/l	8260	04/17/96
Chloroethane	<1	ug/l	8260	04/17/96
Chloroform	<1	ug/l	8260	04/17/96
Chloromethane (Methyl chloride)	<1	ug/l	8260	04/17/96
Dibromochloromethane	<1	ug/l	8260	04/17/96
Dibromomethane	<1	ug/l	8260	04/17/96
Dichlorodifluoromethane	<1	ug/l	8260	04/17/96
1,2-Dichlorobenzene	<1	ug/l	8260	04/17/96
1,3-Dichlorobenzene	<1	ug/l	8260	04/17/96
1,4-Dichlorobenzene	<1	ug/l	8260	04/17/96
1,1-Dichloroethane	<1	ug/l	8260	04/17/96
1,2-Dichloroethane	<1	ug/l	8260	04/17/96
1,1-Dichloroethene	<1	ug/l	8260	04/17/96
c-1,2-Dichloroethene	<1	ug/l	8260	04/17/96
t-1,2-Dichloroethene	<1	ug/l	8260	04/17/96
1,2-Dichloropropane	<1	ug/l	8260	04/17/96
Methylene chloride	<5	ug/l	8260	04/17/96
1,1,1,2-Tetrachloroethane	<1	ug/l	8260	04/17/96
1,1,2,2-Tetrachloroethane	<1	ug/l	8260	04/17/96
Tetrachloroethene	<1	ug/l	8260	04/17/96
1,1,1-Trichloroethane	<1	ug/l	8260	04/17/96
1,1,2-Trichloroethane	<1	ug/l	8260	04/17/96
Trichloroethene	<1	ug/l	8260	04/17/96
Trichlorofluoromethane	<1	ug/l	8260	04/17/96
Vinyl chloride	<1	ug/l	8260	04/17/96
1,2-Dichloroethane-d4 (Surrogate)	99	%	8260	04/16/96
Toluene-d8 (Surrogate)	98	%	8260	04/16/96
4-Bromofluorobenzene (Surrogate)	98	%	8260	04/16/96
VOLATILE ORGANIC COMPOUNDS				
Benzyl chloride	(1)	ug/l	8260	04/17/96
c-1,3-Dichloropropene	<1	ug/l	8260	04/17/96
t-1,3-Dichloropropene	<1	ug/l	8260	04/17/96
2-Chloroethyl vinyl ether	<10	ug/l	8260	04/17/96

QA/qc 8260 Trip blank

DRAFT

Client Name: MAXIM - TRI-CITIES, WA
Project No.: 87-921
Laboratory No.: 173232
Sample Name: TRIP BLANK
Sample Date: NONE GIVEN
Collected by: NONE GIVEN
Time Sampled: NONE GIVEN
Sample Type: WATER

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
EPA METHOD 8260				
Data File Number-Volatiles	0416961009		8260	04/16/96
Benzene	<1	ug/l	8260	04/16/96
Bromobenzene	<1	ug/l	8260	04/16/96
Bromochloromethane	<1	ug/l	8260	04/16/96
Bromodichloromethane	<1	ug/l	8260	04/16/96
Bromoform	<1	ug/l	8260	04/16/96
Bromomethane	<1	ug/l	8260	04/16/96
n-Butylbenzene	<1	ug/l	8260	04/16/96
sec-Butylbenzene	<1	ug/l	8260	04/16/96
t-Butylbenzene	<1	ug/l	8260	04/16/96
Carbon Tetrachloride	<1	ug/l	8260	04/16/96
Chlorobenzene	<1	ug/l	8260	04/16/96
Chloroethane	<1	ug/l	8260	04/16/96
Chloroform	<1	ug/l	8260	04/16/96
Chloromethane (Methyl chloride)	<1	ug/l	8260	04/16/96
2-Chlorotoluene	<1	ug/l	8260	04/16/96
4-Chlorotoluene	<1	ug/l	8260	04/16/96
Dibromochloromethane	<1	ug/l	8260	04/16/96
1,2-Dibromo-3-chloropropane	<5	ug/l	8260	04/16/96
1,2-Dibromoethane	<1	ug/l	8260	04/16/96
Dibromomethane	<1	ug/l	8260	04/16/96
Dichlorodifluoromethane	<1	ug/l	8260	04/16/96
1,2-Dichlorobenzene	<1	ug/l	8260	04/16/96
1,3-Dichlorobenzene	<1	ug/l	8260	04/16/96
1,4-Dichlorobenzene	<1	ug/l	8260	04/16/96
1,1-Dichloroethane	<1	ug/l	8260	04/16/96
1,2-Dichloroethane	<1	ug/l	8260	04/16/96
1,1-Dichloroethene	<1	ug/l	8260	04/16/96
c-1,2-Dichloroethene	<1	ug/l	8260	04/16/96
t-1,2-Dichloroethene	<1	ug/l	8260	04/16/96
1,2-Dichloropropane	<1	ug/l	8260	04/16/96
1,3-Dichloropropane	<1	ug/l	8260	04/16/96
2,2-Dichloropropane	<5	ug/l	8260	04/16/96
1,1-Dichloropropene	<1	ug/l	8260	04/16/96
Ethylbenzene	<1	ug/l	8260	04/16/96
Hexachlorobutadiene	<2	ug/l	8260	04/16/96
Cumene (Isopropylbenzene)	<1	ug/l	8260	04/16/96
Isopropyltoluene	<1	ug/l	8260	04/16/96
Methylene chloride	<5	ug/l	8260	04/16/96
Naphthalene	<1	ug/l	8260	04/16/96
n-Propylbenzene	<1	ug/l	8260	04/16/96
Styrene	<1	ug/l	8260	04/16/96

Client Name: MAXIM - Yakima
Project No.: 95-932
Laboratory No.: 173234
Sample Name: MATRIX SPIKE DUPLICATE 173228 MW-2
Sample Date: 04/15/96
Collected by: ROB FARRELL
Time Sampled: 1135
Sample Type: WATER

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
EPA METHOD 8260				
Data File Number-Volatiles	0416961012			
Bromobenzene	<1	ug/l	8260	04/17/96
Bromodichloromethane	<1	ug/l	8260	04/17/96
Bromoform	<1	ug/l	8260	04/17/96
Bromomethane	<1	ug/l	8260	04/17/96
Carbon Tetrachloride	<1	ug/l	8260	04/17/96
Chlorobenzene	94	%	8260	04/17/96
Chloroethane	<1	ug/l	8260	04/17/96
Chloroform	1	ug/l	8260	04/17/96
Chloromethane (Methyl chloride)	<1	ug/l	8260	04/17/96
Dibromochloromethane	<1	ug/l	8260	04/17/96
Dibromomethane	<1	ug/l	8260	04/17/96
Dichlorodifluoromethane	<1	ug/l	8260	04/17/96
1,2-Dichlorobenzene	<1	ug/l	8260	04/17/96
1,3-Dichlorobenzene	<1	ug/l	8260	04/17/96
1,4-Dichlorobenzene	<1	ug/l	8260	04/17/96
1,1-Dichloroethane	<1	ug/l	8260	04/17/96
1,2-Dichloroethane	<1	ug/l	8260	04/17/96
1,1-Dichloroethene	87	%	8260	04/17/96
c-1,2-Dichloroethene	<1	ug/l	8260	04/17/96
t-1,2-Dichloroethene	<1	ug/l	8260	04/17/96
1,2-Dichloropropane	<1	ug/l	8260	04/17/96
Methylene chloride	<5	ug/l	8260	04/17/96
1,1,1,2-Tetrachloroethane	<1	ug/l	8260	04/17/96
1,1,2,2-Tetrachloroethane	<1	ug/l	8260	04/17/96
Tetrachloroethene	7	ug/l	8260	04/17/96
1,1,1-Trichloroethane	<1	ug/l	8260	04/17/96
1,1,2-Trichloroethane	<1	ug/l	8260	04/17/96
Trichloroethene	91	%	8260	04/17/96
Trichlorofluoromethane	<1	ug/l	8260	04/17/96
Vinyl chloride	<1	ug/l	8260	04/17/96
1,2-Dichloroethane-d4 (Surrogate)	97	%	8260	04/16/96
Toluene-d8 (Surrogate)	99	%	8260	04/16/96
4-Bromofluorobenzene (Surrogate)	99	%	8260	04/16/96
VOLATILE ORGANIC COMPOUNDS				
Benzyl chloride	(1)	ug/l	8260	04/17/96
c-1,3-Dichloropropene	<1	ug/l	8260	04/17/96
t-1,3-Dichloropropene	<1	ug/l	8260	04/17/96
2-Chloroethyl vinyl ether	<10	ug/l	8260	04/17/96

Client Name: MAXIN - TRI-CITIES, WA
Project No.: 87-921
Laboratory No.: 173233
Sample Name: MATRIX SPIKE 173228 MW-2
Sample Date: 04/15/96
Collected by: ROB FARRELL
Time Sampled: 1135
Sample Type: WATER

MATRIX spike
8260

DRAFT

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
EPA METHOD 8260				
Data File Number-Volatiles	0416961011		8260	04/16/96
Benzene	42	ug/l	8260	04/16/96
Bromobenzene	<1	ug/l	8260	04/16/96
Bromochloromethane	<1	ug/l	8260	04/16/96
Bromodichloromethane	<1	ug/l	8260	04/16/96
Bromoform	<1	ug/l	8260	04/16/96
Bromomethane	<1	ug/l	8260	04/16/96
n-Butylbenzene	<1	ug/l	8260	04/16/96
sec-Butylbenzene	<1	ug/l	8260	04/16/96
t-Butylbenzene	<1	ug/l	8260	04/16/96
Carbon Tetrachloride	<1	ug/l	8260	04/16/96
Chlorobenzene	47	ug/l	8260	04/16/96
Chloroethane	<1	ug/l	8260	04/16/96
Chloroform	1	ug/l	8260	04/16/96
Chloromethane (Methyl chloride)	<1	ug/l	8260	04/16/96
2-Chlorotoluene	<1	ug/l	8260	04/16/96
4-Chlorotoluene	<1	ug/l	8260	04/16/96
Dibromochloromethane	<1	ug/l	8260	04/16/96
1,2-Dibromo-3-chloropropane	<5	ug/l	8260	04/16/96
1,2-Dibromoethane	<1	ug/l	8260	04/16/96
Dibromomethane	<1	ug/l	8260	04/16/96
Dichlorodifluoromethane	<1	ug/l	8260	04/16/96
1,2-Dichlorobenzene	<1	ug/l	8260	04/16/96
1,3-Dichlorobenzene	<1	ug/l	8260	04/16/96
1,4-Dichlorobenzene	<1	ug/l	8260	04/16/96
1,1-Dichloroethane	<1	ug/l	8260	04/16/96
1,2-Dichloroethane	<1	ug/l	8260	04/16/96
1,1-Dichloroethene	45	ug/l	8260	04/16/96
c-1,2-Dichloroethene	<1	ug/l	8260	04/16/96
t-1,2-Dichloroethene	<1	ug/l	8260	04/16/96
1,2-Dichloropropane	<1	ug/l	8260	04/16/96
1,3-Dichloropropane	<1	ug/l	8260	04/16/96
2,2-Dichloropropane	<5	ug/l	8260	04/16/96
1,1-Dichloropropene	<1	ug/l	8260	04/16/96
Ethylbenzene	<1	ug/l	8260	04/16/96
Hexachlorobutadiene	<2	ug/l	8260	04/16/96
Cumene (Isopropylbenzene)	<1	ug/l	8260	04/16/96
Isopropyltoluene	<1	ug/l	8260	04/16/96
Methylene chloride	<5	ug/l	8260	04/16/96
Naphthalene	<1	ug/l	8260	04/16/96
n-Propylbenzene	<1	ug/l	8260	04/16/96
Styrene	<1	ug/l	8260	04/16/96

Client Name: MAXIM - TRI-CITIES, WA
Project No.: 87-921
Laboratory No.: 173233
Sample Name: MATRIX SPIKE 173228 MW-2
Sample Date: 04/15/96
Collected by: ROB FARWELL
Time Sampled: 1135
Sample Type: WATER

DRAFT

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
1,1,1,2-Tetrachloroethane	<1	ug/l	8260	04/16/96
1,1,2,2-Tetrachloroethane	<1	ug/l	8260	04/16/96
Tetrachloroethene	8	ug/l	8260	04/16/96
Toluene	45	ug/l	8260	04/16/96
1,2,3-Trichlorobenzene	<1	ug/l	8260	04/16/96
1,2,4-Trichlorobenzene	<1	ug/l	8260	04/16/96
1,1,1-Trichloroethane	<1	ug/l	8260	04/16/96
1,1,2-Trichloroethane	<1	ug/l	8260	04/16/96
Trichloroethene	46	ug/l	8260	04/16/96
Trichlorofluoromethane	<1	ug/l	8260	04/16/96
1,2,3-Trichloropropane	<1	ug/l	8260	04/16/96
1,2,4-Trimethylbenzene	<1	ug/l	8260	04/16/96
1,3,5-Trimethylbenzene	<1	ug/l	8260	04/16/96
Vinyl chloride	<1	ug/l	8260	04/16/96
Total xylenes	<1	ug/l	8260	04/16/96
1,2-Dichloroethane-d4 (Surrogate)	100	%	8260	04/16/96
Toluene-d8 (Surrogate)	98	%	8260	04/16/96
4-Bromofluorobenzene (Surrogate)	105	%	8260	04/16/96

Client Name: MAXIM - TRI-CITIES, WA
Project No.: 87-921
Laboratory No.: 173234
Sample Name: MATRIX SPIKE DUPLICATE 173228 MW-2
Sample Date: 04/15/96
Collected by: ROB FARRELL
Time Sampled: 1135
Sample Type: WATER

DRAFT

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
EPA METHOD 8260				
Data File Number-Volatiles	0416961012		8260	04/16/96
Benzene	42	ug/l	8260	04/16/96
Bromobenzene	<1	ug/l	8260	04/16/96
Bromochloromethane	<1	ug/l	8260	04/16/96
Bromodichloromethane	<1	ug/l	8260	04/16/96
Bromoform	<1	ug/l	8260	04/16/96
Bromomethane	<1	ug/l	8260	04/16/96
n-Butylbenzene	<1	ug/l	8260	04/16/96
sec-Butylbenzene	<1	ug/l	8260	04/16/96
t-Butylbenzene	<1	ug/l	8260	04/16/96
Carbon Tetrachloride	<1	ug/l	8260	04/16/96
Chlorobenzene	48	ug/l	8260	04/16/96
Chloroethane	<1	ug/l	8260	04/16/96
Chloroform	1	ug/l	8260	04/16/96
Chloromethane (Methyl chloride)	<1	ug/l	8260	04/16/96
2-Chlorotoluene	<1	ug/l	8260	04/16/96
4-Chlorotoluene	<1	ug/l	8260	04/16/96
Dibromochloromethane	<1	ug/l	8260	04/16/96
1,2-Dibromo-3-chloropropane	<5	ug/l	8260	04/16/96
1,2-Dibromoethane	<1	ug/l	8260	04/16/96
Dibromomethane	<1	ug/l	8260	04/16/96
Dichlorodifluoromethane	<1	ug/l	8260	04/16/96
1,2-Dichlorobenzene	<1	ug/l	8260	04/16/96
1,3-Dichlorobenzene	<1	ug/l	8260	04/16/96
1,4-Dichlorobenzene	<1	ug/l	8260	04/16/96
1,1-Dichloroethane	<1	ug/l	8260	04/16/96
1,2-Dichloroethane	<1	ug/l	8260	04/16/96
1,1-Dichloroethene	45	ug/l	8260	04/16/96
c-1,2-Dichloroethene	<1	ug/l	8260	04/16/96
t-1,2-Dichloroethene	<1	ug/l	8260	04/16/96
1,2-Dichloropropane	<1	ug/l	8260	04/16/96
1,3-Dichloropropane	<1	ug/l	8260	04/16/96
2,2-Dichloropropane	<5	ug/l	8260	04/16/96
1,1-Dichloropropene	<1	ug/l	8260	04/16/96
Ethylbenzene	<1	ug/l	8260	04/16/96
Hexachlorobutadiene	<2	ug/l	8260	04/16/96
Cumene (Isopropylbenzene)	<1	ug/l	8260	04/16/96
Isopropyltoluene	<1	ug/l	8260	04/16/96
Methylene chloride	<5	ug/l	8260	04/16/96
Naphthalene	<1	ug/l	8260	04/16/96
n-Propylbenzene	<1	ug/l	8260	04/16/96
Styrene	<1	ug/l	8260	04/16/96

Client Name: MAXIM - TRI-CITIES, WA
Project No.: 87-921
Laboratory No.: 173234
Sample Name: MATRIX SPIKE DUPLICATE 173228 MW-2
Sample Date: 04/15/96
Collected by: ROB FARRELL
Time Sampled: 1135
Sample Type: WATER

DRAFT

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
1,1,1,2-Tetrachloroethane	<1	ug/l	8260	04/16/96
1,1,2,2-Tetrachloroethane	<1	ug/l	8260	04/16/96
Tetrachloroethene	7	ug/l	8260	04/16/96
Toluene	46	ug/l	8260	04/16/96
1,2,3-Trichlorobenzene	<1	ug/l	8260	04/16/96
1,2,4-Trichlorobenzene	<1	ug/l	8260	04/16/96
1,1,1-Trichloroethane	<1	ug/l	8260	04/16/96
1,1,2-Trichloroethane	<1	ug/l	8260	04/16/96
Trichloroethene	47	ug/l	8260	04/16/96
Trichlorofluoromethane	<1	ug/l	8260	04/16/96
1,2,3-Trichloropropane	<1	ug/l	8260	04/16/96
1,2,4-Trimethylbenzene	<1	ug/l	8260	04/16/96
1,3,5-Trimethylbenzene	<1	ug/l	8260	04/16/96
Vinyl chloride	<1	ug/l	8260	04/16/96
Total xylenes	<1	ug/l	8260	04/16/96
1,2-Dichloroethane-d4 (Surrogate)	97	%	8260	04/16/96
Toluene-d8 (Surrogate)	99	%	8260	04/16/96
4-Bromofluorobenzene (Surrogate)	99	%	8260	04/16/96

MAXIM TECHNOLOGIES INC

receipt.lst

SAMPLE RECEIPT CHECKLIST

Client Name: M-Yakima

Project: Southgate Laundry

Laboratory number(s): 173224-32

Checklist completed by: MB 4/16 (Initials / Date)

Date/Time Received: 4/16/96 0945 (Date / Time)

Received by: [signature]

Carrier name: FedX

Logged in by: MB 4/16 (Initials / Date)

Sample Type: Soil/Water

		YES	NO
1.	Shipping container in good condition?	✓	
2.	Custody seals present on shipping container?		✓
3.	Condition: Intact _____ Broken _____		
4.	Chain of custody present?	✓	
5.	Chain of custody signed when relinquished and received?		✓
6.	Chain of custody agrees with sample labels?	✓	
7.	Custody seals on sample bottles?		✓
8.	Condition: Intact _____ Broken _____		
9.	Samples in proper container/bottle?	✓	
10.	Samples intact?	✓	
11.	Sufficient sample volume for indicated test?	✓	
12.	VOA vials have zero headspace?	✓	
13.	Trip Blank received?	✓	
14.	Ice/Frozen Blue Ice present in shipping container? (circle one)	✓	
15.	Container temperature 1. 10.4°C 2. _____ 3. _____		

		YES	NO
16.	All samples rec'd within holding time?	✓	
	Preservation		
17.	pH check performed by: DP		
18.	Metals bottle(s) pH <2?	✓	
19.	Nutrient bottle(s) pH <2?		
20.	Cyanide bottle(s) pH >12?		
21.	Sulfide bottle(s) pH >9?		
22.	Oil & grease bottle(s) pH <2?		
23.	TOC bottle(s) pH <2?		
24.	DRO/418.1 bottle(s) pH <2?		
25.	Phenolics bottle(s) pH <2?		
26.	Volatiles (VOA) pH <2? (VOA pH checked by analyst)	✓	
27.	Client contacted?		
28.	Person contacted		
29.	Date contacted		
30.	Contacted by		
31.	Regarding?		

Any NO response must be detailed in the comments section below. If items are not applicable, they should be marked NA.

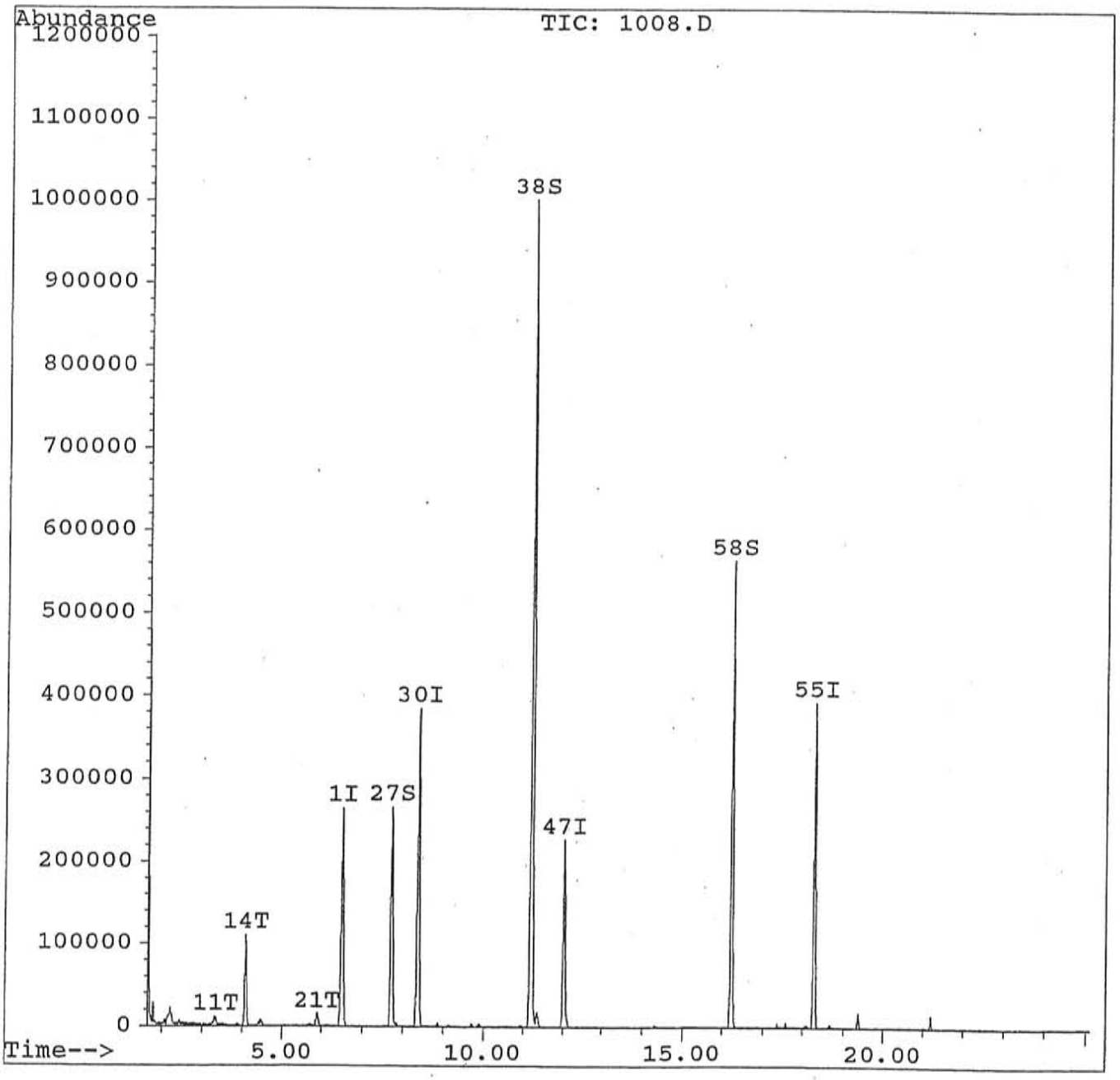
COMMENTS: #5 See Copy MB

Quantitation Report

Data File : C:\HPCHEM\1\DATA\041796\1008.D
Acq Time : 17 Apr 96 11:09 am
Sample : 173224 5g
Misc :
Quant Time: Apr 17 11:37 1996

Operator: GHP
Inst : GC/MS
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\82600319.M
Title : 8260
Last Update : Wed Apr 17 09:58:09 1996
Response via : Single Level Calibration

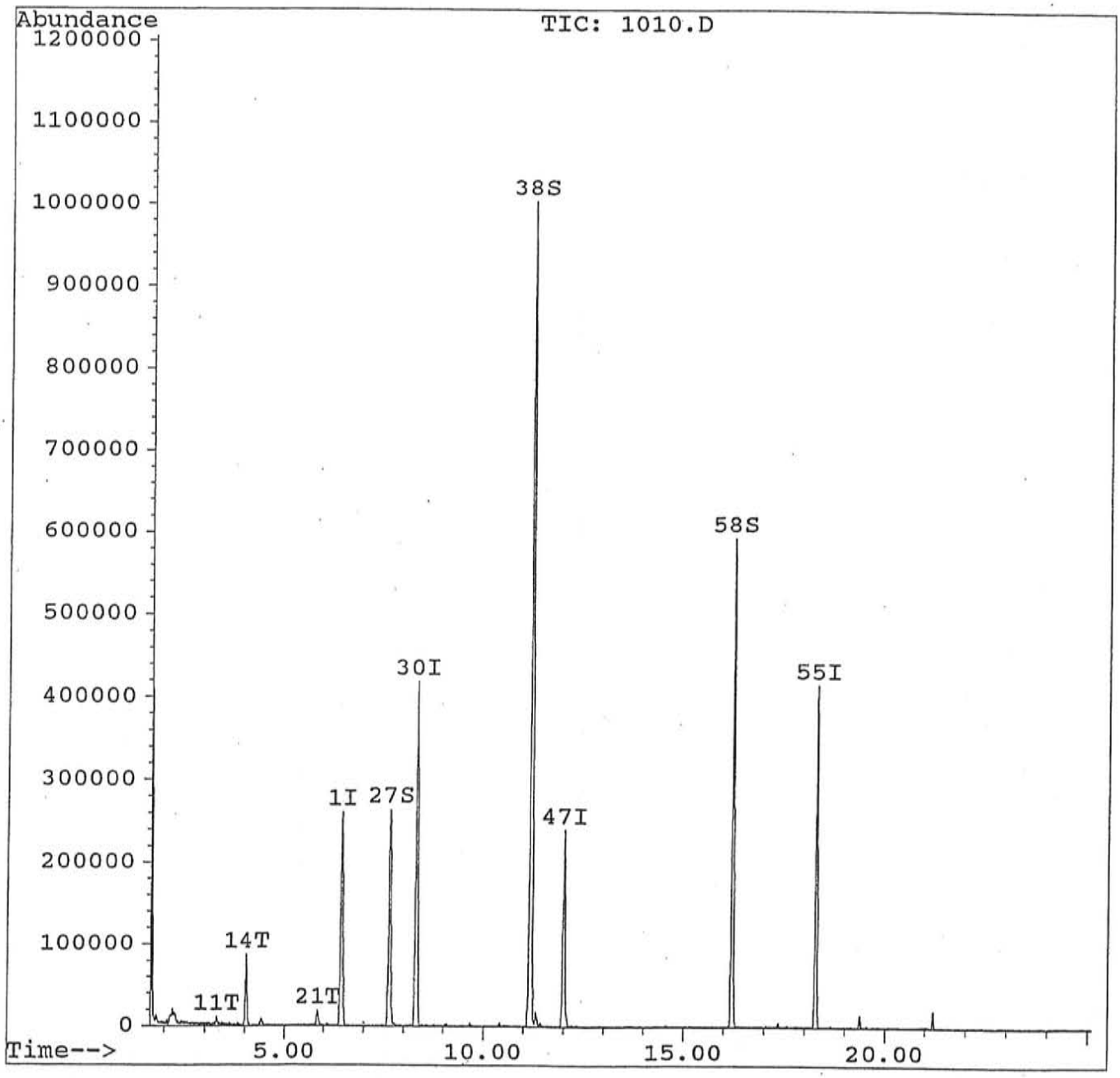


Quantitation Report

Data File : C:\HPCHEM\1\DATA\041796\1010.D
Acq Time : 17 Apr 96 12:30 pm
Sample : 173226 5g
Misc :
Quant Time: Apr 17 12:58 1996

Operator: GHP
Inst : GC/MS
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\82600319.M
Title : 8260
Last Update : Wed Apr 17 09:58:09 1996
Response via : Single Level Calibration

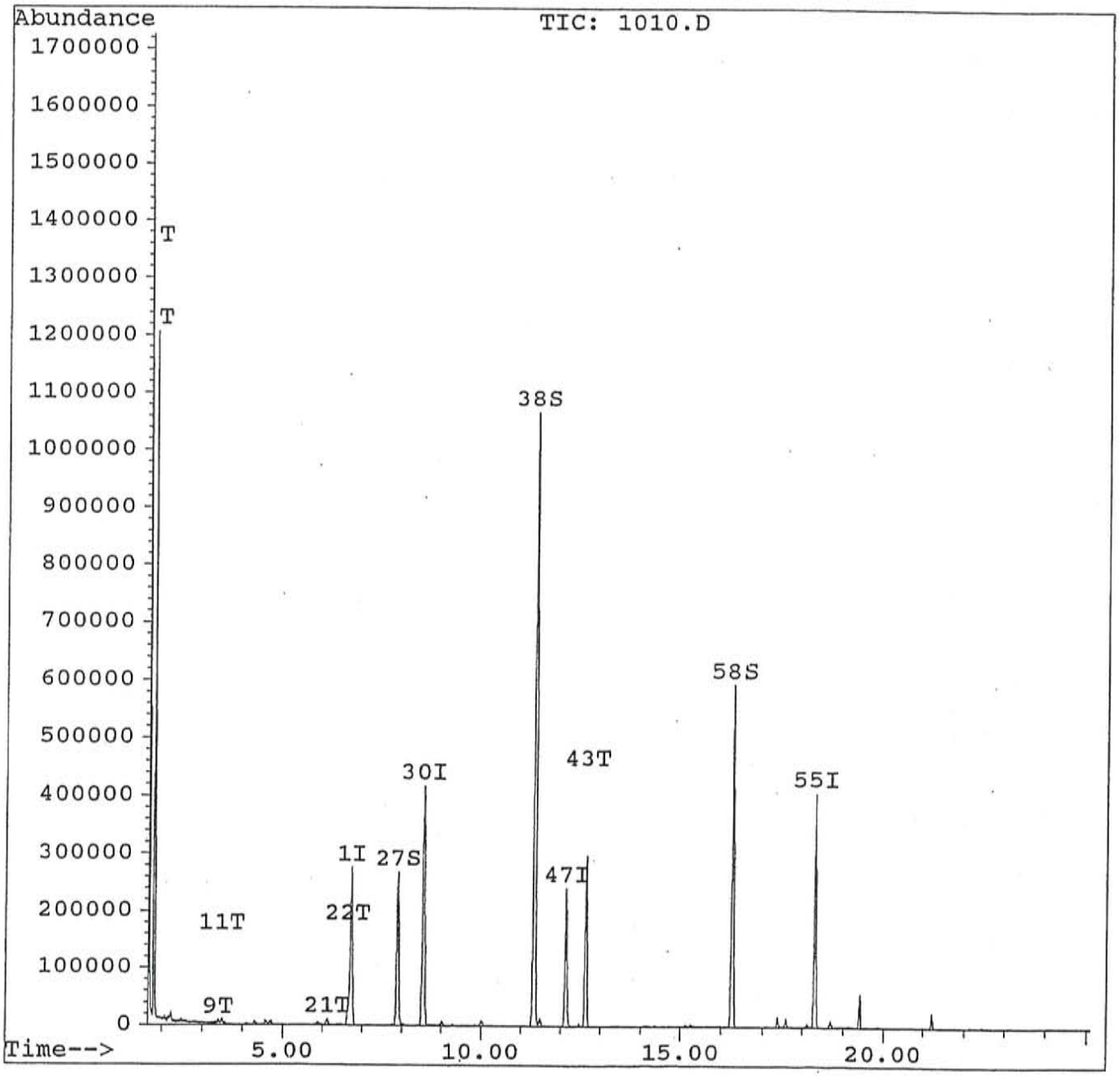


Quantitation Report

Data File : C:\HPCHEM\1\DATA\041696\1010.D
Acq Time : 16 Apr 96 1:48 pm
Sample : 173228
Misc :
Quant Time: Apr 16 14:17 1996

Operator: GHP
Inst : GC/MS
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\82600319.M
Title : 8260
Last Update : Tue Apr 16 11:16:43 1996
Response via : Single Level Calibration

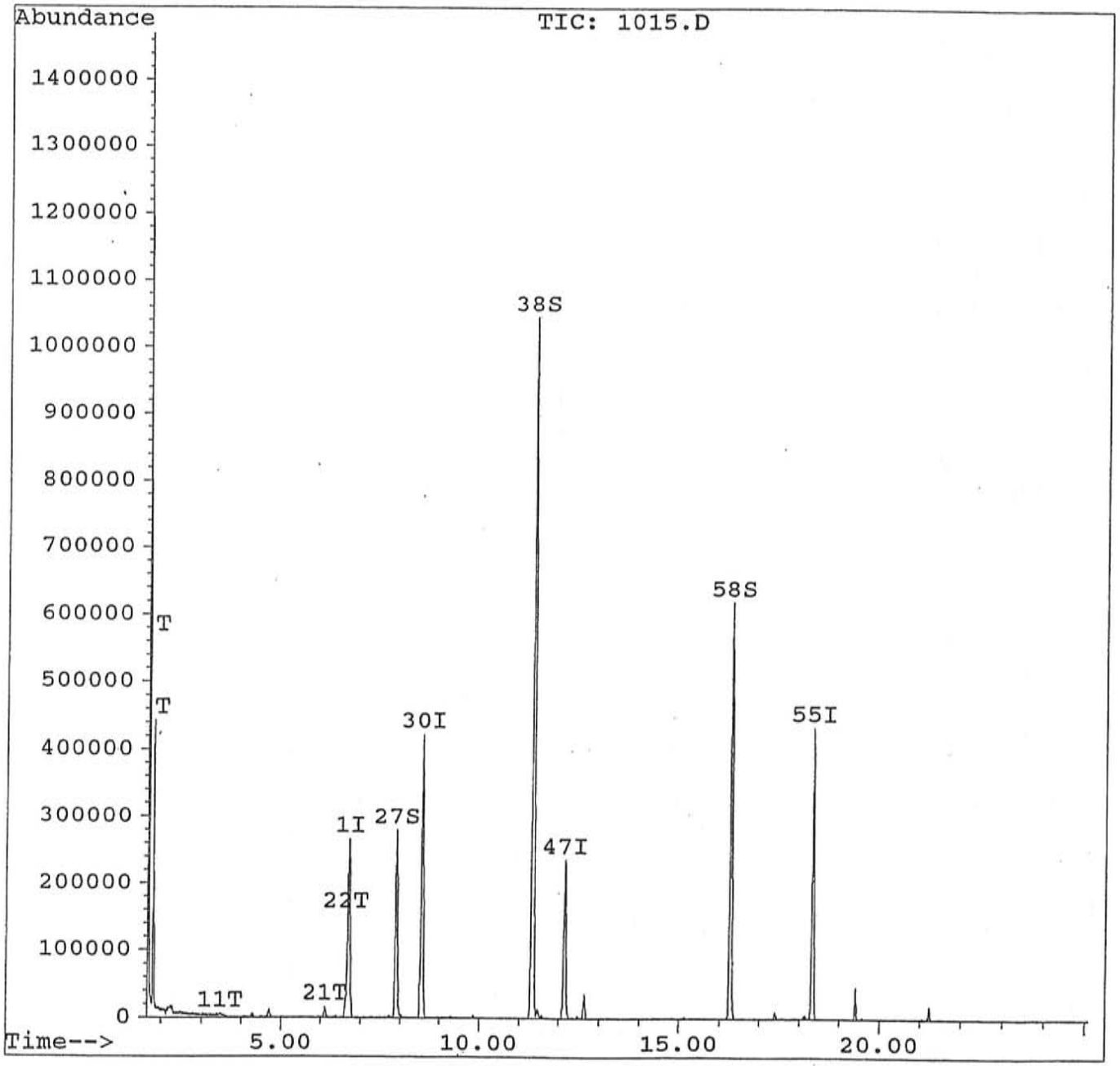


Quantitation Report

Data File : C:\HPCHEM\1\DATA\041696\1015.D
Acq Time : 16 Apr 96 4:31 pm
Sample : 173230
Misc :
Quant Time: Apr 16 16:59 1996

Operator: GHP
Inst : GC/MS
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\82600319.M
Title : 8260
Last Update : Tue Apr 16 15:09:21 1996
Response via : Single Level Calibration

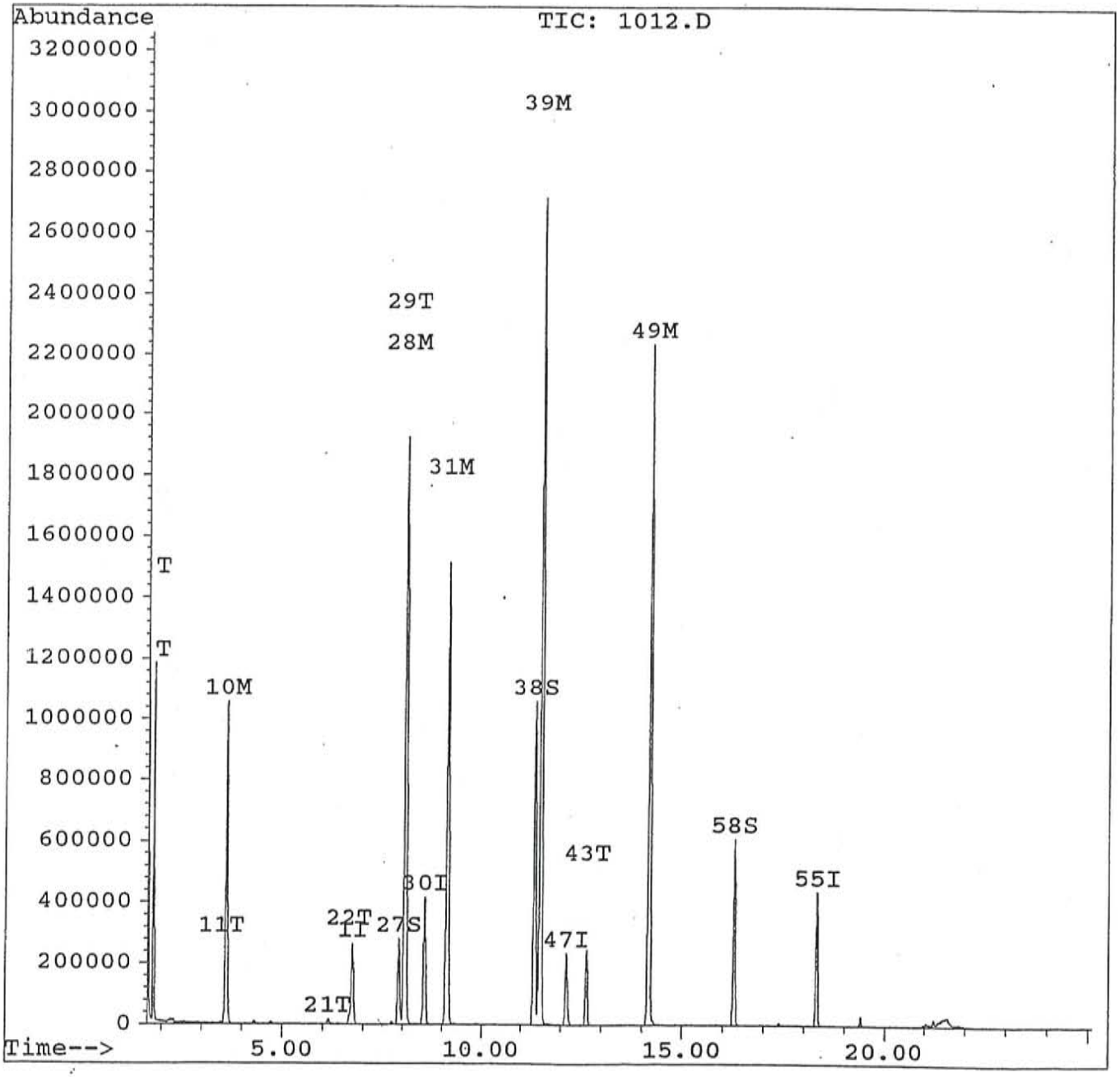


Quantitation Report

Data File : C:\HPCHEM\1\DATA\041696\1012.D
Acq Time : 16 Apr 96 2:54 pm
Sample : 173234 msd
Misc :
Quant Time: Apr 16 15:23 1996

Operator: GHP
Inst : GC/MS
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\82600319.M
Title : 8260
Last Update : Tue Apr 16 15:09:21 1996
Response via : Single Level Calibration



GROUNDWATER SAMPLING LOG

Project: Southgate Laundry Date/Time: 4/15/96 Station No. MW-2

Narrative Description:

Personnel: Rob Farrell Weather: 68°

Well Locked? Yes [X] No [ ] Well Log? Yes [X] No [ ]

Condition of Well: V. Good

Casing Type: PVC Casing Diameter: 2"

Casing Stickup: None Flush mount Measuring Point Description: North side of PVC

Aquifer: Yakima Gravel

Depth to Water (feet below measuring point): 33.75

WELL EVACUATION

Method: Positive Displacement Pump [ ] Hand-Lift Pump [ ] Submersible Pump [ ] SST Bailer [ ] PVC Bailer [X] Teflon Bailer, Other:

One Bore Volume = Gallons

Remarks: See MW-1

EVACUATION DATA

Time	Cumulative Gallons	Temp	pH	SC	Other
11:20		15°C	6.9	300	
11:30		15°C	6.9	300	
	20 Total				

WELL SAMPLING

Sampling Method: Disposable PVC Bailer Sample Type: Natural [X] Replicate [ ] X-Contam [ ] Trip Blank [ ] Blind Field Sta. [X]

SC DATA

Water Temp. (1)	Observed SC (µmhos) (2)	Temp. Correction Factor (3)	Cell Factor (4)	SC = (2) x (3) x (4) µmhos/cm @ 25°C Compensated SC

Temperature: pH: Other:

Sample Container	Parameters	Preservative

Laboratory: Billings Lab (Maxim) Chain-of-Custody: Yes [X] No [ ]

Sample Analysis Request Form: Yes [ ] No [ ]

Meter	Serial No.	Calibration Date
pH		
SC		
M-Scope		

Decontamination

Steam: Yes [ ] No [ ] Potable Water: Yes [ ] No [ ]

Scrub: Yes [ ] No [ ] Liquinox: Yes [ ] No [ ]

Methanol: Yes [ ] No [ ] Acetone: Yes [ ] No [ ]

Nitic Acid: Yes [ ] No [ ]

Comments: blind duplicate collected

GROUNDWATER SAMPLING LOG

Project: Southgate Laundry Date/Time: 4/15/96 Station No. MW-4

Narrative Description:

Personnel: Rob Farrell Weather: 68°

Well Locked? Yes [X] No [ ] Well Log? Yes [X] No [ ]

Condition of Well: Very good

Casing Type: PVC Casing Diameter: 2"

Casing Stickup: Flush Mount Measuring Point Description: North side of PVC

Aquifer: Yakima Gravel

Depth to Water (feet below measuring point): 32.43

WELL EVACUATION

Method: Positive Displacement Pump [ ] Hand-Lift Pump [ ] Submersible Pump [ ] SST Bailer [ ] PVC Bailer [X] Teflon Bailer [ ] Other:

One Bore Volume = _____ Gallons

Remarks:

EVACUATION DATA

Time	Cumulative Gallons	Temp	pH	SC	Other
15:00		15°	7.3	310	
15:10		15°	7.3	810	
	25 Total				

WELL SAMPLING

Sampling Method: Disposable PVC Bailer Sample Type: Natural [X] Replicate [ ] X-Contam [ ] Trip Blank [ ] Blind Field Sta. [ ]

SC DATA

Water Temp. (1)	Observed SC (µmhos) (2)	Temp. Correction Factor (3)	Cell Factor (4)	SC = (2) x (3) x (4) µmhos/cm @ 25°C Compensated SC

Temperature _____ pH: _____ Other: _____

Sample Container	Parameters	Preservative

Laboratory: Billings Lab (Huxim) Chain-of-Custody: Yes [X] No [ ]

Sample Analysis Request Form: Yes [ ] No [ ]

Meter	Serial No.	Calibration Date
pH		
SC		
M-Scope		

Decontamination

Steam: Yes [ ] No [ ] Potable Water: Yes [ ] No [ ]

Scrub: Yes [ ] No [ ] Liquinox: Yes [ ] No [ ]

Methanol: Yes [ ] No [ ] Acetone: Yes [ ] No [ ]

Nitric Acid: Yes [ ] No [ ]

Comments:

Client Name: MAXIM - Yakima
Project No.: 95-932
Laboratory No.: 176497
Sample Name: MW-3
Sample Date: 07/15/96
Collected by: ROD HEIT
Time Sampled: 0713
Sample Type: WATER

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
HALOGENATED VOLATILE ORGANICS				
Data File Number-Volatiles	0717961011			
Benzyl chloride	<1	ug/l	8260	07/17/96
Bromobenzene	<1	ug/l	8260	07/17/96
Bromodichloromethane	<1	ug/l	8260	07/17/96
Bromoform	<1	ug/l	8260	07/17/96
Bromomethane	<1	ug/l	8260	07/17/96
Carbon Tetrachloride	<1	ug/l	8260	07/17/96
Chlorobenzene	<1	ug/l	8260	07/17/96
Chloroethane	<1	ug/l	8260	07/17/96
Chloroform	<1	ug/l	8260	07/17/96
Chloromethane (Methyl chloride)	<1	ug/l	8260	07/17/96
Dibromochloromethane	<1	ug/l	8260	07/17/96
Dibromomethane	<1	ug/l	8260	07/17/96
Dichlorodifluoromethane	18	ug/l	8260	07/17/96
1,2-Dichlorobenzene	<1	ug/l	8260	07/17/96
1,3-Dichlorobenzene	<1	ug/l	8260	07/17/96
1,4-Dichlorobenzene	<1	ug/l	8260	07/17/96
1,1-Dichloroethane	<1	ug/l	8260	07/17/96
1,2-Dichloroethane	<1	ug/l	8260	07/17/96
1,1-Dichloroethene	<1	ug/l	8260	07/17/96
c-1,2-Dichloroethene	<1	ug/l	8260	07/17/96
t-1,2-Dichloroethene	<1	ug/l	8260	07/17/96
1,2-Dichloropropane	<1	ug/l	8260	07/17/96
c-1,3-Dichloropropene	<1	ug/l	8260	07/17/96
t-1,3-Dichloropropene	<1	ug/l	8260	07/17/96
Methylene chloride	<5	ug/l	8260	07/17/96
1,1,1,2-Tetrachloroethane	<1	ug/l	8260	07/17/96
1,1,2,2-Tetrachloroethane	<1	ug/l	8260	07/17/96
Tetrachloroethene	62	ug/l	8260	07/17/96
1,1,1-Trichloroethane	<1	ug/l	8260	07/17/96
1,1,2-Trichloroethane	<1	ug/l	8260	07/17/96
Trichloroethene	<1	ug/l	8260	07/17/96
Trichlorofluoromethane	<1	ug/l	8260	07/17/96
1,2,3-Trichloropropane	<1	ug/l	8260	07/17/96
Vinyl Chloride	<1	ug/l	8260	07/17/96
2-Chloroethyl vinyl ether	<10	ug/l	8260	07/17/96
1,2-Dichloroethane-d4 (Surrogate)	90	%	8260	07/17/96
Toluene-d8 (Surrogate)	104	%	8260	07/17/96
4-Bromofluorobenzene (Surrogate)	101	%	8260	07/17/96

Client Name: MAXIM - Yakima
Project No.: 95-932
Laboratory No.: 176499
Sample Name: MW-BLIND MW-3
Sample Date: 07/15/96
Collected by: ROD HEIT
Time Sampled: NONE GIVEN
Sample Type: WATER

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
HALOGENATED VOLATILE ORGANICS				
Data File Number-Volatiles	0717961013			
Benzyl chloride	<1	ug/l	8260	07/17/96
Bromobenzene	<1	ug/l	8260	07/17/96
Bromodichloromethane	<1	ug/l	8260	07/17/96
Bromoform	<1	ug/l	8260	07/17/96
Bromomethane	<1	ug/l	8260	07/17/96
Carbon Tetrachloride	<1	ug/l	8260	07/17/96
Chlorobenzene	<1	ug/l	8260	07/17/96
Chloroethane	<1	ug/l	8260	07/17/96
Chloroform	<1	ug/l	8260	07/17/96
Chloromethane (Methyl chloride)	<1	ug/l	8260	07/17/96
Dibromochloromethane	<1	ug/l	8260	07/17/96
Dibromomethane	<1	ug/l	8260	07/17/96
Dichlorodifluoromethane	28	ug/l	8260	07/17/96
1,2-Dichlorobenzene	<1	ug/l	8260	07/17/96
1,3-Dichlorobenzene	<1	ug/l	8260	07/17/96
1,4-Dichlorobenzene	<1	ug/l	8260	07/17/96
1,1-Dichloroethane	<1	ug/l	8260	07/17/96
1,2-Dichloroethane	<1	ug/l	8260	07/17/96
1,1-Dichloroethene	<1	ug/l	8260	07/17/96
c-1,2-Dichloroethene	<1	ug/l	8260	07/17/96
t-1,2-Dichloroethene	<1	ug/l	8260	07/17/96
1,2-Dichloropropane	<1	ug/l	8260	07/17/96
c-1,3-Dichloropropene	<1	ug/l	8260	07/17/96
t-1,3-Dichloropropene	<1	ug/l	8260	07/17/96
Methylene chloride	<5	ug/l	8260	07/17/96
1,1,1,2-Tetrachloroethane	<1	ug/l	8260	07/17/96
1,1,2,2-Tetrachloroethane	<1	ug/l	8260	07/17/96
Tetrachloroethene	53	ug/l	8260	07/17/96
1,1,1-Trichloroethane	<1	ug/l	8260	07/17/96
1,1,2-Trichloroethane	<1	ug/l	8260	07/17/96
Trichloroethene	<1	ug/l	8260	07/17/96
Trichlorofluoromethane	<1	ug/l	8260	07/17/96
1,2,3-Trichloropropane	<1	ug/l	8260	07/17/96
Vinyl Chloride	<1	ug/l	8260	07/17/96
2-Chloroethyl vinyl ether	<10	ug/l	8260	07/17/96
1,2-Dichloroethane-d4 (Surrogate)	97	%	8260	07/17/96
Toluene-d8 (Surrogate)	103	%	8260	07/17/96
4-Bromofluorobenzene (Surrogate)	102	%	8260	07/17/96

CHAIN OF CUSTODY RECORD

MAXIM TECHNOLOGIES INC

Project or Site Name: Southgate Laundry

Project Number: Rod Heit

Sampler Name (Printed)

☐ Billings, MT ☐ Helena, MT
☐ Boise, ID ☐ Missoula, MT
☐ Great Falls, MT ☒ Yakima, WA

Rachel Tarman
Contact or Report to

YAKIMA
Contact Address or Location

Rodney L Heit
Sampler Signature

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED: 8010	NOTES	LAB NUMBER
7/15/96	10:23 AM	MW-1	Grab	Water	2	X		17611-95
7/15/96	8:20 AM	MW-2	↓	↓	2	X		96
7/15/96	7:13 AM	MW-3			2	X		97
7/15/96	9:18 AM	MW-4			2	X		98
7/15/96	—	MW-blind			2	X		99
7/15/96	7:08 AM	Travel blank			2	X	MW-3	17611-100

Relinquished by: Rodney Heit	Date 7/15/96	Time 10:45	Received by: Rachel Tarman
Relinquished by: Rachel Tarman	Date 7/18/96	Time 4:30	Received by: UPS DLR
Relinquished by: UPS	Date 7/16/96	Time 1005	Received by: [signature]
Relinquished by:	Date	Time	Received by:

Cooler temp 17.0°C Yes

Remarks: 4 wells 2 viles each
1 blind (2 viles)
1 Travel blank (2 viles)
8010

MAXIM TECHNOLOGIES INC

SAMPLE RECEIPT CHECKLIST

Client Name: M-Yakima
Project: Southgate Facility
Laboratory number(s): 170495-500
Checklist completed by: YG 7/16 (Initials / Date)

Date/Time Received: 7/16/96 1605 (Date / Time)
Received by: K Gilmore
Carrier name: UPS Red
Sample Type: Water

		YES	NO
1.	Shipping container in good condition?	✓	
2.	Custody seals present on shipping container?		✓
3.	Condition: Intact _____ Broken _____		
4.	Chain of custody present?	✓	
5.	Chain of custody signed when relinquished and received?	✓	
6.	Chain of custody agrees with sample labels?	✓	
7.	Custody seals on sample bottles?		✓
8.	Condition: Intact _____ Broken _____		
9.	Samples in proper container/bottle?	✓	
10.	Samples intact?	✓	
11.	Sufficient sample volume for indicated test?	✓	
12.	VOA vials have zero headspace?		
13.	Trip Blank received?	✓	
14.	Ice/Frozen Blue Ice present in shipping container? (circle one)	✓	
15.	Container temperature 1. 17.0°C 2. _____ 3. _____		

		YES	NO
16.	All samples rec'd within holding time?	✓	
	Preservation		
17.	pH check performed by: YG		
18.	Metals bottle(s) pH <2?	N/A	
19.	Nutrient bottle(s) pH <2?		
20.	Cyanide bottle(s) pH >12?		
21.	Sulfide bottle(s) pH >9?		
22.	Oil & grease bottle(s) pH <2?		
23.	TOC bottle(s) pH <2?		
24.	DRO/418.1 bottle(s) pH <2?		
25.	Phenolics bottle(s) pH <2?		
26.	Volatiles (VOA) pH <2? (VOA pH checked by analyst)	✓	
27.	Client contacted?		
28.	Person contacted		
29.	Date contacted		
30.	Contacted by		
31.	Regarding?		

Note: Samples may be affected when not transported at the temperature recommended by the EPA for the test you've selected. Please contact the lab if you have concerns about the temperature of your samples.

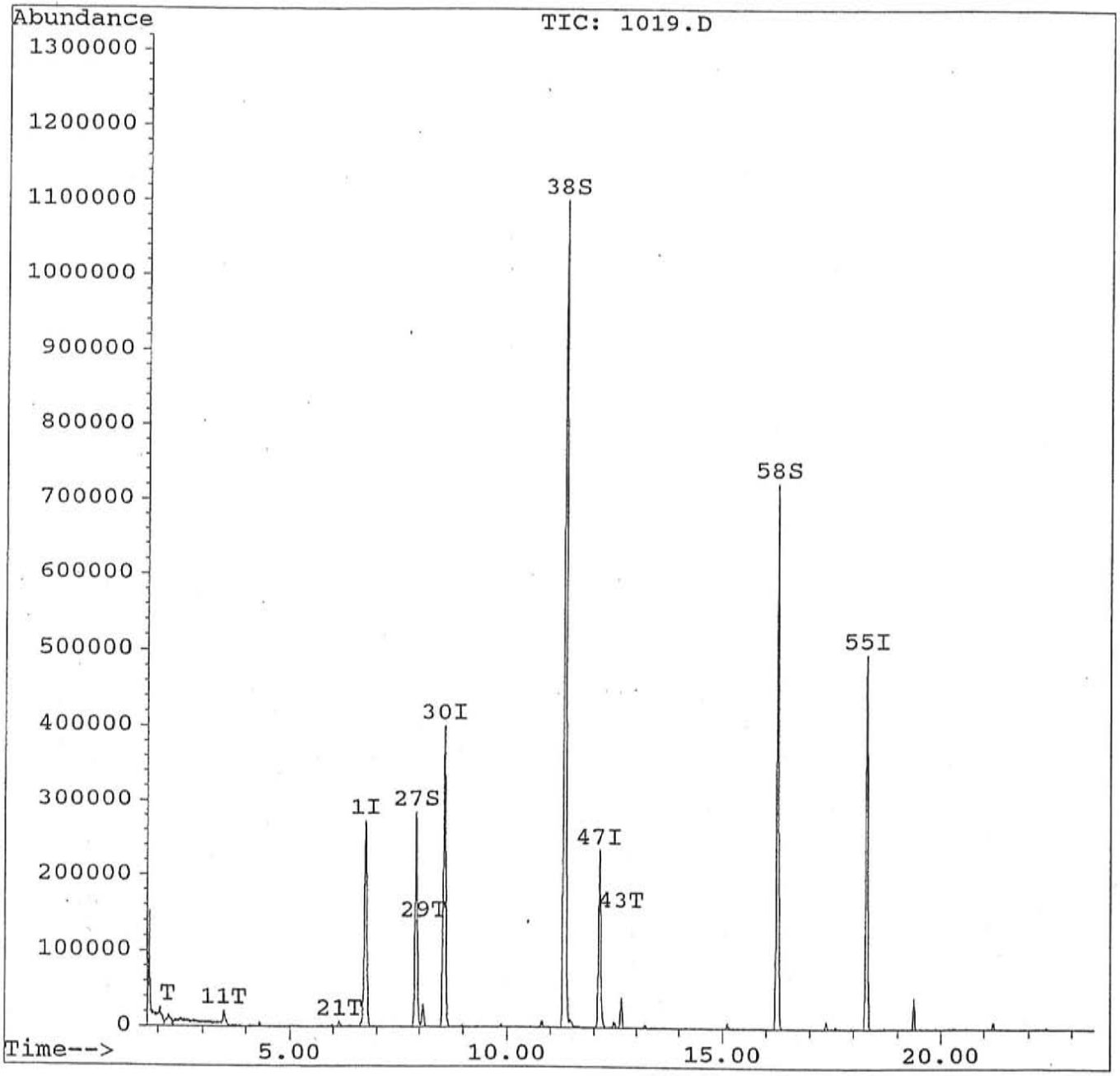
COMMENTS: Trip Blk 8847

Quantitation Report

Data File : C:\HPCHEM\1\DATA\071796\1019.D
Acq Time : 17 Jul 96 6:37 pm
Sample : ~~176315-5gm soil~~ 176953
Misc :
Quant Time: Jul 17 19:03 1996 7/18/96

Operator: GHP
Inst : GC/MS
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\82600702.M
Title : 8260
Last Update : Wed Jul 17 10:43:46 1996
Response via : Single Level Calibration

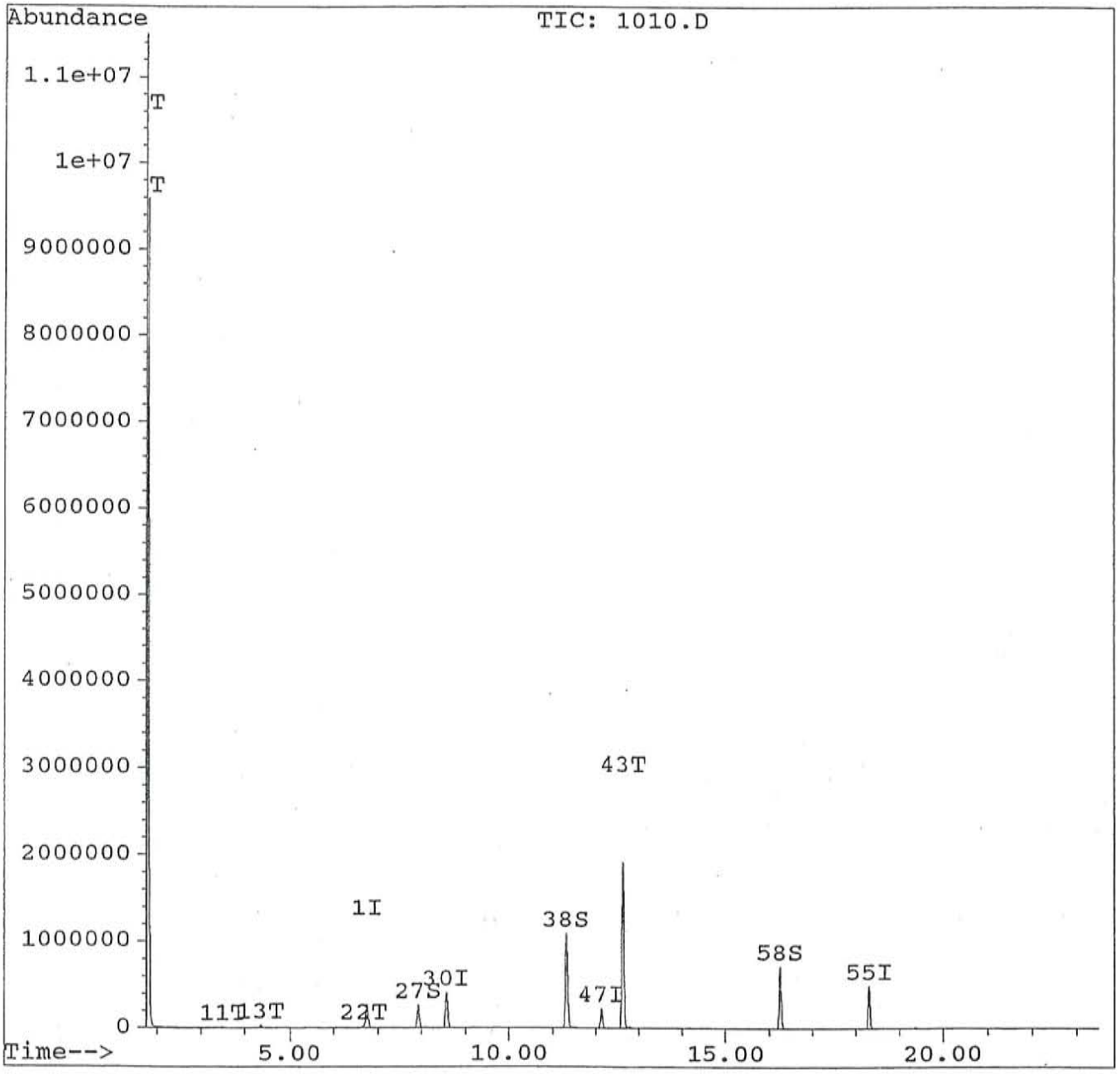


Quantitation Report

Data File : C:\HPCHEM\1\DATA\071796\1010.D
Acq Time : 17 Jul 96 1:40 pm
Sample : 176496
Misc :
Quant Time: Jul 17 14:08 1996

Operator: GHP
Inst : GC/MS
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\82600702.M
Title : 8260
Last Update : Wed Jul 17 10:43:46 1996
Response via : Single Level Calibration

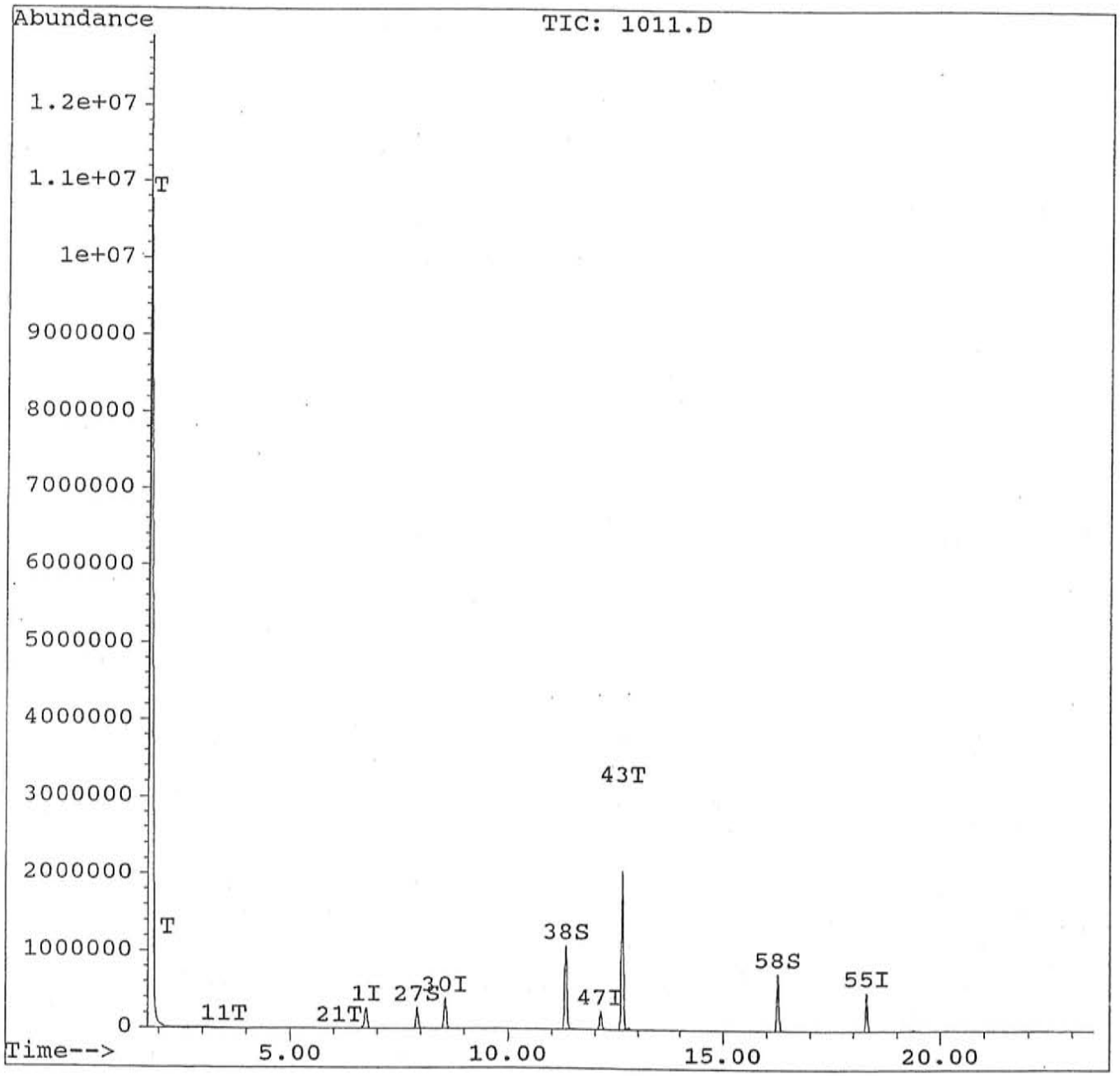


Quantitation Report

Data File : C:\HPCHEM\1\DATA\071796\1011.D
Acq Time : 17 Jul 96 2:12 pm
Sample : 176497
Misc :
Quant Time: Jul 17 14:42 1996

Operator: GHP
Inst : GC/MS
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\82600702.M
Title : 8260
Last Update : Wed Jul 17 10:43:46 1996
Response via : Single Level Calibration

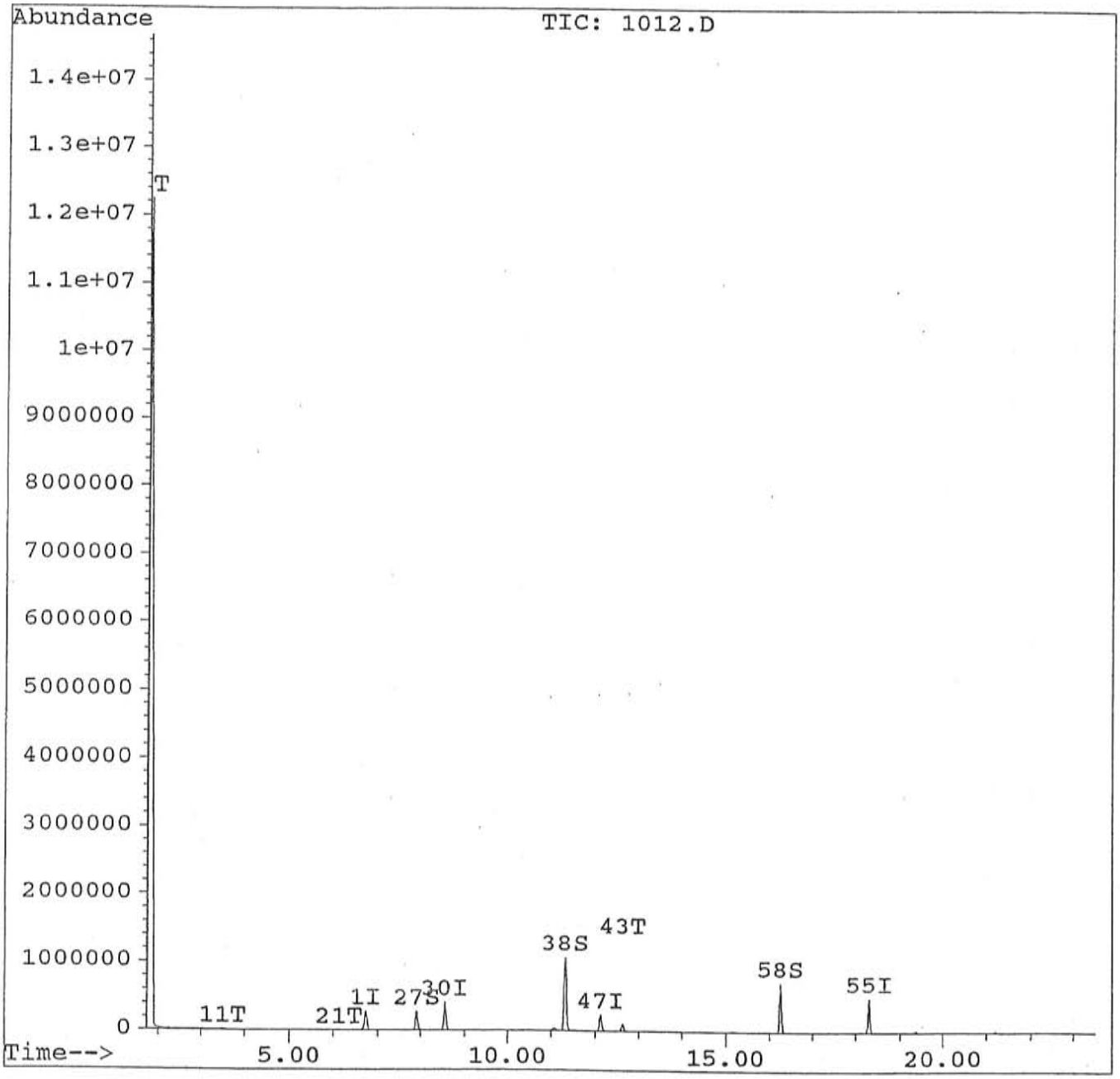


Quantitation Report

Data File : C:\HPCHEM\1\DATA\071796\1012.D
Acq Time : 17 Jul 96 2:45 pm
Sample : 176498
Misc :
Quant Time: Jul 17 15:12 1996

Operator: GHP
Inst : GC/MS
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\82600702.M
Title : 8260
Last Update : Wed Jul 17 10:43:46 1996
Response via : Single Level Calibration

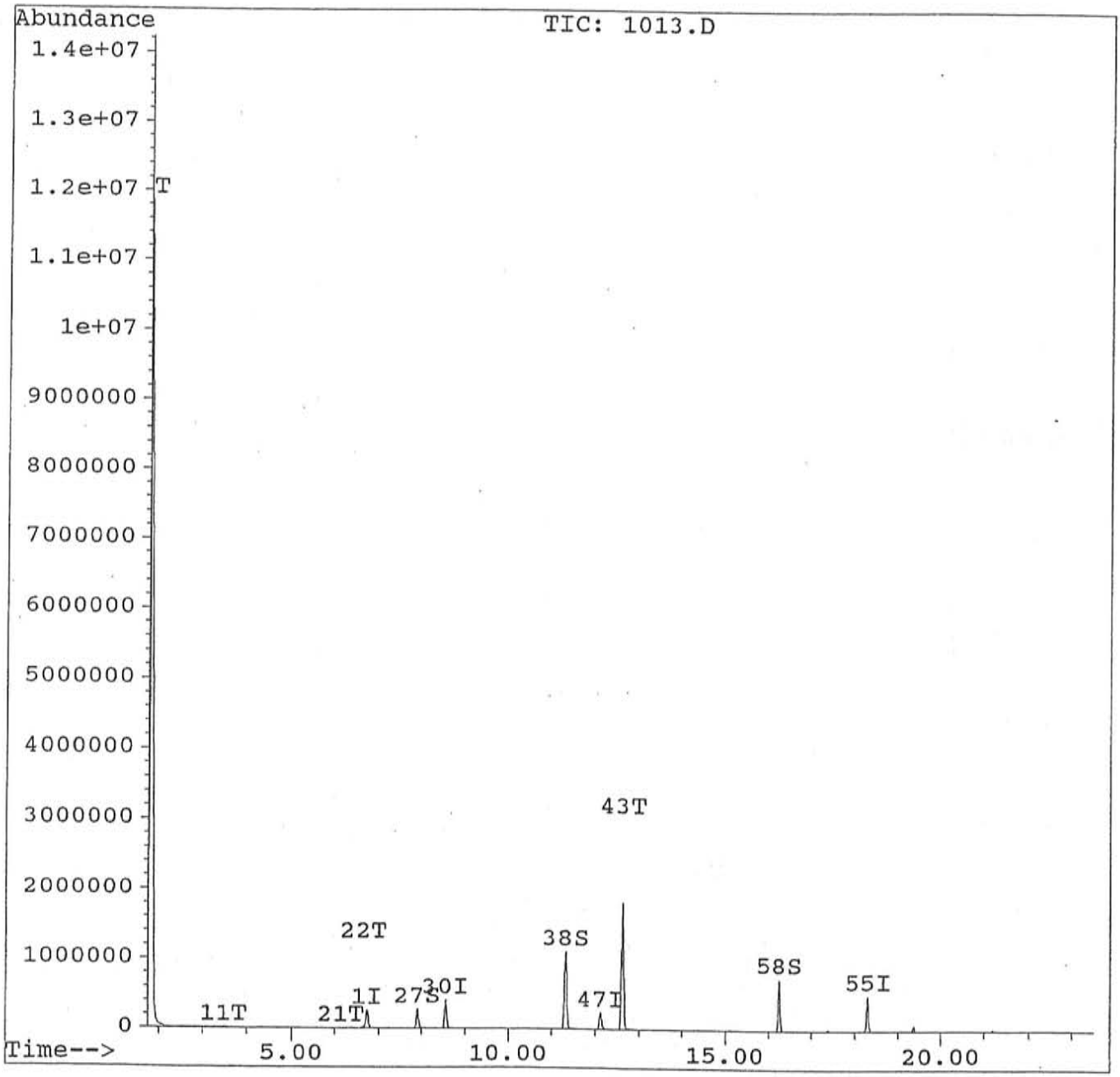


Quantitation Report

Data File : C:\HPCHEM\1\DATA\071796\1013.D
Acq Time : 17 Jul 96 3:18 pm
Sample : 176499
Misc :
Quant Time: Jul 17 15:47 1996

Operator: GHP
Inst : GC/MS
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\82600702.M
Title : 8260
Last Update : Wed Jul 17 10:43:46 1996
Response via : Single Level Calibration

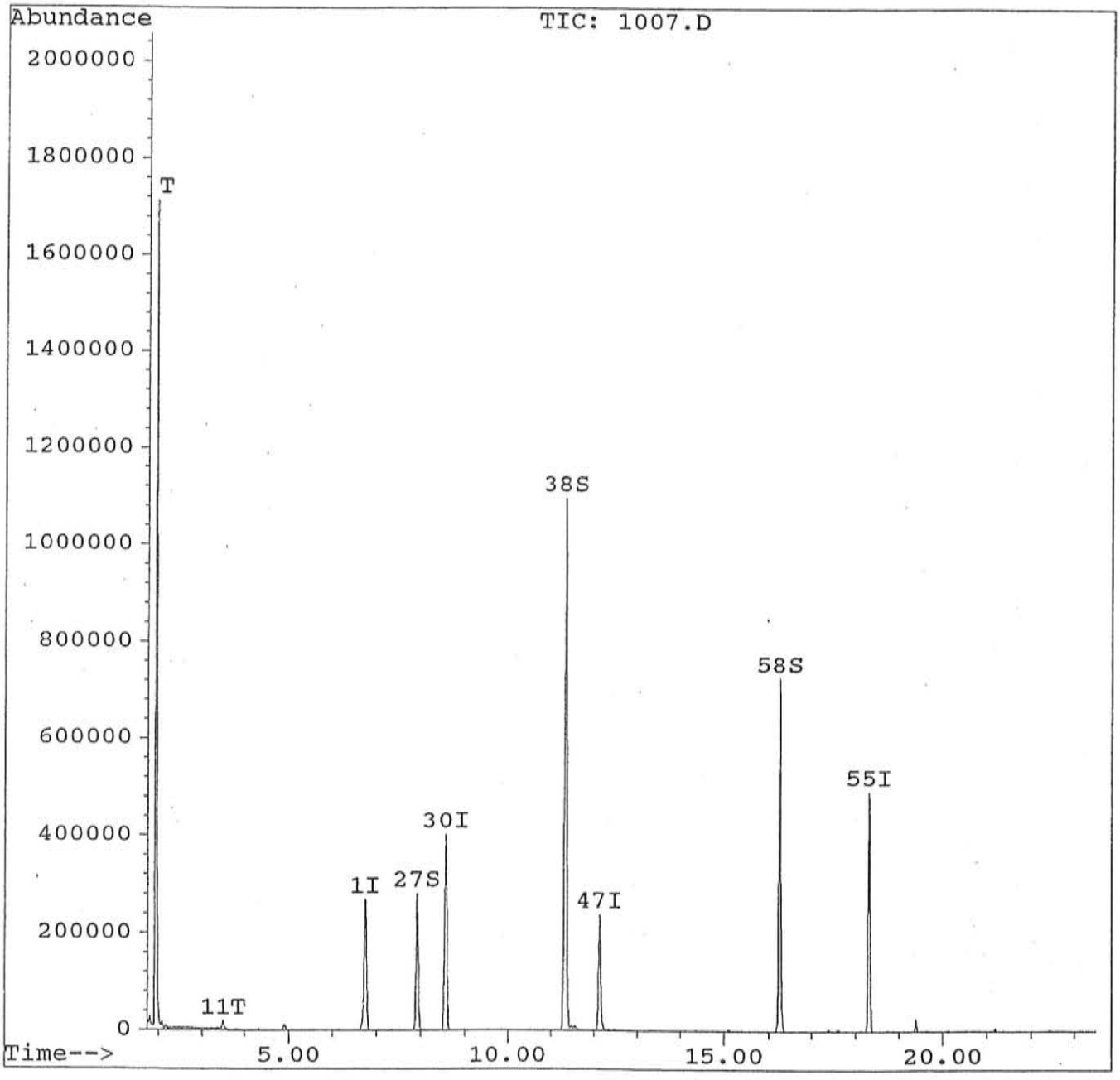


Quantitation Report

Data File : C:\HPCHEM\1\DATA\071796\1007.D
Acq Time : 17 Jul 96 11:28 am
Sample : 176500 t
Misc :
Quant Time: Jul 17 11:55 1996

Operator: GHP
Inst : GC/MS
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\82600702.M
Title : 8260
Last Update : Wed Jul 17 10:43:46 1996
Response via : Single Level Calibration



GROUNDWATER SAMPLING REPORT

Field Personnel Rodney Holt Date 7-15-96

Site Name SOUTHgate Site Location 3rd & Nob Hill

Time	Description
5:50	ARRIVE Racheals Home Grade Key
	ARRIVE ON Site Southgate
6:05	OPEN MW#3 Car parks on Corner Car moves
	Take measurment MW#3 NORTH Top PVC Case.
6:27	Prepare & Bale MW#3
7:10	FINISH Bale 10 gallons Bailed
7:15	SAMPLE MW#3 Water (Semi Clear)
7:28	Move to MW#2 Remove cover
	Gary Slagel Stops By.
7:35	Take H_2O measurment MW#2
7:42	Set up Baler Bale MW#2
8:10	FINISH Bale MW#2 10 gallons (Semi Clear)
8:15	Sample MW#2
8:20	FINISH, Haul water, move to MW#4 South alleyway
8:36	Take H_2O measurement MW#4
	(TO Black DOT High Side West
	(TO NORTH side case TOP
9:18	Bale 10 gallons H_2O MW#4 Collect Sample (Semi Cloudy)

Well Measurements

Time	Well Number	SWL	Temperature	pH	Conductivity
6:22	MW#3	21.70			
7:13	MW#3		64°F	7.8	330 µS
7:37	MW#2	23.43			
8:20	" "		63°F	7.9	340 µS
8:38	MW#4	TO Black 22.08 NORTH 22.07			
9:18	" "		64°F	7.9	320 µS

GROUNDWATER SAMPLING REPORT

Field Personnel Rodney Holt Date 7-15-96

Site Name Southgate Site Location 3rd & Nob Hill

Time	Description
9:25	Close mw #4 Dump water, Secure Barrel lid
9:40	Move Truck To mw #1
	Purchase Distilled H_2O for Rinse of WLI TAPE TIP.
9:45	Open well Cover, Proceed with SWL measurement,
	Both mw #1 Black Dot observed on South Rim
	Top of well Casing measurement ~~has as~~
	indicates no difference for SWL to that
9:52	of North TOP Casing.
9:55	Start Bale procedure mw #1
	FINISH Bale 10 gallons (Cloudy).
10:23	Collect Sample
10:45	Leave Site

Well Measurements

Time	Well Number	SWL	Temperature	pH	Conductivity
9:50	MW #1	Black Marker on North 22.67			
10:23	" "		62°F	7.8	410 µS

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

7110 38th Drive SE
Lacey, Washington 98503

Mobile Environmental Laboratories
Environmental Sampling Services

Telephone: **360-459-4670**
Fax: **360-459-3432**

S. GATE
October
GW

October 14, 1996

Rachel Tauman
Maxim Technologies
P.O. Box 2887
Yakima, WA 98907

Dear Ms. Tauman:

Please find enclosed the data report for off-site analyses of water samples conducted on October 10, 1996, for the Southgate Laundry Project, Project No. 5809500946.04, in Yakima, Washington. The water samples were analyzed for Specific Halogenated Hydrocarbons and BTEX by Modified EPA Method 8010/8020.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. An invoice for this work is also enclosed.

TEG Northwest appreciates the opportunity to have provided analytical services to Maxim Technologies for this project. It was a pleasure working with you, and we are looking forward to the next opportunity to work together.

Sincerely,

Michael A. Korosec

Michael A. Korosec
President

QA/QC FOR ANALYTICAL METHODS

GENERAL

The TEG Northwest Laboratory quality assurance and quality control (QA/QC) procedures are conducted following the guidelines and objectives which meet or exceed certification/-accreditation requirements of California DOHS, Washington DOE, and Oregon DEQ. The Quality Control Program is a consistent set of procedures which assures data quality through the use of appropriate blanks, replicate analyses, surrogate spikes, and matrix spikes, and with the use of reference standards that meet or exceed EPA standards.

When analyses are taking place on-site with the mobile lab, the need for Field Blanks or Travel/Trip Blanks is eliminated. If there is going to be a delay before sample preparation for analysis, the sample is stored at 4° C.

ANALYTICAL METHODS

TEG Northwest Labs use analytical methodologies which are in conformity with U. S. Environmental Protection Agency (EPA), Washington DOE, and Oregon DEQ methodologies. When necessary and appropriate due to the nature or composition of the sample, TEG may use variations of the methods which are consistent with recognized standards or variations used by the industry and government laboratories.

Purgeable Volatile Aromatics (BTEX, EPA 602/8020)

A blank and a calibration standard are run at the beginning of the day. The standard must be within 15% of the continuing calibration curve value. The standard is rerun at the end of the day if more than 10 samples have been run. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135%. At least 1 method blank is run per day.

Purgeable Volatile Halocarbons
(Chlorinated Hydrocarbons, EPA 601/8010,8021)

A blank and a calibration standard are run at the beginning of the day. The standard must be within 15% of the continuing calibration curve value. The standard is rerun at the end of the day if more than 10 samples have been run. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135%. At least 1 method blank is run per day.

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

SOUTHGATE LAUNDRY PROJECT
Yakima, Washington
Maxim Technologies, Inc.
Project No. 5809500946.04

Specific Halogenated Hydrocarbons and BTEX (Mod. EPA 8010/8020) in Water

Sample-Number	MDL	Method Blank	MW-1	MW-1 Dup.	MW-2	MW-3	MW-4
Date		10/10/96	10/10/96	10/10/96	10/10/96	10/10/96	10/10/96
	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Vinylchloride	1	nd	nd	nd	nd	nd	nd
1,1 Dichloroethene	1	nd	nd	nd	nd	nd	nd
Trans-1,2 Dichloroethene	1	nd	nd	nd	nd	nd	nd
Cis-1,2 Dichloroethene	1	nd	nd	nd	nd	nd	nd
Benzene	1	nd	nd	nd	nd	nd	nd
Trichloroethene	1	nd	nd	nd	nd	nd	nd
Toluene	1	nd	nd	nd	nd	nd	nd
Tetrachloroethene	1	nd	1.4	1.2	52	62	2.6
Ethylbenzene	1	nd	nd	nd	nd	nd	nd
m,p-Xylene	1	nd	nd	nd	nd	nd	nd
o-Xylene	1	nd	nd	nd	nd	nd	nd
Dichloromethane	1	nd	nd	nd	nd	nd	nd
1,1 Dichloroethane	1	nd	nd	nd	nd	nd	nd
1,2 Dichloroethane	1	nd	nd	nd	nd	nd	nd
Chloroform	1	nd	nd	nd	nd	nd	nd
Carbon Tetrachloride	1	nd	nd	nd	nd	nd	nd
1,1,1 Trichloroethane	1	nd	nd	nd	nd	nd	nd
1,1,2 Trichloroethane	1	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	1	nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	1	nd	nd	nd	nd	nd	nd
Spike Recovery (%)		83	106	126	103	100	83

"nd" Indicates Not Detected at the listed detection limit.
"int" Indicates that interference peaks prevent determination.

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

SOUTHGATE LAUNDRY PROJECT
Yakima, Washington
Maxim Technologies, Inc.
Project No. 5809500946.04

Specific Halogenated Hydrocarbons and BTEX (Mod. EPA 8010/8020) in Water

Sample-Number	MDL	Travel Blank	Matrix Sp. 5 ug/l	Matrix Sp. Dup.	Blind Dup.
Date		10/10/96	10/10/96	10/10/96	10/10/96
	ug/l	ug/l	ug/l	ug/l	ug/l
Vinylchloride	1	nd	4.43	4.91	nd
1,1 Dichloroethene	1	nd	4.82	5.31	nd
Trans-1,2 Dichloroethene	1	nd	4.36	4.71	nd
Cis-1,2 Dichloroethene	1	nd	5.05	4.27	nd
Benzene	1	nd	4.45	4.85	nd
Trichloroethene	1	nd	4.57	4.41	nd
Toluene	1	nd	4.43	4.91	nd
Tetrachloroethene	1	nd	4.79	5.12	54
Ethylbenzene	1	nd	4.53	5.20	nd
m,p-Xylene	1	nd	8.90	8.99	nd
o-Xylene	1	nd	4.82	5.31	nd
Dichloromethane	1	nd	4.36	5.31	nd
1,1 Dichloroethane	1	nd	4.47	4.27	nd
1,2 Dichloroethane	1	nd	4.61	5.02	nd
Chloroform	1	nd	4.74	4.45	nd
Carbon Tetrachloride	1	nd	4.95	5.32	nd
1,1,1 Trichloroethane	1	nd	4.69	5.01	nd
1,1,2 Trichloroethane	1	nd	4.92	4.80	nd
1,1,1,2-Tetrachloroethane	1	nd	4.46	5.25	nd
1,1,2,2-Tetrachloroethane	1	nd	5.08	5.50	nd
Spike Recovery (%)		78	100	106	128

"nd" Indicates Not Detected at the listed detection limit.
"int" Indicates that interference peaks prevent determination.

GROUNDWATER SAMPLING REPORT

Field Personnel Rodney Heit Date 10-09-96

Site Name SOUTH GATE PROP. Site Location 3rd & NOB HILL

Page 1 SUNNY, WARM, 78°F

Time	Description
6:40 AM	ARRIVE @ Rachel's Home Pickup Sampleing equip.
	ARRIVE ON SITE 6:55 AM
7:00 AM	OPEN MW #3 S.E CORN WELL MEASURE SWL 22.07
	FROM BLACK MARK TOP N.W CORN OF PVC Casing.
7:12 AM	PREPARE TO Baile MW #3, RINSE (SWL I.) OFF
	10. GALLONS H_2O BAILED MW #3 Semi-Clear
7:37 AM	SAMPLE MW #3 PURCHASE ICE CLOSE MW #3
8:00 AM	DISCHARGE accumulated H_2O INTO DRUMS
8:10 AM	MOVE TO MW #2 NEAR SOUTH Gate Cleaners
8:12	ENTRANCE, OPEN MW #2 TAKE SWL @ 23.87 TO EAST BLACK 6"
8:28	PREPARE AND Bailed MW #2 Semi-Clear
8:49	Baile 10 gallons FROM MW #2 SAMPLE MW #2
9:05	CLOSE MW #2 MOVE TO empty Bailed H_2O INTO DRUMS
9:10	OPEN MW #4 SOUTH OF SOUTH gate BUILDING WAY'S
9:14	TAKE SWL @ Black mark top west edge PVC. casing
9:15	Reading is 22.49 PREPARE AND Baile MW #4
	10 gallons Bailed MW #4 Cloudy
9:50	Sample MW #1 Close MW #4
10:02	Empty H_2O generated from MW #4 INTO Drums.

Well Measurements

Time	Well Number	SWL	Temperature	pH	Conductivity
7:01	#3	22.07	—	—	—
7:37	#3	—	60°F	7.9	290 µs
8:12	#2	23.87	—	—	—
8:49	#2	—	61°F	7.5	300 µs
9:14	#4	22.49	—	—	—
9:50	#4	—	61°F	7.6	270 µs

GROUNDWATER SAMPLING REPORT

Field Personnel Rodney Heit Date 10/9/96

Site Name SOUTHGATE PROP. Site Location 3rd & Nob Hill

PAGE 2

Time	Description
10:10	MOVE TO MW#1 N.W PROP CORN. NEAR GRAVEL
	DRIVE. OPEN MW#1 TAKE H_2O SWL MEASUREMENT
	@ 22.93 FROM BLACK MARK TOP SOUTH RIM
	OF P.V.C CASING. 10 GALLONS BAILED CLOUDY, MUDDY
10:15	BAILA MW#1
10:50	SAMPLE MW#1 EMPTY H_2O GENERATED INTO
	DRUMS NEAR MW#1
11:29	CLOSE MW#1 LEAVE FOR MAXIM STORAGE
	AREA. PICK UP 55 GALLON HAZ-MAT. DRUM.
	HEAD FOR ADELINE PROPERTY 1ST STREET AND YAK.
	AVE

Well Measurements

Time	Well Number	SWL	Temperature	pH	Conductivity
10:12	MW#1	22.93	—	—	—
10:50	MW#1	—	61°F	7.3	280 µS

CHAIN OF CUSTODY RECORD

SOUTHGATE LAUNDRY
Project or Site Name

5809500946.04
Project Number

Rodney Heit
Sampler Name (Printed)

MAXIM TECHNOLOGIES INC

- ☐ Billings, MT
- ☐ Boise, ID
- ☐ Great Falls, MT
- ☐ Helena, MT
- ☐ Missoula, MT
- ☒ Yakima, WA

Rachel Tauman
Contact or Report to

ph (509) 577-8592
Contact Address or Location 577-8520 FAX

Rodney K Heit
Sampler Signature

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED 8010/8020	NOTES	LAB NUMBER
10/9/96	10:50 AM	MW-1	Grab	Water	2	X		
10/9/96	8:49 AM	MW-2	Grab	"	2	X		
10/9/96	7:37 AM	MW-3	Grab	"	2	X		
10/9/96	9:50 AM	MW-4	Grab	"	2	X		
10/9/96	—	Blind MW-3	Grab	"	2	X	MW-3	

Relinquished by:	Date	Time	Received by:
Rodney L Heit	10/9/96	4:00	
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by:

Remarks: * HCL Added

Analysis

8010/8020 VOCs

Full List

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

7110 38th Drive SE
Lacey, Washington 98503

Mobile Environmental Laboratories
Environmental Sampling Services

Telephone: 360-459-4670
Fax: 360-459-3432

February 7, 1997

Rachel Tauman
Maxim Technologies
P.O. Box 2887
Yakima, WA 98907

Dear Ms. Tauman:

Please find enclosed the data report for off-site analyses of water samples conducted on February 6, 1997, for the Southgate Laundry Project, Project No. 5809500946.04, in Yakima, Washington. The water samples were analyzed for Specific Halogenated Hydrocarbons and BTEX by Modified EPA Method 8010/8020.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. An invoice for this work is also enclosed.

TEG Northwest appreciates the opportunity to have provided analytical services to Maxim Technologies for this project. It was a pleasure working with you, and we are looking forward to the next opportunity to work together.

Sincerely,

Michael A. Korosec

Michael A. Korosec
President

QA/QC FOR ANALYTICAL METHODS

GENERAL

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ANALYTICAL METHODS

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Purgeable Volatile Aromatics (BTEX, EPA 602/8020)

A blank and a calibration standard are run at the beginning of the day. The standard must be within 15% of the continuing calibration curve value. The standard is rerun at the end of the day if more than 10 samples have been run. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135%. At least 1 method blank is run per day.

Purgeable Volatile Halocarbons
(Chlorinated Hydrocarbons, EPA 601/8010,8021)

A blank and a calibration standard are run at the beginning of the day. The standard must be within 15% of the continuing calibration curve value. The standard is rerun at the end of the day if more than 10 samples have been run. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135%. At least 1 method blank is run per day.

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

SOUTHGATE LAUNDRY PROJECT
Yakima, Washington
Maxim Technologies, Inc.
Project No. 5809500946.04

Specific Halogenated Hydrocarbons and BTEX (Mod. EPA 8010/8020) in Water

Sample-Number	MDL	Method Blank	MW-1	MW-2	MW-3	MW-4
Date		02/06/97	02/06/97	02/06/97	02/06/97	02/06/97
	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Vinylchloride	1	nd	nd	nd	nd	nd
1,1 Dichloroethene	1	nd	nd	nd	nd	nd
Trans-1,2 Dichloroethene	1	nd	nd	nd	nd	nd
Cis-1,2 Dichloroethene	1	nd	nd	nd	nd	nd
Benzene	1	nd	nd	nd	nd	nd
Trichloroethene	1	nd	nd	nd	nd	nd
Toluene	1	nd	nd	nd	nd	nd
Tetrachloroethene	1	nd	9.5	11.9	107	6.3
Ethylbenzene	1	nd	nd	nd	nd	nd
m,p-Xylene	1	nd	nd	nd	nd	nd
o-Xylene	1	nd	nd	nd	nd	nd
Dichloromethane	1	nd	nd	nd	nd	nd
1,1 Dichloroethane	1	nd	nd	nd	nd	nd
1,2 Dichloroethane	1	nd	nd	nd	nd	nd
Chloroform	1	nd	1.7	1.1	0.9	1.5
Carbon Tetrachloride	1	nd	nd	nd	nd	nd
1,1,1 Trichloroethane	1	nd	nd	nd	nd	nd
1,1,2 Trichloroethane	1	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	1	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	1	nd	nd	nd	nd	nd
Spike Recovery (%)		94	127	84	110	132

"nd" Indicates Not Detected at the listed detection limit.
"int" Indicates that interference peaks prevent determination.

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

SOUTHGATE LAUNDRY PROJECT
Yakima, Washington
Maxim Technologies, Inc.
Project No. 5809500946.04

Specific Halogenated Hydrocarbons and BTEX (Mod. EPA 8010/8020) in Water

Sample-Number	MDL	Travel Blank	Matrix Sp. 5 ug/l	Matrix Sp. Dup.	Blind Dup.		
Date	ug/l	02/07/97 ug/l	02/07/97 ug/l	02/07/97 ug/l	02/07/97 ug/l		
Vinylchloride	1	nd	--	--	nd		
1,1 Dichloroethene	1	nd	5.6	5.0	nd		
Trans-1,2 Dichloroethene	1	nd	4.8	4.3	nd		
Cis-1,2 Dichloroethene	1	nd	4.7	4.4	nd		
Benzene	1	nd	4.9	4.5	nd		
Trichloroethene	1	nd	4.5	4.2	nd		
Toluene	1	nd	4.8	4.2	nd		
Tetrachloroethene	1	nd	4.4	4.2	106		
Ethylbenzene	1	nd	4.5	4.7	nd		
m,p-Xylene	1	nd	10.4	8.7	nd		
o-Xylene	1	nd	5.6	5.0	nd		
Dichloromethane	1	nd	5.0	5.1	nd		
1,1 Dichloroethane	1	nd	4.8	4.1	nd		
1,2 Dichloroethane	1	nd	5.2	4.9	nd		
Chloroform	1	nd	4.7	4.1	0.9		
Carbon Tetrachloride	1	nd	5.0	4.5	nd		
1,1,1 Trichloroethane	1	nd	5.0	4.9	nd		
1,1,2 Trichloroethane	1	nd	4.9	4.8	nd		
1,1,1,2-Tetrachloroethane	1	nd	4.9	4.3	nd		
1,1,2,2-Tetrachloroethane	1	nd	4.8	4.6	nd		
Spike Recovery (%)		123	94	97	127		

"nd" Indicates Not Detected at the listed detection limit.
"int" Indicates that interference peaks prevent determination.

CHAIN OF CUSTODY RECORD

TEG

Southgate Laundry
Project or Site Name

5809500946.04
Project Number

Scott Colvin
Sampler Name (Printed)

MAXIM TECHNOLOGIES INC

☐ Billings, MT ☐ Helena, MT
☐ Boise, ID ☐ Missoula, MT
☐ Great Falls, MT ☒ Yakima, WA

Rachel Tavman
Contact or Report to

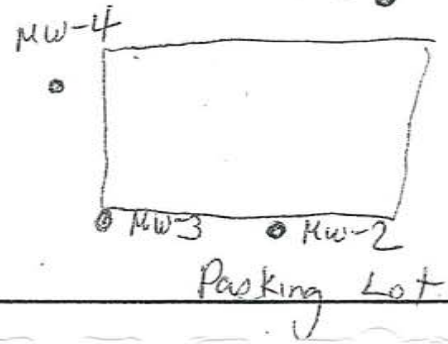
402 E. YAKIMA AVE, #750 P.O. BOX 2887
YAKIMA WA 98907
Contact Address or Location

Scott Colvin
Sampler Signature

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED 8010/8020	NOTES	LAB NUMBER
2/5/97	1000	MW-1	Grab	G.W H_2O	2	X	PCE + BTEX	
	1200	MW-2			2	X		
	0830	MW-3			2	X		
	1100	MW-4			2	X		
"	N/A	blind dup			2	X		
		Travel Blank						

Relinquished by:	Date	Time	Received by:
Scott Colvin	2/5/97	1230	Fed EX
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by:

Remarks: Back Alley → MW-1



GROUNDWATER SAMPLING LOG

Project: Sutherland Laundry Date: 2-5-97 @ 1000 Station No. MW-1

Narrative Description: upgradient - NW of mill

Personnel: CRMM Weather: clear ± 30°F

Well Locked? Yes [X] No [ ] Well Log? Yes [ ] No [X]

Condition of Well: good

Casing Type: PVC Casing Diameter: 2"

Casing Stickup: Measuring Point Description: Top PVC at mark

Aquifer:

Well Depth (feet below measuring point): 45 Depth to Water 29.99 - 15 ft water

WELL EVACUATION

Method: Positive Displacement Pump [ ] Hand-Lift Pump [ ] Submersible Pump [ ] SST Bailer [ ] Disp. Polyethylene Bailer [X] Other:

15 ft. water x .163 gal./ft * = one casing volume ~2.5 gals. x 3 = purge volume 7.5 gals.

* 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Well C feet in diameter = 5.875 x C²

Remarks: evacuated 7.5+ gallons prior to sampling

EVACUATION DATA

Time	Cumulative Gallons	Temp	pH	SC	Other
	2.5	12.5	8.5	347	
	5	12.5	8.6	341	
	7.5	13	8.5	341	

WELL SAMPLING

Sampling Method: Disp. Bailer Sample Type: Natural [X] Replicate [ ] X-Contam [ ] Trip Blank [ ] Blind Field Sta. [ ]

SC DATA

Water Temp. (1)	Observed SC (µmhos) (2)	Temp. Correction Factor (3)	Cell Factor (4)	SC = (2) x (3) x (4) µmhos/cm @ 25°C Compensated SC

Temperature pH: Other:

Sample Container	Parameters	Preservative
2-40ml VOA	BTEX + PCE	HCl + cool

Laboratory: TEG Chain-of-Custody: Yes [X] No [ ]

Meter	Serial No.	Calibration Date
pH		
SC		
M-Scope		
DO		

Decontamination

Steam: Yes [ ] No [X] Potable Water: Yes [ ] No [X]

Scrub: Yes [X] No [ ] Liquinox: Yes [X] No [ ]

Methanol: Yes [ ] No [X] Acetone: Yes [ ] No [X]

Nitric Acid: Yes [ ] No [X] DI Water Yes [X] No [ ]

Comments: well purged for full 3 of water, chipped & bailed to access cap

GROUNDWATER SAMPLING LOG

Project: Southgate Laundry Date: 2-5-17 @ 1200 Station No. MW-2

Narrative Description: Front of Southgate Laundry

Personnel: Colvin Weather: clear ~ 32°F

Well Locked? Yes [X] No [ ] Well Log? Yes [ ] No [X]

Condition of Well: Good

Casing Type: PVC Casing Diameter: 2"

Casing Stickup: Measuring Point Description: Top PVC at mark

Aquifer:

Well Depth (feet below measuring point): 45 Depth to Water 30.45 = 14.6 ft water

WELL EVACUATION

Method: Positive Displacement Pump [ ] Hand-Lift Pump [ ] Submersible Pump [ ] SST Bailer [ ] Disp. Polyethylene Bailer [X] Other:

14.6 ft. water x .163 gal./ft * = one casing volume 2.4 gals. x 3 = purge volume 7.1 gals.

* 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Well C feet in diameter = 5.875 x C²

Remarks: evacuated 7.5 gallons prior to sampling

EVACUATION DATA

Time	Cumulative Gallons	Temp	pH	SC	Other
	2.5	14	8.4	353	
	5.0	13.5	8.5	358	
	7.5	14	8.4	359	

WELL SAMPLING

Sampling Method: Disp Bailer Sample Type: Natural [X] Replicate [ ] X-Contam [ ] Trip Blank [ ] Blind Field Sta. [ ]

SC DATA

Water Temp. (1)	Observed SC (µmhos) (2)	Temp. Correction Factor (3)	Cell Factor (4)	SC = (2) x (3) x (4) µmhos/cm @ 25°C Compensated SC

Temperature _____ pH: _____ Other: _____

Sample Container	Parameters	Preservative
2-40ml VOA	BTEX + PCE	HCl + cool

Laboratory: TEG Chain-of-Custody: Yes [X] No [ ]

Meter	Serial No.	Calibration Date
pH		
SC		
M-Scope		
DO		

Decontamination

Steam: Yes [ ] No [X] Potable Water: Yes [ ] No [X]

Scrub: Yes [X] No [ ] Liquinox: Yes [X] No [ ]

Methanol: Yes [ ] No [X] Acetone: Yes [ ] No [X]

Nitric Acid: Yes [ ] No [X] DI Water Yes [X] No [ ]

Comments:

GROUNDWATER SAMPLING LOG

Project: Southgate Laundry   Date: 2/5/97 @ 0830   Station No. MW-3 ✗

Narrative Description: At Thrifty Entrance

Personnel: Corvin   Weather: clear ~30°F

Well Locked? Yes [X] No [ ]   Well Log? Yes [ ] No [X]

Condition of Well: good

Casing Type: PVC   Casing Diameter: 2"

Casing Stickup: ______   Measuring Point Description: Top of PVC at mark

Aquifer: ______

Well Depth (feet below measuring point): 45   Depth to Water 28.63 = 16.4 ft water

WELL EVACUATION

Method: Positive Displacement Pump [ ] Hand-Lift Pump [ ] Submersible Pump [ ] SST Bailer [ ] Disp. Polyethylene Bailer [X] Other: ______

16.4 ft. water x .163 gal./ft * = one casing volume 2.7 gals. x 3 = purge volume 8 gals.

* 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Well C feet in diameter = 5.875 x C^2

Remarks: evacuated 8 gallons prior to sampling.

EVACUATION DATA

Time	Cumulative Gallons	Temp	pH	SC	Other
	3	13.0	8.3	403	
	6	13.5	8.3	414	
	8	13.5	8.4	406	

WELL SAMPLING

Sampling Method: Disp. Bailer   Sample Type: Natural [X] Replicate [X] X-Contam [ ] Trip Blank [ ] Blind Field Sta: [ ]

SC DATA

Water Temp. (1)	Observed SC (μmhos) (2)	Temp. Correction Factor (3)	Cell Factor (4)	SC = (2) x (3) x (4) μmhos/cm @ 25°C Compensated SC

Temperature ______   pH: ______   Other: ______

Sample Container	Parameters	Preservative
2-40ml VOA	PCE + BTEX	HCl + cool
	8010 / 8020	
✗ 2-40ml VOA	Duplicate	"

Laboratory: TEG   Chain-of-Custody: Yes [X] No [ ]

Meter	Serial No.	Calibration Date
pH		
SC		
M-Scope		
DO		

Decontamination

Steam: Yes [ ] No [X]   Potable Water: Yes [X] No [ ]

Scrub: Yes [X] No [ ]   Liquinox: Yes [X] No [ ]

Methanol: Yes [ ] No [X]   Acetone: Yes [ ] No [X]

Nitric Acid: Yes [ ] No [X]   DI Water Yes [ ] No [X]

Comments: No color - mostly clear

GROUNDWATER SAMPLING LOG

Project: Southgate Laundry   Date: 2-5-97 @ 1100   Station No. MW-4

Narrative Description: S. parking area, S of building

Personnel: [illegible]   Weather: clear ≈ 32°F

Well Locked? Yes [X] No [ ]   Well Log? Yes [ ] No [X]

Condition of Well: Well protector rim + lid missing

Casing Type: PVC   Casing Diameter: 2"

Casing Stickup: Measuring Point Description: Top PVC at mark

Aquifer:

Well Depth (feet below measuring point): 45   Depth to Water 29.05 = 16 ft water

WELL EVACUATION

Method: Positive Displacement Pump [ ] Hand-Lift Pump [ ] Submersible Pump [ ] SST Bailer [ ] Disp. Polyethylene Bailer [X] Other:

16 ft. water x .163 gal./ft * = one casing volume 2.6 gals. x 3 = purge volume 7.8 gals.

* 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Well C feet in diameter = 5.875 x C²

Remarks: evacuated 8 gallons prior to sampling

EVACUATION DATA

Time	Cumulative Gallons	Temp	pH	SC	Other
	3	12.5	8.5	346	
	6	13.5	8.5	334	
	8	13.5	8.5	338	

WELL SAMPLING

Sampling Method: Disp Bailer   Sample Type: Natural [X] Replicate [ ] X-Contam [ ] Trip Blank [ ] Blind Field Sta: [ ]

SC DATA

Water Temp. (1)	Observed SC (μmhos) (2)	Temp. Correction Factor (3)	Cell Factor (4)	SC = (2) x (3) x (4) μmhos/cm @ 25°C Compensated SC

Temperature ______   pH: ______   Other: ______

Sample Container	Parameters	Preservative
2 - 40ml VOA	PCE + BTEX	HCl + cool

Laboratory: TEG   Chain-of-Custody: Yes [X] No [ ]

Meter	Serial No.	Calibration Date
pH		
SC		
M-Scope		
DO		

Decontamination

Steam: Yes [ ] No [X]   Potable Water: Yes [ ] No [X]

Scrub: Yes [X] No [ ]   Liquinox: Yes [X] No [ ]

Methanol: Yes [ ] No [X]   Acetone: Yes [ ] No [X]

Nitric Acid: Yes [ ] No [X]   DI Water Yes [X] No [ ]

Comments: mostly clear

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

7110 38th Drive SE
Lacey, Washington 98503

Mobile Environmental Laboratories
Environmental Sampling Services

Telephone: 360-459-4670
Fax: 360-459-3432

October 4, 1997

Rachel Tauman
Maxim Technologies
96 South Zuni Street
Denver, CO 80223

Dear Ms. Tauman:

Please find enclosed the data report for analyses of water samples conducted on October 2, 1997, for the Southgate Laundry Project, Project No. 5809500946.04, in Yakima, Washington. Water samples were analyzed for Specific Halogenated Hydrocarbons and BTEX by Modified EPA Method 8010/8020.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. An invoice for this work is also enclosed.

TEG Northwest appreciates the opportunity to have provided analytical services to Maxim Technologies for this project. It was a pleasure working with you, and we are looking forward to the next opportunity to work together.

Sincerely,

Michael A. Korosec

Michael A. Korosec
President

QA/QC FOR ANALYTICAL METHODS

GENERAL

The TEG Northwest Laboratory quality assurance and quality control (QA/QC) procedures are conducted following the guidelines and objectives which meet or exceed certification/-accreditation requirements of California DOHS, Washington DOE, and Oregon DEQ. The Quality Control Program is a consistent set of procedures which assures data quality through the use of appropriate blanks, replicate analyses, surrogate spikes, and matrix spikes, and with the use of reference standards that meet or exceed EPA standards.

When analyses are taking place on-site with the mobile lab, the need for Field Blanks or Travel/Trip Blanks is eliminated. If there is going to be a delay before sample preparation for analysis, the sample is stored at 4° C.

ANALYTICAL METHODS

TEG Northwest Labs use analytical methodologies which are in conformity with U. S. Environmental Protection Agency (EPA), Washington DOE, and Oregon DEQ methodologies. When necessary and appropriate due to the nature or composition of the sample, TEG may use variations of the methods which are consistent with recognized standards or variations used by the industry and government laboratories.

Purgeable Volatile Aromatics (BTEX, EPA 602/8020)

A blank and a calibration standard are run at the beginning of the day. The standard must be within 15% of the continuing calibration curve value. The standard is rerun at the end of the day if more than 10 samples have been run. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135%. At least 1 method blank is run per day.

Purgeable Volatile Halocarbons
(Chlorinated Hydrocarbons, EPA 601/8010,8021)

A blank and a calibration standard are run at the beginning of the day. The standard must be within 15% of the continuing calibration curve value. The standard is rerun at the end of the day if more than 10 samples have been run. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135%. At least 1 method blank is run per day.

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

SOUTHGATE LAUNDRY PROJECT
Yakima, Washington
Maxim Technologies, Inc.
Project No. 5809500946.04

Specific Halogenated Hydrocarbons and BTEX (Mod. EPA 8010/8020) in Water

Sample-Number	MDL	Method Blank	MW-1	MW-2	MW-3	MW-4	MW-4 Dup
Date		10/02/97	10/02/97	10/02/97	10/02/97	10/02/97	10/02/97
	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Vinylchloride	1	nd	nd	nd	nd	nd	nd
1,1 Dichloroethene	1	nd	nd	nd	nd	nd	nd
Trans-1,2 Dichloroethene	1	nd	nd	nd	nd	nd	nd
Cis-1,2 Dichloroethene	1	nd	nd	nd	nd	nd	nd
Benzene	1	nd	nd	nd	nd	nd	nd
Trichloroethene	1	nd	nd	nd	nd	nd	nd
Toluene	1	nd	nd	nd	nd	nd	nd
Tetrachloroethene	1	nd	nd	20	31	3.0	3.7
Ethylbenzene	1	nd	nd	nd	nd	nd	nd
m,p-Xylene	1	nd	nd	nd	nd	nd	nd
o-Xylene	1	nd	nd	nd	nd	nd	nd
Dichloromethane	1	nd	nd	nd	nd	nd	nd
1,1 Dichloroethane	1	nd	nd	nd	nd	nd	nd
1,2 Dichloroethane	1	nd	nd	nd	nd	nd	nd
Chloroform	1	nd	1.5	1.5	1.4	3.3	2.4
Carbon Tetrachloride	1	nd	nd	nd	nd	nd	nd
1,1,1 Trichloroethane	1	nd	nd	nd	nd	nd	nd
1,1,2 Trichloroethane	1	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	1	nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	1	nd	nd	nd	nd	nd	nd
Spike Recovery (%)		101	88	80	78	107	106

"nd" Indicates Not Detected at the listed detection limit.
"int" Indicates that interference peaks prevent determination.

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

SOUTHGATE LAUNDRY PROJECT
Yakima, Washington
Maxim Technologies, Inc.
Project No. 5809500946.04

Specific Halogenated Hydrocarbons and BTEX (Mod. EPA 8010/8020) in Water

Sample-Number	MDL	Travel Blank	5 PPB MS	5 PPB MSD	Blind Dup.		
Date		10/02/97	10/02/97	10/02/97	10/02/97		
	ug/l	ug/l	ug/l	ug/l	ug/l		
Vinylchloride	1	nd	--	--	nd		
1,1 Dichloroethene	1	nd	4.8	4.9	nd		
Trans-1,2 Dichloroethene	1	nd	4.3	4.0	nd		
Cis-1,2 Dichloroethene	1	nd	5.0	4.9	nd		
Benzene	1	nd	4.1	4.1	nd		
Trichloroethene	1	nd	6.0	5.5	nd		
Toluene	1	nd	4.0	4.2	nd		
Tetrachloroethene	1	nd	5.9	5.2	37		
Ethylbenzene	1	nd	5.0	5.1	nd		
m,p-Xylene	1	nd	10.0	10.0	nd		
o-Xylene	1	nd	5.0	5.3	nd		
Dichloromethane	1	nd	5.0	4.4	nd		
1,1 Dichloroethane	1	nd	4.8	4.9	nd		
1,2 Dichloroethane	1	nd	5.9	5.3	nd		
Chloroform	1	nd	5.2	5.1	1.6		
Carbon Tetrachloride	1	nd	5.7	5.5	nd		
1,1,1 Trichloroethane	1	nd	5.4	5.7	nd		
1,1,2 Trichloroethane	1	nd	5.8	4.9	nd		
1,1,1,2-Tetrachloroethane	1	nd	6.3	5.8	nd		
1,1,2,2-Tetrachloroethane	1	nd	4.2	4.8	nd		
Spike Recovery (%)		98	100	98	99		

"nd" Indicates Not Detected at the listed detection limit.
"int" Indicates that interference peaks prevent determination.

GROUNDWATER SAMPLING LOG

Project: Southgate Laundry Date: 9/18/97 Station No: MW-1

Narrative Description: In the alley behind Shopping Complex

Personnel: Rahul Tauman Weather: Cool

Well Locked? Yes [X] No [ ] Well Log? Yes [ ] No [X]

Condition of Well: V. Good

Casing Type: PVC Casing Diameter: 2"

Casing Stickup: Measuring Point Description: Top PVC at mark

Aquifer: Yakima Gravels

Well Depth (feet below measuring point): 45 Depth to Water 22.21 - 22.79 ft water

WELL EVACUATION

Method: Positive Displacement Pump [ ] Hand-Lift Pump [ ] Submersible Pump [ ] SST Bailer [ ] Disp. Polyethylene Bailer [X] Other:

22.79 ft. water x .163 gal./ft * = one casing volume 3.7 gals. x 3 = purge volume 11.14 gals.

* 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Well C feet in diameter = 5.875 x C²

Remarks:

EVACUATION DATA

Time	Cumulative Gallons	Temp	pH	SC	Other
12:07	11	61°F	7.4	100	

WELL SAMPLING

Sampling Method: disposable Bailer Sample Type: Natural [X] Replicate [ ] X-Contam [ ] Trip Blank [ ] Blind Field Std: [ ]

SC DATA

Water Temp. (1)	Observed SC (µmhos) (2)	Temp. Correction Factor (3)	Cell Factor (4)	SC = (2) x (3) x (4) µmhos/cm @ 25°C Compensated SC

Temperature _____ pH: _____ Other: _____

Sample Container	Parameters	Preservative
2-40ml VOA	8010/8020	HCl + cool

Laboratory: TEG Chain-of-Custody: Yes [X] No [ ]

Meter	Serial No.	Calibration Date
pH		
SC		
M-Scope		
DO		

Decontamination

Steam: Yes [ ] No [X] Potable Water: Yes [ ] No [X]

Scrub: Yes [X] No [ ] Liquinox: Yes [X] No [ ]

Methanol: Yes [ ] No [X] Acetone: Yes [ ] No [X]

Nitric Acid: Yes [ ] No [X] DI Water Yes [X] No [ ]

Comments: Water Recycled.

GROUNDWATER SAMPLING LOG

Project: Southgate Laundry Date: 9/18/97 Station No: MW-2

Narrative Description: Adjacent to dry cleaner

Personnel: Rachel Tarman Weather: Cool

Well Locked? Yes [X] No [ ] Well Log? Yes [ ] No [X]

Condition of Well: V-Good

Casing Type: PVC Casing Diameter: 2"

Casing Stickup: Measuring Point Description: Top PVC at mark

Aquifer: Yakima Gravels

Well Depth (feet below measuring point): 45' Depth to Water 23.18 - 21.82 ft ft water

WELL EVACUATION

Method: Positive Displacement Pump [ ] Hand-Lift Pump [ ] Submersible Pump [ ] SST Bailer [ ] Disp. Polyethylene Bailer [X] Other:

21.82 ft. water x .163 gal./ft * = one casing volume 3.56 gals. x 3 = purge volume 10.7 gals.

* 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Well C feet in diameter = 5.875 x C²

Remarks:

EVACUATION DATA

Time	Cumulative Gallons	Temp	pH	SC	Other
11.00	11	66°	7.5	100	

WELL SAMPLING

Sampling Method: disposable Bailer Sample Type: Natural [X] Replicate [ ] X-Contam [ ] Trip Blank [ ] Blind Field Std: [ ]

SC DATA

Water Temp. (1)	Observed SC (µmhos) (2)	Temp. Correction Factor (3)	Cell Factor (4)	SC = (2) x (3) x (4) µmhos/cm @ 25°C Compensated SC

Temperature _____ pH: _____ Other: _____

Sample Container	Parameters	Preservative
2-40ml VOA	8010/8020	HCl + cool

Laboratory: TEG Chain-of-Custody: Yes [X] No [ ]

Meter	Serial No.	Calibration Date
pH		
SC		
M-Scope		
DO		

Decontamination

Steam: Yes [ ] No [X] Potable Water: Yes [ ] No [X]

Scrub: Yes [X] No [ ] Liquinox: Yes [X] No [ ]

Methanol: Yes [ ] No [X] Acetone: Yes [ ] No [X]

Nitric Acid: Yes [ ] No [X] DI Water Yes [X] No [ ]

Comments: Water clear

GROUNDWATER SAMPLING LOG

Project: Southgate Laundry Date: 9/18/97 Station No. MW-3

Narrative Description: Adjacent to Entrance of Way Thrift way

Personnel: Rahul Tawan Weather: Cool

Well Locked? Yes [X] No [ ] Well Log? Yes [ ] No [X]

Condition of Well: V. Good

Casing Type: PVC Casing Diameter: 2"

Casing Stickup: ____ Measuring Point Description: Top PVC at mark

Aquifer: Yakima Gravels

Well Depth (feet below measuring point): 45 Depth to Water 21.39 - 23.61 ft water

WELL EVACUATION

Method: Positive Displacement Pump [ ] Hand-Lift Pump [ ] Submersible Pump [ ] SST Bailer [ ] Disp. Polyethylene Bailer [X] Other: ____

23.61 ft. water x .163 gal./ft * = one casing volume 3.85 gals. x 3 = purge volume 11.5 gals.

* 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Well C feet in diameter = 5.875 x C²

Remarks: ____

EVACUATION DATA

Time	Cumulative Gallons	Temp	pH	SC	Other
9:00	11.5	60°	7.5	100	

WELL SAMPLING

Sampling Method: disposable Bailer Sample Type: Natural [X] Replicate [X] X-Contam [ ] Trip Blank [ ] Blind Field Std. [ ]

SC DATA

Water Temp. (1)	Observed SC (µmhos) (2)	Temp. Correction Factor (3)	Cell Factor (4)	SC = (2) x (3) x (4) µmhos/cm @ 25°C Compensated SC

Temperature ____ pH: ____ Other: ____

Sample Container	Parameters	Preservative
2 - 40ml VOA	8010/8020	HCl + cool
2 40ml VOA	8010/8020	

blind dup

Laboratory: TEG Chain-of-Custody: Yes [X] No [ ]

Meter	Serial No.	Calibration Date
pH		
SC		
M-Scope		
DO		

Decontamination

Steam: Yes [ ] No [X] Potable Water: Yes [ ] No [X]

Scrub: Yes [X] No [ ] Liquinox: Yes [X] No [ ]

Methanol: Yes [ ] No [X] Acetone: Yes [ ] No [X]

Nitric Acid: Yes [ ] No [X] DI Water: Yes [X] No [ ]

Comments: Water clean

GROUNDWATER SAMPLING LOG

Project: Southgate Laundry Date: 9/18/97 Station No.: MW-4

Narrative Description: South of Subway Thriftway

Personnel: Rachel Trueman Weather: Cool

Well Locked? Yes [X] No [ ] Well Log? Yes [ ] No [X]

Condition of Well: good See Comments

Casing Type: PVC Casing Diameter: 2"

Casing Stickup: ________ Measuring Point Description: Top PVC at mark

Aquifer: Yakima Gravels

Well Depth (feet below measuring point): 45 Depth to Water: 21.89 - 23.11 ft water

WELL EVACUATION

Method: Positive Displacement Pump [ ] Hand-Lift Pump [ ] Submersible Pump [ ] SST Bailer [ ] Disp. Polyethylene Bailer [X] Other: ________

23.11 ft. water x .163 gal./ft * = one casing volume 3.77 gals. x 3 = purge volume 11.3 gals.

* 2" well = 0.163 gal./ft. 4" well = 0.653 gal./ft. 6" well = 1.469 gal./ft. 8" well = 2.611 gal./ft. Well C feet in diameter = 5.875 x C²

Remarks: ________

EVACUATION DATA

Time	Cumulative Gallons	Temp	pH	SC	Other
10:00	11.5	60°	7.6	100	

WELL SAMPLING

Sampling Method: Disposable Bailer Sample Type: Natural [X] Replicate [ ] X-Contam [ ] Trip Blank [ ] Blind Field Std. [ ]

SC DATA

Water Temp. (1)	Observed SC (μmhos) (2)	Temp. Correction Factor (3)	Cell Factor (4)	SC = (2) x (3) x (4) μmhos/cm @ 25°C Compensated SC

Temperature ________ pH: ________ Other: ________

Sample Container	Parameters	Preservative
2-40ml VOA	8010/8020	HCl + cool

Laboratory: TEG Chain-of-Custody: Yes [X] No [ ]

Meter	Serial No.	Calibration Date
pH		
SC		
M-Scope		
DO		

Decontamination

Steam: Yes [ ] No [X] Potable Water: Yes [ ] No [X]

Scrub: Yes [X] No [ ] Liquinox: Yes [X] No [ ]

Methanol: Yes [ ] No [X] Acetone: Yes [ ] No [X]

Nitric Acid: Yes [ ] No [X] DI Water Yes [X] No [ ]

Comments: Water very clean - well cover raised by snow plow. client set steel plate on top of well - flush with the parking lot

teg TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES

CHAIN-OF-CUSTODY RECORD

CLIENT: MAXIM Technologies

ADDRESS:

PHONE (303) 744-7105 FAX:

CLIENT PROJECT #: Lovering, Adeline Southgate PROJECT MANAGER: Rachel Tauman

DATE: Sep 18 PAGE 1 OF 1

PROJECT NAMES Lovering (3) Adeline (3)

LOCATION: S. gate (6)

COLLECTOR: Rachel Tauman DATE OF COLLECTION 9/17-18

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES: VOA 601/8010/8020	VOA 602/8020	VOA 624/8240	Semi Vol 625/8270	TPH 418.1	TPH 8015 (gasoline)	TPH (8015 (diesel)	TPH 8015 (g & d)	PAH 610/8100	PEST/PCBs 8080	HEX CHROME	ORGANIC LEAD	TOTAL LEAD	pH	ASBESTOS	FIELD NOTES	Total Number of Containers	Laboratory Note Number
Lovering	9/17/97		wtr																	Slightly Muddy wtr 3 wells		
MW-1 ND	9/17/97		wtr	2 VOA vials	X	[redacted]			X				DTW	13.75								
MW-2 ND	9/17/97		wtr	"	X				X				DTW	13.89								
MW-3 ND	9/17/97		wtr	"	X				X				DTW	12.30								
Adeline	9/17/97																					
MW-1 0.8	9/17/97		wtr	2 VOA vials	X	DTW			12.71											Very clean Water 3 wells		
MW-3 4.9	9/17/97		wtr	"	X	DTW			12.12													
MW-4 26.2	9/17/97		wtr	"	X	DTW			12.64													
									12.62													
Southgate	9/18/97																					
MW-1 ND	9/18/97		wtr	2 VOA vials	X	DTW			22.21											Slightly Muddy 6 wells		
MW-2 20.0	9/18/97				X	DTW			23.18													
MW-3 31.0	9/18/97				X	DTW			21.39													
MW-4 30	9/18/97				X	DTW			21.89													
Travel ND	~~9/18/97~~				X																	
Blind dup 17	9/18/97				X																	

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
Rachel Tauman	9/18/97	FedEx	3:30
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

SAMPLE DISPOSAL INSTRUCTIONS

☐ TEG DISPOSAL @ $2.00 each ☐ Return ☐ Pickup

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	12
CHAIN OF CUSTODY SEALS Y/N/NA	(N)
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES:

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

7110 38th Drive SE
Lacey, Washington 98503

Mobile Environmental Laboratories
Environmental Sampling Services

Telephone: **360-459-4670**
Fax: **360-459-3432**

December 11, 1997

Rachel Tauman
Maxim Technologies
3525 Holland St.
Wheat Ridge, Co 80033-5847

Dear Ms. Tauman:

Please find enclosed the analytical data report for the Southgate Laundry Project, Project No. 9732801, in Yakima, Washington. Water samples were analyzed for Specific Halogenated Hydrocarbons and BTEX by Modified EPA Method 8010/8020 on December 5, 1997.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. An invoice for this work is also enclosed.

TEG Northwest appreciates the opportunity to have provided analytical services to Maxim Technologies for this project. It was a pleasure working with you, and we are looking forward to the next opportunity to work together.

Sincerely,

Michael A Korosec

Michael A. Korosec
President

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

SOUTHGATE LAUNDRY PROJECT
Yakima, Washington
Maxim Technologies, Inc.
Project No.: 9732801

Specific Halogenated Hydrocarbons (Mod. EPA 8010) in Water

Sample-Number	MDL	Method Blank	MW-1	MW-2	MW-3	MW-4	BLIND
Date		12/05/97	12/05/97	12/05/97	12/05/97	12/05/97	12/05/97
	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
1,1 Dichloroethene	1	nd	nd	nd	nd	nd	nd
Dichloromethane	1	nd	nd	nd	nd	nd	nd
Trans-1,2 Dichloroethene	1	nd	nd	nd	nd	nd	nd
1,1 Dichloroethane	1	nd	nd	nd	nd	nd	nd
Cis-1,2 Dichloroethene	1	nd	nd	nd	nd	nd	nd
Chloroform	1	nd	2.3	2.2	2.4	2.1	2.3
1,1,1 Trichloroethane	1	nd	nd	nd	nd	nd	nd
Carbon Tetrachloride	1	nd	nd	nd	nd	nd	nd
1,2 Dichloroethane	1	nd	nd	nd	nd	nd	nd
Trichloroethene	1	nd	nd	nd	nd	nd	nd
1,1,2 Trichloroethane	1	nd	nd	nd	nd	nd	nd
Tetrachloroethene	1	nd	1.7	16	8.2	2.0	9.0
1,1,1,2-Tetrachloroethane	1	nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	1	nd	nd	nd	nd	nd	nd
Spike Recovery (%)		102	108	111	106	113	105

"nd" Indicates Not Detected at the listed detection limit.

"int" Indicates that interference peaks prevent determination.

MAXIM
TECHNOLOGIES INC
...10___ Ne... ..., Suite 2...
Spokane, Washington 9921...
(509) 465-218...
Fax: (509) 465-219...

GROUNDWATER MONITORING AND SAMPLIN...

PROJECT NAME: Southgate Laundry FIELD REPORT No.: ____ PAGE 1 OF 1

SAMPLER: Eric Polzin DATE SAMPLED: 12-3-97 PROJECT No.: 9732801

METHOD OF COLLECTION: Disposible Bailer WEATHER: O/C 30's

PURGE WATER DISPOSITION: TREATMENT ☐ DRUMMED ON-SITE ☒ OTHER (SPECIFY) ____ DRUM COUNT Used Zonsite

PRODUCT DISPOSITION: DRUMMED ON-SITE ☐ DRUM COUNT ____ OTHER (SPECIFY) No Product

1 WELL VOLUME = (COLUMN HEIGHT)(WELL VOLUME CONSTANT)

WELL VOLUME CONSTANTS: 1"ID...0.041 gal/ft 1.5"ID...0.092 gal/ft 2"ID...0.163 gal/ft 4"ID...0.653 gal/ft 6"ID...1.469 gal/ft

SAMPLE: / WELL DIAMETER	LAB I.D.	DEPTH TO PRODUCT (ft)	DEPTH TO WATER (ft)	PRODUCT THICKNESS (ft)	DEPTH TO BOTTOM (ft)	COLUMN HEIGHT (ft) / 1 WELL VOLUME	VOLUME PURGED / BAILED DRY (Y/N)	TIME SAMPLED	CONDUCTIVITY (uMHOS)	DISSOLVED O_2 % / (mg/L)	TEMP. (C)	pH
MW-1		N-M	29.82	—	45	15.18 / 2.47	7.4 / N	1150				
MW-2		NM	30.31	—	45	14.69 / 2.4	7 / N	1000				
MW-3		NM	28.47	—	45	16.53 / 2.69	8 / N	0900				
MW-4		NM	29.00	—	45	16.00 / 2.6	7.8 / N	1100				
Blind (MW-3)		—	—	—				0920				
						TOTAL PURGED						

CHAIN OF CUSTODY RECORD

MAXIM TECHNOLOGIES INC

600 South 25th Street
Billings, Montana 59101
Phone (406) 248-9161 • Fax (406) 248-9282

Project of Site Name: South Gate Laundry

Project Number: 9732801

Sample Name (Printed): Eric Polzin

Contact Name: Rachel Tauman

Report to (Firm or Agency): Maxim

Address: 3525 Holland St, Wheat Ridge Co. 80033

Sample Signature: [illegible]

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED: VOC 8010							NOTES	LAB NUMBER
12-3-97	0900	MW-3		W	3	X								
|	0920	Blind		|	|	X								
|	1000	MW-2		|	|	X								
|	1100	MW-4		|	|	X								
|	1150	MW-1		|	|	X								
|	1245	Trip Blank		|	|	X								

Relinquished by:	Date	Time	Received by:
[illegible]	12-3-97	1300	[illegible]
	12-4-97	1000	[illegible]

Remarks: [illegible] to [illegible] and [illegible]: fax: 509-248-2843 Send invoice [illegible] to Rachel Tauman

APPENDIX D

REMEDIAL INVESTIGATIONS-LABORATORY REPORTS OF SOIL SAMPLES (MARCH-AUGUST 1996)

STRATAPROBE SOIL SAMPLING MARCH 1996

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC. SAMPLES 1-11

SOUTHGATE SHOPPING CENTER PROJECT
Yakima, Washington
MAXIM Technologies, Inc.

Specific Halogenated Hydrocarbons and BTEX (Mod. EPA 8010/8020) in Soil

Sample-Number	MDL	Method Blank	Soil #1	Soil #2	Soil #3	Soil #4	Soil #5
Date		03/25/96	03/25/96	03/25/96	03/25/96	03/25/96	03/25/96
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Vinylchloride	0.05	nd	nd	nd	nd	nd	nd
1,1 Dichloroethene	0.05	nd	nd	nd	nd	nd	nd
Trans-1,2 Dichloroethene	0.05	nd	nd	nd	nd	nd	nd
Cis-1,2 Dichloroethene	0.05	nd	nd	nd	nd	nd	nd
Benzene	0.05	nd	nd	nd	nd	nd	nd
Trichloroethene	0.05	nd	nd	nd	nd	nd	nd
Toluene	0.05	nd	nd	nd	nd	nd	nd
Tetrachloroethene	0.05	nd	0.11	0.36	3.99	0.38	0.30
Ethylbenzene	0.05	nd	nd	nd	nd	nd	nd
m,p-Xylene	0.05	nd	nd	nd	nd	nd	nd
o-Xylene	0.05	nd	nd	nd	nd	nd	nd
Dichloromethane	0.05	nd	nd	nd	nd	nd	nd
1,1 Dichloroethane	0.05	nd	nd	nd	nd	nd	nd
1,2 Dichloroethane	0.05	nd	nd	nd	nd	nd	nd
Chloroform	0.05	nd	nd	nd	nd	nd	nd
Carbon Tetrachloride	0.05	nd	nd	nd	nd	nd	nd
1,1,1 Trichloroethane	0.05	nd	nd	nd	nd	nd	nd
1,1,2 Trichloroethane	0.05	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	0.05	nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	0.05	nd	nd	nd	nd	nd	nd
Spike Recovery (%)		92	88	91	89	86	89

"nd" Indicates Not Detected at the listed detection limit.
"int" Indicates that interference peaks prevent determination.

SOUTHGATE SHOPPING CENTER PROJECT
Yakima, Washington
MAXIM Technologies, Inc.

Specific Halogenated Hydrocarbons and BTEX (Mod. EPA 8010/8020) in Soil

Sample-Number	MDL	Soil #5 Dup	Soil #6	Soil #6 Dup	Soil #7	Soil #8	Soil #9
Date		03/25/96	03/25/96	03/25/96	03/25/96	03/25/96	03/25/96
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Vinylchloride	0.05	nd	nd	nd	nd	nd	nd
1,1 Dichloroethene	0.05	nd	nd	nd	nd	nd	nd
Trans-1,2 Dichloroethene	0.05	nd	nd	nd	nd	nd	nd
Cis-1,2 Dichloroethene	0.05	nd	nd	nd	nd	nd	nd
Benzene	0.05	nd	nd	nd	nd	nd	nd
Trichloroethene	0.05	nd	nd	nd	nd	nd	nd
Toluene	0.05	nd	nd	nd	nd	nd	nd
Tetrachloroethene	0.05	0.41	0.33	0.47	2.08	0.15	0.22
Ethylbenzene	0.05	nd	nd	nd	nd	nd	nd
m,p-Xylene	0.05	nd	nd	nd	nd	nd	nd
o-Xylene	0.05	nd	nd	nd	nd	nd	nd
Dichloromethane	0.05	nd	nd	nd	nd	nd	nd
1,1 Dichloroethane	0.05	nd	nd	nd	nd	nd	nd
1,2 Dichloroethane	0.05	nd	nd	nd	nd	nd	nd
Chloroform	0.05	nd	nd	nd	nd	nd	nd
Carbon Tetrachloride	0.05	nd	nd	nd	nd	nd	nd
1,1,1 Trichloroethane	0.05	nd	nd	nd	nd	nd	nd
1,1,2 Trichloroethane	0.05	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	0.05	nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	0.05	nd	nd	nd	nd	nd	nd
Spike Recovery (%)		93	81	86	87	92	96

"nd" Indicates Not Detected at the listed detection limit.
"int" Indicates that interference peaks prevent determination.

SOUTHGATE SHOPPING CENTER PROJECT
Yakima, Washington
MAXIM Technologies, Inc.

Specific Halogenated Hydrocarbons and BTEX (Mod. EPA 8010/8020) in Soil

Sample-Number	MDL	Soil #10	Soil #11	2.5 ppm MS	2.5 ppm MSD
Date		03/25/96	03/25/96	03/25/96	03/25/96
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Vinylchloride	0.05	nd	nd	--	--
1,1 Dichloroethene	0.05	nd	nd	2.35	2.49
Trans-1,2 Dichloroethene	0.05	nd	nd	2.42	2.53
Cis-1,2 Dichloroethene	0.05	nd	nd	2.29	2.30
Benzene	0.05	nd	nd	2.28	2.37
Trichloroethene	0.05	nd	nd	2.24	2.38
Toluene	0.05	nd	nd	2.22	2.24
Tetrachloroethene	0.05	0.17	0.16	2.35	2.23
Ethylbenzene	0.05	nd	nd	2.23	2.32
m,p-Xylene	0.05	nd	nd	4.41	4.39
o-Xylene	0.05	nd	nd	2.26	2.11
Dichloromethane	0.05	nd	nd	2.63	2.71
1,1 Dichloroethane	0.05	nd	nd	2.60	2.34
1,2 Dichloroethane	0.05	nd	nd	2.35	2.38
Chloroform	0.05	nd	nd	2.44	2.45
Carbon Tetrachloride	0.05	nd	nd	2.56	2.47
1,1,1 Trichloroethane	0.05	nd	nd	2.22	2.23
1,1,2 Trichloroethane	0.05	nd	nd	2.21	2.27
1,1,1,2-Tetrachloroethane	0.05	nd	nd	2.34	2.30
1,1,2,2-Tetrachloroethane	0.05	nd	nd	2.29	2.23
Spike Recovery (%)		87	97	--	--

"nd" Indicates Not Detected at the listed detection limit.
"int" Indicates that interference peaks prevent determination.

teg TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES

CHAIN-OF-CUSTODY RECORD

CLIENT: SOUTHGATE LAUNDRY

ADDRESS: Third & Nob Hill

PHONE (509) 577-8592 FAX: (509) 572-8520

CLIENT PROJECT #: PROJECT MANAGER: P. TAUMAN

DATE: March 22 1996 PAGE 2 OF 2

PROJECT NAME: Southgate LAUNDRY

LOCATION: YAKIMA, WA

COLLECTOR: TEG DATE OF COLLECTION March 22 96

Sample Number	Depth	Time	Sample Type	Container Type	VOA 601/8010	VOA 602/8020	VOA 624/8240	Semi Vol 625/8270	TPH 418.1	TPH 8015 (gasoline)	TPH (8015 (diesel)	TPH 8015 (g & d)	PAH 610/8100	PEST/PCBs 8080	HEX CHROME	ORGANIC LEAD	TOTAL LEAD	pH	ASBESTOS	FIELD NOTES	Total Number of Containers	Laboratory Note Number
#7 Soil	0.5	12:30	Soil	JAR 4oz		X																
#8 Soil	8.5	1:35	Soil	JAR 4oz		X																
#1 Soil	6.0	2:10	Soil	JAR 4oz		X																
#9 Soil	5.0	1530	Soil	Jar 4oz		X																
#10 Soil	6.0	1555	Soil	Jar 4oz		X																
#11 Soil	5.0	16:50	Soil	Jar 4oz		X																
#2 Soil	2	17:20	Soil	Jar 4oz		X																
#3 Soil	1.5	17:40	Soil	Jar 4oz		X																
#4 Soil	2.0	18:00	Soil	JAR 4oz		X																
#5 Soil	2.0	18:00	Soil	JAR 4oz		X																
#6 Soil	2.0	18:20	Soil	JAR 4oz		X																

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
Rachel Tauman	March 22/96	Eric Coster	
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

SAMPLE DISPOSAL INSTRUCTIONS

☐ TEG DISPOSAL @ $2.00 each ☐ Return ☐ Pickup

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES:

MDL 0.05 mg/kg

Maxim
600 South 25th Street
P O Box 30615
Billings, MT 59107
(406) 248-9161
FAX (406) 248-9282

hand Auger - Soil August Samples 12-20

TECHNICAL REPORT

REPORT TO: ATTN: RACHEL TAUMAN
MAXIM TECHNOLOGIES, INC.
P. O. Box 2887
YAKIMA WA 98907

DATE: August 16, 1996
JOB NUMBER: 95-932
SHEET: 1 of 14
INVOICE NO.: 036167

REPORT OF: Soil Analysis - Southgate Laundry 946.04

SAMPLE IDENTIFICATION:

On August 14, 1996, these soil samples (laboratory numbers 177580 through 177590) were received in our laboratory for analysis. Tests were conducted in accordance with SW-846 *"Test Methods for Evaluating Solid Waste"*, 3rd Edition, updates I, II, IIA, IIB.

The condition of the samples upon receipt at the laboratory is ntoed on the attached sampe receipt checklist. Chain of custody documentation is enclosed. Chromatograms are attached for your reference.

The test results are shown on the following pages.

A < sign indicates the value reported was the practical quantitation limit for this sample using the method described. Concentrations of analyte, if present, below this were not quantifiable.

Reviewed by

Attachments: Sample Receipt Checklist
Chain of Custody
Chromatograms

rmr

Client Name: MAXIM - Yakima
Project No.: 95-932
Laboratory No.: 177584
Sample Name: 15 H&R 2.5'
Sample Date: 08/13/96
Collected by: RACHEL TAUMAN
Time Sampled: 0910
Sample Type: SOIL

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
HALOGENATED VOLATILE ORGANICS				
Data File Number-Volatiles	0814961013			
Bromobenzene	<5	ug/kg	8260	08/14/96
Bromodichloromethane	<5	ug/kg	8260	08/14/96
Bromoform	<5	ug/kg	8260	08/14/96
Bromomethane	<5	ug/kg	8260	08/14/96
Carbon Tetrachloride	<5	ug/kg	8260	08/14/96
Chlorobenzene	<5	ug/kg	8260	08/14/96
Chloroethane	<5	ug/kg	8260	08/14/96
Chloroform	<5	ug/kg	8260	08/14/96
Chloromethane (Methyl chloride)	<5	ug/kg	8260	08/14/96
Dibromochloromethane	<5	ug/kg	8260	08/14/96
Dibromomethane	<5	ug/kg	8260	08/14/96
Dichlorodifluoromethane	<5	ug/kg	8260	08/14/96
1,2-Dichlorobenzene	<5	ug/kg	8260	08/14/96
1,3-Dichlorobenzene	<5	ug/kg	8260	08/14/96
1,4-Dichlorobenzene	<5	ug/kg	8260	08/14/96
1,1-Dichloroethane	<5	ug/kg	8260	08/14/96
1,2-Dichloroethane	<5	ug/kg	8260	08/14/96
1,1-Dichloroethene	<5	ug/kg	8260	08/14/96
c-1,2-Dichloroethene	<5	ug/kg	8260	08/14/96
t-1,2-Dichloroethene	<5	ug/kg	8260	08/14/96
1,2-Dichloropropane	<5	ug/kg	8260	08/14/96
c-1,3-Dichloropropene	<5	ug/kg	8260	08/14/96
t-1,3-Dichloropropene	<5	ug/kg	8260	08/14/96
Methylene chloride	<25	ug/kg	8260	08/14/96
1,1,1,2-Tetrachloroethane	<5	ug/kg	8260	08/14/96
1,1,2,2-Tetrachloroethane	<5	ug/kg	8260	08/14/96
Tetrachloroethene	5	ug/kg	8260	08/14/96
1,1,1-Trichloroethane	<5	ug/kg	8260	08/14/96
1,1,2-Trichloroethane	<5	ug/kg	8260	08/14/96
Trichloroethene	<5	ug/kg	8260	08/14/96
Trichlorofluoromethane	<5	ug/kg	8260	08/14/96
1,2,3-Trichloropropane	<5	ug/kg	8260	08/14/96
Vinyl Chloride	<5	ug/kg	8260	08/14/96
2-Chloroethyl vinyl ether	<50	ug/kg	8260	08/14/96
1,2-Dichloroethane-d4 (Surrogate)	104	%	8260	08/14/96
Toluene-d8 (Surrogate)	100	%	8260	08/14/96
4-Bromofluorobenzene (Surrogate)	100	%	8260	08/14/96

Client Name: MAXIM - Yakima
Project No.: 95-932
Laboratory No.: 177585
Sample Name: 15 H&R 3.0'
Sample Date: 08/13/96
Collected by: RACHEL TAUMAN
Time Sampled: 0915
Sample Type: SOIL

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
HALOGENATED VOLATILE ORGANICS				
Data File Number-Volatiles	0814961014			
Bromobenzene	<5	ug/kg	8260	08/14/96
Bromodichloromethane	<5	ug/kg	8260	08/14/96
Bromoform	<5	ug/kg	8260	08/14/96
Bromomethane	<5	ug/kg	8260	08/14/96
Carbon Tetrachloride	<5	ug/kg	8260	08/14/96
Chlorobenzene	<5	ug/kg	8260	08/14/96
Chloroethane	<5	ug/kg	8260	08/14/96
Chloroform	<5	ug/kg	8260	08/14/96
Chloromethane (Methyl chloride)	<5	ug/kg	8260	08/14/96
Dibromochloromethane	<5	ug/kg	8260	08/14/96
Dibromomethane	<5	ug/kg	8260	08/14/96
Dichlorodifluoromethane	<5	ug/kg	8260	08/14/96
1,2-Dichlorobenzene	<5	ug/kg	8260	08/14/96
1,3-Dichlorobenzene	<5	ug/kg	8260	08/14/96
1,4-Dichlorobenzene	<5	ug/kg	8260	08/14/96
1,1-Dichloroethane	<5	ug/kg	8260	08/14/96
1,2-Dichloroethane	<5	ug/kg	8260	08/14/96
1,1-Dichloroethene	<5	ug/kg	8260	08/14/96
c-1,2-Dichloroethene	<5	ug/kg	8260	08/14/96
t-1,2-Dichloroethene	<5	ug/kg	8260	08/14/96
1,2-Dichloropropane	<5	ug/kg	8260	08/14/96
c-1,3-Dichloropropene	<5	ug/kg	8260	08/14/96
t-1,3-Dichloropropene	<5	ug/kg	8260	08/14/96
Methylene chloride	<25	ug/kg	8260	08/14/96
1,1,1,2-Tetrachloroethane	<5	ug/kg	8260	08/14/96
1,1,2,2-Tetrachloroethane	<5	ug/kg	8260	08/14/96
Tetrachloroethene	<5	ug/kg	8260	08/14/96
1,1,1-Trichloroethane	<5	ug/kg	8260	08/14/96
1,1,2-Trichloroethane	<5	ug/kg	8260	08/14/96
Trichloroethene	<5	ug/kg	8260	08/14/96
Trichlorofluoromethane	<5	ug/kg	8260	08/14/96
1,2,3-Trichloropropane	<5	ug/kg	8260	08/14/96
Vinyl Chloride	<5	ug/kg	8260	08/14/96
2-Chloroethyl vinyl ether	<50	ug/kg	8260	08/14/96
1,2-Dichloroethane-d4 (Surrogate)	104	%	8260	08/14/96
Toluene-d8 (Surrogate)	100	%	8260	08/14/96
4-Bromofluorobenzene (Surrogate)	102	%	8260	08/14/96

Client Name: MAXIM - Yakima
Project No.: 95-932
Laboratory No.: 177586
Sample Name: 16 WRAY 1.5'
Sample Date: 08/13/96
Collected by: RACHEL TAUMAN
Time Sampled: 0940
Sample Type: SOIL

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
HALOGENATED VOLATILE ORGANICS				
Data File Number-Volatiles	0814961015			
Bromobenzene	<5	ug/kg	8260	08/14/96
Bromodichloromethane	<5	ug/kg	8260	08/14/96
Bromoform	<5	ug/kg	8260	08/14/96
Bromomethane	<5	ug/kg	8260	08/14/96
Carbon Tetrachloride	<5	ug/kg	8260	08/14/96
Chlorobenzene	<5	ug/kg	8260	08/14/96
Chloroethane	<5	ug/kg	8260	08/14/96
Chloroform	<5	ug/kg	8260	08/14/96
Chloromethane (Methyl chloride)	<5	ug/kg	8260	08/14/96
Dibromochloromethane	<5	ug/kg	8260	08/14/96
Dibromomethane	<5	ug/kg	8260	08/14/96
Dichlorodifluoromethane	<5	ug/kg	8260	08/14/96
1,2-Dichlorobenzene	<5	ug/kg	8260	08/14/96
1,3-Dichlorobenzene	<5	ug/kg	8260	08/14/96
1,4-Dichlorobenzene	<5	ug/kg	8260	08/14/96
1,1-Dichloroethane	<5	ug/kg	8260	08/14/96
1,2-Dichloroethane	<5	ug/kg	8260	08/14/96
1,1-Dichloroethene	<5	ug/kg	8260	08/14/96
c-1,2-Dichloroethene	<5	ug/kg	8260	08/14/96
t-1,2-Dichloroethene	<5	ug/kg	8260	08/14/96
1,2-Dichloropropane	<5	ug/kg	8260	08/14/96
c-1,3-Dichloropropene	<5	ug/kg	8260	08/14/96
t-1,3-Dichloropropene	<5	ug/kg	8260	08/14/96
Methylene chloride	<25	ug/kg	8260	08/14/96
1,1,1,2-Tetrachloroethane	<5	ug/kg	8260	08/14/96
1,1,2,2-Tetrachloroethane	<5	ug/kg	8260	08/14/96
Tetrachloroethene	20	ug/kg	8260	08/14/96
1,1,1-Trichloroethane	<5	ug/kg	8260	08/14/96
1,1,2-Trichloroethane	<5	ug/kg	8260	08/14/96
Trichloroethene	<5	ug/kg	8260	08/14/96
Trichlorofluoromethane	<5	ug/kg	8260	08/14/96
1,2,3-Trichloropropane	<5	ug/kg	8260	08/14/96
Vinyl Chloride	<5	ug/kg	8260	08/14/96
2-Chloroethyl vinyl ether	<50	ug/kg	8260	08/14/96
1,2-Dichloroethane-d4 (Surrogate)	105	%	8260	08/14/96
Toluene-d8 (Surrogate)	100	%	8260	08/14/96
4-Bromofluorobenzene (Surrogate)	100	%	8260	08/14/96

Client Name: MAXIM - Yakima
Project No.: 95-932
Laboratory No.: 177587
Sample Name: 17 WRAY 2'
Sample Date: 08/13/96
Collected by: RACHEL TAUMAN
Time Sampled: 0950
Sample Type: SOIL

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
HALOGENATED VOLATILE ORGANICS				
Data File Number-Volatiles	0814961016			
Bromobenzene	<5	ug/kg	8260	08/14/96
Bromodichloromethane	<5	ug/kg	8260	08/14/96
Bromoform	<5	ug/kg	8260	08/14/96
Bromomethane	<5	ug/kg	8260	08/14/96
Carbon Tetrachloride	<5	ug/kg	8260	08/14/96
Chlorobenzene	<5	ug/kg	8260	08/14/96
Chloroethane	<5	ug/kg	8260	08/14/96
Chloroform	<5	ug/kg	8260	08/14/96
Chloromethane (Methyl chloride)	<5	ug/kg	8260	08/14/96
Dibromochloromethane	<5	ug/kg	8260	08/14/96
Dibromomethane	<5	ug/kg	8260	08/14/96
Dichlorodifluoromethane	<5	ug/kg	8260	08/14/96
1,2-Dichlorobenzene	<5	ug/kg	8260	08/14/96
1,3-Dichlorobenzene	<5	ug/kg	8260	08/14/96
1,4-Dichlorobenzene	<5	ug/kg	8260	08/14/96
1,1-Dichloroethane	<5	ug/kg	8260	08/14/96
1,2-Dichloroethane	<5	ug/kg	8260	08/14/96
1,1-Dichloroethene	<5	ug/kg	8260	08/14/96
c-1,2-Dichloroethene	<5	ug/kg	8260	08/14/96
t-1,2-Dichloroethene	<5	ug/kg	8260	08/14/96
1,2-Dichloropropane	<5	ug/kg	8260	08/14/96
c-1,3-Dichloropropene	<5	ug/kg	8260	08/14/96
t-1,3-Dichloropropene	<5	ug/kg	8260	08/14/96
Methylene chloride	<25	ug/kg	8260	08/14/96
1,1,1,2-Tetrachloroethane	<5	ug/kg	8260	08/14/96
1,1,2,2-Tetrachloroethane	<5	ug/kg	8260	08/14/96
Tetrachloroethene	40	ug/kg	8260	08/14/96
1,1,1-Trichloroethane	<5	ug/kg	8260	08/14/96
1,1,2-Trichloroethane	<5	ug/kg	8260	08/14/96
Trichloroethene	<5	ug/kg	8260	08/14/96
Trichlorofluoromethane	<5	ug/kg	8260	08/14/96
1,2,3-Trichloropropane	<5	ug/kg	8260	08/14/96
Vinyl Chloride	<5	ug/kg	8260	08/14/96
2-Chloroethyl vinyl ether	<50	ug/kg	8260	08/14/96
1,2-Dichloroethane-d4 (Surrogate)	103	%	8260	08/14/96
Toluene-d8 (Surrogate)	100	%	8260	08/14/96
4-Bromofluorobenzene (Surrogate)	99	%	8260	08/14/96

Client Name: MAXIM - Yakima
Project No.: 95-932
Laboratory No.: 177588
Sample Name: 18 WRAY 0.5'
Sample Date: 08/13/96
Collected by: RACHEL TAUMAN
Time Sampled: 1010
Sample Type: SOIL

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
HALOGENATED VOLATILE ORGANICS				
Data File Number-Volatiles	0814961017			
Bromobenzene	<5	ug/kg	8260	08/14/96
Bromodichloromethane	<5	ug/kg	8260	08/14/96
Bromoform	<5	ug/kg	8260	08/14/96
Bromomethane	<5	ug/kg	8260	08/14/96
Carbon Tetrachloride	<5	ug/kg	8260	08/14/96
Chlorobenzene	<5	ug/kg	8260	08/14/96
Chloroethane	<5	ug/kg	8260	08/14/96
Chloroform	<5	ug/kg	8260	08/14/96
Chloromethane (Methyl chloride)	<5	ug/kg	8260	08/14/96
Dibromochloromethane	<5	ug/kg	8260	08/14/96
Dibromomethane	<5	ug/kg	8260	08/14/96
Dichlorodifluoromethane	<5	ug/kg	8260	08/14/96
1,2-Dichlorobenzene	<5	ug/kg	8260	08/14/96
1,3-Dichlorobenzene	<5	ug/kg	8260	08/14/96
1,4-Dichlorobenzene	<5	ug/kg	8260	08/14/96
1,1-Dichloroethane	<5	ug/kg	8260	08/14/96
1,2-Dichloroethane	<5	ug/kg	8260	08/14/96
1,1-Dichloroethene	<5	ug/kg	8260	08/14/96
c-1,2-Dichloroethene	<5	ug/kg	8260	08/14/96
t-1,2-Dichloroethene	<5	ug/kg	8260	08/14/96
1,2-Dichloropropane	<5	ug/kg	8260	08/14/96
c-1,3-Dichloropropene	<5	ug/kg	8260	08/14/96
t-1,3-Dichloropropene	<5	ug/kg	8260	08/14/96
Methylene chloride	<25	ug/kg	8260	08/14/96
1,1,1,2-Tetrachloroethane	<5	ug/kg	8260	08/14/96
1,1,2,2-Tetrachloroethane	<5	ug/kg	8260	08/14/96
Tetrachloroethene	<5	ug/kg	8260	08/14/96
1,1,1-Trichloroethane	<5	ug/kg	8260	08/14/96
1,1,2-Trichloroethane	<5	ug/kg	8260	08/14/96
Trichloroethene	<5	ug/kg	8260	08/14/96
Trichlorofluoromethane	<5	ug/kg	8260	08/14/96
1,2,3-Trichloropropane	<5	ug/kg	8260	08/14/96
Vinyl Chloride	<5	ug/kg	8260	08/14/96
2-Chloroethyl vinyl ether	<50	ug/kg	8260	08/14/96
1,2-Dichloroethane-d4 (Surrogate)	109	%	8260	08/14/96
Toluene-d8 (Surrogate)	100	%	8260	08/14/96
4-Bromofluorobenzene (Surrogate)	97	%	8260	08/14/96

Client Name: MAXIM - Yakima
Project No.: 95-932
Laboratory No.: 177589
Sample Name: 19 WRAY 1.5'
Sample Date: 08/13/96
Collected by: RACHEL TAUMAN
Time Sampled: 1020
Sample Type: SOIL

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
HALOGENATED VOLATILE ORGANICS				
Data File Number-Volatiles	0814961018			
Bromobenzene	<5	ug/kg	8260	08/14/96
Bromodichloromethane	<5	ug/kg	8260	08/14/96
Bromoform	<5	ug/kg	8260	08/14/96
Bromomethane	<5	ug/kg	8260	08/14/96
Carbon Tetrachloride	<5	ug/kg	8260	08/14/96
Chlorobenzene	<5	ug/kg	8260	08/14/96
Chloroethane	<5	ug/kg	8260	08/14/96
Chloroform	<5	ug/kg	8260	08/14/96
Chloromethane (Methyl chloride)	<5	ug/kg	8260	08/14/96
Dibromochloromethane	<5	ug/kg	8260	08/14/96
Dibromomethane	<5	ug/kg	8260	08/14/96
Dichlorodifluoromethane	<5	ug/kg	8260	08/14/96
1,2-Dichlorobenzene	<5	ug/kg	8260	08/14/96
1,3-Dichlorobenzene	<5	ug/kg	8260	08/14/96
1,4-Dichlorobenzene	<5	ug/kg	8260	08/14/96
1,1-Dichloroethane	<5	ug/kg	8260	08/14/96
1,2-Dichloroethane	<5	ug/kg	8260	08/14/96
1,1-Dichloroethene	<5	ug/kg	8260	08/14/96
c-1,2-Dichloroethene	<5	ug/kg	8260	08/14/96
t-1,2-Dichloroethene	<5	ug/kg	8260	08/14/96
1,2-Dichloropropane	<5	ug/kg	8260	08/14/96
c-1,3-Dichloropropene	<5	ug/kg	8260	08/14/96
t-1,3-Dichloropropene	<5	ug/kg	8260	08/14/96
Methylene chloride	<25	ug/kg	8260	08/14/96
1,1,1,2-Tetrachloroethane	<5	ug/kg	8260	08/14/96
1,1,2,2-Tetrachloroethane	<5	ug/kg	8260	08/14/96
Tetrachloroethene	179	ug/kg	8260	08/14/96
1,1,1-Trichloroethane	<5	ug/kg	8260	08/14/96
1,1,2-Trichloroethane	<5	ug/kg	8260	08/14/96
Trichloroethene	<5	ug/kg	8260	08/14/96
Trichlorofluoromethane	<5	ug/kg	8260	08/14/96
1,2,3-Trichloropropane	<5	ug/kg	8260	08/14/96
Vinyl Chloride	<5	ug/kg	8260	08/14/96
2-Chloroethyl vinyl ether	<50	ug/kg	8260	08/14/96
1,2-Dichloroethane-d4 (Surrogate)	107	%	8260	08/14/96
Toluene-d8 (Surrogate)	97	%	8260	08/14/96
4-Bromofluorobenzene (Surrogate)	117	%	8260	08/14/96

Client Name: MAXIM - Yakima
Project No.: 95-932
Laboratory No.: 177590
Sample Name: ~~2019~~ WRAY ~~2.0'~~ 1.5 RT
Sample Date: 08/13/96
Collected by: RACHEL TAUMAN
Time Sampled: 1025
Sample Type: SOIL

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
HALOGENATED VOLATILE ORGANICS				
Data File Number-Volatiles	0814961019			
Bromobenzene	<5	ug/kg	8260	08/14/96
Bromodichloromethane	<5	ug/kg	8260	08/14/96
Bromoform	<5	ug/kg	8260	08/14/96
Bromomethane	<5	ug/kg	8260	08/14/96
Carbon Tetrachloride	<5	ug/kg	8260	08/14/96
Chlorobenzene	<5	ug/kg	8260	08/14/96
Chloroethane	<5	ug/kg	8260	08/14/96
Chloroform	<5	ug/kg	8260	08/14/96
Chloromethane (Methyl chloride)	<5	ug/kg	8260	08/14/96
Dibromochloromethane	<5	ug/kg	8260	08/14/96
Dibromomethane	<5	ug/kg	8260	08/14/96
Dichlorodifluoromethane	<5	ug/kg	8260	08/14/96
1,2-Dichlorobenzene	<5	ug/kg	8260	08/14/96
1,3-Dichlorobenzene	<5	ug/kg	8260	08/14/96
1,4-Dichlorobenzene	<5	ug/kg	8260	08/14/96
1,1-Dichloroethane	<5	ug/kg	8260	08/14/96
1,2-Dichloroethane	<5	ug/kg	8260	08/14/96
1,1-Dichloroethene	<5	ug/kg	8260	08/14/96
c-1,2-Dichloroethene	<5	ug/kg	8260	08/14/96
t-1,2-Dichloroethene	<5	ug/kg	8260	08/14/96
1,2-Dichloropropane	<5	ug/kg	8260	08/14/96
c-1,3-Dichloropropene	<5	ug/kg	8260	08/14/96
t-1,3-Dichloropropene	<5	ug/kg	8260	08/14/96
Methylene chloride	<25	ug/kg	8260	08/14/96
1,1,1,2-Tetrachloroethane	<5	ug/kg	8260	08/14/96
1,1,2,2-Tetrachloroethane	<5	ug/kg	8260	08/14/96
Tetrachloroethene	23	ug/kg	8260	08/14/96
1,1,1-Trichloroethane	<5	ug/kg	8260	08/14/96
1,1,2-Trichloroethane	<5	ug/kg	8260	08/14/96
Trichloroethene	<5	ug/kg	8260	08/14/96
Trichlorofluoromethane	<5	ug/kg	8260	08/14/96
1,2,3-Trichloropropane	<5	ug/kg	8260	08/14/96
Vinyl Chloride	<5	ug/kg	8260	08/14/96
2-Chloroethyl vinyl ether	<50	ug/kg	8260	08/14/96
1,2-Dichloroethane-d4 (Surrogate)	105	%	8260	08/14/96
Toluene-d8 (Surrogate)	99	%	8260	08/14/96
4-Bromofluorobenzene (Surrogate)	103	%	8260	08/14/96

Client Name: MAXIM - Yakima
Project No.: 95-932
Laboratory No.: 177591
Sample Name: MATRIX SPIKE 177580 12 H&R 1'
Sample Date: 08/13/96
Collected by: RACHEL TAUMAN
Time Sampled: 0820
Sample Type: SOIL

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
HALOGENATED VOLATILE ORGANICS				
Data File Number-Volatiles	0814961008			
Bromobenzene	<5	ug/kg	8260	08/14/96
Bromodichloromethane	<5	ug/kg	8260	08/14/96
Bromoform	<5	ug/kg	8260	08/14/96
Bromomethane	<5	ug/kg	8260	08/14/96
Carbon Tetrachloride	<5	ug/kg	8260	08/14/96
Chlorobenzene	91	%	8260	08/14/96
Chloroethane	<5	ug/kg	8260	08/14/96
Chloroform	<5	ug/kg	8260	08/14/96
Chloromethane (Methyl chloride)	<5	ug/kg	8260	08/14/96
Dibromochloromethane	<5	ug/kg	8260	08/14/96
Dibromomethane	<5	ug/kg	8260	08/14/96
Dichlorodifluoromethane	<5	ug/kg	8260	08/14/96
1,2-Dichlorobenzene	<5	ug/kg	8260	08/14/96
1,3-Dichlorobenzene	<5	ug/kg	8260	08/14/96
1,4-Dichlorobenzene	<5	ug/kg	8260	08/14/96
1,1-Dichloroethane	77	%	8260	08/14/96
1,2-Dichloroethane	<5	ug/kg	8260	08/14/96
1,1-Dichloroethene	<5	ug/kg	8260	08/14/96
c-1,2-Dichloroethene	<1	ug/kg	8260	08/14/96
t-1,2-Dichloroethene	<5	ug/kg	8260	08/14/96
1,2-Dichloropropane	<5	ug/kg	8260	08/14/96
c-1,3-Dichloropropene	<5	ug/kg	8260	08/14/96
t-1,3-Dichloropropene	<5	ug/kg	8260	08/14/96
Methylene chloride	<25	ug/kg	8260	08/14/96
1,1,1,2-Tetrachloroethane	<5	ug/kg	8260	08/14/96
1,1,2,2-Tetrachloroethane	<5	ug/kg	8260	08/14/96
Tetrachloroethene	<5	ug/kg	8260	08/14/96
1,1,1-Trichloroethane	<5	ug/kg	8260	08/14/96
1,1,2-Trichloroethane	<5	ug/kg	8260	08/14/96
Trichloroethene	91	%	8260	08/14/96
Trichlorofluoromethane	<5	ug/kg	8260	08/14/96
1,2,3-Trichloropropane	<5	ug/kg	8260	08/14/96
Vinyl Chloride	<5	ug/kg	8260	08/14/96
2-Chloroethyl vinyl ether	<50	ug/kg	8260	08/14/96
1,2-Dichloroethane-d4 (Surrogate)	98	%	8260	08/14/96
Toluene-d8 (Surrogate)	102	%	8260	08/14/96
4-Bromofluorobenzene (Surrogate)	97	%	8260	08/14/96

Client Name: MAXIM - Yakima
Project No.: 95-932
Laboratory No.: 177592
Sample Name: MATRIX SPIKE DUPLICATE 177580 12 H&R 1'
Sample Date: 08/13/96
Collected by: RACHEL TAUMAN
Time Sampled: 0820
Sample Type: SOIL

PARAMETER	MEASURED VALUE		METHOD NUMBER	DATE ANALYZED
HALOGENATED VOLATILE ORGANICS				
Data File Number-Volatiles	0814961009			
Bromobenzene	<5	ug/kg	8260	08/14/96
Bromodichloromethane	<5	ug/kg	8260	08/14/96
Bromoform	<5	ug/kg	8260	08/14/96
Bromomethane	<5	ug/kg	8260	08/14/96
Carbon Tetrachloride	<5	ug/kg	8260	08/14/96
Chlorobenzene	92	%	8260	08/14/96
Chloroethane	<5	ug/kg	8260	08/14/96
Chloroform	<5	ug/kg	8260	08/14/96
Chloromethane (Methyl chloride)	<5	ug/kg	8260	08/14/96
Dibromochloromethane	<5	ug/kg	8260	08/14/96
Dibromomethane	<5	ug/kg	8260	08/14/96
Dichlorodifluoromethane	<5	ug/kg	8260	08/14/96
1,2-Dichlorobenzene	<5	ug/kg	8260	08/14/96
1,3-Dichlorobenzene	<5	ug/kg	8260	08/14/96
1,4-Dichlorobenzene	<5	ug/kg	8260	08/14/96
1,1-Dichloroethane	<5	ug/kg	8260	08/14/96
1,2-Dichloroethane	<5	ug/kg	8260	08/14/96
1,1-Dichloroethene	78	%	8260	08/14/96
c-1,2-Dichloroethene	<5	ug/kg	8260	08/14/96
t-1,2-Dichloroethene	<5	ug/kg	8260	08/14/96
1,2-Dichloropropane	<5	ug/kg	8260	08/14/96
c-1,3-Dichloropropene	<5	ug/kg	8260	08/14/96
t-1,3-Dichloropropene	<5	ug/kg	8260	08/14/96
Methylene chloride	<25	ug/kg	8260	08/14/96
1,1,1,2-Tetrachloroethane	<5	ug/kg	8260	08/14/96
1,1,2,2-Tetrachloroethane	<5	ug/kg	8260	08/14/96
Tetrachloroethene	<5	ug/kg	8260	08/14/96
1,1,1-Trichloroethane	<5	ug/kg	8260	08/14/96
1,1,2-Trichloroethane	<5	ug/kg	8260	08/14/96
Trichloroethene	93	%	8260	08/14/96
Trichlorofluoromethane	<5	ug/kg	8260	08/14/96
1,2,3-Trichloropropane	<5	ug/kg	8260	08/14/96
Vinyl Chloride	<5	ug/kg	8260	08/14/96
2-Chloroethyl vinyl ether	<50	ug/kg	8260	08/14/96
1,2-Dichloroethane-d4 (Surrogate)	102	%	8260	08/14/96
Toluene-d8 (Surrogate)	191	%	8260	08/14/96
4-Bromofluorobenzene (Surrogate)	102	%	8260	08/14/96

CHAIN OF CUSTODY RECORD

MAXIM TECHNOLOGIES INC

Project or Site Name: Southgate Laundry

Project Number: 946.04

Sampler Name (Printed): RACHEL TAUMAN

page 1 of 2

☐ Billings, MT ☐ Helena, MT
☐ Boise, ID ☐ Missoula, MT
☐ Great Falls, MT ☒ Yakima, WA

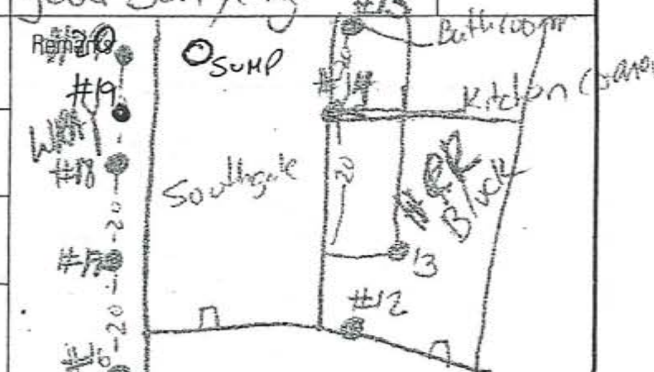
Contact or Report to: Rachel Taeuman

(509) 577-8592

Contact Address or Location:

Sampler Signature: Rachel Taeuman

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	JAR NO. OF CONTAINERS 1 4 OZ	ANALYSIS REQUIRED 8010	NOTES 3" hole HAND Auger	LAB NUMBER 8010
8/13	8:20	#12 H&R @1'	Grab	Soil	1 4oz jar	X <5	Brown silt/soil	
HER Block	8:35	#13 H&R @1'			1 JAR	X 13	AA	
	8:45	#14 H&R @1'			1 JAR	X 14	kitchen near refrigerator	
	8:50	#14 H&R @ 1.5'			1 JAR	X 76	deeper sample soil silt/clay	
	9:10	#15 H&R 2.5'			1 JAR	X 5	Bathroom near sink good soil	
	9:15	#15 H&R 3.0'			1 JAR	X <5	AA silty/clay brown soil	
	9:40	#16 WEAY 1.5			1 JAR	X 20	dry fill + gravel	
WEAY	9:50	#17 weay @2'			1 JAR	X 40	Vacumed fill (gravel) collapses	
	10:00	#18 weay @0.5		POOR	1 JAR	X <5 refusal @0.5'	Samples beneath fill	
↓	10:10	#19 weay @ 1.5'	↓	↓	1 JAR	X 23	good soil/clay-silt #15	

Relinquished by	Date	Time	Received by	Remarks
Rachel Taeuman	8/13/96	12:00	UPS AIR	
Relinquished by:	Date	Time	Received by:	
Relinquished by:	Date	Time	Received by:	
Relinquished by:	Date	Time	Received by:	

CHAIN OF CUSTODY RECORD

MAXIM TECHNOLOGIES INC

Project or Site Name: Southgate Laundry

Project Number: 946.04

Sampler Name (Printed): RACHEL TAUMAN

Page 2 of 2

- [ ] Billings, MT
- [ ] Boise, ID
- [ ] Great Falls, MT
- [ ] Helena, MT
- [ ] Missoula, MT
- [x] Yakima, WA

Contact or Report to: Rachel Tauman

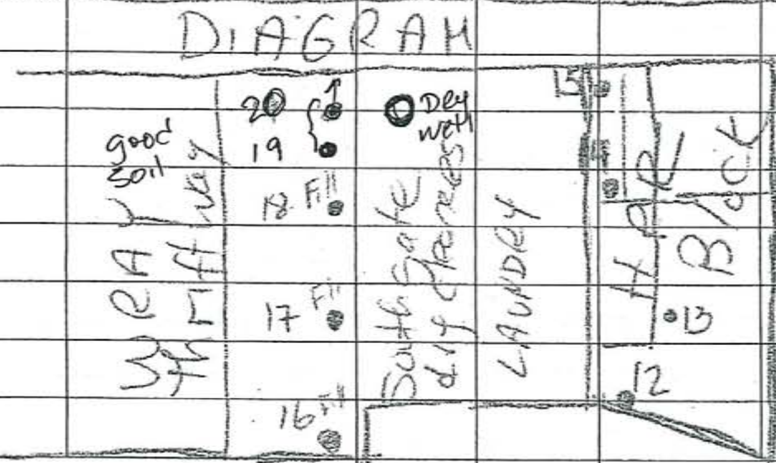
(509) 577-8592

Contact Address or Location

Sampler Signature: Rachel Tauman

DATE COLLECTED	TIME COLLECTED	SAMPLE LOCATION OR DESCRIPTION	COMP OR GRAB	SAMPLE MATRIX	NO. OF CONTAINERS	ANALYSIS REQUIRED: 8010							NOTES: 3" hole Hand Auger	LAB NUMBER
8/13	10:25	#20 Way @ [illegible]	Grab	Soil	1 JAR	X	179						Good Soil brown clay silt directly across from sump	

DIAGRAM



Relinquished by:	Date	Time	Received by:
Rachel Tauman	[illegible]	[illegible]	UPS AIR

Remarks: concrete Slab 6" Samples 16,17,18 were collected beneath Gravel fill (In Soil) Hit refusal @ 0.5' Sample 19 Native Soil 20

Distance between Sample

MAXIM TECHNOLOGIES INC

SAMPLE RECEIPT CHECKLIST

Client Name: M- Yakima

Project: Southgate Indy

Laboratory number(s): 177580-90

Checklist completed by: [Initials] / 8/14 [Date]

Date/Time Received: 8/14/96 0950 (Date / Time)

Received by: [signature]

Carrier name: FedX

Sample Type: Soil

		YES	NO
1.	Shipping container in good condition?	✓	
2.	Custody seals present on shipping container?		✓
3.	Condition: Intact _____ Broken _____		
4.	Chain of custody present?	✓	
5.	Chain of custody signed when relinquished and received?	✓	
6.	Chain of custody agrees with sample labels?	✓	
7.	Custody seals on sample bottles?		✓
8.	Condition: Intact _____ Broken _____		
9.	Samples in proper container/bottle?	✓	
10.	Samples intact?	✓	
11.	Sufficient sample volume for indicated test?	✓	
12.	VOA vials have zero headspace?	NA	NA
13.	Trip Blank received?		✓
14.	Ice/Frozen Blue Ice present in shipping container? (circle one) Melted	✓	
15.	Container temperature 1. 16.6°C 2. _____ 3. _____		

		YES	NO
16.	All samples rec'd within holding time?	✓	
	Preservation		
17.	pH check performed by: _____		
18.	Metals bottle(s) pH <2?	NA	
19.	Nutrient bottle(s) pH <2?		
20.	Cyanide bottle(s) pH >12?		
21.	Sulfide bottle(s) pH >9?		
22.	Oil & grease bottle(s) pH <2?		
23.	TOC bottle(s) pH <2?		
24.	DRO/418.1 bottle(s) pH <2?		
25.	Phenolics bottle(s) pH <2?		
26.	Volatiles (VOA) pH <2? (VOA pH checked by analyst)	NA	
27.	Client contacted?		
28.	Person contacted		
29.	Date contacted		
30.	Contacted by		
31.	Regarding?		

Note: Samples may be affected when not transported at the temperature recommended by the EPA for the test you've selected. Please contact the lab if you have concerns about the temperature of your samples.

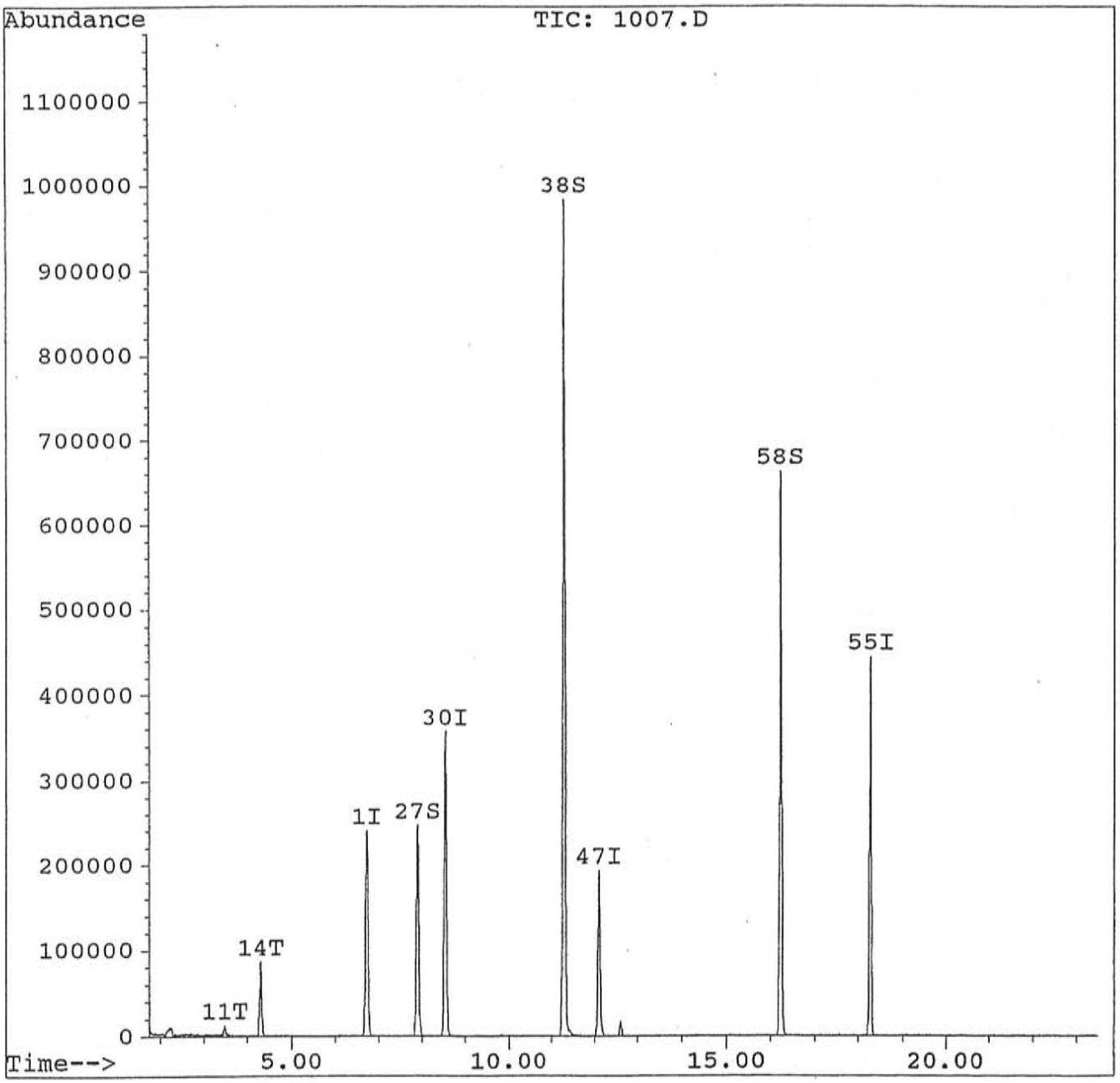
COMMENTS: _____

Quantitation Report

Data File : C:\HPCHEM\1\DATA\081496\1007.D
Acq Time : 14 Aug 96 12:00 pm
Sample : 177580 5gm
Misc :
Quant Time: Aug 14 12:26 1996

Operator: GHP
Inst : GC/MS
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\82600808.M
Title : 8260
Last Update : Wed Aug 14 10:52:10 1996
Response via : Single Level Calibration

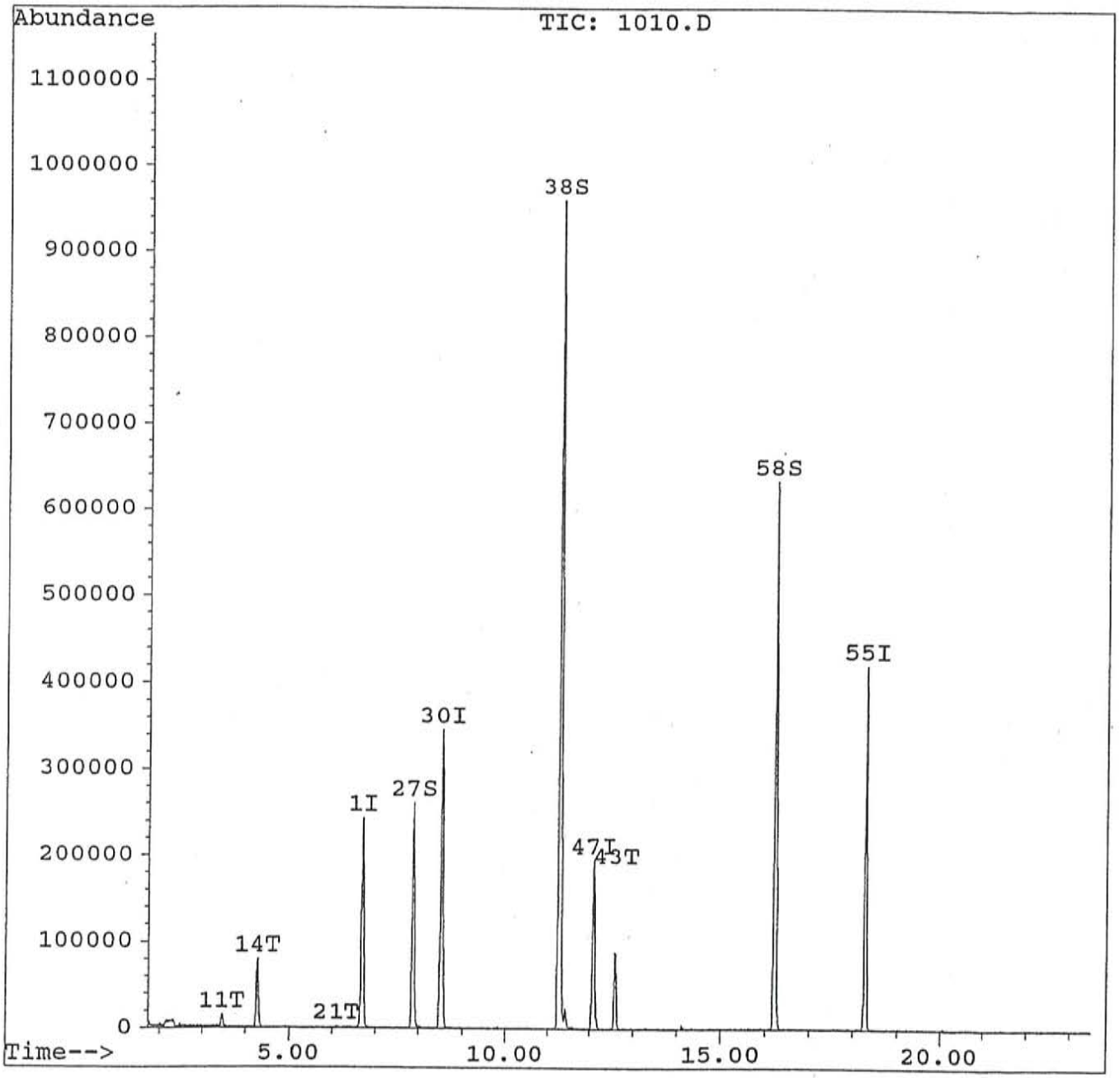


Quantitation Report

Data File : C:\HPCHEM\1\DATA\081496\1010.D
Acq Time : 14 Aug 96 1:35 pm
Sample : 177581 5gm
Misc :
Quant Time: Aug 14 14:02 1996

Operator: GHP
Inst : GC/MS
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\82600808.M
Title : 8260
Last Update : Wed Aug 14 10:52:10 1996
Response via : Single Level Calibration

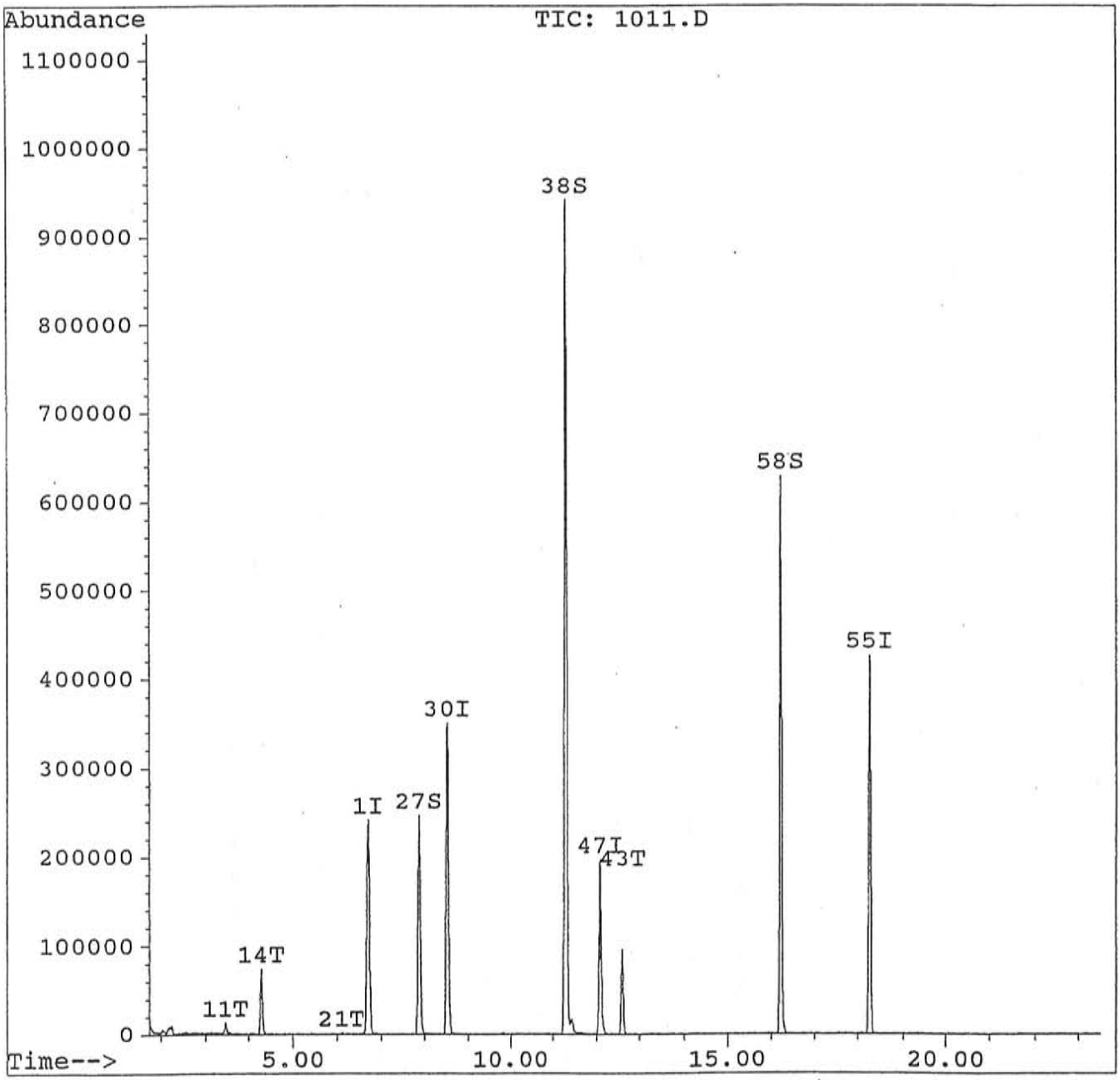


Quantitation Report

Data File : C:\HPCHEM\1\DATA\081496\1011.D
Acq Time : 14 Aug 96 2:07 pm
Sample : 177582 5gm
Misc :
Quant Time: Aug 14 14:34 1996

Operator: GHP
Inst : GC/MS
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\82600808.M
Title : 8260
Last Update : Wed Aug 14 10:52:10 1996
Response via : Single Level Calibration

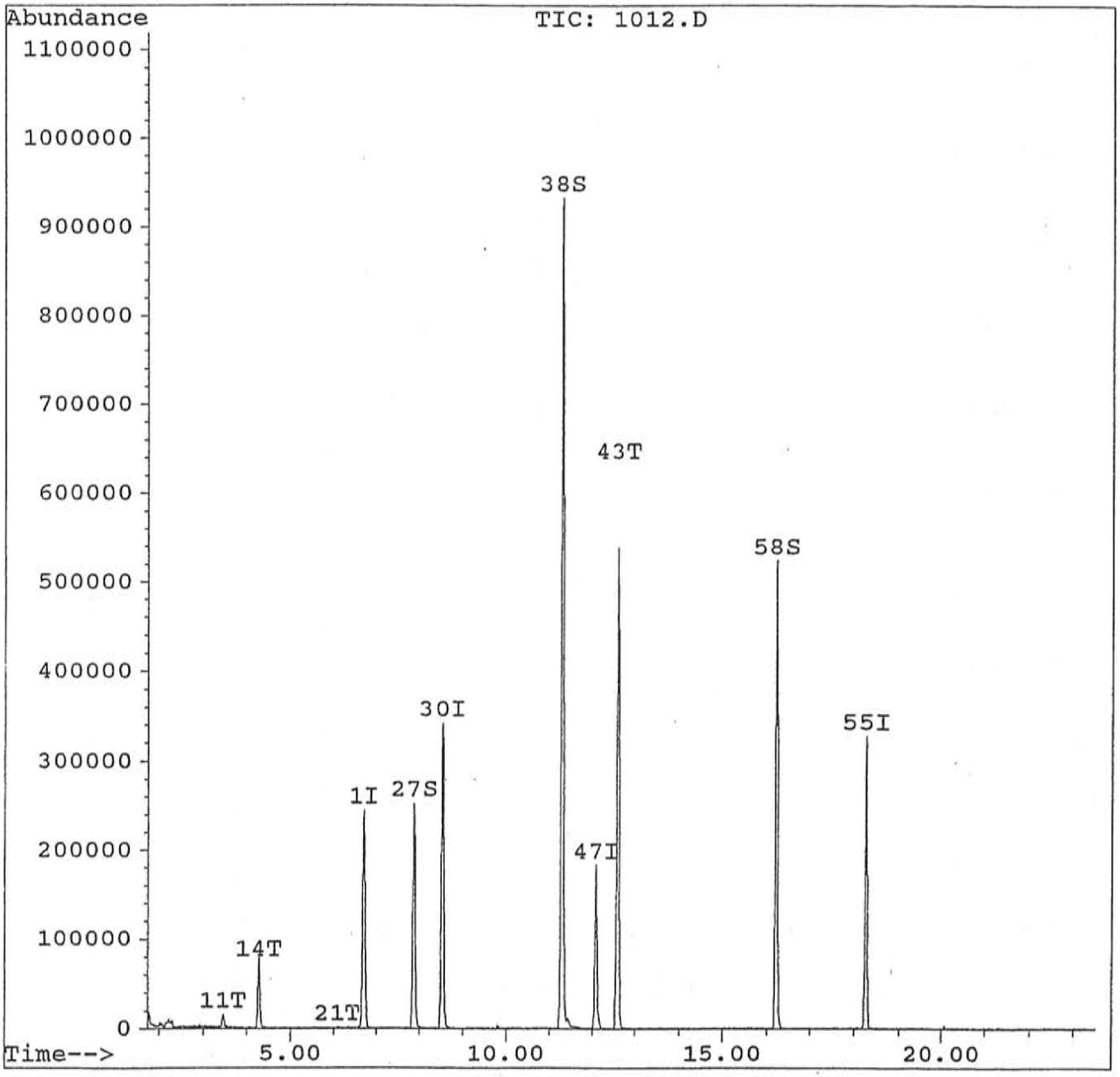


Quantitation Report

Data File : C:\HPCHEM\1\DATA\081496\1012.D
Acq Time : 14 Aug 96 2:39 pm
Sample : 177583 5gm
Misc :
Quant Time: Aug 14 15:06 1996

Operator: GHP
Inst : GC/MS
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\82600808.M
Title : 8260
Last Update : Wed Aug 14 10:52:10 1996
Response via : Single Level Calibration

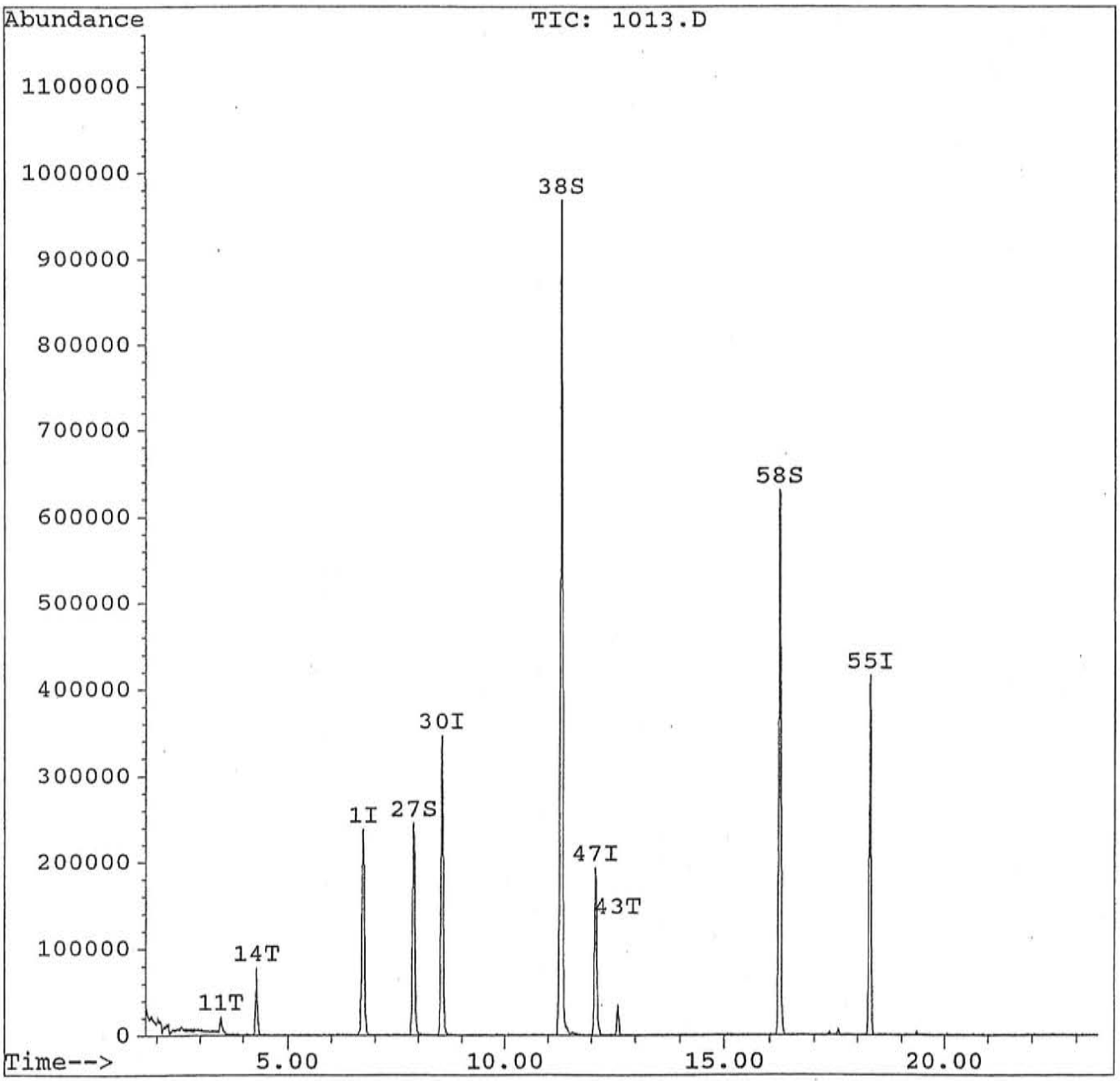


Quantitation Report

Data File : C:\HPCHEM\1\DATA\081496\1013.D
Acq Time : 14 Aug 96 3:12 pm
Sample : 177584 5gm
Misc :
Quant Time: Aug 14 15:39 1996

Operator: GHP
Inst : GC/MS
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\82600808.M
Title : 8260
Last Update : Wed Aug 14 10:52:10 1996
Response via : Single Level Calibration

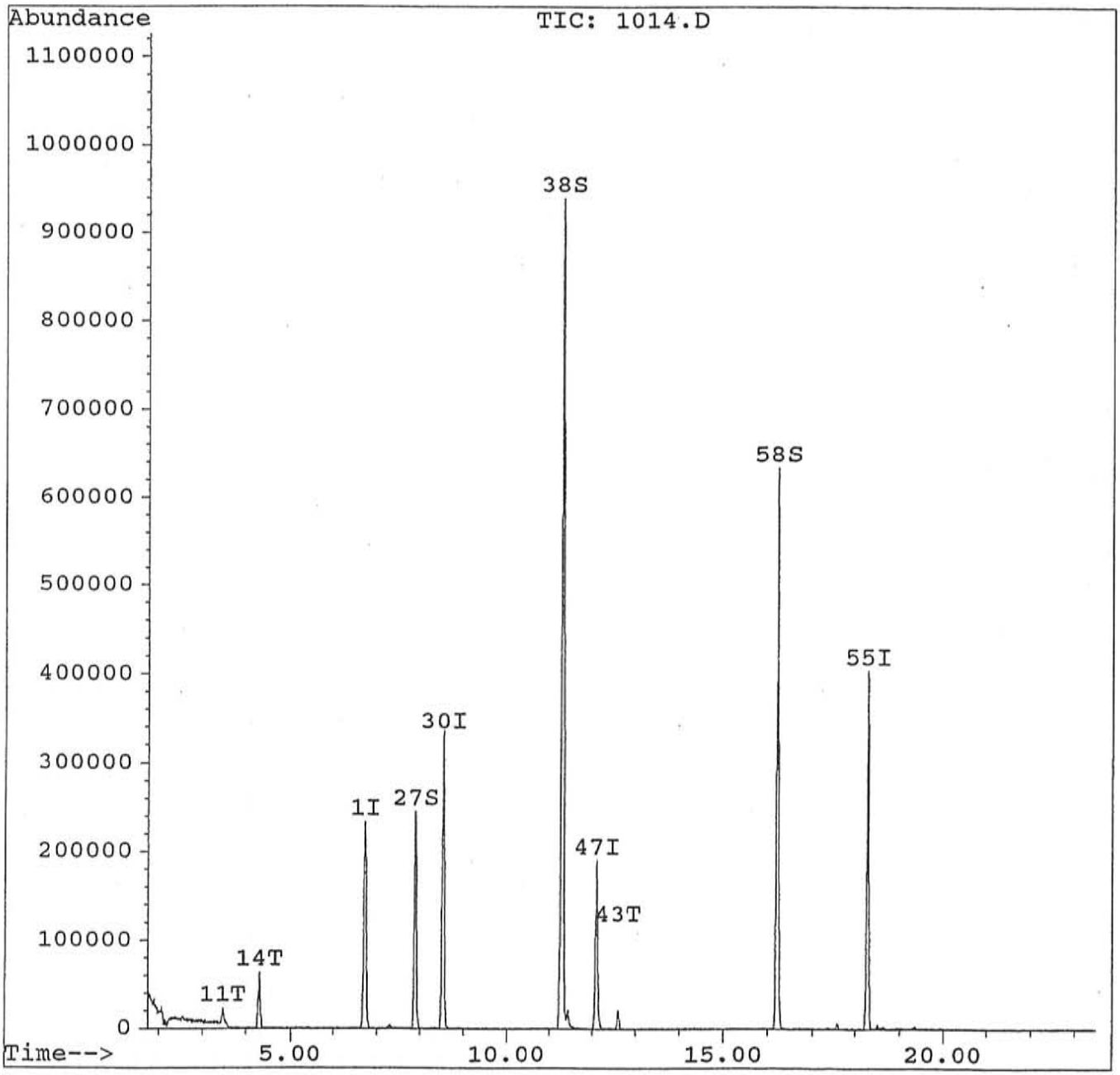


Quantitation Report

Data File : C:\HPCHEM\1\DATA\081496\1014.D
Acq Time : 14 Aug 96 3:45 pm
Sample : 177585 5gm
Misc :
Quant Time: Aug 14 16:11 1996

Operator: GHP
Inst : GC/MS
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\82600808.M
Title : 8260
Last Update : Wed Aug 14 10:52:10 1996
Response via : Single Level Calibration

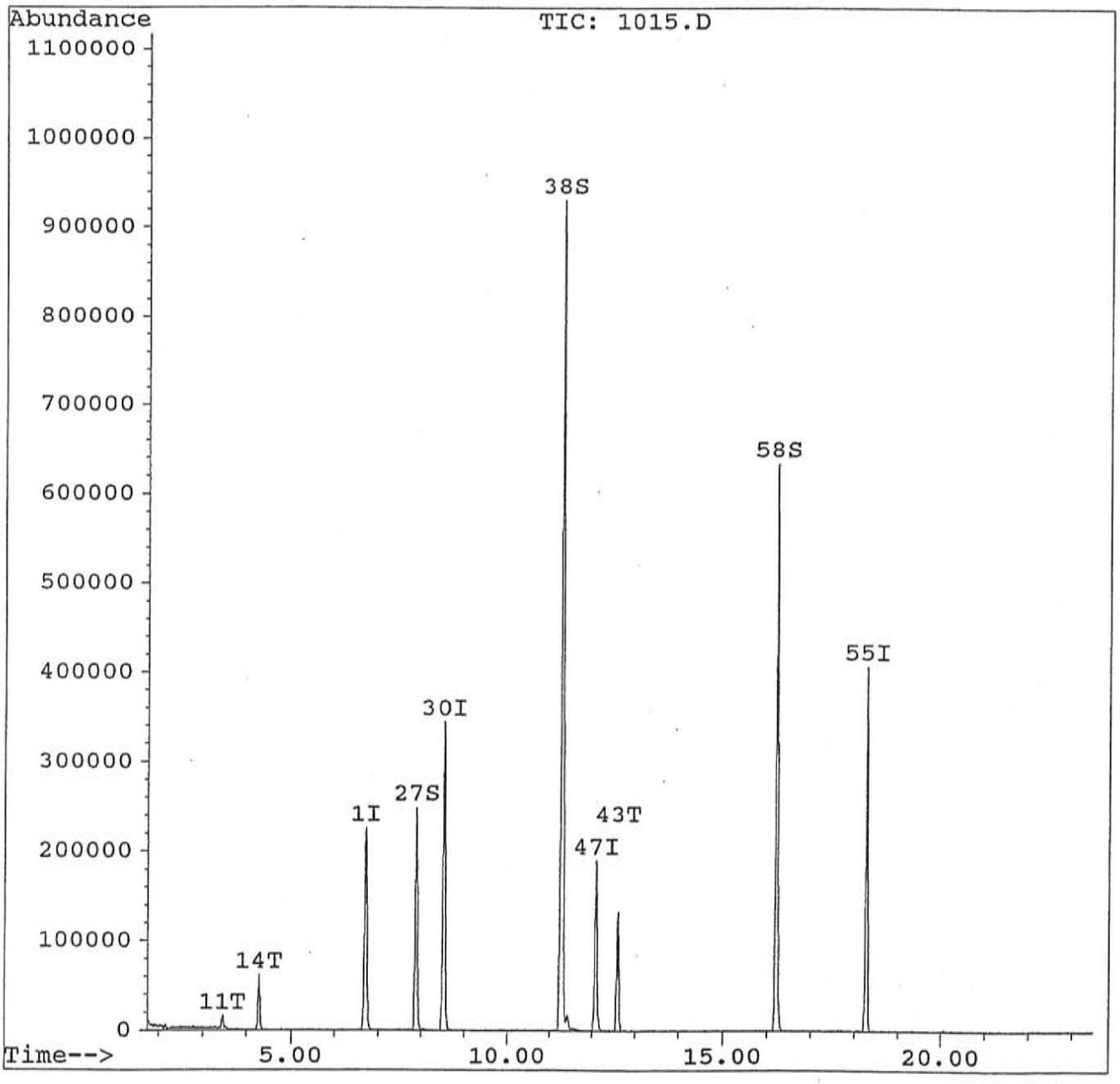


Quantitation Report

Data File : C:\HPCHEM\1\DATA\081496\1015.D
Acq Time : 14 Aug 96 4:17 pm
Sample : 177586 5gm
Misc :
Quant Time: Aug 14 16:44 1996

Operator: GHP
Inst : GC/MS
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\82600808.M
Title : 8260
Last Update : Wed Aug 14 10:52:10 1996
Response via : Single Level Calibration

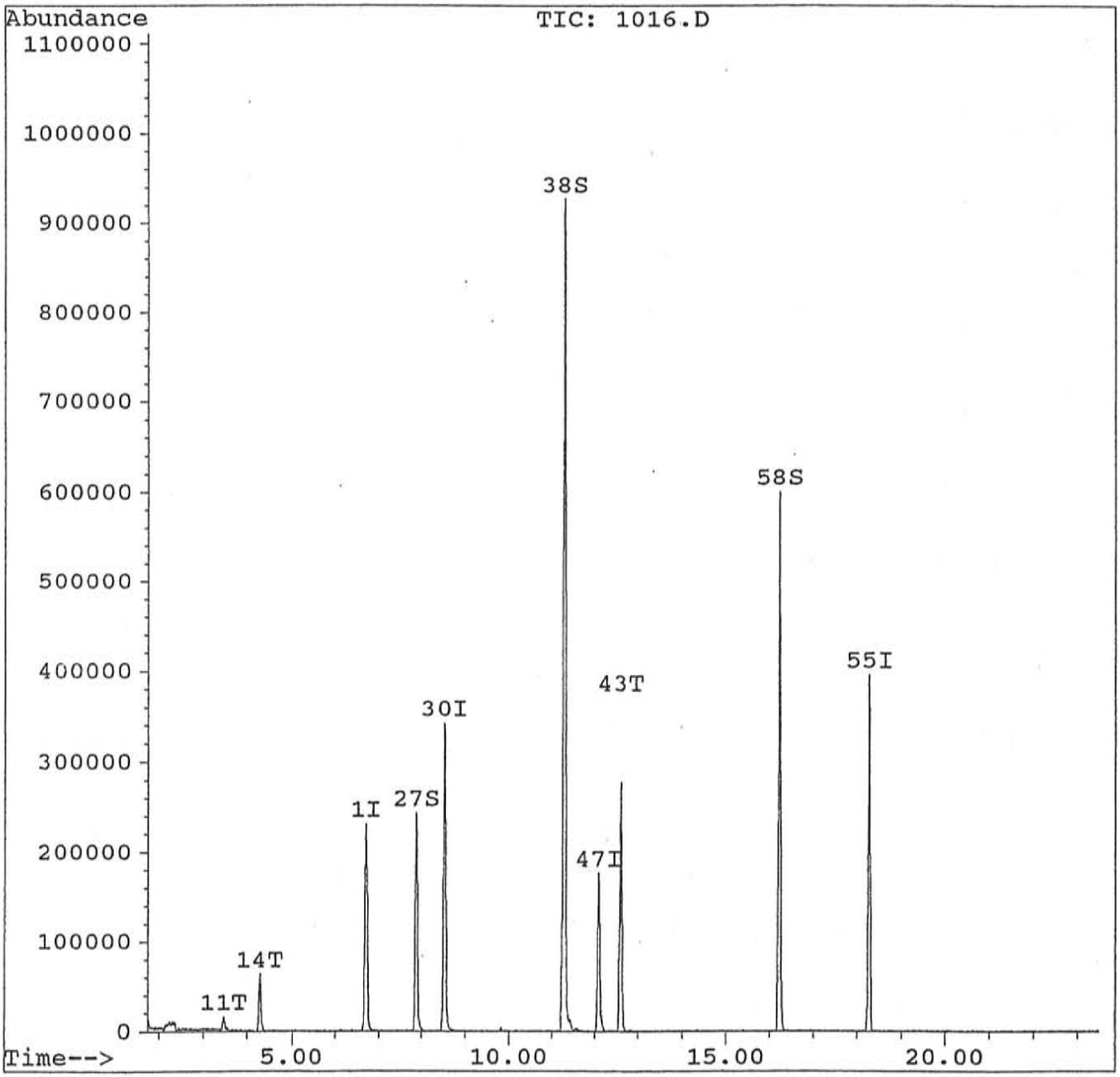


Quantitation Report

Data File : C:\HPCHEM\1\DATA\081496\1016.D
Acq Time : 14 Aug 96 4:49 pm
Sample : 177587 5gm
Misc :
Quant Time: Aug 14 17:15 1996

Operator: GHP
Inst : GC/MS
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\82600808.M
Title : 8260
Last Update : Wed Aug 14 10:52:10 1996
Response via : Single Level Calibration

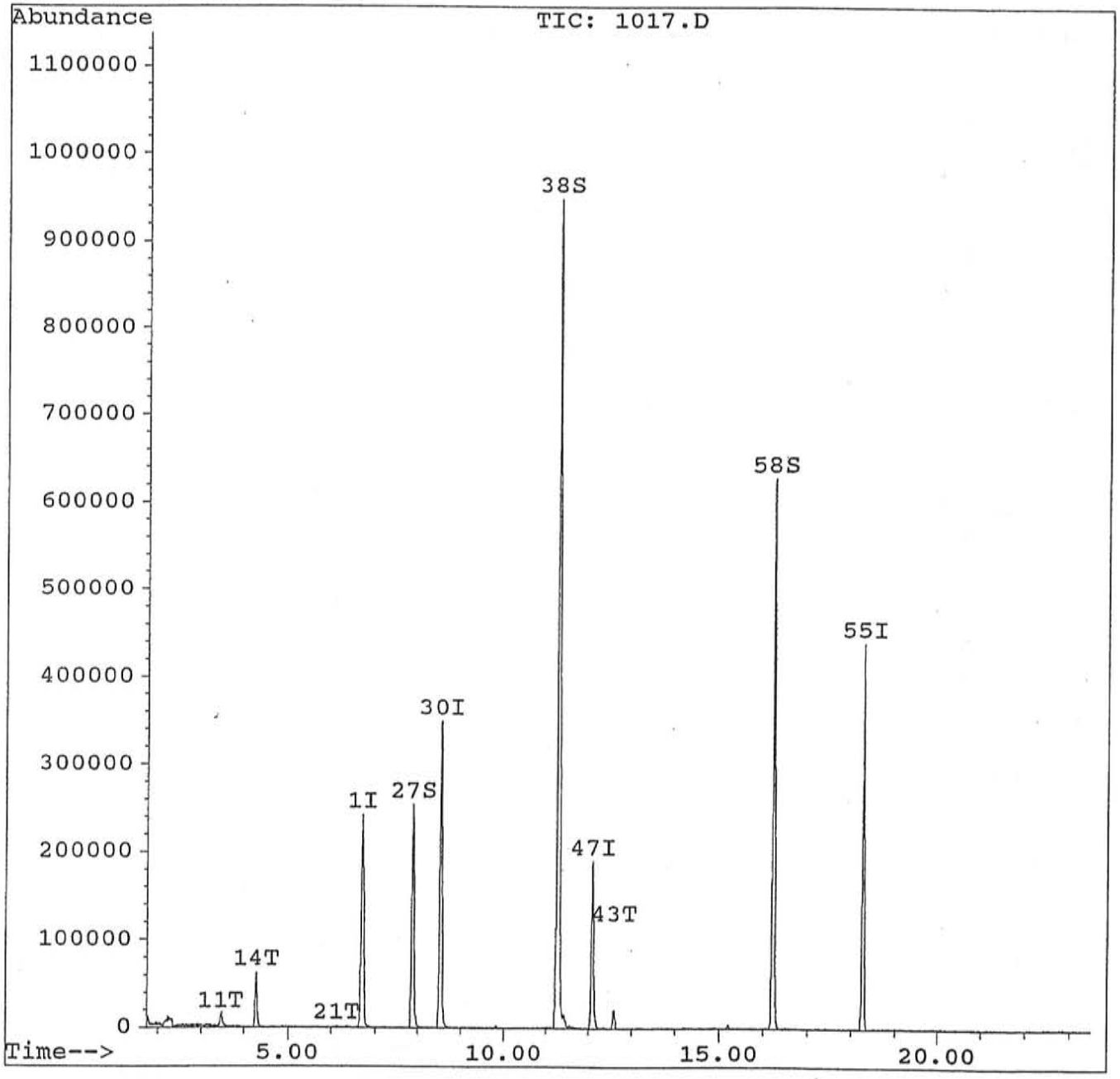


Quantitation Report

Data File : C:\HPCHEM\1\DATA\081496\1017.D
Acq Time : 14 Aug 96 5:20 pm
Sample : 177588 5gm
Misc :
Quant Time: Aug 14 17:47 1996

Operator: GHP
Inst : GC/MS
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\82600808.M
Title : 8260
Last Update : Wed Aug 14 10:52:10 1996
Response via : Single Level Calibration

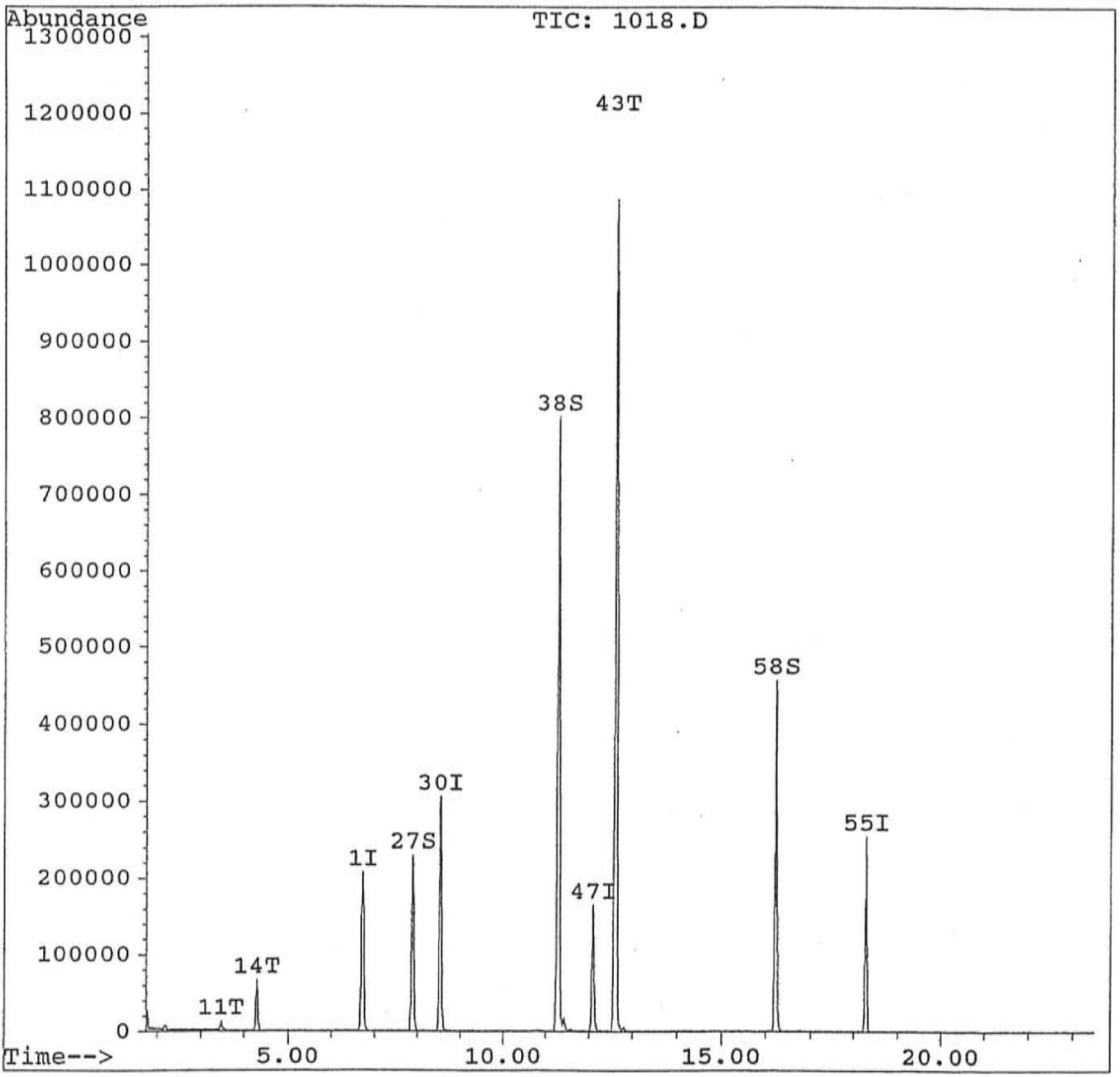


Quantitation Report

Data File : C:\HPCHEM\1\DATA\081496\1018.D
Acq Time : 14 Aug 96 5:52 pm
Sample : 177589 5gm
Misc :
Quant Time: Aug 14 18:19 1996

Operator: GHP
Inst : GC/MS
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\82600808.M
Title : 8260
Last Update : Wed Aug 14 10:52:10 1996
Response via : Single Level Calibration

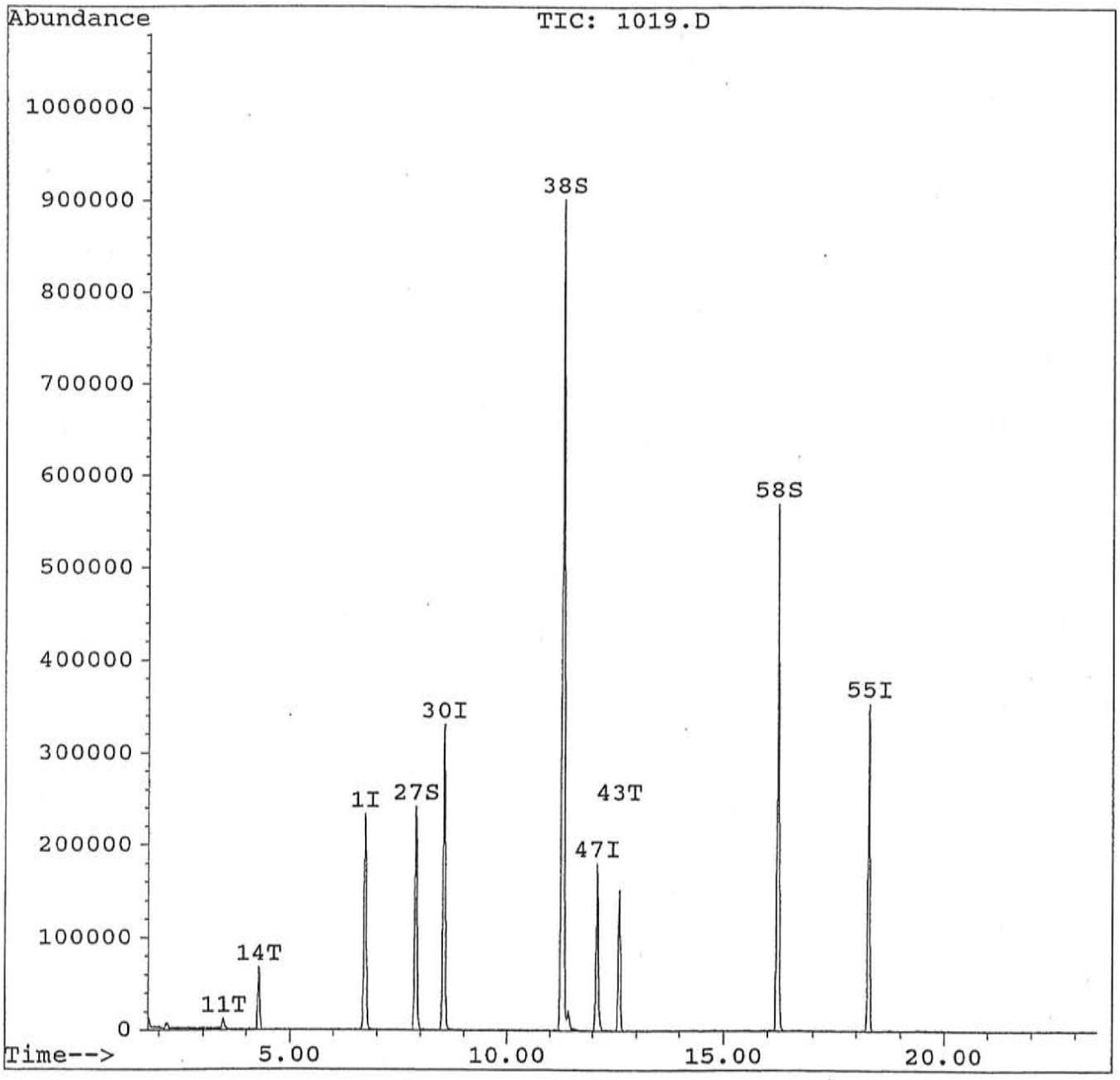


Quantitation Report

Data File : C:\HPCHEM\1\DATA\081496\1019.D
Acq Time : 14 Aug 96 6:23 pm
Sample : 177590 5gm
Misc :
Quant Time: Aug 14 18:50 1996

Operator: GHP
Inst : GC/MS
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\82600808.M
Title : 8260
Last Update : Wed Aug 14 10:52:10 1996
Response via : Single Level Calibration

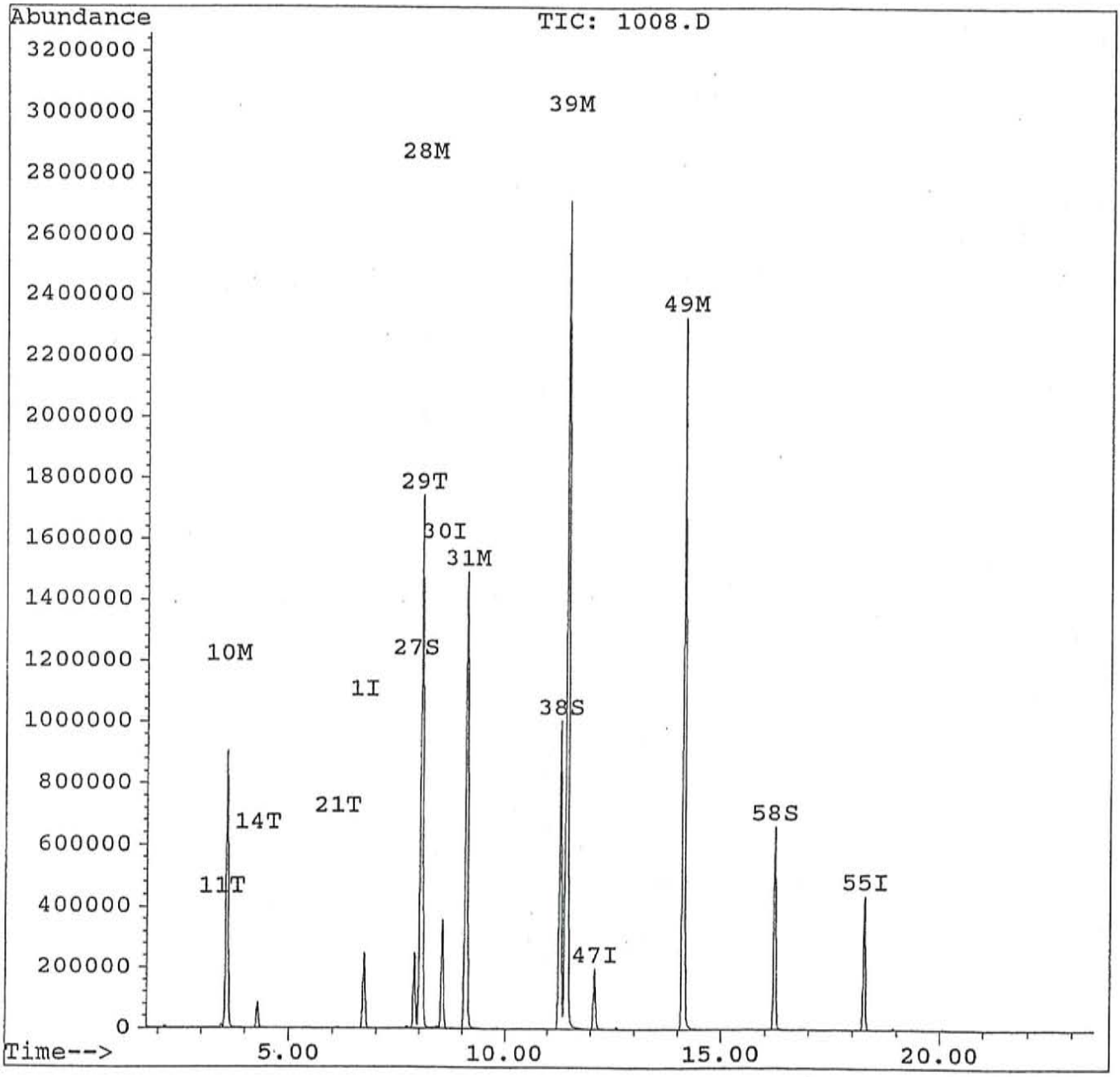


Quantitation Report

Data File : C:\HPCHEM\1\DATA\081496\1008.D
Acq Time : 14 Aug 96 12:32 pm
Sample : 177591 ms 5gm
Misc :
Quant Time: Aug 14 12:59 1996

Operator: GHP
Inst : GC/MS
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\82600808.M
Title : 8260
Last Update : Wed Aug 14 10:52:10 1996
Response via : Single Level Calibration

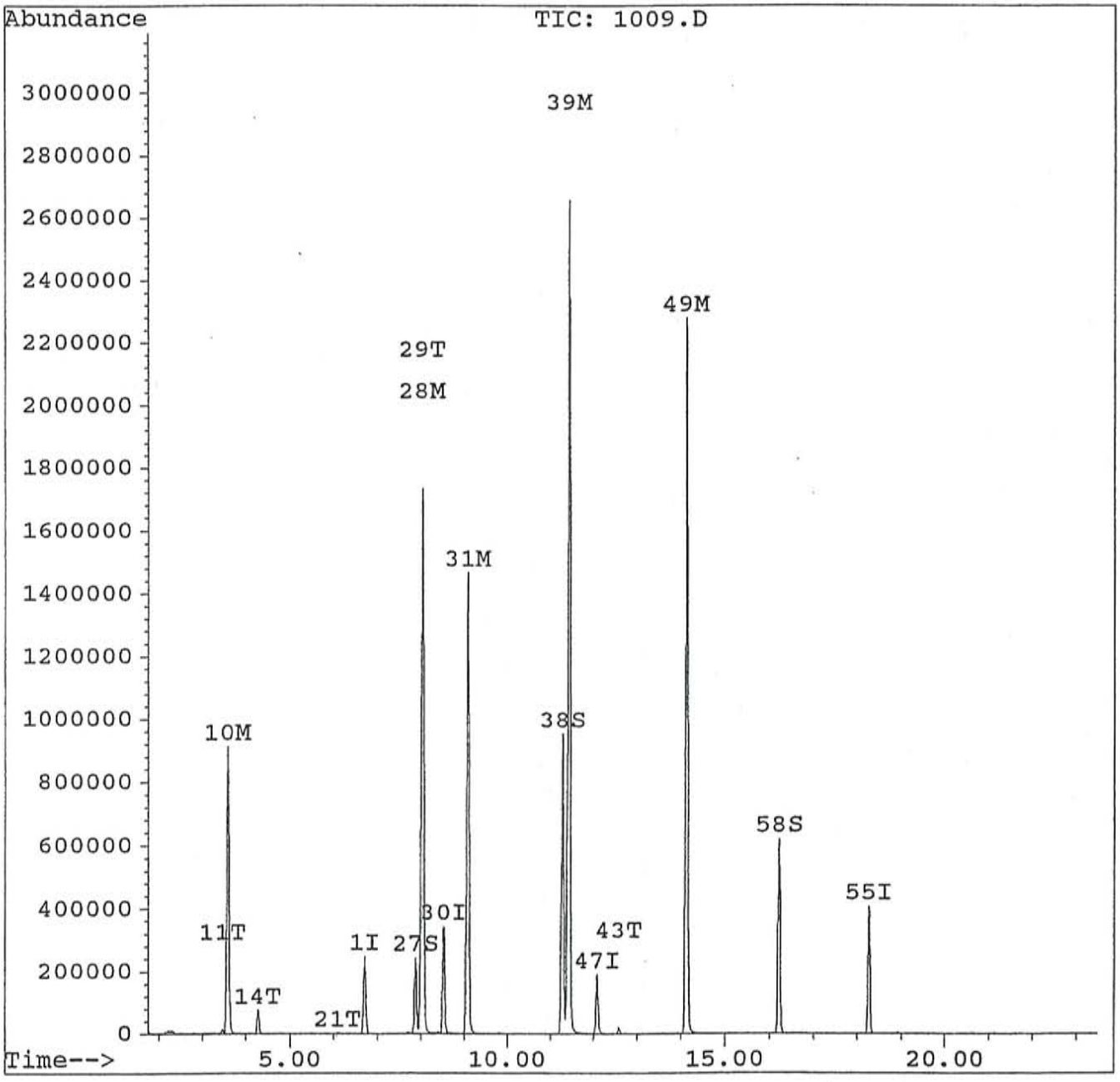


Quantitation Report

Data File : C:\HPCHEM\1\DATA\081496\1009.D
Acq Time : 14 Aug 96 1:04 pm
Sample : 177592 ms 5gm
Misc :
Quant Time: Aug 14 13:33 1996

Operator: GHP
Inst : GC/MS
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\82600808.M
Title : 8260
Last Update : Wed Aug 14 10:52:10 1996
Response via : Single Level Calibration



APPENDIX E

REMEDIAL ACTIONS-LABORATORY REPORTS OF SOIL SAMPLES (JULY-SEPTEMBER 1997)

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

7110 38th Drive SE
Lacey, Washington 98503

Mobile Environmental Laboratories
Environmental Sampling Services

Telephone: **360-459-4670**
Fax: **360-459-3432**

July 18, 1997

Rachel Tauman
Maxim Technologies
96 South Zuni Street
Denver, CO 80223

Dear Ms. Tauman:

Please find enclosed the data report for analyses of soil samples conducted July 16, 1997, for the Southgate Laundry Project, Project No. 5809500946.04, in Yakima, Washington. The soil samples were analyzed for Specific Halogenated Hydrocarbons and BTEX by Modified EPA Method 8010/8020.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. An invoice for this work is also enclosed.

TEG Northwest appreciates the opportunity to have provided analytical services to Maxim Technologies for this project. It was a pleasure working with you, and we are looking forward to the next opportunity to work together.

Sincerely,

Michael A. Korosec
President

QA/QC FOR ANALYTICAL METHODS

GENERAL

The TEG Northwest Laboratory quality assurance and quality control (QA/QC) procedures are conducted following the guidelines and objectives which meet or exceed certification/-accreditation requirements of California DOHS, Washington DOE, and Oregon DEQ. The Quality Control Program is a consistent set of procedures which assures data quality through the use of appropriate blanks, replicate analyses, surrogate spikes, and matrix spikes, and with the use of reference standards that meet or exceed EPA standards.

When analyses are taking place on-site with the mobile lab, the need for Field Blanks or Travel/Trip Blanks is eliminated. If there is going to be a delay before sample preparation for analysis, the sample is stored at 4° C.

ANALYTICAL METHODS

TEG Northwest Labs use analytical methodologies which are in conformity with U. S. Environmental Protection Agency (EPA), Washington DOE, and Oregon DEQ methodologies. When necessary and appropriate due to the nature or composition of the sample, TEG may use variations of the methods which are consistent with recognized standards or variations used by the industry and government laboratories.

Purgeable Volatile Aromatics (BTEX, EPA 602/8020)

A check standard is run at the beginning of the day. The check standard is run at the end of the day. Both open and close standards must be within 15% of the continuing calibration curve value. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135% unless high sample concentrations interfere with the determination of the recovery percentage. At least 1 method blank is run per day.

Purgeable Volatile Halocarbons
(Chlorinated Hydrocarbons, EPA 601/8010,8021)

A blank and a calibration standard are run at the beginning of the day. The standard must be within 15% of the continuing calibration curve value. The standard is rerun at the end of the day if more than 10 samples have been run. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135%. At least 1 method blank is run per day.

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

SOUTHGATE LAUNDRY PROJECT
Yakima, Washington
Maxim Technologies, Inc.
Project No. 5809500946.04

Specific Halogenated Hydrocarbons and BTEX (Mod. EPA 8010/8020) in Soil

Sample-Number	MDL	Method Blank	TP-1 #1 @ 2'	TP-1 #1 @ 5'	TP-1 #1 @ 9'	TP-1 #1 @ 13'	TP-1 #2 @ 2'
Date		07/16/97	07/16/97	07/16/97	07/16/97	07/16/97	07/16/97
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Vinylchloride	0.05	nd	nd	nd	nd	nd	nd
1,1 Dichloroethene	0.05	nd	nd	nd	nd	nd	nd
Trans-1,2 Dichloroethene	0.05	nd	nd	nd	nd	nd	nd
Cis-1,2 Dichloroethene	0.05	nd	nd	nd	nd	nd	nd
Benzene	0.05	nd	nd	nd	nd	nd	nd
Trichloroethene	0.05	nd	nd	nd	nd	nd	nd
Toluene	0.05	nd	nd	nd	nd	nd	nd
Tetrachloroethene	0.05	nd	nd	nd	nd	nd	nd
Ethylbenzene	0.05	nd	nd	nd	nd	nd	nd
m,p-Xylene	0.05	nd	nd	nd	nd	nd	nd
o-Xylene	0.05	nd	nd	nd	nd	nd	nd
Dichloromethane	0.05	nd	nd	nd	nd	nd	nd
1,1 Dichloroethane	0.05	nd	nd	nd	nd	nd	nd
1,2 Dichloroethane	0.05	nd	nd	nd	nd	nd	nd
Chloroform	0.05	nd	nd	nd	nd	nd	nd
Carbon Tetrachloride	0.05	nd	nd	nd	nd	nd	nd
1,1,1 Trichloroethane	0.05	nd	nd	nd	nd	nd	nd
1,1,2 Trichloroethane	0.05	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	0.05	nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	0.05	nd	nd	nd	nd	nd	nd
Spike Recovery (%)		94	86	90	95	93	86

"nd" Indicates Not Detected at the listed detection limit.
"int" Indicates that interference peaks prevent determination.

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

SOUTHGATE LAUNDRY PROJECT
Yakima, Washington
Maxim Technologies, Inc.
Project No. 5809500946.04

Specific Halogenated Hydrocarbons and BTEX (Mod. EPA 8010/8020) in Soil

Sample-Number	MDL	TP-1 #2 @ 5'	TP-1 #2 @ 9'	TP-1 #2 @ 9' Dup	TP-1 #2 @ 13'	TP-1 #3 @ 7'	
Date		07/16/97	07/16/97	07/16/97	07/16/97	07/16/97	
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
Vinylchloride	0.05	nd	nd	nd	nd	nd	
1,1 Dichloroethene	0.05	nd	nd	nd	nd	nd	
Trans-1,2 Dichloroethene	0.05	nd	nd	nd	nd	nd	
Cis-1,2 Dichloroethene	0.05	nd	nd	nd	nd	nd	
Benzene	0.05	nd	nd	nd	nd	nd	
Trichloroethene	0.05	nd	nd	nd	nd	nd	
Toluene	0.05	nd	nd	nd	nd	nd	
Tetrachloroethene	0.05	0.11	0.04	0.05	0.05	nd	
Ethylbenzene	0.05	nd	nd	nd	nd	nd	
m,p-Xylene	0.05	nd	nd	nd	nd	nd	
o-Xylene	0.05	nd	nd	nd	nd	nd	
Dichloromethane	0.05	nd	nd	nd	nd	nd	
1,1 Dichloroethane	0.05	nd	nd	nd	nd	nd	
1,2 Dichloroethane	0.05	nd	nd	nd	nd	nd	
Chloroform	0.05	nd	nd	nd	nd	nd	
Carbon Tetrachloride	0.05	nd	nd	nd	nd	nd	
1,1,1 Trichloroethane	0.05	nd	nd	nd	nd	nd	
1,1,2 Trichloroethane	0.05	nd	nd	nd	nd	nd	
1,1,1,2-Tetrachloroethane	0.05	nd	nd	nd	nd	nd	
1,1,2,2-Tetrachloroethane	0.05	nd	nd	nd	nd	nd	
Spike Recovery (%)		85	86	86	85	73	

"nd" Indicates Not Detected at the listed detection limit.
"int" Indicates that interference peaks prevent determination.

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

SOUTHGATE LAUNDRY PROJECT
Yakima, Washington
Maxim Technologies, Inc.
Project No. 5809500946.04

Specific Halogenated Hydrocarbons and BTEX (Mod. EPA 8010/8020) in Soil

Sample-Number	MDL	Stockpile #1	Stockpile #2	Stockpile #3
Date		07/16/97	07/16/97	07/16/97
	mg/kg	mg/kg	mg/kg	mg/kg
Vinylchloride	0.05	nd	nd	nd
1,1 Dichloroethene	0.05	nd	nd	nd
Trans-1,2 Dichloroethene	0.05	nd	nd	nd
Cis-1,2 Dichloroethene	0.05	nd	nd	nd
Benzene	0.05	nd	nd	nd
Trichloroethene	0.05	nd	nd	nd
Toluene	0.05	nd	nd	nd
Tetrachloroethene	0.05	0.07	0.06	0.08
Ethylbenzene	0.05	nd	nd	nd
m,p-Xylene	0.05	nd	nd	nd
o-Xylene	0.05	nd	nd	nd
Dichloromethane	0.05	nd	nd	nd
1,1 Dichloroethane	0.05	nd	nd	nd
1,2 Dichloroethane	0.05	nd	nd	nd
Chloroform	0.05	nd	nd	nd
Carbon Tetrachloride	0.05	nd	nd	nd
1,1,1 Trichloroethane	0.05	nd	nd	nd
1,1,2 Trichloroethane	0.05	nd	nd	nd
1,1,1,2-Tetrachloroethane	0.05	nd	nd	nd
1,1,2,2-Tetrachloroethane	0.05	nd	nd	nd
Spike Recovery (%)		118	86	92

"nd" Indicates Not Detected at the listed detection limit.
"int" Indicates that interference peaks prevent determination.

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

SOUTHGATE LAUNDRY PROJECT
Yakima, Washington
Maxim Technologies, Inc.
Project No. 5809500946.04

Specific Halogenated Hydrocarbons and BTEX (Mod. EPA 8010/8020) in Soil

Sample-Number	MDL	TP-2 #1 @ 2'	TP-2 #1 @ 4.5'	TP-2 #1 @ 4.5' Dup
Date		07/16/97	07/16/97	07/16/97
	mg/kg	mg/kg	mg/kg	mg/kg
Vinylchloride	0.05	nd	nd	nd
1,1 Dichloroethene	0.05	nd	nd	nd
Trans-1,2 Dichloroethene	0.05	nd	nd	nd
Cis-1,2 Dichloroethene	0.05	nd	nd	nd
Benzene	0.05	nd	nd	nd
Trichloroethene	0.05	nd	nd	nd
Toluene	0.05	nd	nd	nd
Tetrachloroethene	0.05	nd	0.06	0.05
Ethylbenzene	0.05	nd	nd	nd
m,p-Xylene	0.05	nd	nd	nd
o-Xylene	0.05	nd	nd	nd
Dichloromethane	0.05	nd	nd	nd
1,1 Dichloroethane	0.05	nd	nd	nd
1,2 Dichloroethane	0.05	nd	nd	nd
Chloroform	0.05	nd	nd	nd
Carbon Tetrachloride	0.05	nd	nd	nd
1,1,1 Trichloroethane	0.05	nd	nd	nd
1,1,2 Trichloroethane	0.05	nd	nd	nd
1,1,1,2-Tetrachloroethane	0.05	nd	nd	nd
1,1,2,2-Tetrachloroethane	0.05	nd	nd	nd
Spike Recovery (%)		92	76	98

"nd" Indicates Not Detected at the listed detection limit.
"int" Indicates that interference peaks prevent determination.

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

SOUTHGATE LAUNDRY PROJECT
Yakima, Washington
Maxim Technologies, Inc.
Project No. 5809500946.04

Specific Halogenated Hydrocarbons and BTEX (Mod. EPA 8010/8020) in Soil

Sample-Number	MDL	1 PPM MS	1 PPM MSD
Date		07/16/97	07/16/97
	mg/kg	mg/kg	mg/kg
Vinylchloride	0.05	--	--
1,1 Dichloroethene	0.05	1.14	1.13
Trans-1,2 Dichloroethene	0.05	1.10	1.00
Cis-1,2 Dichloroethene	0.05	1.03	0.92
Benzene	0.05	0.99	0.99
Trichloroethene	0.05	1.09	1.05
Toluene	0.05	1.06	0.95
Tetrachloroethene	0.05	1.03	0.99
Ethylbenzene	0.05	1.10	1.15
m,p-Xylene	0.05	2.15	2.11
o-Xylene	0.05	1.01	0.91
Dichloromethane	0.05	0.86	0.85
1,1 Dichloroethane	0.05	0.91	0.86
1,2 Dichloroethane	0.05	1.00	0.97
Chloroform	0.05	0.89	0.82
Carbon Tetrachloride	0.05	0.95	0.93
1,1,1 Trichloroethane	0.05	0.91	0.83
1,1,2 Trichloroethane	0.05	0.94	0.86
1,1,1,2-Tetrachloroethane	0.05	0.92	0.92
1,1,2,2-Tetrachloroethane	0.05	0.98	0.96
Spike Recovery (%)		104	102

"nd" Indicates Not Detected at the listed detection limit.
"int" Indicates that interference peaks prevent determination.

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

SOUTHGATE LAUNDRY PROJECT
Yakima, Washington
Maxim Technologies, Inc.
Project No. 5809500946.04

Specific Halogenated Hydrocarbons and BTEX (Mod. EPA 8010/8020) in Soil

Sample-Number	MDL	Method Blank	TP-1 #2A @ 5'	TP-1 #2A @ 7'	TP-1 #2A @ 7' Dup		
Date		07/18/97	07/18/97	07/18/97	07/18/97		
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
Vinylchloride	0.05	nd	nd	nd	nd		
1,1 Dichloroethene	0.05	nd	nd	nd	nd		
Trans-1,2 Dichloroethene	0.05	nd	nd	nd	nd		
Cis-1,2 Dichloroethene	0.05	nd	nd	nd	nd		
Benzene	0.05	nd	nd	nd	nd		
Trichloroethene	0.05	nd	nd	nd	nd		
Toluene	0.05	nd	nd	nd	nd		
Tetrachloroethene	0.05	nd	nd	nd	nd		
Ethylbenzene	0.05	nd	nd	nd	nd		
m,p-Xylene	0.05	nd	nd	nd	nd		
o-Xylene	0.05	nd	nd	nd	nd		
Dichloromethane	0.05	nd	nd	nd	nd		
1,1 Dichloroethane	0.05	nd	nd	nd	nd		
1,2 Dichloroethane	0.05	nd	nd	nd	nd		
Chloroform	0.05	nd	nd	nd	nd		
Carbon Tetrachloride	0.05	nd	nd	nd	nd		
1,1,1 Trichloroethane	0.05	nd	nd	nd	nd		
1,1,2 Trichloroethane	0.05	nd	nd	nd	nd		
1,1,1,2-Tetrachloroethane	0.05	nd	nd	nd	nd		
1,1,2,2-Tetrachloroethane	0.05	nd	nd	nd	nd		
Spike Recovery (%)		90	92	91	91		

"nd" Indicates Not Detected at the listed detection limit.
"int" Indicates that interference peaks prevent determination.

teg TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES

CHAIN-OF-CUSTODY RECORD

CLIENT: Southgate Laundry
ADDRESS: Yakima WA - MAXIM TECH
PHONE (509) 577-8592 FAX: (509) 577-8520
CLIENT PROJECT #: 5809500946 PROJECT MANAGER: Rachel Tauman

DATE: July 15, 1997 PAGE 1 OF 1
PROJECT NAME: Southgate Laundry
LOCATION: Yakima WA
COLLECTOR: Rachel Tauman DATE OF COLLECTION 7-15/7-17-97

Time	Sample Number	Depth	PCE Results mg/kg ~~Time~~	Sample Type	Date / Container Type	ANALYSES: VOA 601/8010 / 8020	VOA 602/8020	VOA 624/8240	Semi Vol 625/8270	TPH 418.1	TPH 8015 (gasoline)	TPH (8015 (diesel)	TPH 8015 (g & d)	PAH 610/8100	PEST/PCBs 8080	HEX CHROME	ORGANIC LEAD	TOTAL LEAD	pH	ASBESTOS	FIELD NOTES	Total Number of Containers	Laboratory Note Number
11:05	TP-1 #1	2	ND	Soil	402 JAR	X																	
11:10	TP-1 #1	5	ND		7/15/97	X															Heavy Slough.		
11:15	TP-1 #1	9	ND		7/15/97	X																	
11:20	TP-1 #1	13	ND		7/15/97	X																	
11:25	TP-1 #2	2	ND		7/15/97	X																	
11:30	TP-1 #2	5	~~2H~~		7/15/97	X															moist darker		
11:35	TP-1 #2	9	004 (DUP 0.05)		7/15/97	X																	
11:40	TP-1 #2	13	0.05		7/15/97	X																	
11:45	TP-1 #3	7	ND		7/15/97	X															Near Dry Well		
12:00	Stockpile #1	comp	0.06		7/15/97	X																	
12:05	Stockpile #2	comp	0.06		7/15/97	X																	
	Stockpile #3	comp	0.08		7/15/97	X																	
																					TP-2 Abandoned Excavation Concerns about hitting Irrigation Line - Equip. Problems @ 13:30		
12:30	TP-2 #1	2	ND		7/15/97	X																	
12:40	TP-2 #1	4.5	0.06		7/15/97	X																	
3:00	TP-~~2A~~1 #2A	5	ND		7/17/97	X																	
3:30	TP-~~2A~~1 #2A	7	ND		7/17/97	X																	

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
Rachel Tauman			
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

SAMPLE DISPOSAL INSTRUCTIONS
☐ TEG DISPOSAL @ $2.00 each ☐ Return ☐ Pickup

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES: Analyze for PCE 8010/8020 in Soil ASAP

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST, INC.

7110 38th Drive SE
Lacey, Washington 98503

Mobile Environmental Laboratories
Environmental Sampling Services

Telephone: 360-459-4670
Fax: 360-459-3432

Interior - "Hot Spots"

September 15, 1997

Rachel Tauman
Maxim Technologies
96 South Zuni Street
Denver, CO 80223

Dear Ms. Tauman:

Please find enclosed the data report for analyses of soil and water samples conducted September 10 and 11, 1997, for the Southgate Laundry Project, Project No. 5809500946.04, in Yakima, Washington. Soil and water samples were analyzed for Specific Halogenated Hydrocarbons and BTEX by Modified EPA Method 8010/8020.

The results of the analyses are summarized in the attached tables. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this work is also enclosed.

TEG Northwest appreciates the opportunity to have provided analytical services to Maxim Technologies for this project. It was a pleasure working with you, and we are looking forward to the next opportunity to work together.

Sincerely,

Michael A. Korosec

Michael A. Korosec
President

QA/QC FOR ANALYTICAL METHODS

GENERAL

The TEG Northwest Laboratory quality assurance and quality control (QA/QC) procedures are conducted following the guidelines and objectives which meet or exceed certification/-accreditation requirements of California DOHS, Washington DOE, and Oregon DEQ. The Quality Control Program is a consistent set of procedures which assures data quality through the use of appropriate blanks, replicate analyses, surrogate spikes, and matrix spikes, and with the use of reference standards that meet or exceed EPA standards.

When analyses are taking place on-site with the mobile lab, the need for Field Blanks or Travel/Trip Blanks is eliminated. If there is going to be a delay before sample preparation for analysis, the sample is stored at 4° C.

ANALYTICAL METHODS

TEG Northwest Labs use analytical methodologies which are in conformity with U. S. Environmental Protection Agency (EPA), Washington DOE, and Oregon DEQ methodologies. When necessary and appropriate due to the nature or composition of the sample, TEG may use variations of the methods which are consistent with recognized standards or variations used by the industry and government laboratories.

Purgeable Volatile Aromatics (BTEX, EPA 602/8020)

A blank and a calibration standard are run at the beginning of the day. The standard must be within 15% of the continuing calibration curve value. The standard is rerun at the end of the day if more than 10 samples have been run. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135%. At least 1 method blank is run per day.

Purgeable Volatile Halocarbons
(Chlorinated Hydrocarbons, EPA 601/8010,8021)

A blank and a calibration standard are run at the beginning of the day. The standard must be within 15% of the continuing calibration curve value. The standard is rerun at the end of the day if more than 10 samples have been run. All samples are prepared with a surrogate spike, and the recovery must be between 65% and 135%. At least 1 method blank is run per day.

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

SOUTHGATE LAUNDRY PROJECT
Yakima, Washington
Maxim Technologies, Inc.
Project No. 5809500946.04

Specific Halogenated Hydrocarbons and BTEX (Mod. EPA 8010/8020) in Soil

Sample-Number	MDL	Method Blank	1 East @ 3'	1 West @ 3'	1 East @ 5'	1 West @ 4'	1 Center @ 6'	1 Center @ 7
Date		09/10/97	09/10/97	09/10/97	09/10/97	09/10/97	09/10/97	09/10/97
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Vinylchloride	0.05	nd	nd	nd	nd	nd	nd	nd
Benzene	0.05	nd	nd	nd	nd	nd	nd	nd
Toluene	0.05	nd	nd	nd	nd	nd	nd	nd
Ethylbenzene	0.05	nd	nd	nd	nd	nd	nd	nd
Total-Xylene	0.05	nd	nd	nd	nd	nd	nd	nd
1,1 Dichloroethene	0.05	nd	nd	nd	nd	nd	nd	nd
Dichloromethane	0.05	nd	nd	nd	nd	nd	nd	nd
Trans-1,2 Dichloroethene	0.05	nd	nd	nd	nd	nd	nd	nd
1,1 Dichloroethane	0.05	nd	nd	nd	nd	nd	nd	nd
Cis-1,2 Dichloroethene	0.05	nd	nd	nd	nd	nd	nd	nd
Chloroform	0.05	nd	nd	nd	nd	nd	nd	nd
1,1,1 Trichloroethane	0.05	nd	nd	nd	nd	nd	nd	nd
Carbon Tetrachloride	0.05	nd	nd	nd	nd	nd	nd	nd
1,2 Dichloroethane	0.05	nd	nd	nd	nd	nd	nd	nd
Trichloroethene	0.05	nd	nd	nd	nd	nd	nd	nd
1,1,2 Trichloroethane	0.05	nd	nd	nd	nd	nd	nd	nd
Tetrachloroethene	0.05	nd	1.22	0.76	0.61	1.12	0.64	1.15
1,1,1,2-Tetrachloroethane	0.05	nd	nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	0.05	nd	nd	nd	nd	nd	nd	nd
Spike Recovery (%)		80	85	92	93	95	100	90

"nd" Indicates Not Detected at the listed detection limit.
"int" Indicates that interference peaks prevent determination.

SOUTHGATE LAUNDRY PROJECT
Yakima, Washington
Maxim Technologies, Inc.
Project No. 5809500946.04

Specific Halogenated Hydrocarbons and BTEX (Mod. EPA 8010/8020) in Soil

Sample-Number	MDL	1 Center @ 8.5	SP TestPit 1 East	SP TestPit 1 West	SP TestPit 1 Center	Test Pit 2 2 East @3'	Test Pit 2 2 West @3'	Test Pit 2 2 Center @ 4'
Date		09/10/97	09/10/97	09/10/97	09/10/97	09/10/97	09/10/97	09/10/97
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Vinylchloride	0.05	nd	nd	nd	nd	nd	nd	nd
Benzene	0.05	nd	nd	nd	nd	nd	nd	nd
Toluene	0.05	nd	nd	nd	nd	nd	nd	nd
Ethylbenzene	0.05	nd	nd	nd	nd	nd	nd	nd
Total-Xylene	0.05	nd	nd	nd	nd	nd	nd	nd
1,1 Dichloroethene	0.05	nd	nd	nd	nd	nd	nd	nd
Dichloromethane	0.05	nd	nd	nd	nd	nd	nd	nd
Trans-1,2 Dichloroethene	0.05	nd	nd	nd	nd	nd	nd	nd
1,1 Dichloroethane	0.05	nd	nd	nd	nd	nd	nd	nd
Cis-1,2 Dichloroethene	0.05	nd	nd	nd	nd	nd	nd	nd
Chloroform	0.05	nd	nd	nd	nd	nd	nd	nd
1,1,1 Trichloroethane	0.05	nd	nd	nd	nd	nd	nd	nd
Carbon Tetrachloride	0.05	nd	nd	nd	nd	nd	nd	nd
1,2 Dichloroethane	0.05	nd	nd	nd	nd	nd	nd	nd
Trichloroethene	0.05	nd	nd	nd	nd	nd	nd	nd
1,1,2 Trichloroethane	0.05	nd	nd	nd	nd	nd	nd	nd
Tetrachloroethene	0.05	1.01	0.85	0.91	0.85	0.85	0.65	0.25
1,1,1,2-Tetrachloroethane	0.05	nd	nd	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	0.05	nd	nd	nd	nd	nd	nd	nd
Spike Recovery (%)		93	127	98	126	127	102	125

"nd" Indicates Not Detected at the listed detection limit.
"int" Indicates that interference peaks prevent determination.

SOUTHGATE LAUNDRY PROJECT
Yakima, Washington
Maxim Technologies, Inc.
Project No. 5809500946.04

Specific Halogenated Hydrocarbons and BTEX (Mod. EPA 8010/8020) in Soil

Sample-Number	MDL	Test Pit 2 @ 8.5'	SP Test Pit 2 #1 Comp	SP Test Pit 2 #2 Comp	SP Test Pit 2 #2 Comp Dup	SP Test Pit 2 #3 Comp
Date		09/10/97	09/10/97	09/10/97	09/10/97	09/10/97
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Vinylchloride	0.05	nd	nd	nd	nd	nd
Benzene	0.05	nd	nd	nd	nd	nd
Toluene	0.05	nd	nd	nd	nd	nd
Ethylbenzene	0.05	nd	nd	nd	nd	nd
Total-Xylene	0.05	nd	nd	nd	nd	nd
1,1 Dichloroethene	0.05	nd	nd	nd	nd	nd
Dichloromethane	0.05	nd	nd	nd	nd	nd
Trans-1,2 Dichloroethene	0.05	nd	nd	nd	nd	nd
1,1 Dichloroethane	0.05	nd	nd	nd	nd	nd
Cis-1,2 Dichloroethene	0.05	nd	nd	nd	nd	nd
Chloroform	0.05	nd	nd	nd	nd	nd
1,1,1 Trichloroethane	0.05	nd	nd	nd	nd	nd
Carbon Tetrachloride	0.05	nd	nd	nd	nd	nd
1,2 Dichloroethane	0.05	nd	nd	nd	nd	nd
Trichloroethene	0.05	nd	nd	nd	nd	nd
1,1,2 Trichloroethane	0.05	nd	nd	nd	nd	nd
Tetrachloroethene	0.05	0.29	0.27	0.47	0.56	0.88
1,1,1,2-Tetrachloroethane	0.05	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane	0.05	nd	nd	nd	nd	nd
Spike Recovery (%)		99	113	112	86	108

"nd" Indicates Not Detected at the listed detection limit.
"int" Indicates that interference peaks prevent determination.

SOUTHGATE LAUNDRY PROJECT
Yakima, Washington
Maxim Technologies, Inc.
Project No. 5809500946.04

Specific Halogenated Hydrocarbons and BTEX (Mod. EPA 8010/8020) in Soil

Sample-Number	MDL	1 PPM MS	1 PPM MSD
Date		09/10/97	09/10/97
	mg/kg	mg/kg	mg/kg
Vinylchloride	0.05	--	--
Benzene	0.05	0.99	1.00
Toluene	0.05	0.99	1.02
Ethylbenzene	0.05	1.05	1.09
Total-Xylene	0.05	3.06	3.28
1,1 Dichloroethene	0.05	1.07	0.98
Dichloromethane	0.05	1.11	1.17
Trans-1,2 Dichloroethene	0.05	0.93	1.03
1,1 Dichloroethane	0.05	1.13	1.25
Cis-1,2 Dichloroethene	0.05	1.03	1.06
Chloroform	0.05	1.11	1.14
1,1,1 Trichloroethane	0.05	1.02	1.03
Carbon Tetrachloride	0.05	1.13	1.18
1,2 Dichloroethane	0.05	1.17	1.16
Trichloroethene	0.05	1.10	1.05
1,1,2 Trichloroethane	0.05	1.21	1.24
Tetrachloroethene	0.05	1.15	1.18
1,1,1,2-Tetrachloroethane	0.05	0.81	0.82
1,1,2,2-Tetrachloroethane	0.05	1.01	1.11
Spike Recovery (%)		98	98

"nd" Indicates Not Detected at the listed detection limit.
"int" Indicates that interference peaks prevent determination.

teg TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES

MAXIM

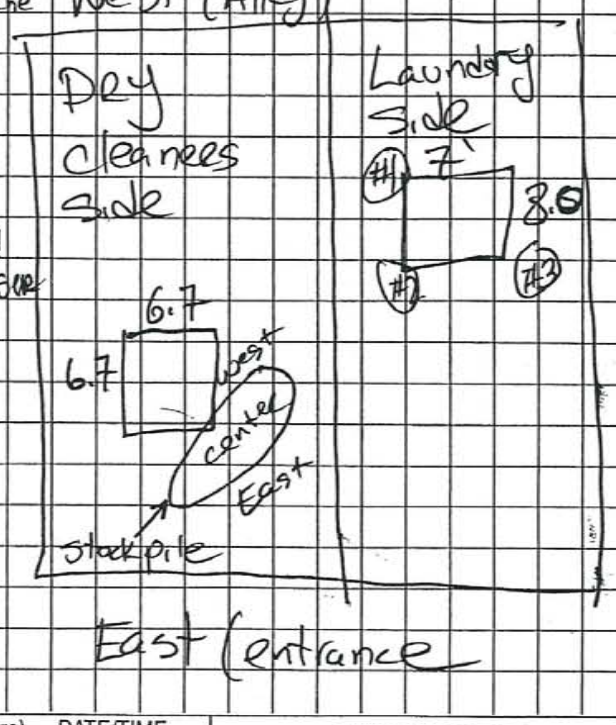
CHAIN-OF-CUSTODY RECORD

CLIENT: Noel Corp Southgate Laundry
ADDRESS: c/o Maxim Technologies
PHONE (303) 744-7105 FAX:
CLIENT PROJECT #: 5809500946.04 PROJECT MANAGER: Rachel Tauman

DATE: 9/9/97 PAGE 1 OF 2
PROJECT NAME: Southgate Laundry
LOCATION: Yakima WA
COLLECTOR: Rachel Tauman DATE OF COLLECTION 9/7/97

Test pit #1

Sample Number	Depth	Time	Sample Type	Container Type	PPM	ANALYSES: 8010/8020	VOA 624/8240	Semi Vol 625/8270	TPH 418.1	TPH 8015 (gasoline)	TPH (8015 (diesel)	TPH 8015 (g & d)	PAH 610/8100	PEST/PCBs 8080	HEX CHROME	ORGANIC LEAD	TOTAL LEAD	pH	ASBESTOS	FIELD NOTES	Total Number of Containers	Laboratory Note Number
1 east	3'	9:00	Soil	4 oz	1.22	X	Backhe													Fill 0-2' concrete debris & clay.		
1 west	3'	9:00			0.76	X																
1 West	4'	9:20			1.12	X														2-8.5 sand & Gravel Dry 70% sand 30% gravel. Sand - black/brown gravel - basalt		
1 East	5'	9:30			0.61	X																
1 center	6'	10:00			0.64	X																
1 center	7'	10:30			1.15	X																
1 center	8.5	11:00			1.01	X	hand Auger															
					hand Auger	7														heavy sludge from 5.5 feet down PCE odor cleaned out entire hole to 7'		
Stock pile Test Pit #1																						
1 east		12:00			0.85	X																
1 west		12:05			0.91	X																
1 center		12:08			0.85	X																
						3															10	



RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
Rachel Tauman	9/9/97	FedEx	3:30
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

SAMPLE DISPOSAL INSTRUCTIONS
☐ TEG DISPOSAL @ $2.00 each ☐ Return ☐ Pickup

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	10
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES: ALL Soil	

LABORATORY NOTES:
8010/8020
Test pit #1 inside dry cleaners 6.7 X 6.7
Hole #1 Stock pile cut concrete

teg TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES

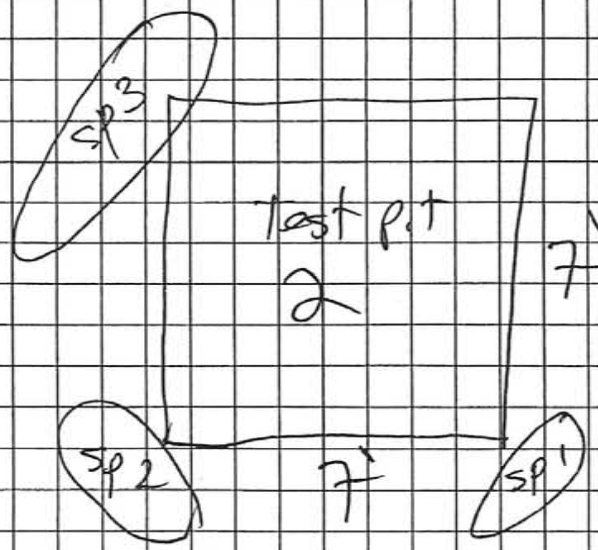
MAXIM

CHAIN-OF-CUSTODY RECORD

CLIENT: Noelcorp Southgate Laundry
ADDRESS: c/o MaXIM Technologies
PHONE (303) 744-7105 FAX:
CLIENT PROJECT #: 5809500946.04 PROJECT MANAGER: Rachel Tarver

DATE: 9/9/97 PAGE 2 OF 2
PROJECT NAME: Southgate Laundry
LOCATION: YAKIMA WA
COLLECTOR: Rachel Tarver DATE OF COLLECTION 9/9/97

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES: VOA 601/8010/8020	VOA 624/8240	Semi Vol 625/8270	TPH 418.1	TPH 8015 (gasoline)	TPH (8015 (diesel)	TPH 8015 (g & d)	PAH 610/8100	PEST/PCBs 8080	HEX CHROME	ORGANIC LEAD	TOTAL LEAD	pH	ASBESTOS	FIELD NOTES	Total Number of Containers	Laboratory Note Number
Test pit 2																					
2 east	3	12:00	Soil	4 oz JAR	X														0-2.5 clay fill w/ Sand & Gravel		
2 west	3	12:10		0.65	X														2.5-8.5 Sand & Gravel & clay		
2 center	4	12:20		0.25	X																
2	5	1:20		0.39	X																
2	5.5	1:30		0.83	X																
2	6.0	1:40		0.24	X																
2	7.0	1:55		0.29	X														65% Sand 30% Gravel & 5% Clay MOIST		
2	7.5	2:06		0.23	X																
2	8.5	2:20		0.29	X																
					9																
Stock piles		Test	Pit 2																		
#1 comp		2:30		0.27 4oz JAR	X														Slough begins at 7.0' NO PCE ODOR		
#2 comp		2:35		0.56	X																
#3 Comp		2:40		0.88	X																
					3																
Water Drums		2:55	WTR	4oz JAR	X														ND		
					1															13	



RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
Rachel Tarver	9/9/97	Fed ex	3:30
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

20 yards. inside

SAMPLE DISPOSAL INSTRUCTIONS

☐ TEG DISPOSAL @ $2.00 each ☐ Return ☐ Pickup

SAMPLE RECEIPT

TOTAL NUMBER OF CONTAINERS	13
CHAIN OF CUSTODY SEALS Y/N/NA	(N)
SEALS INTACT? Y/N/NA	(N)
RECEIVED GOOD COND./COLD	
NOTES: 12 Soil 1 WTR	

LABORATORY NOTES:
8010/8020
Test Pit 2
Stock Pile
Drums Water

APPENDIX F

MEETINGS/CORRESPONDENCE BETWEEN THE NOEL CORPORATION AND ECOLOGY

LAW OFFICES
LYON, WEIGAND & GUSTAFSON PS
LYON LAW OFFICES · 939 NORTH THIRD STREET
MAILING ADDRESS: PO BOX 1689
YAKIMA, WASHINGTON 98907-1689

TELEPHONE
(509) 248-7220
FACSIMILE
(509) 575-1883

ROBERT M. BOGGS
JEFFREY R. CUTTER
RUSSELL H. GILBERT*
J. ERIC GUSTAFSON
CHARLES H. LYON (1997)
ERIC R. VARGAS
WM. L. WEIGAND, JR.
JEANIE R. ZIMMERMAN

*Also Admitted in Missouri and Oregon

COPY

RECEIVED JUN 0 5 1997

June 3, 1997

Rick Roeder, Site Manager
Toxics Cleanup Program
Department of Ecology
15 W. Yakima Avenue, Suite 200
Yakima, WA 98902-3401

RE: Sam's Southgate Cleaners
1020 South Third Avenue
Yakima, Washington

Dear Rick:

Thank you for meeting with Gary Slagle, Rachel Tauman, Bill Weigand and myself this morning regarding the cleanup of the above referenced property.

As we agreed this morning, the Noel Corporation will begin cleanup of the PERC contamination on the property by excavating and removing the contaminated soil beneath the Southgate Cleaners. Cleanup work will begin on June 30, 1997 at which time the Noel Corporation will begin gutting the interior of the premises. You agreed to notify Mr. Kim that he must vacate the premises by June 29, 1997 so work can begin the morning of June 30, 1997.

You also agreed to advise Mr. Kim that in the event that he does not vacate the premises by June 29, 1997, the Department would issue an enforcement order against him which could result fines of up to $25,000 per day for interference with the cleanup process, and in addition, Mr. Kim would be named a potentially liable party.

You also approved the Noel Corporation's plan to excavate and remove as much soil beneath the contaminated premises as possible without endangering the structural integrity of the building itself. Upon completion of this process, the Noel Corporation will continue to monitor PERC levels from the existing test well sites.

As the process of getting Mr. Kim to vacate the premises has taken significantly longer than originally anticipated, we agreed that it would be appropriate to amend the Agreed Order dated January 5, 1996 to extend the time for the Noel Corporation to take appropriate remedial steps.

You suggested an additional year would be appropriate. Therefore, we request that your office prepare an amended order for signature and entry.

Thank you again for meeting with us this morning and providing assistance in getting the cleanup process going.

Very truly yours,

Russell H. Gilbert

cc: Gary Slagle
Rachel Tauman

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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
15 West Yakima, Suite 200 • Yakima, Washington 98902-3401 • (509) 575-2490

August 4, 1997

Mr. Gary Slagel
Noel Corporation
1001 S 1st St
Yakima WA 98901

RE: Groundwater Sampling: Property Access at Southgate Laundry Site

Dear Mr. Slagel:

SECOR International, Inc. (SECOR) is beginning work on the Yakima Railroad Area Remedial Investigation for Ecology. As part of this investigation SECOR will be sampling one ground water monitoring well at your site four times over the next year or so. A SECOR representative will also survey the elevation of the well designated for monitoring by SECOR prior to the first monitoring event. The sample will be analyzed for perchloroethylene and breakdown products. Results will be available to you once Ecology receives them. You will remain responsible for sampling all additional wells at your site. Ecology will be contacting you in separate correspondence to coordinate your sampling events with those performed by SECOR.

Please consider this letter to be a formal property access notice for Ecology and/or a SECOR representative. A SECOR representative will be contacting you in the next couple of weeks to make necessary arrangements such as getting keys to locks. Ecology encourages you to provide the necessary access as promptly as possible so that this critical step in the cleanup process can begin.

If you have any questions please feel free to call me at (509)454-7837.

Sincerely,

Rick Roeder

Rick Roeder
Site Manager
Toxics Cleanup Program

cc: Peter Jewett, SECOR International, Inc.
Mark Valentine, *de maximis inc.*
Mark Jobson, AAG
Steve Thiele, AAG

LAW OFFICES
LYON, WEIGAND & GUSTAFSON PS
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ERIC R. VARGAS
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JEANIE R. ZIMMERMAN

*Also admitted in Missouri and Oregon

August 11, 1997

Rick Roeder, Site Manager
Toxics Cleanup Program
Department of Ecology
15 W. Yakima Avenue, Suite 200
Yakima, WA 98902-3401

RE: Sam's Southgate Cleaners
1020 South Third Avenue
Yakima, Washington

Dear Rick:

Your August 4, 1997 letter to Gary Slagle was forwarded to me by him for review and response.

The Noel Corporation will do everything it can to cooperate with Ecology during the process of obtaining water samples from one of the ground water monitoring wells at the above referenced site. However, during SECOR's water sampling program, the Noel Corporation would like to employ the following procedures:

1. That SECOR provide Noel with at least a one week advance notice prior to each date that SECOR plans on obtaining a water sample.

2. That Noel personnel be in attendance during each ground water sampling to obtain and/or receive a split water sample to enable Noel to conduct its own testing and monitoring parallel with the SECOR/Ecology testing and monitoring process.

The above procedures are not unusual, nor is it anticipated that they would in any way interfere or otherwise hinder or obstruct SECOR or Ecology from conducting the water sampling and data gathering from any one of the Southgate ground water monitoring wells. Therefore, please contact either myself or Gary Slagle regarding implementation and coordination of the above.

Thank you.

Very truly yours,

Russell H. Gilbert

cc: Gary Slagle
Rachel Tauman

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STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

15 West Yakima, Suite 200 • Yakima, Washington 98902-3401 • (509) 575-2490

September 16, 1997

Mr. Gary Slagel
Noel Corporation
1001 S 1st Street
Yakima, Washington 98901

Dear Mr. Slagel:

The Department of Ecology (Ecology) is presently working with SECOR International, Inc. (SECOR) on the Areawide Remedial Investigation of the Yakima Railroad Area (YRRA). As part of this work it is necessary for each YRRA subfacility to conduct groundwater monitoring on a coordinated, quarterly basis for the next year. The information generated by the groundwater monitoring will be used by SECOR and Ecology in the remedial investigation to characterize the areawide contamination problem.

Currently your subfacility, Southgate Laundry, is under Agreed Order No. DE 95TC-C239, for Remedial Investigation. This Agreed Order requires that you sample groundwater according to method 8010 or 8260 on a routine basis. It is necessary to change this sampling schedule to quarterly sampling for the next year on the same schedule as all other facilities in the YRRA. The new sampling schedule will be as follows:

1st quarter:	Week of December 1 - 5th, 1997
2nd quarter:	Week of March 2 - 7, 1998
3rd quarter:	Week of June 1 - 5, 1998
4th quarter:	Week of September 8 - 11, 1998

All wells at your facility will need to be sampled for PCE and its breakdown products (i.e. sample analysis method 8010 of 8240) and water level measurements need to be taken. Sample results and the water level measurements must be submitted to Ecology, in both hardcopy and electronic format, within four weeks of each sampling event.

In the interest of simplicity I ask that you respond to this letter in writing indicating whether you will agree to the above sampling schedule or not. By undertaking this voluntarily, both you and Ecology will save the costs associated with having to modify your existing order or issue a new agreed or enforcement order. Please provide your response by September 30, 1997.

As always, if you have any questions please feel free to call me at (509) 454-7837.

Sincerely,

Rick Roeder

Rick Roeder
Site Manager
Toxics Cleanup Program

cc: Peter Jewett, SECOR
Mark Valentine, *de maximus*
Mark Jobson, AAG

APPENDIX G

MAXIM TECHNOLOGIES' STANDARD OPERATING PROCEDURES

STANDARD OPERATING PROCEDURES (SOPs)

MAXIM TECHNOLOGIES, INC.

Revision Dates Noted

STANDARD OPERATING PROCEDURE

EQUIPMENT DECONTAMINATION

The purpose of this section is to describe general decontamination procedures for field equipment in contact with mine/mill tailings, soil, or water. During field sampling activities, sampling equipment will become contaminated after it is used. Sampling equipment must be decontaminated between sample collection points if it is not disposable. Field personnel must wear disposable latex or vinyl gloves while decontaminating equipment at the project site. Change gloves between every sample. Every precaution must be taken by personnel to prevent contaminating themselves with the wash water and rinse water used in the decontamination process.

Table A-1 lists equipment and liquids necessary to decontaminate field equipment.

The following should be done in order to complete thorough decontamination:

1. Set up the decontamination zone upwind from the sampling area to reduce the chances of windborne contamination.

2. Visually inspect sampling equipment for contamination; use stiff brush to remove visible material.

3. The general decontamination sequence for field equipment includes: wash with Liquinox or an equivalent degreasing detergent; deionized water rinse; 10% dilute nitric acid rinse; deionized water rinse; rinse with sample water three times.

4. Rinse equipment with methanol in place of the nitric rinse if sampling for organic contamination. Follow with a deionized water rinse.

5. Decontaminated equipment that is to be used for sampling organics should be wrapped in aluminum foil if not used immediately.

6. Clean the outside of sample container after filling sample container.

Alternatively, field equipment can be decontaminated by steam cleaning, rinsing with 10% dilute nitric acid, and rinsing with deionized water.

All disposable items (e.g., paper towels, latex gloves) should be deposited into a garbage bag and disposed of in a proper manner. Contaminated wash water does not have to be collected, under most circumstances.

If vehicles used during sampling become contaminated, wash both inside and outside as necessary.

TABLE A-1. EQUIPMENT LIST FOR DECONTAMINATION

- 5-gallon plastic tubs
- 5-gallon plastic water-container
- 5-gallon carboy DI water
- 1-gallon cube of 10% HNO_3
- 1-gallon container or spray bottle of 10% Methanol or pesticide grade acetone for organics
- Liquinox (soap)
- Hard bristle brushes
- Garbage bags
- Latex gloves
- Squeeze bottles
- Paper Towels

STANDARD OPERATING PROCEDURE

SAMPLE DOCUMENTATION

Sample documentation is an important step to ensure the laboratory, project manager, and field personnel are informed on the status of field samples. Depending on the specifics required for each project, a number of forms will need to be filled out. Most sample documentation forms are preprinted carbonless triplicates, enabling copies to be filed or mailed from labs or offices. The forms will be completed by field personnel, who have custody of the samples. The office copy will be kept in the project file and subsequent copies sent to the laboratory, or other designated parties. The responsibility for the completion of these forms will be with each field crew leader. It is important the field crew leader is certain field personnel are familiar with the completion process for filling out forms, and the expected information is included.

Potential documents to be completed clearly in ink for each sample generated include:

- Field Form
- Chain-of-Custody
- Custody Seal

If working on Superfund activities, the following additional forms will also be prepared:

- EPA Sample Tags
- SAS Packing Lists
- Sample Identification Matrix Forms
- Organic Traffic Report (if applicable)
- Inorganic Traffic Report (if applicable)

STANDARD OPERATING PROCEDURE

QC SAMPLES

Quality Control (QC) samples are submitted along with natural samples to provide supporting laboratory data to validate laboratory results. QC samples are submitted blind, and do not have any unique identifying codes that would enable the lab or others to bias these samples in any way. Usually, the time or sampling location is modified in a way which will separate blank and standard samples from the rest of the sample train. QC samples are identified only on field forms and in field notebooks. The following codes are typically used:

N - Natural Sample	Soil, water, air, or other of interest material from a field site
SP - Split Sample	A portion of a natural sample collected for independent analysis; used in calculating laboratory precision
D - Duplicate Sample	Two samples taken from the same media under similar conditions; also used to calculate precision
BB - Bottle Blank	Deionized water collected in sample bottle; used to detect contamination sampling containers
CCB - Cross Contamination	Deionized water run through decontaminated equipment and analyzed for Blank residual contamination and deionized water contamination
BFS - Blind Field Standard	Certified materials of known concentration; used to determine laboratory accuracy
TB - Travel or Trip Blank	Inert material (deionized water or diatomaceous earth) included in sample cooler; sent by the lab, the sample is used to determine if contamination by volatiles is present during collection or shipping

In general, selected QC samples will be inserted into the sample train within a group of twenty samples. Unless otherwise specified, QC samples will be prepared in the field. Deionized water blanks will be collected from carboys and cubitainers used in the field. An exception to field preparation of QC samples is the preparation of some blind field standards. Since the concentration of analytes in the sample is to be mixed according to specific manufacturer's instructions, field conditions may not provide the needed laboratory atmosphere. This is especially true for volatile organic compounds, which need to be prepared just before analyzing. Under these circumstances, standards will be shipped to the laboratory for preparation, keeping the concentration or manufacturer's QC Lot Number as blind as possible.

The number and types of samples submitted for each group of natural samples will be determined by the project manager and others, including state or Federal agencies, and will be defined in the project work plan. Each field crew leader will be responsible for all QC samples prepared by that crew.

Methods for computing data validation statements can be found in EPA documents or obtained from the Maxim laboratory.

STANDARD OPERATING PROCEDURE

SOIL SAMPLE COLLECTION

This SOP describes the field equipment and sampling methods for surface and subsurface sampling of soil material. Methods explained in this SOP may be different from those identified in the project specific Sampling and Analysis Plan (SAP) and the project specific SAP should be referenced for additions or deletions to the methods noted below. All sampling equipment should be cleaned before arriving on site.

FIELD EQUIPMENT

- Sharp shooter and clean-out shovel
- Stainless steel mixing bowl and sampling trowel
- Dilute (10%) hydrochloric acid
- Hand lens (10) power
- Steel tape (10 foot)
- pH and electrical conductivity meters (if required)
- Munsel color book (if required)
- No. 10 sampling screen
- Field forms and field book
- Bucket augers

SURFACE SAMPLING

Surface soil/tailings samples are collected from the surface to a depth of one inch unless otherwise specified in the project specific SAP. Sufficient sample will be collected for the analysis that will be performed but generally this will be on the order of one gallon. Soil samples will be collected in either wide mouth glass jars or resealable polyethylene bags (ziplock or equivalent).

Samples should be described according to the procedures outlined in the Unified Soil Classification System (USCS; method ASTM D2487) or the Soil Conservation Service (SCS) classification system. Soil texture should be classified by either the USCS or U.S. Department of Agriculture (USDA) classification. Descriptions shall be recorded in field books or on standard morphological description logs as provided in the SAP.

Samples should be collected from an area of approximately six square feet by digging up the top inch with the sampling trowel and placed in the mixing bowl. The sample should be screened with the 10 mesh sieve if coarse fragments are to be excluded from the sample. If a sod or duff layer is present, this layer should be pealed back to the top of the mineral soil.

The sample placed in the mixing bowl shall be well mixed and then a portion of the sample placed in the sample container. To select a sample from the mixing bowl, quarter the sample in the bowl and place an equal volume of soil from each quarter in the sample container. When sampling soil for organics, the samples should not be mixed.

All equipment used in the sampling of surface soils will be decontaminated using the procedures in SOP-11. All necessary paperwork will be filled out in accordance with SOP-12.

SUBSURFACE SAMPLING

Subsurface sampling will be completed using a bucket auger, split spoon sampler, or hand dug or backhoe excavated pits. Sampling procedures for each type of equipment is described below. Sample collection, homogenation, and transfer to sampling containers should follow the same procedures as outlined for collection of surface samples.

Bucket Auger

1. Arrive on-site equipped with stainless steel auger rod and several sizes of stainless steel bucket augers (e.g. 2-inch, 4-inch, 6-inch, etc.).

2. Bucket auger holes can be drilled as one size or in a telescoping manner if contamination between sample intervals is a concern. If a single sized, advance the bucket auger to the desired sampling interval depth and empty the contents of the auger in a stainless steel mixing bowl. For the telescoping method, advance the largest auger to an approximate depth of three feet, collecting specified depth increment samples as the auger is advanced. Install temporary decontaminated PVC casing with a diameter slightly smaller than the borehole to keep the hole open and reduce possible cross-contamination between depth intervals. Using the next size smaller bucket auger, repeat the process.

3. Select sample intervals for packaging for laboratory analysis in accordance with procedures described in the SAP.

4. Fill out appropriate paper work and bottle labels as necessary prior to leaving site.

5. Decontaminate all equipment between sample locations.

Split Spoon Sampler

1. Arrive on-site equipped with at least two standard 1.4 inch inside diameter split spoon samplers. If geotechnical information is desired, a 140 pound drive hammer is required.

2. Install sampler into borehole and advance to the desired depth with the 140 pound drop hammer or equivalent means. Record number of blow counts to complete sampling over each 18-inch interval, as necessary. Retrieve sampler and place on work table. Using the other sampler, repeat this sequence.

3. Record lithology and percent recovery from cores retrieved from split spoon sampler.

4. Based upon the project work plan or sampling and analysis plan, composite like core intervals by mixing in stainless steel bowl in a similar manner as described for surface sampling. When sampling for organics, the sample should not be mixed.

5. Decontaminate sampling equipment between each interval sampled if required by the SAP. Decontaminate sampling equipment between sampling sites.

Backhoe or Hand Dug Excavations

1. Locate the site to be sampled and insure that equipment can safely access the site. Minimize off road travel to prevent off site damage to surrounding vegetation.

2. Orient excavation to maximize use of the angle of the sun to illuminate the pit for photographs. Place excavated material a sufficient distance from the excavation.

3. Excavate to the prescribed depth. If the pit exceeds five feet in depth, OSHA construction standards for shoring or sloping must be observed to prevent accidental burials. Sampling personnel should enter the pit with care during and after excavation.

4. Soil profile descriptions shall be made from a hand cleaned surface along the pit wall. Complete profile descriptions and take photographs before pit is sampled.

5. Soil samples shall be collected from depth intervals specified in the SAP. When a depth interval is sampled, an equal volume of soil should be collected from the entire interval exposed on the pit wall. Soil samples will be collected with the stainless steel trowel and mixing bowl according to methods described for surface soil sampling. When sampling for organics, the sample should not be mixed.

6. After sampling is completed, the pit should be backfilled with excavated material in the reverse order that it was excavated so that topsoil material is returned to the top of the pit. When backfilling is complete the area should be cleaned-up to its original condition.

7. Decontaminate sampling equipment between sampling sites. Excavation equipment should be cleaned between sites with water (where possible) or with a shovel to remove accumulated dirt and mud.

STANDARD OPERATING PROCEDURE

FIELD MEASUREMENT OF SOIL FIELD PARAMETERS

1. Obtain soil sample in accordance with SOP-22.

2. Prepare mixture of 1:1 ratio of soil (dry weight basis) to deionized water in a glass beaker. A 10 gram sample of soil should be weighed and placed in a clean 50 ml glass beaker or plastic cup. Since the density of soil generally ranges from 1.3 to 1.5 grams per cubic centimeter, an equivalent volume of soil can be added to the beaker if a scale is not available. Add 10 ml of deionized water to the beaker and stir with a glass rod or plastic spoon.

3. Allow the sample to equilibrate for 10 minutes or until the suspension settles. For samples with high clay content, this period may be up to 30 minutes.

4. Insert calibrated pH or electrical conductivity probes into the supernatant solution above the soil and obtain field measurements in accordance with SOP 05 and SOP 06.

5. Record all collected data on standardized field forms or in the field book as required by the SAP.

6. Rinse our beaker with deionized water between samples.