Groundwater Monitoring and Progress Report Second Quarter 2004

Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

Prepared for:

Sierra Pacific Industries

July 27, 2004

Project No. 9329, Task 22

Geomatrix Consultants

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GEOMATRIX

July 27, 2004
Project 9329, Task 22

Executive Officer
California Regional Water Quality Control Board
North Coast Region
5550 Skylane Boulevard, Suite A
Santa Rosa, California 95403

Attention: Dean Prat

Subject: Groundwater Monitoring and Progress Report
Second Quarter 2004
Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

Dear Mr. Prat:

As requested by Sierra Pacific Industries, we have enclosed a copy of the subject report.

Sincerely yours,
GEOMATRIX CONSULTANTS, INC.

Ross Steenson, C.HG.
Senior Hydrogeologist

Edward P. Conti, C.E.G., C.HG.
Principal Geologist

RAS/EPC/abr
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Enclosure

cc: Bob Ellery, Sierra Pacific Industries (with enclosure)
Gordie Amos, Sierra Pacific Industries (with enclosure)
Fred Evenson, Law Offices of Frederic Evenson (with enclosure)
Jim Lamport, Ecological Rights Foundation (with enclosure)

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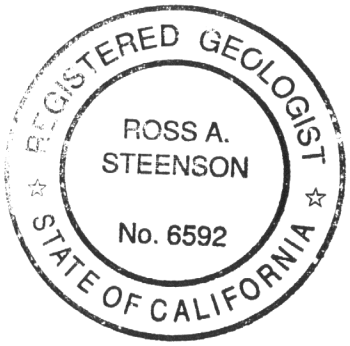
PROFESSIONAL CERTIFICATION

GROUNDWATER MONITORING AND PROGRESS REPORT
SECOND QUARTER 2004
Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

July 27, 2004
Project No. 9329.000, Task 22



This report was prepared by Geomatrix Consultants, Inc., under the professional supervision of Ross A. Steenson. The findings, recommendations, specifications and/or professional opinions presented in this report were prepared in accordance with generally accepted professional hydrogeologic practice, and within the scope of the project. There is no other warranty, either express or implied.

Ross A. Steenson, C.HG.
Senior Hydrogeologist

GEOMATRIX

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SECOND QUARTER 2004

Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

1.0 INTRODUCTION

This report presents the methods and results of groundwater monitoring and pilot study activities performed at the Sierra Pacific Industries (SPI) Arcata Division Sawmill, located in Arcata, California (the site, Figure 1) during the second calendar quarter 2004. The quarterly groundwater monitoring activities were performed in accordance with Monitoring and Reporting Program (MRP) No. R1-2003-0127, issued by the California Regional Water Quality Control Board, North Coast Region (RWQCB) on November 13, 2003. The pilot study activities were performed in accordance with the *Pilot Study Work Plan for Implementation of Proposed Remedial Action* (Geomatrix, 2004b). The pilot study work plan was approved by RWQCB staff in a letter dated June 1, 2004.

Geomatrix Consultants, Inc. (Geomatrix) has prepared this report on behalf of SPI. This report is organized as follows:

- Background, including a discussion of site history, subsurface lithology, and hydrogeology, is presented in Section 2.0.
- Second Quarter 2004 Groundwater Monitoring Report methods and results are presented in Section 3.0.
- Progress Report on Pilot Study Activities is presented in Section 4.0.
- Future Schedule of the planned upcoming monitoring and pilot study activities is presented in Section 5.0
- References used in preparation of this report are listed in Section 6.0.

2.0 SITE BACKGROUND

This section provides background information regarding the site setting and history and discusses subsurface conditions at the site, including lithology and hydrogeology. Subsurface lithologic and hydrogeologic conditions at the site were previously investigated and described by EnviroNet (EnviroNet, 2002a).

2.1 HISTORY

The approximately 68-acre site is located on the Samoa Peninsula, inland from the northern shoreline of Humboldt Bay and approximately 4 miles west of the town of Arcata, California. The site is bounded to the north and east by the Mad River Slough, to the northwest by an old railroad grade, and to the south by New Navy Base Road and mud flats of Humboldt Bay (Figure 1).

The site is currently an active sawmill; features are shown on Figure 2. The sawmill has operated at the site since approximately 1950. Prior to construction of the mill facilities, the site consisted of undeveloped sand dunes and mud flats. During construction of mill facilities in the 1950s and 1960s, portions of the Mad River Slough on the eastern, northern, and southern sides of the site were filled. The current mill facility consists of an administrative building, a main sawmill building, numerous wood-processing buildings, log storage areas, milled lumber storage areas, and loading/unloading areas. A 140-foot-deep water supply well (Feature 48 on Figure 2) provides water for log sprinkling. An older, shallow water supply well is located adjacent to the 140-foot well, but has not been used since it began to produce sand.

Wood surface protection activities historically conducted at the site included the use of an anti-stain solution containing chlorinated phenols, including pentachlorophenol (PCP) and tetrachlorophenol, to control sap stain and mold on a small amount of milled lumber. The anti-stain solution was applied in an aboveground dip tank located in the middle of the former green chain, which was located immediately south of the eastern end of the current sorter building (Feature 49 on Figure 2, and shown on Figure 3). Use of the solution containing chlorinated phenols in the former green chain area of the site reportedly commenced in the early to mid-1960s and was discontinued in 1985 (EnviroNet, 2002b). At the direction of the RWQCB, SPI stopped purchasing anti-stain solution containing chlorinated phenols in 1985 and commenced a process of relocating the remaining solution containing chlorinated phenols to a new dip tank

facility for recycling (MFG, 2003). Due to the difficulty of disposing of the old solution containing chlorinated phenols, the remaining solution from the old dip tank was mixed with a new anti-stain solution that did not contain chlorinated phenols at the new dip tank facility (Feature 21 on Figure 2). Recycling of the solution containing chlorinated phenols in the new dip tank continued until 1987, at which time the drip basin adjacent to the old dip tank was cleaned out, filled with sand, and capped with 3 to 4 inches of concrete (MFG, 2003). The new dip tank has been cleaned three times since 1987.

The potential effects of wood surface protection activities on soil and groundwater have been investigated to depths of approximately 20 feet below ground surface (bgs). In 2002, investigation activities included the installation of 19 monitoring wells at the site: 15 monitoring wells (MW-1 through MW-12, MW-14, MW-17, and MW-18) were constructed to monitor shallow groundwater between depths of approximately 2 and 8 feet bgs, and four monitoring wells (MW-13D, MW-15D, MW-16D, and MW-19D) were constructed to monitor deeper groundwater between depths of approximately 15 and 20 feet bgs (EnviroNet, 2003b). Two additional monitoring wells (MW-20 and MW-21) were installed in January and February of 2004 to monitor shallow groundwater (Geomatrix, 2004a). Monitoring well construction details are included in Table 1.

2.2 LITHOLOGY

The site is located adjacent to the Mad River Slough near the northern shoreline of Humboldt Bay. The eastern, northern, and southern portions of the site were filled in the 1950s and 1960s.

Based on observations made during investigation activities at the site, subsurface lithology within the shallow zone (less than 8 feet bgs) is predominantly fine- to medium-grained sand of apparent sand dune origin. Wood and fill material was locally observed in this shallow zone, during activities such as the installation of monitoring wells MW-13D and MW-15D. Soil beneath the fine- to medium-grained sand consisted of more sand and locally of fine-grained material, classified as "bay mud." The fine-grained material was encountered during the installation of monitoring wells MW-3, MW-10, MW-15D, MW-16D, and MW-17 at depths of approximately 6 to 8 feet bgs and during the installation of monitoring well MW-15 at a depth of approximately 15 feet bgs. Soil described during the installation of a water supply well at the site (Feature 48 on Figure 2) suggests that subsurface soil between the ground surface and 140 feet bgs is predominately composed of sand (EnviroNet, 2001).

2.3 HYDROGEOLOGY

The groundwater surface measured in 21 site monitoring wells has ranged between approximately 0.5 and 5.5 feet bgs in the 17 shallow wells (i.e., screened from 2 to 8 feet bgs) and between approximately 4 and 6 feet bgs in the four deep wells (i.e., screened from 15 to 20 feet bgs). In the eastern portion of the site, groundwater flow generally is to the east, toward the Mad River Slough (MFG and Geomatrix, 2003). In the southwestern portion of the site, groundwater likely flows to the south-southeast, toward Humboldt Bay (MFG and Geomatrix, 2003).

Tidal fluctuations in the Mad River Slough and nearby Humboldt Bay influence groundwater levels at the site in the vicinity of the slough. A 2002 tidal influence study conducted at the site by EnviroNet suggested that tidal effects become negligible at distances greater than 100 feet from the slough shore (EnviroNet, 2003b).

3.0 GROUNDWATER MONITORING REPORT

This section presents field and laboratory methods and results of groundwater monitoring activities conducted during this calendar quarter.

3.1 FIELD METHODS

Depth to water was measured on May 17, 2004, in all site monitoring wells (MW-1 through MW-21) and at a monitoring point in the Mad River Slough using an Envirotech Ltd., Waterline Model 150 meter (Table 2). Water levels were measured before conducting groundwater sampling activities. Monitoring wells were gauged in sequence, generally from lowest expected concentrations of constituents of concern (first) to highest expected concentrations (last), based on laboratory analytical results from the previous sampling event. Field personnel cleaned the meter used to measure the groundwater surface before using it at each location. The equipment was washed in a Liquinox® detergent solution and then rinsed three consecutive times with distilled water.

Twenty-one monitoring wells (MW-1 through MW-21) were purged and sampled on May 17 and 18, 2004, in accordance with the site MRP. Field personnel used dedicated, disposable Teflon® bailers to purge groundwater and remove standing water in the well casing, except for monitoring well MW-21, where a peristaltic pump and disposable tubing were used due to the small diameter of this well casing. Field personnel measured and recorded readings of temperature, pH, and specific conductance on field sampling records during groundwater

purging activities. Purging activities stopped when a minimum of three well casing volumes of water had been removed, or three pore-tube volumes at monitoring well MW-21, and water quality parameters stabilized to within approximately 10 percent of specific conductance, 0.05 pH unit for pH, and 1 degree Celsius for temperature. Copies of the field records for groundwater monitoring and sampling activities are included in Appendix A.

After purging, groundwater within each well was allowed to recover to approximately 80 percent or more of the height of the initial water column that was measured prior to purging. Groundwater was sampled after the groundwater recovered. Groundwater samples were collected upon recharge, if applicable, using the dedicated Teflon® bailers and, for monitoring well MW-21, the peristaltic pump and new tubing. A field sample of groundwater was monitored for temperature, pH, specific conductance, and total dissolved solids (TDS) just prior to collecting the groundwater sample, to record water quality parameters of the groundwater being sampled. These field parameter measurements are summarized in Table 3; laboratory analytical results for TDS also are shown in this table.

Groundwater collected from each of the twenty-one monitoring wells was placed in two 125-milliliter glass vials that were sealed with Teflon®-lined screw caps and a 1-quart plastic bottle that was sealed with a plastic screw cap. After filling, the vials and bottles were labeled and placed in an ice-cooled, insulated chest for transport to the laboratory for analysis. Chain-of-custody records were completed for the samples and accompanied the samples until received by the laboratory. Copies of the chain-of-custody records for the groundwater samples are included in Appendix B.

An additional groundwater sample was collected from monitoring well MW-21 and submitted to the laboratory as a blind duplicate sample, labeled MW-A. This sample was placed in two additional 125-milliliter glass vials sealed with Teflon®-lined screw caps and sent to the laboratory as described above.

3.2 LABORATORY METHODS

Groundwater samples collected from monitoring wells MW-1 through MW-21 were analyzed at Alpha Analytical Laboratories, Inc. (Alpha), of Ukiah, California, an analytical laboratory certified by the California Department of Health Services. Analyses included the following:

- Total dissolved solids (TDS) [Environmental Protection Agency (EPA) Method 160.1]

- Chlorinated phenols (consisting of PCP, three tetrachlorophenols, and one trichlorophenol) [Canadian Pulp Method]

Results of laboratory analyses for these constituents are discussed in the following section.

3.3 GROUNDWATER MONITORING AND SAMPLING RESULTS

Monitoring and sampling results from site wells include data obtained from groundwater elevation measurements, field measurements of water quality parameters, and laboratory analysis of groundwater samples. Groundwater elevation data provide information on subsurface hydraulic conditions, discussed below as occurrence and movement of groundwater. Groundwater quality is evaluated based on laboratory analysis and field measurements of TDS and on laboratory analysis of chlorinated phenols. The results are presented below.

3.3.1 Occurrence and Movement of Groundwater

The groundwater surface measured in shallow monitoring wells at the site (i.e., screened from approximately 2 to 8 feet bgs) ranged from 0.38 to 5.43 feet below the measuring point with associated groundwater elevations ranging from 4.18 to 10.00 feet above mean sea level (msl), relative to the North American Vertical Datum of 1988. Groundwater elevation data from these monitoring wells indicate that the direction of shallow groundwater flow is generally to the east (Figure 4). The magnitude of the lateral hydraulic gradient ranges from approximately 0.005 feet/foot in the former green chain vicinity to up to approximately 0.05 feet/foot beneath the sawmill and maintenance buildings. Groundwater elevations within 100 feet of the Mad River Slough shoreline are subject to tidal fluctuations (EnviroNet, 2003b) and as such, were not used to evaluate the flow direction or gradient of shallow groundwater.

The groundwater surface measured in deep monitoring wells at the site (i.e., screened from approximately 15 to 20 feet bgs) ranged from 4.13 to 5.77 feet below the measuring point with associated groundwater elevations ranging from 5.42 to 6.43 feet above msl, relative to the North American Vertical Datum of 1988. Groundwater elevation data from these monitoring wells indicate that the direction of deep groundwater flow is generally to the east (Figure 5) at a lateral hydraulic gradient from approximately 0.005 to 0.008 feet/foot.

3.3.2 Groundwater Analytical Results

This section discusses results of laboratory analyses for TDS and chlorinated phenols in samples collected from the shallow and deep groundwater monitoring wells at the site.

Laboratory analytical reports and chain-of-custody records are included in Appendix B. Both field-measured and laboratory analyses TDS results are presented on Table 3. The results for the chlorinated phenol analyses (consisting of PCP, three tetrachlorophenols [2,3,5,6-tetrachlorophenol, 2,3,4,6-tetrachlorophenol, and 2,3,4,5-tetrachlorophenol] and one trichlorophenol [2,4,6-trichlorophenol]) are presented on Table 4. PCP results also are illustrated on Figure 6 (shallow groundwater) and Figure 7 (deep groundwater).

3.3.2.1 Shallow Groundwater

The TDS results for the laboratory analyses ranged from 360 to 1,800 milligrams per liter (mg/L). The TDS results for the field measurements ranged from 438 to 2,046 mg/L. The field-measured TDS results are higher than laboratory measurements by 26 to 499 mg/L per sample.

Trichlorophenol was not detected in any groundwater samples. PCP and tetrachlorophenols were detected in groundwater samples from monitoring wells MW-7, MW-20, and MW-21 (Table 4; PCP also shown on Figure 6). Concentrations of these constituents were the highest in groundwater samples collected from monitoring well MW-7 and lowest in samples collected at MW-20. The detected concentration of PCP were 25,000 micrograms per liter (µg/L) at MW-7, 1,900 and 670 µg/L at MW-21 (primary sample/blind duplicate sample); and 3.6 µg/L at MW-20.

3.3.2.2 Deep Groundwater

TDS measured in deep groundwater samples by the laboratory ranged from 430 to 2,800 mg/L. The TDS results for the field measurements ranged from 562 to 3,457 mg/L. The field-measured TDS results are higher than laboratory measurements by 88 to 657 mg/L per sample.

No chlorinated phenols were detected (Table 4 and Figure 7).

3.4 LABORATORY DATA QUALITY REVIEW

Geomatrix reviewed the quality of laboratory data generated for the quarterly groundwater sampling as discussed in Appendix C. Based on the results of the quality assurance and quality

control procedures, the data from the quarterly groundwater sampling appear to be representative.

3.5 WASTEWATER DISPOSAL

Wastewater was generated from purging groundwater during sampling activities and from cleaning water-level measurement equipment while monitoring groundwater elevations. The purge water and equipment wash water were placed in three steel, 55-gallon drums and labeled. As the drums are filled, SPI arranges for the drums to be disposed by Asbury Environmental Services in accordance with applicable regulations.

During this calendar quarter, Asbury Environmental Services disposed of two drums of purge water. These drums were disposed at the Demenno/Kerdoon facility in Compton, California. A copy of the manifest for these two drums is included in Appendix D.

4.0 PROGRESS REPORT ON PILOT STUDY ACTIVITIES

This section presents a summary of activities performed during the calendar quarter in accordance with the *Pilot Study Work Plan for Implementation of Proposed Remedial Action* (Geomatrix, 2004b). The objectives of the Pilot Study are to:

- Demonstrate that in situ destruction of contaminants is occurring in the subsurface through natural attenuation processes
- Demonstrate that discharges of wood surface protection chemicals to surface water have been abated
- Implement risk management measures to protect current and future personnel working on site from participating in activities that would result in exposure to unacceptable risk

During the calendar quarter, surface water and debris sampling were performed to evaluate whether discharges of wood surface protection chemicals to surface water have been abated.

4.1 SURFACE WATER SAMPLING AND RESULTS

Three surface water sampling events were performed during the calendar quarter at storm water monitoring locations that are identified in the site Storm Water Pollution Prevention Plan (SWPPP; EnviroNet, 2003a). Non-storm surface water was sampled during the first sampling event (April 14, 2004), and storm water was sampled during the last two sampling events (April 20, 2004 and May 27, 2004).

4.1.1 Surface Water Sampling Methods

Field personnel collected grab samples at the SWPPP monitoring locations and additional locations by dipping laboratory-supplied containers into the water. Grab samples were labeled and placed in an ice-cooled, insulated chest for transport to the laboratory for analysis. Chain-of-custody records were completed for the samples and accompanied the samples until received by the laboratory.

4.1.2 Surface Water Sampling – April 14, 2004

During a site inspection on April 6, 2004, RWQCB personnel collected samples at location SL-1, SL-2 and SL-4 for chlorinated phenol analysis. Pentachlorophenol was detected in the sample from SL-1 at a concentration of 0.42 µg/L. Monitoring location SL-1 is located in the drainage area of Drainage Ditch #1.

On April 14, 2004, sampling at monitoring location SL-1 was performed to confirm the April 6, 2004, sample results. There had been no rainfall events since the RWQCB sampling on April 6, 2004. Pentachlorophenol was detected in the sample collected at monitoring location SL-1 at 0.7 µg/L (Table 5). Because the presence of pentachlorophenol result was confirmed, it was determined that additional investigation would be necessary. This additional investigation consisted of debris sampling in the drainage area for Drainage Ditch #1. This work is reported in Section 4.2 of this report.

4.1.3 Surface Water Sampling – April 20, 2004

During a storm event on April 20, 2004, grab samples were collected at monitoring locations SL-2 and SL-3 to evaluate the presence of chlorinated phenols and petroleum hydrocarbons, respectively. Additional grab samples were collected at approximately 35- to 40-minute intervals for two hours so that the laboratories could create a time-weighted composite sample for analysis of the same parameters.

For the samples from monitoring location SL-2, no chlorinated phenols were detected in either the grab sample or the time-weighted composite sample (Table 5).

The samples from monitoring location SL-3 were collected as a response to the TPH detections reported in the October 8, 2003, samples to assess whether there are interferences contributing to the TPH analyses. The grab samples were analyzed for TPHd and TPHmo both with and

without silica gel cleanup. The time-weighted composite sample was analyzed for TPHd and TPHmo without silica gel cleanup.

For the TPHd analysis, the non-silica gel result was 8,700 µg/L and the TPHd with silica gel result was 1,300 µg/L. These results indicate that polar (non-petroleum) constituents significantly contributed to the quantitation of TPHd.

For the TPHmo analysis, the non-silica gel result was 22,000 µg/L, and the TPHmo with silica gel result was 7,300 µg/L. These results indicate that polar (non-petroleum) constituents significantly contributed to the quantitation of TPHmo.

The results for the time-weighted composite were 9,500 µg/L TPHd and 24,000 µg/L TPHmo. These data suggest that the constituents contributing to the quantitation of TPH in the sample did not vary significantly during the two-hour sampling period.

4.1.4 Storm Event Sampling – May 27, 2004

Sampling was performed on May 27, 2004, at monitoring locations SL-1 through SL-4, where there was storm water discharge. Samples were not collected at monitoring locations SL-5, SL-6, and ML-2 because there was no storm water discharge. No flow was observed at location ML-1.

The results from the sampling are presented in Table 5. Metals (arsenic, copper, zinc, lead, and nickel) were detected at low concentrations in all four samples (monitoring locations SL-1 through SL-4). Chlorinated phenols were not detected in samples from monitoring locations SL-1 through SL-4.

The measured pH values ranged from 5.61 to 6.19. Specific electrical conductance ranged from 160 to 1,300 micro-mhos per centimeter. Chemical oxygen demand ranged from 230 to 2,100 mg/L. Total suspended solids ranged from 100 to 2,900 mg/L. Tannins and lignins were detected at concentrations ranging from 6.6 to 240 mg/L.

TPHg was detected in three samples at concentrations of 340 µg/L (SL-2), 190 µg/L (SL-3), and 85 µg/L (SL-4). TPHg was not detected in the sample from monitoring location SL-1. TPHd was detected in four samples at concentrations of to 92 µg/L (SL-1), 280 µg/L (SL-2), 2,300 µg/L (SL-3), and 720 µg/L (SL-4). TPHmo was detected in four samples at concentrations of 550 µg/L (SL-1), 1,100 µg/L (SL-2), 6,000 µg/L (SL-3), and 3,200 µg/L (SL-

4). As discussed in Section 4.1.3 of this report, it is likely that polar (non-petroleum) constituents significantly contributed to the quantitation of TPHd and TPHmo in these samples.

Oil and grease was not detected in the samples collected from monitoring locations SL-1 through SL-4.

Dioxins and furans were detected in the three samples analyzed for dioxins and furans (monitoring locations SL-2, SL-3, and SL-4). Concentrations of dioxins and furans, which refers to a complex mixture of various dioxin and furan congeners, are generally summarized in terms of their 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD) toxic equivalency (TEQ) based on toxic equivalency factors adopted by the California Environmental Protection Agency's Office of Environmental Health Hazard Assessment (Cal-EPA, 2003). Dioxins and furans were detected at 25.5 pg/L TEQ, 30.5 pg/L TEQ, and 45.9 pg/L TEQ in the storm water samples from monitoring locations SL 2, SL 3, and SL 4, respectively (Table 6). These samples were prepared by Frontier using a 0.7 micron filter (EPA Method 1613 specifies use of a 1.0-micron filter). The use of a smaller pore-size filter than specified in this method likely creates a higher bias in the analytical results.

4.2 DEBRIS SAMPLING AND RESULTS

In response to the detection of pentachlorophenol in the surface water samples from Drainage Ditch #1 that were collected on April 6 and April 14, 2004, additional investigation was performed to identify the potential source of the detection. On June 10, 2004, eight debris (soil and sawdust) samples were collected within the drainage area for Drainage Ditch #1 at the locations illustrated on Figure 8.

To further assess the detection of pentachlorophenol at Drainage Ditch #2 on February 6, 2004 (Geomatrix, 2004c), seven debris samples (Figure 8) also were collected within the drainage area for Drainage Ditch #2.

4.2.1 Field Sampling Methods

Debris samples were collected by field personnel by scooping debris (soil and sawdust) into sample containers. Samples were labeled and placed in an ice-cooled, insulated chest for transport to the laboratory for analysis. Chain-of-custody records were completed for the samples and accompanied the samples until received by the laboratory. Copies of the chain-of-custody records for the surface water and debris samples are included in Appendix E.

4.2.2 Laboratory Methods

Debris samples collected were analyzed at Alpha for chlorinated phenols (consisting of PCP, three tetrachlorophenols, and one trichlorophenol) [Canadian Pulp Method].

4.2.3 Laboratory Analytical Results

Fifteen debris (soil and sawdust) samples were collected on June 10, 2004, in the drainage areas for Drainage Ditch #1 (eight samples) and Drainage Ditch #2 (seven samples). No chlorinated phenols were detected in any of the debris samples collected.

4.3 LABORATORY DATA QUALITY REVIEW

Geomatrix reviewed the quality of laboratory data generated under the pilot study as discussed in Appendix C. Based on the results of the quality assurance and quality control procedures, analytical results for samples collected as part of the pilot study program appear to be representative.

5.0 FUTURE SCHEDULE

The next groundwater monitoring and sampling event for the MRP is scheduled to be performed in August 2004. In conjunction with that event, borehole dilution testing for the pilot study will take place at the same time.

6.0 REFERENCES

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TABLES

TABLE 1
MONITORING WELL CONSTRUCTION DETAILS [1]

Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

Well No.	Date Installed	Total Boring Depth (ft bgs)	Total Well Depth (ft bgs)	Well Diameter (inches)	Latitude[2]	Longitude[2]	Ground Level Elevation[2] (ft msl)	Top of Casing Elevation[2] (ft msl)	Screened Interval (ft bgs)	Screen Slot Size (inches)	Filter Pack Interval (ft bgs)	Bentonite Seal Interval (ft bgs)	Surface Seal Interval[3] (ft bgs)
Shallow Wells													
MW-1	5-Mar-02	8	8	2	40.8661595	124.1521395	10.12	9.69	2.0 – 8.0	0.01	1.5 – 8.0	1.0 – 1.5	0 – 1.0
MW-2	5-Mar-02	9	8	2	40.8661024	124.1525276	10.41	9.61	2.0 – 8.0	0.01	1.5 – 9.0	1.0 – 1.5	0 – 1.0
MW-3	5-Mar-02	8.5	8	2	40.8662689	124.1530739	11.67	11.22	2.0 – 8.0	0.01	1.5 – 8.5	1.0 – 1.5	0 – 1.0
MW-4	5-Mar-02	8	8	2	40.8662303	124.1533599	11.17	10.74	2.0 – 8.0	0.01	1.5 – 8.0	1.0 – 1.5	0 – 1.0
MW-5	7-Mar-02	8	8	2	40.8660945	124.1536734	11.26	10.74	2.0 – 8.0	0.01	1.5 – 8.0	1.0 – 1.5	0 – 1.0
MW-6	7-Mar-02	8	8	2	40.8660710	124.1531061	10.13	9.83	2.0 – 8.0	0.01	1.5 – 8.0	1.0 – 1.5	0 – 1.0
MW-7	7-Mar-02	8	8	2	40.8659980	124.1531187	10.09	9.74	2.0 – 8.0	0.01	1.5 – 8.0	1.0 – 1.5	0 – 1.0
MW-8	8-Mar-02	8	8	2	40.8657492	124.1535343	10.55	10.33	2.0 – 8.0	0.01	1.5 – 8.0	1.0 – 1.5	0 – 1.0
MW-9	8-Mar-02	8	8	2	40.8657520	124.1532218	10.36	9.91	2.0 – 8.0	0.01	1.5 – 8.0	1.0 – 1.5	0 – 1.0
MW-10	11-Nov-02	9.5	8	2	40.8656910	124.1530670	10.08	9.85	2.0 – 8.0	0.01	1.5 – 9.5	1.0 – 1.5	0 – 1.0
MW-11	12-Nov-02	8.5	8	2	40.8655740	124.1533817	10.51	10.28	2.0 – 8.0	0.01	1.5 – 8.5	1.0 – 1.5	0 – 1.0
MW-12	12-Nov-02	9.5	8	2	40.8656625	124.1537231	11.01	10.76	2.0 – 8.0	0.01	1.5 – 9.5	1.0 – 1.5	0 – 1.0
MW-14	13-Nov-02	8	8	2	40.8657622	124.1523580	9.60	9.15	2.0 – 8.0	0.01	1.5 – 8.0	1.0 – 1.5	0 – 1.0
MW-17	14-Nov-02	9	8	2	40.8656690	124.1526420	9.46	9.16	2.0 – 8.0	0.01	1.5 – 9.0	1.0 – 1.5	0 – 1.0
MW-18	13-Nov-02	9.5	8	4	40.8657448	124.1531649	10.12	9.92	2.0 – 8.0	0.01	1.5 – 9.5	1.0 – 1.5	0 – 1.0
MW-20[4]	23-Jan-03	8	7	4	40.8658416	124.1532563	10.92	11.87	3.2 – 6.8	0.01	2.0 – 7.0	1.0 – 2.0	0 – 1.0
MW-21	12-Feb-03	8.3	8.3	0.75	40.8660161	124.1530089	10.11	12.89	2.1 – 8.1	0.01	1.5 – 8.3	1.0 – 1.5	0 – 1.0
Deep Wells													
MW-13D	12-Nov-02	21	20	2	40.8660809	124.1525231	10.26	9.96	15.0 – 20.0	0.01	13.5 – 21.0	12.0 – 13.5	0 – 12.0
MW-15D	13-Nov-02	21	20	2	40.8662658	124.1528255	11.59	11.19	15.0 – 20.0	0.01	14.0 – 21.0	12.0 – 14.0	0 – 12.0
MW-16D	14-Nov-02	21.5	20	2	40.8655571	124.1530363	10.13	9.83	15.0 – 20.0	0.01	14.0 – 21.5	12.0 – 14.0	0 – 12.0
MW-19D	14-Nov-02	21.5	20	2	40.8662419	124.1532744	11.21	11.06	15.0 – 20.0	0.01	14.0 – 21.0	12.0 – 14.0	0 – 12.0

Notes:
1. Construction details for wells MW-1 through MW-9 were obtained from Report on Recent Hydrogeologic Investigations at Sierra-Pacific Industries, Arcata Division Sawmill, dated April 19, 200 prepared by Environet Consulting. Construction details for wells MW-10 through MW-19D were obtained from Results of the Remedial Investigation for Sierra Pacific Industries – Arcata Divisio Sawmills, Arcata, California, dated January 30, 2003, prepared by EnviroNet Consulting. Installation of wells MW-20 and MW-21 documented in this report
2. Monitoring wells were resurveyed by Omsberg Suveyors and Company of Eureka California on February 13, 2003; latitude and longitude were surveyed relative to North American Datum (NAD) of 1983 and elevations were surveyed relative to National Geodetic Vertical Datum (NGVD) of 1929. Elevations shown have been adjusted by 3.35 feet and presented as North American Vertical Datum (NAVD) of 1988 elevations.
3. Surface seal interval consists of the concrete surface completion and a neat cement sanitary seal, if applicable.
4. Well installed on a raised concrete pad of the former green chain. Depth measurements (ft bgs) are relative to the local ground surface of the concrete pad, which is approximately 1 foot above the grade of the surrounding ground surface.

Abbreviations:
ft bgs = feet below ground surface
ft msl = feet mean sea level

TABLE 2

SUMMARY OF WATER LEVEL MEASUREMENTS

Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

Well No.	Measurement [1] Date	MP Elevation [2] (ft NAVD 88)	Depth to Water (ft bMP)	Water Level Elevation (ft NAVD 88)
Shallow Wells				
MW-1	14-Mar-02	9.56	5.31	4.25
	18-Jul-02	9.56	4.52	5.04
	16-Sep-02	9.56	4.37	5.19
	02-Dec-02	9.56	4.18	5.38
	18-Mar-03	9.56	4.09	5.47
	31-Mar-03	9.56	4.48	5.08
	21-May-03	9.56	4.66	4.90
	27-Aug-03	9.56	4.55	5.01
	03-Nov-03	9.56	4.20	5.36
	23-Mar-04	9.69	4.47	5.22
	17-May-04	9.69	4.57	5.12
MW-2	14-Mar-02	9.49	4.52	4.97
	18-Jul-02	9.49	5.43	4.06
	16-Sep-02	9.49	5.28	4.21
	02-Dec-02	9.49	5.17	4.32
	18-Mar-03	9.49	5.16	4.33
	31-Mar-03	9.49	5.43	4.06
	21-May-03	9.49	5.45	4.04
	27-Aug-03	9.49	5.09	4.40
	03-Nov-03	9.49	5.17	4.32
	23-Mar-04	9.61	5.31	4.30
	17-May-04	9.61	5.43	4.18
MW-3	14-Mar-02	11.14	2.19	8.95
	18-Jul-02	11.14	2.79	8.35
	16-Sep-02	11.14	2.96	8.18
	02-Dec-02	11.14	2.75	8.39
	18-Mar-03	11.14	2.30	8.84
	31-Mar-03	11.14	1.96	9.18
	21-May-03	11.14	2.19	8.95
	27-Aug-03	11.14	2.08	9.06
	03-Nov-03	11.14	2.35	8.79
	23-Mar-04	11.22	2.24	8.98
	17-May-04	11.22	2.25	8.97
MW-4	14-Mar-02	10.71	1.52	9.19
	18-Jul-02	10.71	1.84	8.87
	16-Sep-02	10.71	2.04	8.67
	02-Dec-02	10.71	1.80	8.91
	18-Mar-03	10.71	1.52	9.19
	31-Mar-03	10.71	0.93	9.78
	21-May-03	10.71	1.18	9.53
	27-Aug-03	10.71	1.36	9.35
	03-Nov-03	10.71	1.64	9.07
	23-Mar-04	10.74	1.17	9.57
	17-May-04	10.74	1.17	9.57

TABLE 2

SUMMARY OF WATER LEVEL MEASUREMENTS

Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

Well No.	Measurement [1] Date	MP Elevation [2] (ft NAVD 88)	Depth to Water (ft bMP)	Water Level Elevation (ft NAVD 88)
MW-5	14-Mar-02	10.69	0.95	9.74
	18-Jul-02	10.69	1.26	9.43
	16-Sep-02	10.69	1.35	9.34
	02-Dec-02	10.69	1.23	9.46
	18-Mar-03	10.69	0.87	9.82
	31-Mar-03	10.69	0.63	10.06
	21-May-03	10.69	0.69	10.00
	27-Aug-03	10.69	0.84	9.85
	03-Nov-03	10.69	0.92	9.77
	23-Mar-04	10.74	0.62	10.12
	17-May-04	10.74	0.78	9.96
MW-6	14-Mar-02	9.77	0.85	8.92
	18-Jul-02	9.77	1.27	8.50
	16-Sep-02	9.77	1.51	8.26
	02-Dec-02	9.77	1.30	8.47
	18-Mar-03	9.77	0.89	8.88
	31-Mar-03	9.77	0.37	9.40
	21-May-03	9.77	0.60	9.17
	27-Aug-03	9.77	0.70	9.07
	03-Nov-03	9.77	1.21	8.56
	23-Mar-04	9.83	0.69	9.14
	17-May-04	9.83	0.78	9.05
MW-7	14-Mar-02	9.68	0.73	8.95
	18-Jul-02	9.68	1.15	8.53
	16-Sep-02	9.68	1.37	8.31
	02-Dec-02	9.68	1.19	8.49
	18-Mar-03	9.68	0.75	8.93
	31-Mar-03	9.68	0.26	9.42
	21-May-03	9.68	0.45	9.23
	27-Aug-03	9.68	0.61	9.07
	03-Nov-03	9.68	1.13	8.55
	23-Mar-04	9.74	0.44	9.30
	17-May-04	9.74	0.50	9.24
MW-8	14-Mar-02	10.30	0.92	9.38
	18-Jul-02	10.30	1.24	9.06
	16-Sep-02	10.30	1.52	8.78
	02-Dec-02	10.30	1.34	8.96
	18-Mar-03	10.30	0.95	9.35
	31-Mar-03	10.30	0.29	10.01
	21-May-03	10.30	0.49	9.81
	27-Aug-03	10.30	0.91	9.39
	03-Nov-03	10.30	1.36	8.94
	23-Mar-04	10.33	0.57	9.76
	17-May-04	10.33	0.54	9.79

TABLE 2

SUMMARY OF WATER LEVEL MEASUREMENTS

Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

Well No.	Measurement [1] Date	MP Elevation [2] (ft NAVD 88)	Depth to Water (ft bMP)	Water Level Elevation (ft NAVD 88)
MW-9	14-Mar-02	9.86	0.71	9.15
	18-Jul-02	9.86	1.13	8.73
	16-Sep-02	9.86	1.40	8.46
	02-Dec-02	9.86	1.18	8.68
	18-Mar-03	9.86	0.79	9.07
	31-Mar-03	9.86	0.11	9.75
	21-May-03	9.86	0.30	9.56
	27-Aug-03	9.86	0.81	9.05
	03-Nov-03	9.86	1.19	8.67
	23-Mar-04	9.91	0.40	9.51
	17-May-04	9.91	0.38	9.53
MW-10	02-Dec-02	9.80	1.35	8.45
	18-Mar-03	9.80	0.95	8.85
	31-Mar-03	9.80	0.30	9.50
	21-May-03	9.80	0.52	9.28
	27-Aug-03	9.80	1.02	8.78
	03-Nov-03	9.80	1.43	8.37
	23-Mar-04	9.85	0.70	9.15
	17-May-04	9.85	0.61	9.24
MW-11	02-Dec-02	10.26	1.55	8.71
	18-Mar-03	10.26	1.12	9.14
	31-Mar-03	10.26	0.40	9.86
	21-May-03	10.26	0.64	9.62
	27-Aug-03	10.26	1.19	9.07
	03-Nov-03	10.26	1.56	8.70
	23-Mar-04	10.28	0.75	9.53
	17-May-04	10.28	0.69	9.59
MW-12	02-Dec-02	10.73	1.56	9.17
	18-Mar-03	10.73	1.15	9.58
	31-Mar-03	10.73	0.55	10.18
	21-May-03	10.73	0.70	10.03
	27-Aug-03	10.73	1.12	9.61
	03-Nov-03	10.73	1.68	9.05
	23-Mar-04	10.76	0.87	9.89
	17-May-04	10.76	0.76	10.00
MW-14	02-Dec-02	9.02	2.40	6.62
	18-Mar-03	9.02	2.21	6.81
	31-Mar-03	9.02	1.77	7.25
	21-May-03	9.02	1.69	7.33
	27-Aug-03	9.02	2.27	6.75
	03-Nov-03	9.02	2.52	6.50
	23-Mar-04	9.15	2.08	7.07
	17-May-04	9.15	2.15	7.00

TABLE 2

SUMMARY OF WATER LEVEL MEASUREMENTS

Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

Well No.	Measurement [1] Date	MP Elevation [2] (ft NAVD 88)	Depth to Water (ft bMP)	Water Level Elevation (ft NAVD 88)
MW-17	02-Dec-02	8.98	1.27	7.71
	18-Mar-03	8.98	0.94	8.04
	31-Mar-03	8.98	0.32	8.66
	21-May-03	8.98	0.58	8.40
	27-Aug-03	8.98	1.06	7.92
	03-Nov-03	8.98	1.30	7.68
	23-Mar-04	9.16	0.83	8.33
	17-May-04	9.16	0.74	8.42
MW-18	02-Dec-02	9.53	0.94	8.59
	18-Mar-03	9.53	0.52	9.01
	31-Mar-03	9.53	--[3]	NC
	21-May-03	9.53	0.05	9.48
	27-Aug-03	9.53	0.55	8.98
	03-Nov-03	9.53	0.95	8.58
	23-Mar-04	9.92	0.52	9.40
	17-May-04	9.92	0.47	9.45
MW-20	23-Mar-04	11.87	2.36	9.51
	17-May-04	11.87	2.35	9.52
MW-21	23-Mar-04	12.89	3.97	8.92
	17-May-04	12.89	3.99	8.90
Deep Wells				
MW-13D	02-Dec-02	9.84	4.18	5.66
	18-Mar-03	9.84	4.21	5.63
	31-Mar-03	9.84	4.26	5.58
	21-May-03	9.84	4.52	5.32
	27-Aug-03	9.84	4.45	5.39
	03-Nov-03	9.84	4.30	5.54
	23-Mar-04	9.96	4.42	5.54
	17-May-04	9.96	4.54	5.42
MW-15D	02-Dec-02	11.08	5.31	5.77
	18-Mar-03	11.08	5.44	5.64
	31-Mar-03	11.08	5.46	5.62
	21-May-03	11.08	5.74	5.34
	27-Aug-03	11.08	5.71	5.37
	03-Nov-03	11.08	5.51	5.57
	23-Mar-04	11.19	5.66	5.53
	17-May-04	11.19	5.77	5.42
MW-16D	02-Dec-02	9.80	3.99	5.81
	18-Mar-03	9.80	4.17	5.63
	31-Mar-03	9.80	3.91	5.89
	21-May-03	9.80	4.11	5.69
	27-Aug-03	9.80	3.95	5.85
	03-Nov-03	9.80	4.26	5.54
	23-Mar-04	9.83	4.01	5.82
	17-May-04	9.83	4.13	5.70

TABLE 2

SUMMARY OF WATER LEVEL MEASUREMENTS

Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

Well No.	Measurement [1] Date	MP Elevation [2] (ft NAVD 88)	Depth to Water (ft bMP)	Water Level Elevation (ft NAVD 88)
MW-19D	02-Dec-02	11.00	4.31	6.69
	18-Mar-03	11.00	4.23	6.77
	31-Mar-03	11.00	4.02	6.98
	21-May-03	11.00	4.22	6.78
	27-Aug-03	11.00	4.26	6.74
	03-Nov-03	11.00	4.61	6.39
	23-Mar-04	11.06	4.13	6.93
	17-May-04	11.06	4.63	6.43
Mad River Slough[4]	31-Mar-03	15.70	15.15	0.55
	31-Mar-03	15.70	15.84	-0.14
	21-May-03	15.70	17.23	-1.53
	21-May-03	15.70	16.75	-1.05
	27-Aug-03	15.70	16.20	-0.50
	27-Aug-03	15.70	12.60	3.10
	03-Nov-03	15.70	9.63	6.07
	03-Nov-03	15.70	10.53	5.17
	23-Mar-04	15.70	15.00	0.70
	23-Mar-04	15.70	12.16	3.54
	17-May-04	15.70	14.48	1.22
	17-May-04	15.70	12.50	3.20

Notes:

1. Data prior to March 18, 2003 were obtained from Results of the Remedial Investigation for Sierra Pacific Industries - Arcata Division Sawmill, Arcata, California, dated January 30, 2003, prepared by Environet Consulting.
2. Monitoring wells surveyed by Omsberg & Company of Eureka, California. Wells were resurveyed on February 13, 2004; elevations shown are relative to the Northern American Vertical Datum of 1988.
3. Water level was above the top of casing measuring point.
4. Mad River Slough measuring point on railroad bridge. Water level measurements are obtained before and after the water level measurements in the monitoring wells.

Abbreviations:
ft NAVD 88 = feet above North American Vertical Datum of 1988
ft bMP = feet below measuring point
-- = not measured or sample not collected for analysis
NC = not calcuated

GEOMATRIX

TABLE 3

SUMMARY OF WATER QUALITY PARAMETERS
GROUNDWATER MONITORING PROGRAM

Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

Well No.	Date Sampled	Field Measurements[1]				Laboratory Measurement[2]
		Temperature (ºC)	Specific Conductance (µmohs/cm)	pH (pH Units)	TDS (mg/L)	TDS (mg/L)
Shallow Wells						
MW-1	20-Mar-03	14	2,600	6.5	--	--
	22-May-03	14	2,700	6.7	--	1,400
	27-Aug-03	18	2,500	6.7	1,800	1,400
	04-Nov-03	16.9	2,440	6.6	1,800	1,300
	24-Mar-04	--	--	--	--	--
	17-May-04	15	2635	6.3	1899	1,400
MW-2	20-Mar-03	13	2,100	6.2	--	--
	22-May-03	14	1,700	6.4	1100	860
	27-Aug-03	18	1,500	6.6	1,100	760
	03-Nov-03	16.3	1,590	6.3	1,125	760
	24-Mar-04	13.4	1,390	6.3	973	740
	17-May-04	14.8	1,437	6.2	982	730
MW-3	20-Mar-03	13	1,100	6.4	--	--
	22-May-03	15	1,000	6.4	630	510
	27-Aug-03	20	1,000	6.5	720	470
	03-Nov-03	16.3	986	6.6	--	410
	24-Mar-04	--	--	--	--	--
	17-May-04	15.7	1108	6.2	750	510
MW-4	20-Mar-03	14	830	6.5	--	--
	22-May-03	16	730	6.4	440	420
	27-Aug-03	21	730	6.5	500	340
	03-Nov-03	17.8	758	6.6	516	310
	24-Mar-04	--	--	--	--	--
	17-May-04	17.7	884	6.2	590	360
MW-5	20-Mar-03	14	670	6.6	--	--
	22-May-03	14	690	6.6	410	360
	27-Aug-03	18	670	6.7	450	360
	03-Nov-03	17.2	661	6.6	450	380
	24-Mar-04	--	--	--	--	--
	17-May-04	15.2	662	6.3	438	360
MW-6	20-Mar-03	11	950	6.6	--	--
	22-May-03	14	1,000	6.3	620	430
	27-Aug-03	17	890	6.4	620	410
	04-Nov-03	12.8	918	6.6	634	430
	24-Mar-04	11	925	6.5	640	410
	17-May-04	13.6	933	6.3	645	420

TABLE 3

SUMMARY OF WATER QUALITY PARAMETERS
GROUNDWATER MONITORING PROGRAM

Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

Well No.	Date Sampled	Field Measurements[1]				Laboratory Measurement[2]
		Temperature (ºC)	Specific Conductance (µmohs/cm)	pH (pH Units)	TDS (mg/L)	TDS (mg/L)
MW-7	20-Mar-03	11	910	6.6	--	--
	22-May-03	11	960	6.5	--	460
	27-Aug-03	14	840	6.6	580	400
	03-Nov-03	12.4	869	6.6	597	460
	24-Mar-04	10.7	955	6.4	--	440
	18-May-04	11.9	733	6.6	486	370
MW-8	18-Mar-03	14	730	6.4	--	--
	21-May-03	16	740	6.3	460	390
	27-Aug-03	21	730	6.2	500	370
	04-Nov-03	17.2	745	6.4	507	380
	24-Mar-04	14.2	777	6.2	530	400
	17-May-04	17.6	795	6.1	528	390
MW-9	18-Mar-03	14	820	6.4	--	--
	23-May-03	16	870	6.6	550	400
	27-Aug-03	20	830	6.2	570	350
	04-Nov-03	16.7	821	6.6	563	350
	24-Mar-04	13.9	878	6.4	604	380
	17-May-04	16.1	927	6.1	621	380
MW-10	18-Mar-03	14	920	6.4	--	--
	23-May-03	17	970	6.7	--	460
	27-Aug-03	22	860	6.3	600	400
	04-Nov-03	17.9	878	6.6	604	430
	24-Mar-04	--	--	--	--	--
	17-May-04	18.7	920	6.2	613	420
MW-11	20-Mar-03	14	870	6.4	--	--
	21-May-03	17	890	6.4	560	460
	27-Aug-03	23	870	6.2	600	440
	04-Nov-03	18.6	877	6.6	600	450
	24-Mar-04	--	--	--	--	--
	17-May-04	18.1	878	6.2	586	430
MW-12	18-Mar-03	15	830	6.3	--	--
	21-May-03	18	840	6.1	--	460
	27-Aug-03	23	870	6.2	600	480
	04-Nov-03	18.1	916	6.5	631	480
	24-Mar-04	--	--	--	--	--
	17-May-04	19.7	905	6.0	605	490
MW-14	20-Mar-03	14	3,200	6.7	--	--
	22-May-03	15	3,400	6.6	--	2,100
	27-Aug-03	20	3,600	6.6	2,300	1,900
	04-Nov-03	15.9	3,330	6.6	2,520	2,100
	24-Mar-04	--	--	--	--	--
	17-May-04	16.9	2824	6.4	2046	1,800

TABLE 3

SUMMARY OF WATER QUALITY PARAMETERS
GROUNDWATER MONITORING PROGRAM

Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

Well No.	Date Sampled	Field Measurements[1]				Laboratory Measurement[2]
		Temperature (ºC)	Specific Conductance (µmohs/cm)	pH (pH Units)	TDS (mg/L)	TDS (mg/L)
MW-17	20-Mar-03	13	980	6.4	--	--
	22-May-03	15	1,000	6.5	--	450
	27-Aug-03	19	860	7.0	600	420
	04-Nov-03	14.9	920	6.6	635	450
	24-Mar-04	--	--	--	--	--
	17-May-04	15.3	944	6.5	620	440
MW-18	18-Mar-03	14	1,000	6.5	--	--
	23-May-03	17	980	6.6	610	640
	27-Aug-03	23	1,100	6.3	780	520
	04-Nov-03	16.7	1,092	6.6	760	490
	24-Mar-04	--	--	--	--	--
	17-May-04	19.4	995	6.3	670	430
MW-20	24-Mar-04	13.6	425	6.9	284	250
	18-May-04	18.3	469	6.7	306	280
MW-21	24-Mar-04	11.7	987	6.3	683	460
	18-May-04	13.5	1003	6.3	663	420
Deep Wells						
MW-13D	20-Mar-03	14	1,200	6.2	--	--
	22-May-03	14	1,100	6.2	--	--
	27-Aug-03	15	1,100	6.1	750	690
	04-Nov-03	14.8	1,020	6.1	--	580
	24-Mar-04	--	--	--	--	--
	17-May-04	13.8	1035	5.8	698	610
MW-15D	20-Mar-03	13	1,300	6.8	--	--
	22-May-03	13	1,300	6.8	--	800
	27-Aug-03	14	1,300	6.3	900	810
	04-Nov-03	14	1,290	6.8	--	790
	24-Mar-04	--	--	--	--	--
	17-May-04	13.4	1,360	6.3	928	800
MW-16D	18-Mar-03	14	5,200	7.7	--	--
	23-May-03	14	5,200	7.6	--	3,200
	27-Aug-03	16	5,000	7.4	3,400	3,000
	04-Nov-03	15.5	4,770	7.6	3,700	2,800
	24-Mar-04	--	--	--	--	--
	17-May-04	14.9	4,562	7.3	3,457	2,800

TABLE 3

SUMMARY OF WATER QUALITY PARAMETERS
GROUNDWATER MONITORING PROGRAM

Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

Well No.	Date Sampled	Field Measurements[1]				Laboratory Measurement[2]
		Temperature (ºC)	Specific Conductance (µmohs/cm)	pH (pH Units)	TDS (mg/L)	TDS (mg/L)
MW-19D	20-Mar-03	16	810	6.7	--	--
	22-May-03	16	860	6.6	520	480
	27-Aug-03	17	810	6.5	560	410
	03-Nov-03	16.9	759	6.7	517	370
	24-Mar-04	--	--	--	--	--
	17-May-04	15.9	843	6.5	562	430

Notes:
1. Water quality parameters measured in the field using an Ultrameter instrument or a flow through cell and a YSI Model 556 instrument; reported measurements recorded towards end of purge after parameters stabilized or from the last purge volume if a well was repeatedly purged dry.
2. Water quality parameter analyzed in the laboratory; EPA Method 160.1.

Abbreviations:
ºC = degrees Celsius
µmhos/cm = micromhos per centimeter at 25 ºC
mg/L = milligrams per liter
-- = not measured or sample not collected for analysis
TDS = total dissolved solids
EPA = U.S. Environmental Protection Agency

TABLE 4

LABORATORY ANALYTICAL RESULTS FOR CHLORINATED PHENOLS
GROUNDWATER MONITORING PROGRAM
Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

Concentrations in micrograms per liter (µg/L)

Monitoring Well Number	Date Sampled [1]	Penta-chlorophenol	2,4,6-trichloro-phenol	2,3,5,6-tetrachloro-phenol	2,3,4,6-tetrachloro-phenol	2,3,4,5-tetrachloro-phenol	Comments
Shallow Wells							
MW-1	14-Mar-02	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	18-Jul-02	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	16-Sep-02	1.8	< 1.0	< 1.0	< 1.0	< 1.0	
	03-Oct-02 [2]	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	02-Dec-02	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	20-Mar-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	22-May-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	27-Aug-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	04-Nov-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	24-Mar-04	--	--	--	--	--	
	17-May-04	<1.0	<1.0	<1.0	<1.0	<1.0	
MW-2	14-Mar-02	7.4	< 1.0	< 1.0	< 1.0	< 1.0	
	18-Jul-02	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	16-Sep-02	2.5	< 1.0	< 1.0	< 1.0	< 1.0	
	03-Dec-02	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	20-Mar-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	22-May-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	27-Aug-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	4-Nov-03	<1.0	<1.0	<1.0	<1.0	<1.0	
	24-Mar-04	<1.0	<1.0	<1.0	<1.0	<1.0	
	17-May-04	<1.0	<1.0	<1.0	<1.0	<1.0	
MW-3	14-Mar-02	1.2	< 1.0	< 1.0	< 1.0	< 1.0	
	18-Jul-02	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	16-Sep-02	5.0	< 1.0	< 1.0	< 1.0	< 1.0	
	03-Dec-02	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	20-Mar-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	22-May-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	27-Aug-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	4-Nov-03	<1.0	<1.0	<1.0	<1.0	<1.0	
	24-Mar-04	--	--	--	--	--	
	17-May-04	<1.0	<1.0	<1.0	<1.0	<1.0	

TABLE 4

LABORATORY ANALYTICAL RESULTS FOR CHLORINATED PHENOLS
GROUNDWATER MONITORING PROGRAM
Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

Concentrations in micrograms per liter (µg/L)

Monitoring Well Number	Date Sampled [1]	Penta-chlorophenol	2,4,6-trichloro-phenol	2,3,5,6-tetrachloro-phenol	2,3,4,6-tetrachloro-phenol	2,3,4,5-tetrachloro-phenol	Comments
MW-4	14-Mar-02	8.6	< 1.0	< 1.0	< 1.0	< 1.0	
	18-Jul-02	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	16-Sep-02	5.7	< 1.0	< 1.0	< 1.0	< 1.0	
	03-Dec-02	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	20-Mar-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	22-May-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	27-Aug-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	4-Nov-03	<1.0	<1.0	<1.0	<1.0	<1.0	
	24-Mar-04	--	--	--	--	--	
	17-May-04	<1.0	<1.0	<1.0	<1.0	<1.0	
MW-5	14-Mar-02	4.3	< 1.0	< 1.0	< 1.0	< 1.0	
	18-Jul-02	9.1	< 1.0	< 1.0	< 1.0	< 1.0	
	16-Sep-02	25	< 1.0	< 1.0	< 1.0	< 1.0	
	03-Dec-02	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	20-Mar-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	20-Mar-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	duplicate sample
	22-May-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	27-Aug-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	4-Nov-03	<1.0	<1.0	<1.0	<1.0	<1.0	
	24-Mar-04	--	--	--	--	--	
	17-May-04	<1.0	<1.0	<1.0	<1.0	<1.0	
MW-6	14-Mar-02	4.5	< 1.0	< 1.0	< 1.0	< 1.0	
	18-Jul-02	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	16-Sep-02	6.3	< 1.0	< 1.0	< 1.0	< 1.0	
	03-Dec-02	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	20-Mar-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	22-May-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	27-Aug-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	24-Mar-04	<1.0	<1.0	<1.0	<1.0	<1.0	
	17-May-04	<1.0	<1.0	<1.0	<1.0	<1.0	

TABLE 4

LABORATORY ANALYTICAL RESULTS FOR CHLORINATED PHENOLS
GROUNDWATER MONITORING PROGRAM
Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

Concentrations in micrograms per liter (µg/L)

Monitoring Well Number	Date Sampled [1]	Penta-chlorophenol	2,4,6-trichloro-phenol	2,3,5,6-tetrachloro-phenol	2,3,4,6-tetrachloro-phenol	2,3,4,5-tetrachloro-phenol	Comments
MW-7	14-Mar-02	31,000	< 1.0	41	650	24	
	18-Jul-02	33,000	< 1.0	< 1.0	990	56	
	16-Sep-02	44,000	< 1.0	< 1.0	920	64	
	03-Dec-02	46,000	< 1.3	76	1,300	52	
	14-Jan-03 [3]	51,000	2.4	< 1.0	970	52	
	20-Mar-03	19,000	< 1.0	36	460	22	
	22-May-03	19,000	< 1.0	< 1.0	470	< 100	
	22-May-03	16,000	< 1.0	< 1.0	400	< 100	duplicate sample
	22-May-03	14,000	< 1.0	< 1.0	400	< 100	filtered
	27-Aug-03	31,000	< 1.5	41	710	39	
	27-Aug-03	18,000	< 1.0	28	450	26	duplicate sample
	3-Nov-03	28,000	<5.0	36	580	35	bailer sample / unfiltered
	3-Nov-03	31,000	<5.0	47	740	43	bailer sample / filtered
	3-Nov-03	20,000	<5.0	28	450	24	low flow sample / unfiltered
	3-Nov-03	14,000	<5.0	19	300	17	low flow sample / filtered
	24-Mar-04	19,000	<1.5	19	450	19	
	24-Mar-04	7,400	<1.0	8.7	150	9.9	duplicate sample
	18-May-04	25,000	<2.5	86	480	41	
MW-8	14-Mar-02	22	< 1.0	< 1.0	< 1.0	< 1.0	
	18-Jul-02	31	< 1.0	< 1.0	< 1.0	< 1.0	
	16-Sep-02	4.8	< 1.0	< 1.0	< 1.0	< 1.0	
	03-Dec-02	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	18-Mar-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	21-May-03	1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	27-Aug-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	4-Nov-03	<1.0	<1.0	<1.0	<1.0	<1.0	
	24-Mar-04	<1.0	<1.0	<1.0	<1.0	<1.0	
	17-May-04	<1.0	<1.0	<1.0	<1.0	<1.0	

TABLE 4

LABORATORY ANALYTICAL RESULTS FOR CHLORINATED PHENOLS
GROUNDWATER MONITORING PROGRAM
Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

Concentrations in micrograms per liter (µg/L)

Monitoring Well Number	Date Sampled [1]	Penta-chlorophenol	2,4,6-trichloro-phenol	2,3,5,6-tetrachloro-phenol	2,3,4,6-tetrachloro-phenol	2,3,4,5-tetrachloro-phenol	Comments
MW-9	14-Mar-02	94	3.1	21	130	5.5	
	18-Jul-02	2.1	< 1.0	< 1.0	< 1.0	< 1.0	
	16-Sep-02	3.1	< 1.0	< 1.0	< 1.0	< 1.0	
	03-Dec-02	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	18-Mar-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	23-May-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	27-Aug-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	04-Nov-03	<1.0	<1.0	<1.0	<1.0	<1.0	
	24-Mar-04	<1.0	<1.0	<1.0	<1.0	<1.0	
	17-May-04	<1.0	<1.0	<1.0	<1.0	<1.0	
MW-10	03-Dec-02	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	18-Mar-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	23-May-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	27-Aug-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	4-Nov-03	<1.0	<1.0	<1.0	<1.0	<1.0	
	24-Mar-04	--	--	--	--	--	
	17-May-04	<1.0	<1.0	<1.0	<1.0	<1.0	
MW-11	03-Dec-02	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	20-Mar-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	21-May-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	27-Aug-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	4-Nov-03	<1.0	<1.0	<1.0	<1.0	<1.0	
	24-Mar-04	--	--	--	--	--	
	17-May-04	<1.0	<1.0	<1.0	<1.0	<1.0	
MW-12	03-Dec-02	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	18-Mar-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	21-May-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	27-Aug-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	4-Nov-03	<1.0	<1.0	<1.0	<1.0	<1.0	
	24-Mar-04	--	--	--	--	--	
	17-May-04	<1.0	<1.0	<1.0	<1.0	<1.0	
MW-14	03-Dec-02	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	20-Mar-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	22-May-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	27-Aug-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	4-Nov-03	<1.0	<1.0	<1.0	<1.0	<1.0	
	24-Mar-04	--	--	--	--	--	
	17-May-04	<1.0	<1.0	<1.0	<1.0	<1.0	

TABLE 4

LABORATORY ANALYTICAL RESULTS FOR CHLORINATED PHENOLS
GROUNDWATER MONITORING PROGRAM
Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

Concentrations in micrograms per liter (µg/L)

Monitoring Well Number	Date Sampled [1]	Penta-chlorophenol	2,4,6-trichloro-phenol	2,3,5,6-tetrachloro-phenol	2,3,4,6-tetrachloro-phenol	2,3,4,5-tetrachloro-phenol	Comments
MW-17	03-Dec-02	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	20-Mar-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	22-May-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	27-Aug-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	4-Nov-03	<1.0	<1.0	<1.0	<1.0	<1.0	
	24-Mar-04	--	--	--	--	--	
	17-May-04	<1.0	<1.0	<1.0	<1.0	<1.0	
MW-18	03-Dec-02	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	18-Mar-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	23-May-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	27-Aug-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	4-Nov-03	<1.0	<1.0	<1.0	<1.0	<1.0	
	4-Nov-03	--	--	--	--	--	
	17-May-04	<1.0	<1.0	<1.0	<1.0	<1.0	
MW-20	24-Mar-04	35	<1.0	<1.0	5.1	3.8	
	18-May-04	3.6	<1.0	<1.0	1.1	<1.0	
MW-21	24-Mar-04	800	<1.0	6.3	17	12	
	18-May-04	1,900	<1.0	11	36	11	
	18-May-04	670	<1.0	3.5	16	4.4	duplicate sample
Deep Wells							
MW-13D	03-Dec-02	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	20-Mar-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	22-May-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	27-Aug-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	4-Nov-03	<1.0	<1.0	<1.0	<1.0	<1.0	
	24-Mar-04	--	--	--	--	--	
	17-May-04	<1.0	<1.0	<1.0	<1.0	<1.0	
MW-15D	03-Dec-02	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	20-Mar-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	22-May-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	27-Aug-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	4-Nov-03	<1.0	<1.0	<1.0	<1.0	<1.0	
	24-Mar-04	--	--	--	--	--	
	17-May-04	<1.0	<1.0	<1.0	<1.0	<1.0	

TABLE 4

LABORATORY ANALYTICAL RESULTS FOR CHLORINATED PHENOLS
GROUNDWATER MONITORING PROGRAM
Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

Concentrations in micrograms per liter (µg/L)

Monitoring Well Number	Date Sampled [1]	Penta-chlorophenol	2,4,6-trichloro-phenol	2,3,5,6-tetrachloro-phenol	2,3,4,6-tetrachloro-phenol	2,3,4,5-tetrachloro-phenol	Comments
MW-16D	03-Dec-02	1.3	< 1.0	< 1.0	< 1.0	< 1.0	
	18-Mar-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	23-May-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	27-Aug-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	4-Nov-03	<1.0	<1.0	<1.0	<1.0	<1.0	
	24-Mar-04	--	--	--	--	--	
	17-May-04	<1.0	<1.0	<1.0	<1.0	<1.0	
MW-19D	03-Dec-02	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	20-Mar-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	22-May-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	27-Aug-03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
	4-Nov-03	<1.0	<1.0	<1.0	<1.0	<1.0	
	24-Mar-04	--	--	--	--	--	
	17-May-04	<1.0	<1.0	<1.0	<1.0	<1.0	

Notes:

1. Data prior to March 18, 2003 were obtained from Results of the Remedial Investigation for Sierra Pacific Industries, Arcata Division Sawmill, Arcata, California, dated January 30, 2003, prepared by EnviroNet Consulting.
2. Confirmation sample collected due to detection of pentachlorophenol on September 16, 2002.
3. Sample also contained 280 mg/L of 2,3,4-trichlorophenol and 190 mg/L of 2,4,5-trichlorophenol.

Abbreviation:
< = target analyte was not detected at or above the laboratory reporting limit shown.
-- = not measured or sample not collected for analysis

TABLE 5

LABORATORY ANALYTICAL RESULTS FOR METALS, CHLORINATED PHENOLS, WATER QUALITY PARAMETERS, AND HYDROCARBON CONSTITUENTS IN SURFACE WATER SAMPLES [1]
PILOT STUDY PROGRAM

Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

			EPA Method 200 Series							Chlorinated Phenols (Canadian Pulp Method)					Water Quality Parameters						Hydrocarbon Constituents			
Monitoring Location	Date	Sample Type	Arsenic (mg/L)	Copper (mg/L)	Zinc (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Lead (mg/L)	Nickel (mg/L)	PCP (µg/L)	2,3,4,5-TeCP (µg/L)	2,3,4,6-TeCP (µg/L)	2,3,5,6-TeCP (µg/L)	2,4,6-TCP (µg/L)	pH	Specific Electrical Conductance (µmhos/cm)	Chemical Oxygen Demand (mg/L)	Total Dissolved Solids[2] (mg/L)	Total Suspended Solids (mg/L)	Tannins and Lignins (mg/L)	TPH as Gasoline (µg/L)	TPH as Diesel (µg/L)	TPH as Motor Oil (µg/L)	Oil and Grease (mg/L)
SL-1	4/14/2004 [3]	Grab	--	--	--	--	--	--	--	0.7	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--	--	--	--	--	--
SL-1	5/27/2004 [4]	Grab	0.0034	0.03	1.9	--	--	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	6.19	180	230	--	100	6.6	<50	92	550	<5.0
SL-2	4/20/2004 [3]	Grab	--	--	--	--	--	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	6.3	1,334	--	904	--	--	--	--	--	--
SL-2	4/20/2004 [3, 5]	Composite	--	--	--	--	--	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	5.87	734	--	483	--	--	--	--	--	--
SL-2	5/27/2004 [4]	Grab	0.0046	<0.020	0.46	<0.010	<0.010	<0.050	<0.010	<1.0	<1.0	<1.0	<1.0	<1.0	6.19	1,200	630	--	150	100	340	280	1,100	<5.0
SL-3	4/20/2004 [3]	Grab	--	--	--	--	--	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	6.02	170.4	--	107	--	--	--	8,700/1,300[6]	22,000/7,300[6]	--
SL-3	4/20/2004 [3, 5]	Composite	--	--	--	--	--	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	5.85	185	--	116	--	--	--	9,500	24,000	--
SL-3	5/27/2004 [4]	Grab	0.037	<0.080	0.85	--	--	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	5.61	1,300	2,100	--	1,900	240	190	2,300	6,000	<5.0
SL-4	5/27/2004 [4]	Grab	0.039	<0.080	0.75	--	--	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	6.06	160	1,500	--	2,900	160	85	720	3,200	<5.0

Notes:
1. Samples collected by MFG, Inc., of Arcata, California. The samples were analyzed by Alpha Analytical Laboratories, Inc., in Ukiah, California unless otherwise noted. The pH was measured in the field. Samples were analyzed by EPA Method 200.7 (tota EPA Method 200.9 (total arsenic and lead), Canadian Pulp Method (penta, tetra and tri), EPA Method 120.1 (specific electrical conductance), SM 410.2 (chemical oxygen demand), EPA Method 1664 (oil and grease), EPA Method 160.1 (total suspended solids), SM 425.1 (tannins and lignins), EPA Method 8015 Modified (TPH as gasoline, TPH as diesel and TPH as motor oil), and EPA Method 160.1 (total dissolved solids).
2. This parameter is not a required analysis under the SWPPP.
3. Additional sampling during rain event not related to the SWPPP.
4. Second storm sampling event for the 2003 - 2004 storm season. Samples were collected in accordance with the SWPPP for the site. Samples were not collected at monitoring locations SL-5, SL-6 and ML-2 because there was no discharge.
5. Samples were collected on a time weighted bases for two hours at 35 to 40 minute intervals at the locations. The samples were composited at Friedman & Bruya, Inc., in Seattle, Washington prior to analysis.
6. Silica gel clean-up was performed for the second analysis.

Abbreviations:
PCP = pentachlorophenol
2,3,4,5-TeCP = 2,3,4,5-tetrachlorophenol
2,3,4,6-TeCP = 2,3,4,6-tetrachlorophenol
2,3,5,6-TeCP = 2,3,5,6-tetrachlorophenol
2,4,6-TCP = 2,4,6-trichlorophenol
TPH = total petroleum hydrocarbons

EPA = U.S. Environmental Protection Agency
SM = Standard Method
µg/L = micrograms per liter; parts per billion
mg/L = milligrams per liter; parts per million
µmhos/cm = micro ohms per centimeter
-- = not measured or sample not collected for analysis
< = target analyte was not detected at or above the laboratory reporting limit show

TABLE 6

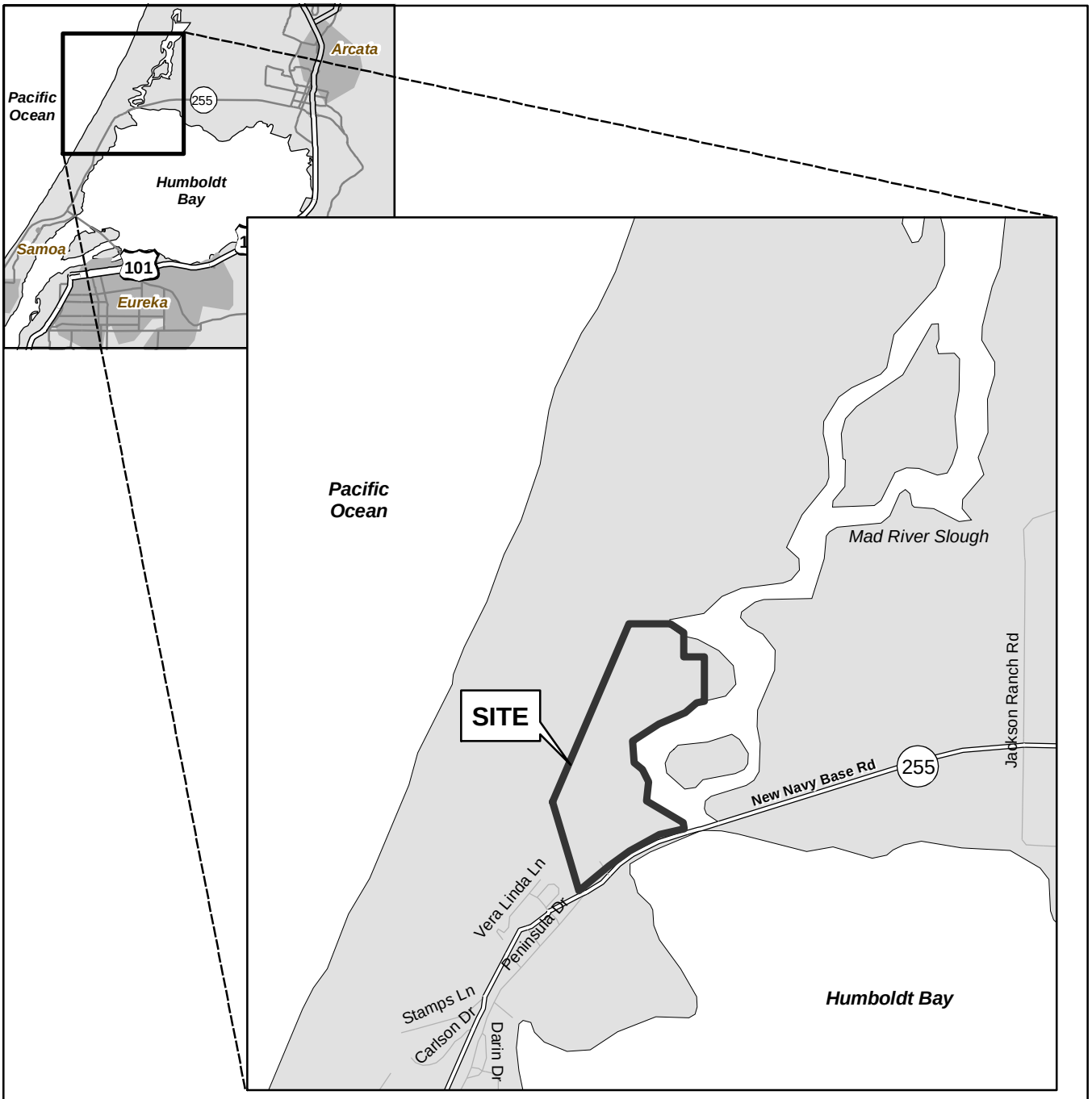
LABORATORY ANALYTICAL RESULTS FOR DIOXINS AND FURANS IN SURFACE WATER SAMPLES[1]
PILOT STUDY PROGRAM
Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

Monitoring Station	Date	2,3,7,8-TCDD	1,2,3,7,8 - PeCDD	1,2,3,4,7,8-HxCDD	1,2,3,6,7,8-HxCDD	1,2,3,7,8,9-HxCDD	1,2,3,4,6,7,8,-HpCDD	OCDD	Total Dioxins	2,3,7,8-TCDF	1,2,3,7,8-PeCDF	2,3,4,7,8-PeCDF	1,2,3,4,7,8-HxCDF	1,2,3,6,7,8-HxCDF	2,3,4,6,7,8-HxCDF	1,2,3,7,8,9-HxCDF	1,2,3,4,6,7,8-HpCDF	1,2,3,4,7,8,9-HpCDF	OCDF	Total Furans	Total TEQ[2,3]	Percent 2,3,7,8-TCDD[4]
SL-2	5/27/2004[5]	<1.5	6.72 J	9.02 J	34.9	16.1 J	458	3070	1092.1	<1.32	2.97 J	4.13 J	6.87 J	14.4 J	14.9 J	<2.05	192	11.1 J	247	698.6	25.5	0
SL-3	5/27/2004[5]	<1.8	8.37 J	10.7 J	42.2	18.7 J	516	3390	1328.5 M	4.07 J	<4.38	8.27 J	5.71 J	10.9 J	13.2 J	<3.20	181	10.1	282	805.9 M	30.5	0
SL-4	5/27/2004[5]	<1.52	10.4 J	14.8 J	79.5	23.8 J	891	5590	2168.45 M	2.82 J	<4.20	10.1 J	10.5 J	19.4 J	23.7 J	<2.76	328	20.6 J	454	1469.5 M	45.9	0
	TEF [6]:	1	1	0.1	0.1	0.1	0.01	0.0001	NA	0.1	0.05	0.5	0.1	0.1	0.1	0.1	0.01	0.01	0.0001	NA	NA	NA

Notes:
1. Samples were collected by MFG Inc., of Arcata, California and analyzed by Frontier Analytical Laboratory in El Dorado Hills, California. The samples were analyzed for dioxins and furans using EPA Method 1613. EPA Method 1613 specifies that for a sample containing less than 1% solids, the sample will then be analyzed as a liquid. Frontier Analytical Laboratory determined that these samples contained less than 1% solids and, therefore, analyzed the samples as a liquid. The laboratory used a 0.7 micron filter to prepare the sample for analysis (a 1.0 micron filter is specified in EPA Method 1613.) Concentrations reported in picograms per liter (pg/L).
2. Calculated as the sum of congener concentrations after each has been multiplied by its TEF.
3. Concentrations not detected above the laboratory reporting limit were assigned a concentration of 0 pg/L or 0 pg/kg to calculate TEQ.
4. Calculated by dividing the concentration of 2,3,7,8-TCDD by the Total TEQ (multiplied by 100). When the concentration of 2,3,7,8-TCDD was not detected, it was assigned a concentration of 0 pg/g for this calculation.
5. Second seasonal storm sampling event for the 2003 - 2004 wet season. Samples were collected in accordance with the SWPPP for the site.
6. Toxicity equivalency factor (unitless) from the World Health Organization, 1997 (WHO-97), adopted from F.X.R. van Leeuwen, 1997.

Abbreviations:
TCDD = tetrachlorodibenzo-p-dioxin
PeCDD = pentachlorodibenzo-p-dioxin
HxCDD = hexachlorodibenzo-p-dioxin
HpCDD = heptachlorodibenzo-p-dioxin
OCDD = octachlorodibenzo-p-dioxin
TCDF = tetrachlorodibenzofuran
PeCDF = pentachlorodibenzofuran
HxCDF = hexachlorodibenzofuran
HpCDF = heptachlorodibenzofuran
OCDF = octachlorodibenzofuran
TEQ = toxicity equivalence
TEF = toxicity equivalency factor (unitless)
EPA = U.S. Environmental Protection Agency
NA = not applicable
< = target analyte was not detected at or above the laboratory reporting limit shown
J = concentration detected was below the calibration range, as flagged by the laboratory
M = maximum possible concentration, as flagged by the laboratory
-- = not measured or sample not collected for analysis
< = target analyte was not detected at or above the laboratory reporting limit shown

FIGURES



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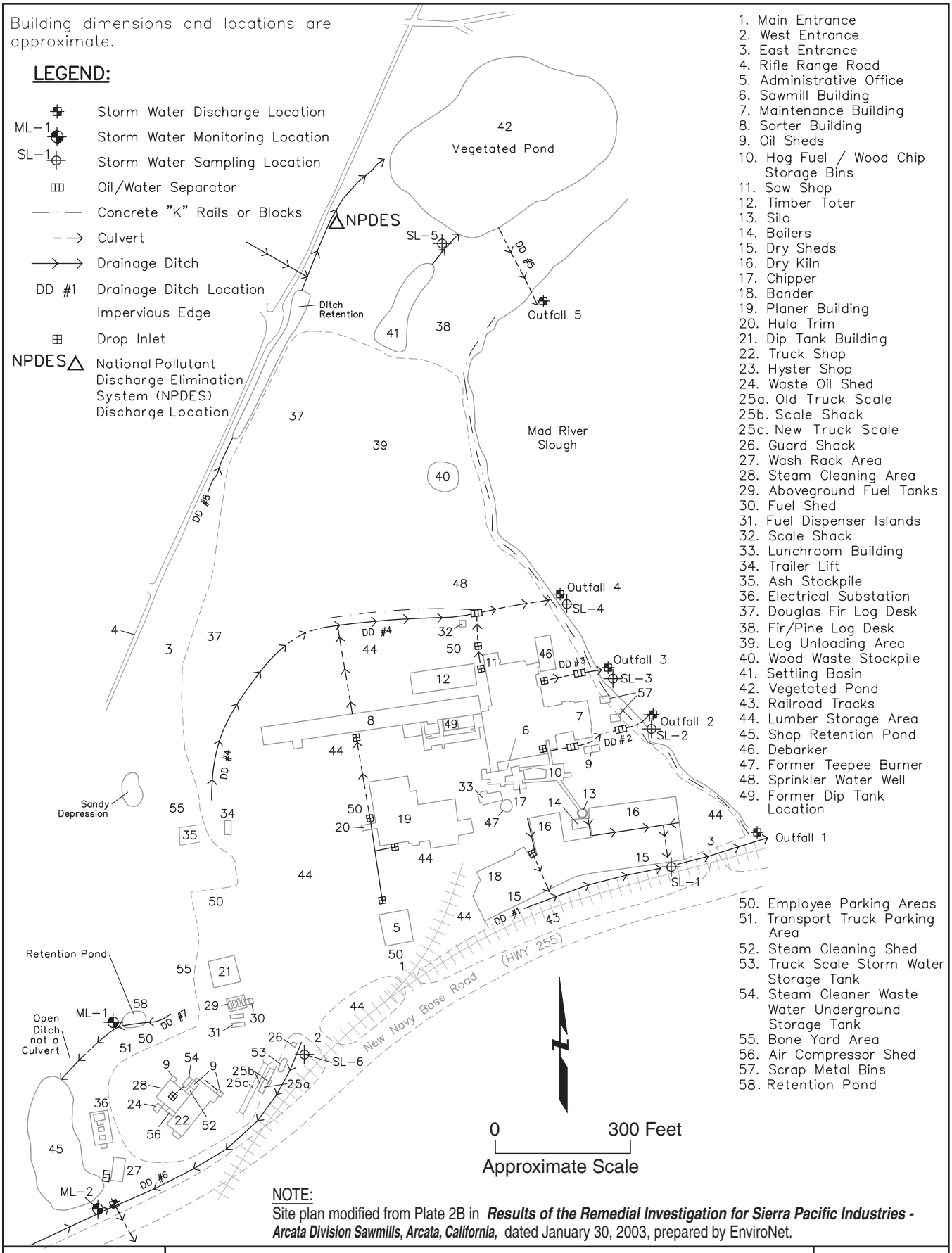
GEOMATRIX

SITE LOCATION MAP
Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

Project No.
9329

Figure No.
1



NOTE:
Site plan modified from Plate 2B in ***Results of the Remedial Investigation for Sierra Pacific Industries - Arcata Division Sawmills, Arcata, California,*** dated January 30, 2003, prepared by EnviroNet.

GEOMATRIX

SITE PLAN
Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

Project No.
9329

Figure
2

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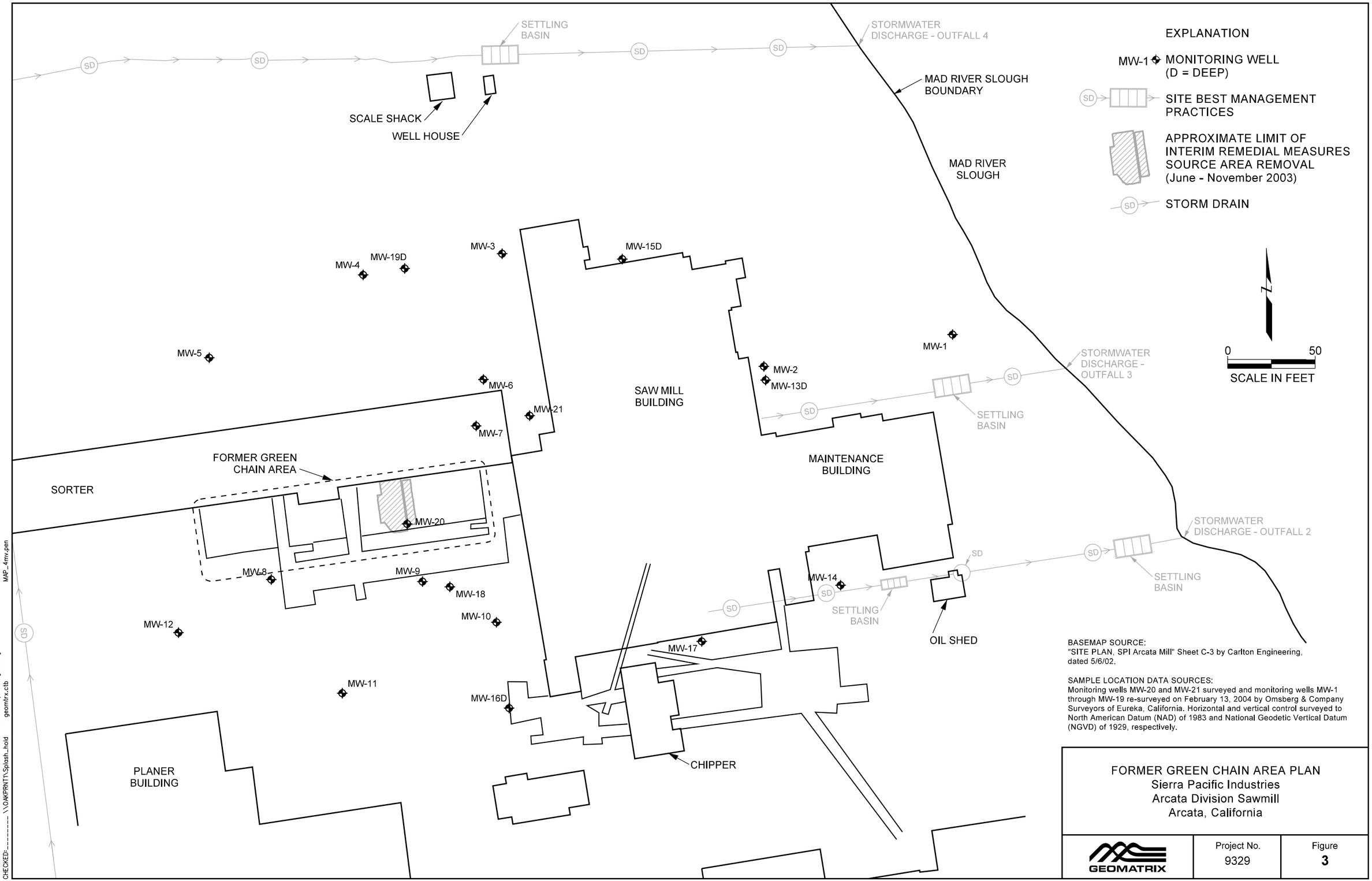

BASEMAP SOURCE:
"SITE PLAN, SPI Arcata Mill" Sheet C-3 by Carlton Engineering, dated 5/6/02.

SAMPLE LOCATION DATA SOURCES:
Monitoring wells MW-20 and MW-21 surveyed and monitoring wells MW-1 through MW-19 re-surveyed on February 13, 2004 by Omsberg & Company Surveyors of Eureka, California. Horizontal and vertical control surveyed to North American Datum (NAD) of 1983 and National Geodetic Vertical Datum (NGVD) of 1929, respectively.

FORMER GREEN CHAIN AREA PLAN
Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

GEOMATRIX	Project No. 9329	Figure 3

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SCALE IN FEET

SETTLING BASIN

STORMWATER DISCHARGE - OUTFALL 4

SD

SCALE SHACK

WELL HOUSE

MAD RIVER SLOUGH BOUNDARY

MAD RIVER SLOUGH

MW-3 8.97

MW-19D

MW-4 9.57

MW-15D

9.00

8.00

7.00

6.00

5.00

MW-5 9.96

5.12 MW-1*

4.18 MW-2

MW-13D

STORMWATER DISCHARGE - OUTFALL 3

9.05 MW-6

MW-21 8.90

SAW MILL BUILDING

SETTLING BASIN

MW-7 9.24

FORMER GREEN CHAIN AREA

MAINTENANCE BUILDING

SORTER

9.52 MW-20

5.00

6.00

STORMWATER DISCHARGE - OUTFALL 2

10.00

MW-8 9.79

MW-9 9.53

9.45 MW-18

7.00 MW-14

SETTLING BASIN

7.00

SETTLING BASIN

OIL SHED

MW-12 10.00

MW-10 9.24

8.42 MW-17

8.00

9.00

MW-11 9.59

MW-16D

CHIPPER

PLANER BUILDING

EXPLANATION

MW-1 "SHALLOW" MONITORING WELL

MW-13D "DEEP" MONITORING WELL

APPROXIMATE GROUNDWATER FLOW DIRECTION

SITE BEST MANAGEMENT PRACTICES

APPROXIMATE LIMIT OF INTERIM REMEDIAL MEASURES SOURCE AREA REMOVAL (June - November 2003)

STORM DRAIN

9.24 GROUNDWATER ELEVATION IN FEET ABOVE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988.

5.00 GROUNDWATER ELEVATION CONTOUR DRAWN TO APPROXIMATE THE GROUNDWATER POTENTIOMETRIC SURFACE. LINES OF EQUAL ELEVATION ARE SHOWN FOR CLARITY AND NOT MEANT TO IMPLY CERTAINTY; CONTOUR INTERVAL OF 1.0 FEET

* MW-1 WATER-LEVEL DATA NOT USED FOR CONTOURING BECAUSE IT IS LOCATED WITHIN THE 100-foot TIDAL INFLUENCE ZONE (EnviroNet, 2003)

BASEMAP SOURCE:
"SITE PLAN, SPI Arcata Mill" Sheet C-3 by Carlton Engineering, dated 5/6/02.

SAMPLE LOCATION DATA SOURCES:
Monitoring wells MW-20 and MW-21 surveyed and monitoring wells MW-1 through MW-19 re-surveyed on February 13, 2004 by Omsberg & Company Surveyors of Eureka, California. Horizontal and vertical control surveyed to North American Datum (NAD) of 1983 and National Geodetic Vertical Datum (NGVD) of 1929, respectively. Elevations shown are based on the NAVD of 1988 coordinate system and are 3.35 feet higher than the NGVD of 1929 elevations.

POTENTIOMETRIC SURFACE MAP OF SHALLOW GROUNDWATER MAY 17, 2004

Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

GEOMATRIX

Project No. 9329

Figure 4

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SCALE IN FEET

SETTLING BASIN

STORMWATER DISCHARGE - OUTFALL 4

SD

SCALE SHACK

WELL HOUSE

MAD RIVER SLOUGH BOUNDARY

MAD RIVER SLOUGH

EXPLANATION

MW-1 "SHALLOW" MONITORING WELL

MW-13D "DEEP" MONITORING WELL

APPROXIMATE GROUNDWATER FLOW DIRECTION

SITE BEST MANAGEMENT PRACTICES

APPROXIMATE LIMIT OF INTERIM REMEDIAL MEASURES SOURCE AREA REMOVAL (June - November 2003)

STORM DRAIN

5.62 GROUNDWATER ELEVATION IN FEET ABOVE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988.

6.00 GROUNDWATER ELEVATION CONTOUR DRAWN TO APPROXIMATE THE GROUNDWATER POTENTIOMETRIC SURFACE. LINES OF EQUAL ELEVATION ARE SHOWN FOR CLARITY AND NOT MEANT TO IMPLY CERTAINTY; CONTOUR INTERVAL OF 0.5 FEET

MW-3

MW-4

MW-19D 6.43

5.42 MW-15D

MW-5

MW-6

6.00

MW-21

MW-7

5.50

SAW MILL BUILDING

MW-1

MW-2

MW-13D 5.42

STORMWATER DISCHARGE - OUTFALL 3

SETTLING BASIN

FORMER GREEN CHAIN AREA

SORTER

MAINTENANCE BUILDING

MW-20

STORMWATER DISCHARGE - OUTFALL 2

MW-8

MW-9

MW-18

MW-10

MW-14

SETTLING BASIN

OIL SHED

MW-12

MW-17

MW-11

MW-16D 5.70

CHIPPER

PLANER BUILDING

GS

BASEMAP SOURCE:
"SITE PLAN, SPI Arcata Mill" Sheet C-3 by Carlton Engineering, dated 5/6/02.

SAMPLE LOCATION DATA SOURCES:
Monitoring wells MW-20 and MW-21 surveyed and monitoring wells MW-1 through MW-19 re-surveyed on February 13, 2004 by Omsberg & Company Surveyors of Eureka, California. Horizontal and vertical control surveyed to North American Datum (NAD) of 1983 and National Geodetic Vertical Datum (NGVD) of 1929, respectively. Elevations shown are based on the NAVD of 1988 coordinate system and are 3.35 feet higher than the NGVD of 1929 elevations.

POTENTIOMETRIC SURFACE MAP OF DEEP GROUNDWATER MAY 17, 2004

Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

GEOMATRIX

Project No. 9329

Figure **5**

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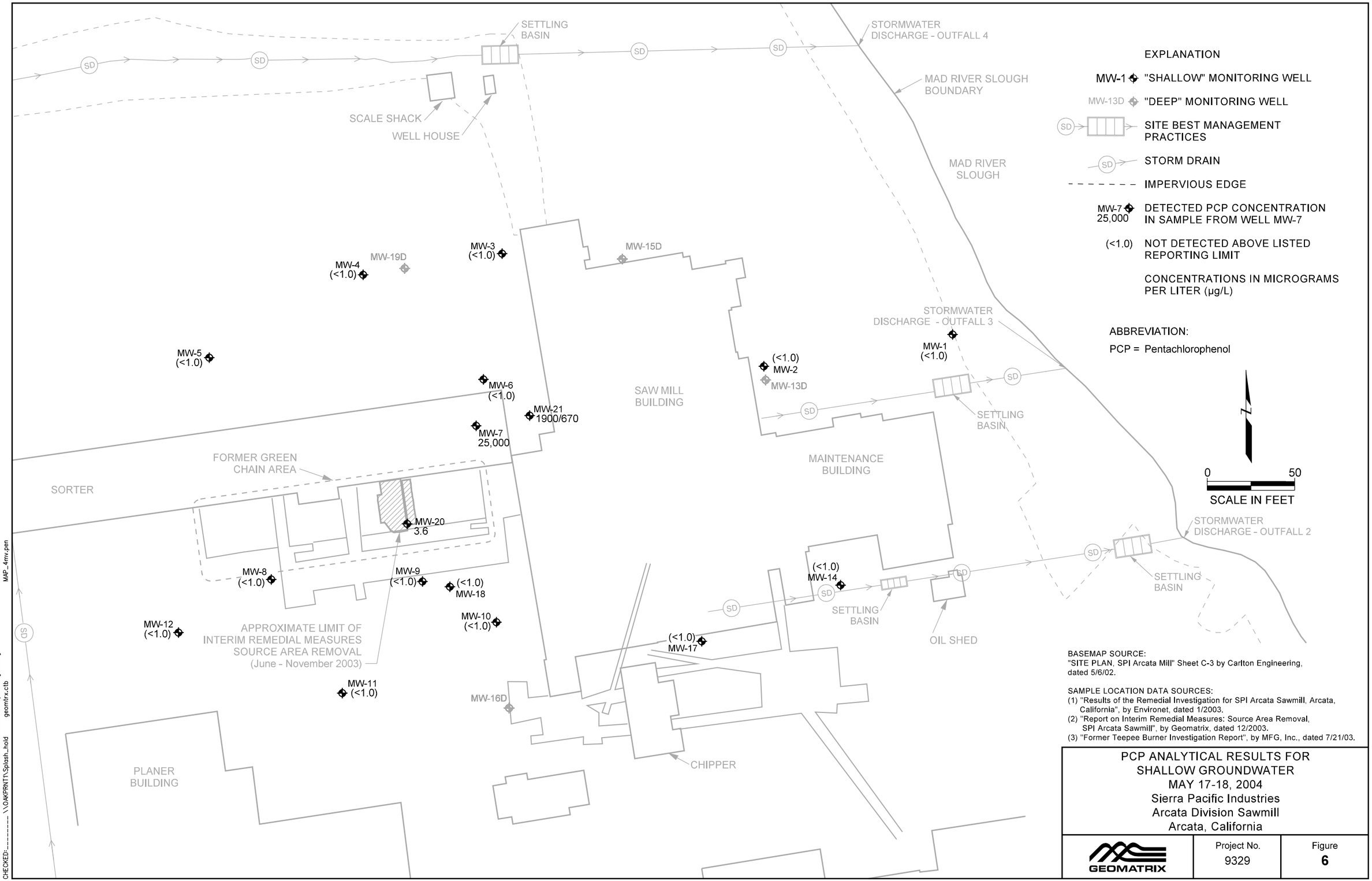

EXPLANATION

- MW-1 ◆ "SHALLOW" MONITORING WELL
- MW-13D ◆ "DEEP" MONITORING WELL
- SD — SITE BEST MANAGEMENT PRACTICES
- SD — STORM DRAIN
- IMPERVIOUS EDGE
- MW-7 ◆ 25,000 — DETECTED PCP CONCENTRATION IN SAMPLE FROM WELL MW-7
- (<1.0) — NOT DETECTED ABOVE LISTED REPORTING LIMIT

CONCENTRATIONS IN MICROGRAMS PER LITER (µg/L)

ABBREVIATION:

PCP = Pentachlorophenol

BASEMAP SOURCE:
"SITE PLAN, SPI Arcata Mill" Sheet C-3 by Carlton Engineering, dated 5/6/02.

SAMPLE LOCATION DATA SOURCES:
(1) "Results of the Remedial Investigation for SPI Arcata Sawmill, Arcata, California", by Environet, dated 1/2003.
(2) "Report on Interim Remedial Measures: Source Area Removal, SPI Arcata Sawmill", by Geomatrix, dated 12/2003.
(3) "Former Teepee Burner Investigation Report", by MFG, Inc., dated 7/21/03.

PCP ANALYTICAL RESULTS FOR SHALLOW GROUNDWATER
MAY 17-18, 2004
Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

GEOMATRIX | Project No. 9329 | Figure 6

SETTLING BASIN

STORMWATER DISCHARGE - OUTFALL 4

MAD RIVER SLOUGH BOUNDARY

MAD RIVER SLOUGH

SCALE SHACK

WELL HOUSE

(<1.0) MW-19D

MW-4

MW-3

(<1.0) MW-15D

MW-5

MW-6

MW-21

MW-7

SAW MILL BUILDING

STORMWATER DISCHARGE - OUTFALL 3

MW-1

MW-2

MW-13D (<1.0)

SETTLING BASIN

MAINTENANCE BUILDING

FORMER GREEN CHAIN AREA

SORTER

MW-20

MW-8

MW-9

MW-18

MW-10

MW-12

APPROXIMATE LIMIT OF INTERIM REMEDIAL MEASURES SOURCE AREA REMOVAL (June - November 2003)

MW-11

MW-16D (<1.0)

CHIPPER

PLANER BUILDING

MW-14

SETTLING BASIN

OIL SHED

STORMWATER DISCHARGE - OUTFALL 2

SETTLING BASIN

MW-17

N

0 50

SCALE IN FEET

EXPLANATION

MW-1 "SHALLOW" MONITORING WELL

MW-13D "DEEP" MONITORING WELL

SITE BEST MANAGEMENT PRACTICES

STORM DRAIN

IMPERVIOUS EDGE

(<1.0) NOT DETECTED ABOVE LISTED REPORTING LIMIT

CONCENTRATIONS IN MICROGRAMS PER LITER (µg/L)

ABBREVIATION:

PCP = Pentachlorophenol

BASEMAP SOURCE:
"SITE PLAN, SPI Arcata Mill" Sheet C-3 by Carlton Engineering, dated 5/6/02.

SAMPLE LOCATION DATA SOURCES:
(1) "Results of the Remedial Investigation for SPI Arcata Sawmill, Arcata, California", by Environet, dated 1/2003.
(2) "Report on Interim Remedial Measures: Source Area Removal, SPI Arcata Sawmill", by Geomatrix, dated 12/2003.
(3) "Former Teepee Burner Investigation Report", by MFG, Inc., dated 7/21/03.

PCP ANALYTICAL RESULTS FOR DEEP GROUNDWATER MAY 17-18, 2004

Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

GEOMATRIX

Project No. 9329

Figure 7

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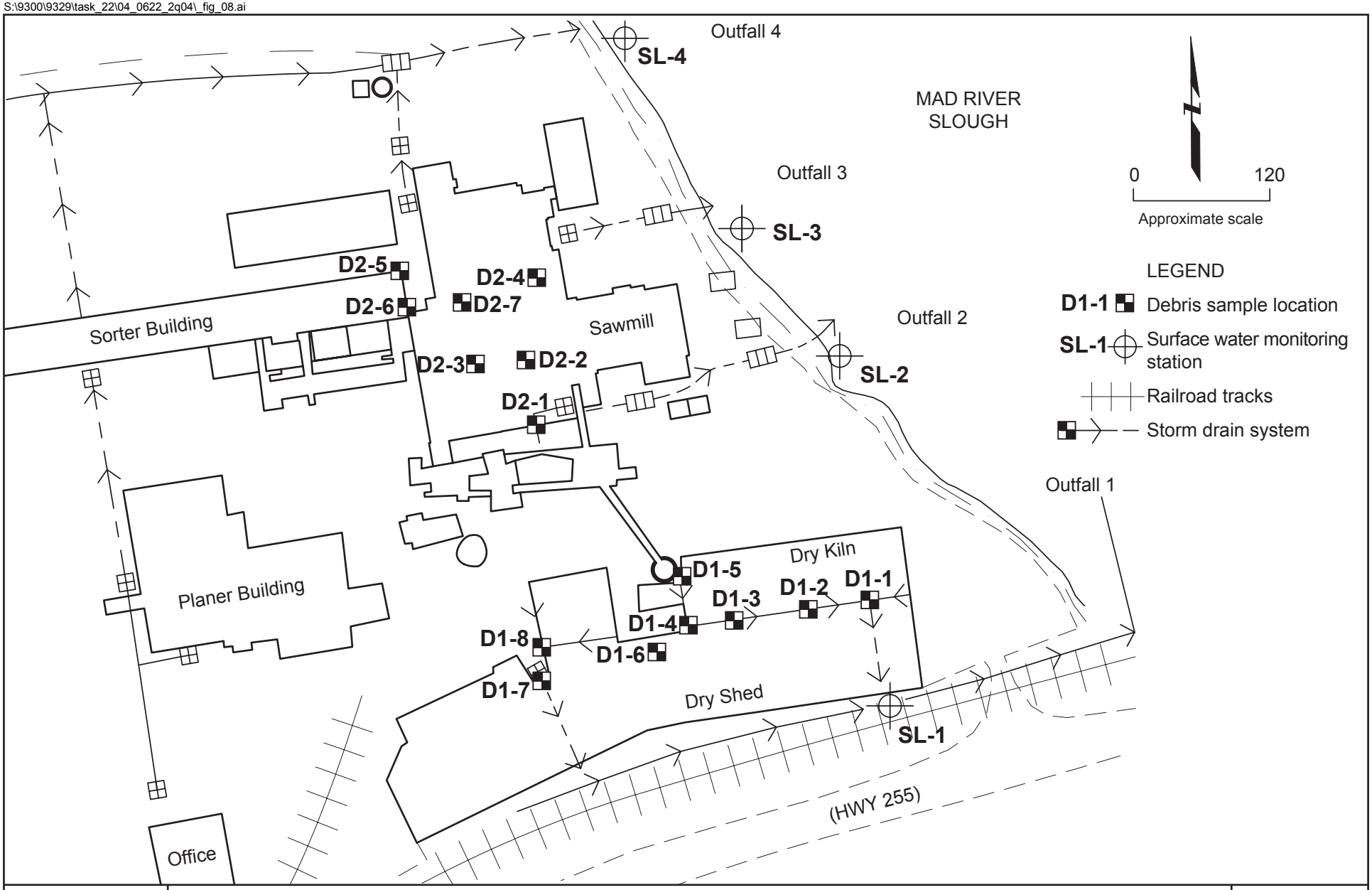

GEOMATRIX

DEBRIS SAMPLE LOCATIONS
Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

Project No.
9329

Figure
8

APPENDIX A

Field Records – Groundwater Monitoring Program

WATER LEVEL MONITORING RECORD

WELL NUMBER or DATE: 5/17/04

Project No: 030275.22 Project Name: SPI Arcata Sawmill PAGE: 1 of 1

Weather Conditions:

Measuring Point of Well (MP): Notch or North

Measuring Device: Envirotech LTD, Waterline Model 150

Observations / Comments: Total Depth

DATE or WELL	TIME	MP ELEVATION (feet , NGVD)	DEPTH TO WATER (feet below MP)	CONVERSIONS or CORRECTIONS TO DEPTH TO WATER	WATER LEVEL ELEVATION (feet , NGVD)	REMARKS	MEASURED BY
MW-1	917	9.56	4.57	7.90			M.Hillyard
MW-2	922	9.49	5.43				
MW-3	930	11.14					
MW-4	934	10.71	1.17				
MW-5	940	10.69	0.73				
MW-6		9.77					
MW-7		9.68					
MW-8	855	10.30	0.54	7.80			
MW-9	900	9.86	2.38	7.80			
MW-10	903	9.80	0.61				
MW-11	857	10.26	0.69				
MW-12	8:50	10.73	0.76				
MW-13D	920	9.84	4.54	19.10			
MW-14	910	9.02	2.15	7.90			
MW-15D	926	11.08					
MW-16D	905	9.80	4.13				
MW-17	908	8.98	0.74	7.60			
MW-18	901		0.47				
MW-19D	932	11.00	4.63				
MW-20							
MW-21							
RR	8:15	15.70	14.45				
RR		15.70					

Measured by:

Checked by:

Water Levels Form, Rev: 8-8-95

McCulley, Frick & Gilman, Inc.

GROUNDWATER SAMPLING RECORD

PAGE: 1 of: 1

SAMPLE NUMBER: MW-1

Project No: 030275.22 Project Name: SPI Arcata Sawmill Date 05/17/04

Sampling Location (well ID, etc.): MW-1

Sampled by: Matt Hillyard

Measuring Point (MP) of Well: 9.56

Screened Interval (ft.BGL): 2.0-8.0

Filter Pack Interval (ft.BGL): 1.5-8.0

Casing Stick-Up/Down (ft.):

Starting Water Level (ft. BMP): 4.57

Total Depth (ft. BMP): 7.90 Water Column Height (ft.): 3.33

Casing Diameter (in. ID): 2-Inch Multiplication Factor: 0.163

Casing Volume (gal.): ~.54 2X: 1.1 3X 1.63 4X

Water Level (ft.BMP) at End of Purge: 5.50

Total Depth (ft. BMP) at End of Purge:

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Liquinox detergent & distilled water solution followed by triple rinse w/ distilled water.

Purging: Disposable Teflon Bailer Sampling: Disposable Teflon Bailer

Disposal of Discharged Water: 55-Gallon Drum

INSTRUMENTS (indicate make, model, i.d.):

Water Level: Envirotech LTD, Waterline Model 150 Thermometer: Ultrameter

pH Meter: Ultrameter Field Calibration: pH 4, 7, 10

Conductivity Meter: Ultrameter Field Calibration: 447, 2070 µmhos

Other: TDS Ultrameter Field Calibration: 300,1500 ppm

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics: Cumul.Vol. (gal)	Purge Rate (gpm)	Water Quality Data: Temp. (°C)	pH	Specific Conductance (µmhos/cm): @ Field Temp.	@ 25 °C.	Appearance: Color	Turbidity & Sediment	Intake Depth (ft. BMP)	Remarks
1347	0		15.7	7.30		2611	lt yellow	clear		
1348	.5		15.4	6.83		2641	"	"		
1349	1		15.3	6.67		2636	lt gray	cloudy		
1350	1.5		15.2	6.52		2615	gray	cloudy		
1351	2.0		15.1	6.33		2609	"	"		
1351	2.5		15.0	6.33		2635	"	TDS: 1299 ppm		sample

SAMPLE INVENTORY

Water Level (ft. BMP) Before Sampling: 5.20 Recovery %: 81 Sample Intake Depth (ft. BMP):

Bottles Collected: Time	Volume	Composition (glass, plastic)	Quantity	Filtration (Y/N)	Preservation (type)	Analysis	Remarks (quality control sample, other)
1353	125 ml	Glass	2	N	-	PCP/TCP	
	1 Qt	Plastic	1	N	-	TDS	

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GROUNDWATER SAMPLING RECORD

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SAMPLE NUMBER: MW-2

Project No: 030275.22 Project Name: SPI Arcata Sawmill Date 05/17/04

Sampling Location (well ID, etc.): MW-2

Sampled by: Matt Hillyard

Measuring Point (MP) of Well:

Screened Interval (ft.BGL): 2.0-8.0

Filter Pack Interval (ft.BGL): 1.5-9.0

Casing Stick-Up/Down (ft.):

Starting Water Level (ft. BMP): 5.43

Total Depth (ft. BMP): 7.90 Water Column Height (ft.): 2.47

Casing Diameter (in. ID): 2-Inch Multiplication Factor: 0.163

Casing Volume (gal.): .4 2X: .8 3X 1.2 4X

Water Level (ft.BMP) at End of Purge: 6.65

Total Depth (ft. BMP) at End of Purge:

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Liquinox detergent & distilled water solution followed by triple rinse w/ distilled water.

Purging: Disposable Teflon Barter Sampling: Disposable Teflon Bailer

Disposal of Discharged Water: 55-Gallon Drum

INSTRUMENTS (indicate make, model, i.d.):

Water Level: Envirotech LTD, Waterline Model 150 Thermometer: Ultrameter

pH Meter: Ultrameter Field Calibration: pH 4, 7, 10

Conductivity Meter: Ultrameter Field Calibration: 447, 2070 µmhos

Other: TDS Ultrameter Field Calibration: 300,1500 ppm

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics: Cumul.Vol. (gal)	Purge Rate (gpm)	Water Quality Data: Temp. (°C)	pH	Specific Conductance (µmhos/cm): @ Field Temp.	@ 25 °C.	Appearance: Color	Turbidity & Sediment	Intake Depth (ft. BMP)	Remarks
1400	0		15.2	6.71		1436	Clear	Cloudy		
1401	.5		14.9	6.51		1434	Clear	Slightly Cloudy		
1402	1		14.9	6.23		1434	ltgray	Cloudy		
1403	1.5		14.8	6.18		1437	"	TDS=982		sample

SAMPLE INVENTORY

Water Level (ft. BMP) Before Sampling: 5.65 Recovery %: 91 Sample Intake Depth (ft. BMP):

Bottles Collected: Time	Volume	Composition (glass, plastic)	Quantity	Filtration (Y/N)	Preservation (type)	Analysis	Remarks (quality control sample, other)
1405	125 ml	Glass	2	N	-	PCP/TCP	
	1 Qt	Plastic	1	N	-	TDS	

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GROUNDWATER SAMPLING RECORD

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SAMPLE NUMBER: MW-3

Project No: 030275.22 Project Name: SPI Arcata Sawmill Date 05/17/04

Sampling Location (well ID, etc.): MW-3
Sampled by: Matt Hillyard
Measuring Point (MP) of Well: 11.14
Screened Interval (ft.BGL): 2.0-8.0
Filter Pack Interval (ft.BGL): 1.5-8.5
Casing Stick-Up/Down (ft.):

Starting Water Level (ft. BMP): 2.25
Total Depth (ft. BMP): 7.90 Water Column Height (ft.): 5.65
Casing Diameter (in. ID): 2-Inch Multiplication Factor: 0.163
Casing Volume (gal.): .92 2X: 1.84 3X: 2.8 4X:
Water Level (ft.BMP) at End of Purge: 2.50
Total Depth (ft. BMP) at End of Purge:

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: Liquinox detergent & distilled water solution followed by triple rinse w/ distilled water.
Purging: Disposable Teflon Bailer Sampling: Disposable Teflon Bailer
Disposal of Discharged Water: 55-Gallon Drum

INSTRUMENTS (indicate make, model, i.d.):
Water Level: Envirotech LTD, Waterline Model 150 Thermometer: Ultrameter
pH Meter: Ultrameter Field Calibration: pH 4, 7, 10
Conductivity Meter: Ultrameter Field Calibration: 447, 2070 µmhos
Other: TDS Ultrameter Field Calibration: 300,1500 ppm

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics: Cumul.Vol. (gal)	Purge Rate (gpm)	Water Quality Data: Temp. (°C)	pH	Specific Conductance (µmhos/cm): @ Field Temp.	@ 25 °C.	Appearance: Color	Turbidity & Sediment	Intake Depth (ft. BMP)	Remarks
1505	0		15.8	6.62		1004	Clear	clear		
1505	1		15.8	6.36		1080	Hazy	Slightly cloudy		
1506	2		15.4	6.14		1058	"	"		
1507	3		15.7	6.32			"	"		
1507	3.5		15.7	6.17		1119	"	"		
1508	4.0		15.7	6.16		1108	"	TDS = 752 ppm		Sample

SAMPLE INVENTORY

Water Level (ft. BMP) Before Sampling: 2.50 Recovery %: 96 Sample Intake Depth (ft. BMP):

Bottles Collected: Time	Volume	Composition (glass, plastic)	Quantity	Filtration (Y/N)	Preservation (type)	Analysis	Remarks (quality control sample, other)
1510	125 ml	Glass	2	N	-	PCP/TCP	
	1 Qt	Plastic	1	N	-	TDS	

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SAMPLE NUMBER: MW-4

Project No: 030275.22 Project Name: SPI Arcata Sawmill Date 05/17/04

Sampling Location (well ID, etc.): MW-4

Sampled by: Matt Hillyard

Measuring Point (MP) of Well: 10.71

Screened Interval (ft.BGL): 2.0-8.0

Filter Pack Interval (ft.BGL): 1.5-8.0

Casing Stick-Up/Down (ft.):

Starting Water Level (ft. BMP): 1.17

Total Depth (ft. BMP): 7.80 Water Column Height (ft.): 6.63

Casing Diameter (in. ID): 2-Inch Multiplication Factor: 0.163

Casing Volume (gal.): 1.1 2X: 2.2 3X: 3.3 4X:

Water Level (ft.BMP) at End of Purge: 2.45

Total Depth (ft. BMP) at End of Purge:

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Liquinox detergent & distilled water solution followed by triple rinse w/ distilled water

Purging: Disposable Teflon Bailer Sampling: Disposable Teflon Bailer

Disposal of Discharged Water: 55-Gallon Drum

INSTRUMENTS (indicate make, model, i.d.):

Water Level: Envirotech LTD, Waterline Model 150 Thermometer: Ultrameter

pH Meter: Ultrameter Field Calibration: pH 4, 7, 10

Conductivity Meter: Ultrameter Field Calibration: 447, 2070 µmhos

Other: TDS Ultrameter Field Calibration: 300,1500 ppm

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics: Cumul.Vol. (gal)	Purge Rate (gpm)	Water Quality Data: Temp. (°C)	pH	Specific Conductance (µmhos/cm): @ Field Temp.	@ 25 °C.	Appearance: Color	Turbidity & Sediment	Intake Depth (ft. BMP)	Remarks
1540	0		18.8	6.67		829	clear	clear		
1542	1.5		18.3	6.27		869	lt gray	slightly cloudy		
1543	2		18.0	6.20		885	"	"		
1544	3		17.7	6.18		886	"	cloudy		
1545	3.5		17.7	6.16		884	"	"		sample
								TDS: 540ppm		

SAMPLE INVENTORY

Water Level (ft. BMP) Before Sampling: 2.10 Recovery %: 86 Sample Intake Depth (ft. BMP):

Bottles Collected: Time	Volume	Composition (glass, plastic)	Quantity	Filtration (Y/N)	Preservation (type)	Analysis	Remarks (quality control sample, other)
1546	125 ml	Glass	2	N	-	PCP/TCP	
	1 Qt	Plastic	1	N	-	TDS	

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GROUNDWATER SAMPLING RECORD

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SAMPLE NUMBER: MW-5

Project No: 030275.22 Project Name: SPI Arcata Sawmill Date 05/17/04

Sampling Location (well ID, etc.): MW-5

Sampled by: Matt Hillyard

Measuring Point (MP) of Well: 10.69

Screened Interval (ft.BGL): 2.0-8.0

Filter Pack Interval (ft.BGL): 1.5-8.0

Casing Stick-Up/Down (ft.):

Starting Water Level (ft. BMP): 0.78

Total Depth (ft. BMP): 7.80 Water Column Height (ft): 7.02

Casing Diameter (in. ID): 2-Inch Multiplication Factor: 0.163

Casing Volume (gal.): 1.14 2X: 2.28 3X 3.43 4X

Water Level (ft.BMP) at End of Purge: 1.20

Total Depth (ft. BMP) at End of Purge:

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Liquinox detergent & distilled water solution followed by triple rinse w/ distilled water

Purging: Disposable Teflon Bailer Sampling: Disposable Teflon Bailer

Disposal of Discharged Water: 55-Gallon Drum

INSTRUMENTS (indicate make, model, i.d.):

Water Level: Envirotech LTD, Waterline Model 150 Thermometer: Ultrameter

pH Meter: Ultrameter Field Calibration: pH 4, 7, 10

Conductivity Meter: Ultrameter Field Calibration: 447, 2070 µmhos

Other: TDS Ultrameter Field Calibration: 300,1500 ppm

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics: Cumul.Vol. (gal)	Purge Rate (gpm)	Water Quality Data: Temp. (°C)	pH	Specific Conductance (µmhos/cm): @ Field Temp.	@ 25 °C.	Appearance: Color	Turbidity & Sediment	Intake Depth (ft. BMP)	Remarks
1605	0		17.4	7.02		676	clear	clear		
1606	1		16.1	6.87		665	"	"		
1607	2		15.4	6.58		665	"	"		
1608	3		15.3	6.37		664	"	"		
			15.2	6.32		662	"	TDS= 438 ppm		sample

SAMPLE INVENTORY

Water Level (ft. BMP) Before Sampling: 1.20 Recovery %: 94 Sample Intake Depth (ft. BMP):

Bottles Collected: Time	Volume	Composition (glass, plastic)	Quantity	Filtration (Y/N)	Preservation (type)	Analysis	Remarks (quality control sample, other)
1610	125 ml	Glass	2	N	-	PCP/TCP	
	1 Qt	Plastic	1	N	-	TDS	

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SAMPLE NUMBER: MW-6

Project No: 030275.22 Project Name: SPI Arcata Sawmill Date 05/17/04

Sampling Location (well ID, etc.): MW-6

Sampled by: Matt Hillyard

Measuring Point (MP) of Well: 9.77

Screened Interval (ft.BGL): 2.0-8.0

Filter Pack Interval (ft.BGL): 1.5-8.0

Casing Stick-Up/Down (ft.):

Starting Water Level (ft. BMP): 0.78

Total Depth (ft. BMP): 7.80 Water Column Height (ft.): 7.02

Casing Diameter (in. ID): 2-Inch Multiplication Factor: 0.163

Casing Volume (gal.): 1.14 2X: 2.28 3X: 3.43 4X:

Water Level (ft.BMP) at End of Purge: 2.05

Total Depth (ft. BMP) at End of Purge: ~~2.0~~

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Liquinox detergent & distilled water solution followed by triple rinse w/ distilled water

Purging: Disposable Teflon Bailer Sampling: Disposable Teflon Bailer

Disposal of Discharged Water: 55-Gallon Drum

INSTRUMENTS (indicate make, model, i.d.):

Water Level: Envirotech LTD, Waterline Model 150 Thermometer: Ultrameter

pH Meter: Ultrameter Field Calibration: pH 4, 7, 10

Conductivity Meter: Ultrameter Field Calibration: 447, 2070 µmhos

Other: TDS Ultrameter Field Calibration: 300,1500 ppm

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics: Cumul.Vol. (gal)	Purge Rate (gpm)	Water Quality Data: Temp. (°C)	pH	Specific Conductance (µmhos/cm): @ Field Temp.	@ 25 °C.	Appearance: Color	Turbidity & Sediment	Intake Depth (ft. BMP)	Remarks
1621	0		14.1	6.67		891	clear	clear		
1622	1.5		13.8	6.34		954	clear	"		
1623	2		13.7	6.31		958	lt gray	slightly cloudy		
1624	3		13.6	6.31		931	"	"		
1625	3.5		13.6	6.26		933	"	TDS = 645 ppm		Sample

SAMPLE INVENTORY

Water Level (ft. BMP) Before Sampling: 1.90 Recovery %: 84 Sample Intake Depth (ft. BMP):

Bottles Collected: Time	Volume	Composition (glass, plastic)	Quantity	Filtration (Y/N)	Preservation (type)	Analysis	Remarks (quality control sample, other)
1626	125 ml	Glass	2	N	-	PCP/TCP	
	1 Qt	Plastic	1	N	-	TDS	

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SAMPLE NUMBER: MW-7

Project No: 030275.22 Project Name: SPI Arcata Sawmill Date 05/17/04

Sampling Location (well ID, etc.): MW-7

Sampled by: Matt Hillyard

Measuring Point (MP) of Well: 9.68

Screened Interval (ft.BGL): 2.0-8.0

Filter Pack Interval (ft.BGL): 1.5-8.0

Casing Stick-Up/Down (ft.):

Starting Water Level (ft. BMP): 7.50

Total Depth (ft. BMP): 9.68 Water Column Height (ft.): 2.18

Casing Diameter (in. ID): 2-Inch Multiplication Factor: 0.163

Casing Volume (gal.): 1.2 2X: 2.4 3X: 3.6 4X:

Water Level (ft.BMP) at End of Purge: dry 1.80

Total Depth (ft. BMP) at End of Purge: dry

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Liquinox detergent & distilled water solution followed by triple rinse w/ distilled water

Purging: Disposable Teflon Bailer Sampling: Disposable Teflon Bailer

Disposal of Discharged Water: 55-Gallon Drum

INSTRUMENTS (indicate make, model, i.d.):

Water Level: Envirotech LTD, Waterline Model 150 Thermometer: Ultrameter

pH Meter: Ultrameter Field Calibration: pH 4, 7, 10

Conductivity Meter: Ultrameter Field Calibration: 1447, 2070 µmhos

Other: TDS Ultrameter Field Calibration: 300,1500 ppm

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics: Cumul.Vol. (gal)	Purge Rate (gpm)	Water Quality Data: Temp. (°C)	pH	Specific Conductance (µmhos/cm): @ Field Temp.	@ 25 °C.	Appearance: Color	Turbidity & Sediment	Intake Depth (ft. BMP)	Remarks
1054	0		12.8	7.93		140	Lt. Yellow	clear		
1056	1		12.2	7.37		320	"	"		
1057	2		12.1	7.05		466	"	"		
1058	3		12.0	6.78		608	"	"		
1058	3.5		12.0	6.68		629	"	"		
1059	4		12.0	6.59		687	"	"		
1059	4.5		11.9	6.55		733	"	TDS=484ppm		sample

SAMPLE INVENTORY

Water Level (ft. BMP) Before Sampling: 1.50 Recovery %: 86 Sample Intake Depth (ft. BMP):

Bottles Collected: Time	Volume	Composition (glass, plastic)	Quantity	Filtration (Y/N)	Preservation (type)	Analysis	Remarks (quality control sample, other)
1100	125 ml	Glass	2	N	-	PCP/TCP	
	1 Qt	Plastic	1	N	-	TDS	

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SAMPLE NUMBER: MW-8

Project No: 030275.22 Project Name: SPI Arcata Sawmill Date 05/17/04

Sampling Location (well ID, etc.): MW-8

Sampled by: Matt Hillyard

Measuring Point (MP) of Well: 10.3

Screened Interval (ft.BGL): 2.0-8.0

Filter Pack Interval (ft.BGL): 1.5-8.0

Casing Stick-Up/Down (ft.):

Starting Water Level (ft. BMP): ~~7.80~~ 0.54

Total Depth (ft. BMP): ~~7.80~~ 7.54 Water Column Height (ft.): 7.26

Casing Diameter (in. ID): 2-Inch Multiplication Factor: 0.163

Casing Volume (gal.): 1 2 2X: 3.4 3X: 3.6 4X: —

Water Level (ft.BMP) at End of Purge: 1.20

Total Depth (ft. BMP) at End of Purge:

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Liquinox detergent & distilled water solution followed by triple rinse w/ distilled water

Purging: Disposable Teflon Bailer Sampling: Disposable Teflon Bailer

Disposal of Discharged Water: 55-Gallon Drum

INSTRUMENTS (indicate make, model, i.d.):

Water Level: Envirotech LTD, Waterline Model 150 Thermometer: Ultrameter

pH Meter: Ultrameter Field Calibration: pH 4, 7, 10

Conductivity Meter: Ultrameter Field Calibration: 447, 2070 µmhos

Other: TDS Ultrameter Field Calibration: 300,1500 ppm

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics: Cumul.Vol. (gal)	Purge Rate (gpm)	Water Quality Data: Temp. (°C)	pH	Specific Conductance (µmhos/cm): @ Field Temp.	@ 25 °C.	Appearance: Color	Turbidity & Sediment	Intake Depth (ft. BMP)	Remarks
1036	0		19.1	6.31		807	Brown	Clear		
1037	1		18.6	6.04		801	"	"		
1038	2		17.8	6.01		797	"	"		
1039	3		17.4	6.02		796	"	"		
1042	4		17.6	6.07		795	"	TDS = 530		Sample

SAMPLE INVENTORY

Water Level (ft. BMP) Before Sampling: 1.00 Recovery %: 94 Sample Intake Depth (ft. BMP):

Bottles Collected: Time	Volume	Composition (glass, plastic)	Quantity	Filtration (Y/N)	Preservation (type)	Analysis	Remarks (quality control sample, other)
1044	125 ml	Glass	2	N	-	PCP/TCP	
1044	1 Qt	Plastic	1	N	-	TDS	

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SAMPLE NUMBER: MW-9

Project No: 030275.22 Project Name: SPI Arcata Sawmill Date 05/17/04

Sampling Location (well ID, etc.): MW-9

Sampled by: Matt Hillyard

Measuring Point (MP) of Well: 9.86

Screened Interval (ft.BGL): 2.0-8.0

Filter Pack Interval (ft.BGL): 1.5-8.0

Casing Stick-Up/Down (ft.):

Starting Water Level (ft. BMP): 0.38

Total Depth (ft. BMP): 7.8 Water Column Height (ft.): 7.42

Casing Diameter (in. ID): 2-Inch Multiplication Factor: 0.163

Casing Volume (gal.): 1.2 2X: 2.4 3X 3.6 4X —

Water Level (ft.BMP) at End of Purge: 1.00

Total Depth (ft. BMP) at End of Purge:

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Liquinox detergent & distilled water solution followed by triple rinse w/ distilled water

Purging: Disposable Teflon Bailer Sampling: Disposable Teflon Bailer

Disposal of Discharged Water: 55-Gallon Drum

INSTRUMENTS (indicate make, model, i.d.):

Water Level: Envirotech LTD, Waterline Model 150 Thermometer: Ultrameter

pH Meter: Ultrameter Field Calibration: pH 4, 7, 10

Conductivity Meter: Ultrameter Field Calibration: 447, 2070 μmhos

Other: TDS Ultrameter Field Calibration: 300,1500 ppm

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics		Water Quality Data		Specific Conductance (μmhos/cm)		Appearance		Intake Depth (ft. BMP)	Remarks
	Cumul.Vol. (gal)	Purge Rate (gpm)	Temp. (°C)	pH	@ Field Temp.	@ 25 °C.	Color	Turbidity & Sediment		
1113	0		16.9	6.37		908	Clear	clear		orange [illegible]
1115	1		16.3	6.15		925	lt gray	Slightly [illegible]		
1116	2		16.1	6.14		926	"	"		
1117	3		16.1	6.13		926	"	"		
1118	4		16.1	6.12		927		TDS 6[illegible] ppm		sample

SAMPLE INVENTORY

Water Level (ft. BMP) Before Sampling: 1.00 Recovery %: 92 Sample Intake Depth (ft. BMP):

Bottles Collected				Filtration (Y/N)	Preservation (type)	Analysis	Remarks (quality control sample, other)
Time	Volume	Composition (glass, plastic)	Quantity				
1120	125 ml	Glass	2	N	-	PCP/TCP	
	1 Qt	Plastic	1	N	-	TDS	

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SAMPLE NUMBER: MW-10

Project No: 030275.22 Project Name: SPI Arcata Sawmill Date 05/17/04

Sampling Location (well ID, etc.): MW-10

Sampled by: Matt Hillyard

Measuring Point (MP) of Well: 9.80

Screened Interval (ft.BGL): 2.0-8.0

Filter Pack Interval (ft.BGL): 1.5-9.5

Casing Stick-Up/Down (ft.):

Starting Water Level (ft. BMP): 1.81

Total Depth (ft. BMP): 7.55 Water Column Height (ft.): 7.24

Casing Diameter (in. ID): 2-Inch Multiplication Factor: 0.163

Casing Volume (gal.): 1.2 2X: 2.4 3X: 3.6 4X: —

Water Level (ft.BMP) at End of Purge: 2.00

Total Depth (ft. BMP) at End of Purge:

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Liquinox detergent & distilled water solution followed by triple rinse w/ distilled water

Purging: Disposable Teflon Bailer Sampling: Disposable Teflon Bailer

Disposal of Discharged Water: 55-Gallon Drum

INSTRUMENTS (indicate make, model, i.d.):

Water Level: Envirotech LTD, Waterline Model 150 Thermometer: Ultrameter

pH Meter: Ultrameter Field Calibration: pH 4, 7, 10

Conductivity Meter: Ultrameter Field Calibration: 447, 2070 µmhos

Other: TDS Ultrameter Field Calibration: 300,1500 ppm

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics: Cumul.Vol. (gal)	Purge Rate (gpm)	Water Quality Data: Temp. (°C)	pH	Specific Conductance (µmhos/cm): @ Field Temp.	@ 25 °C.	Appearance: Color	Turbidity & Sediment	Intake Depth (ft. BMP)	Remarks
1238	0		19.4	6.67		920	clear	clear		
1239	1		19.4	6.26		923	lt.gray	slight		
1240	2		18.7	6.20		915	"	"		
1241	3		18.6	6.22		923	"	Cloudy		
1242	4		18.7	6.22		920	"	TDS=613ppm		sample

SAMPLE INVENTORY

Water Level (ft. BMP) Before Sampling: 2.00 Recovery %: 81 Sample Intake Depth (ft. BMP):

Bottles Collected: Time	Volume	Composition (glass, plastic)	Quantity	Filtration (Y/N)	Preservation (type)	Analysis	Remarks (quality control sample, other)
1244	125 ml	Glass	2	N	-	PCP/TCP	
	1 Q+	Plastic	1	N	-	TDS	

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GROUNDWATER SAMPLING RECORD

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SAMPLE NUMBER: MW-11

Project No: 030275.22 Project Name: SPI Arcata Sawmill Date 05/17/04

Sampling Location (well ID, etc.): MW-11

Sampled by: Matt Hillyard

Measuring Point (MP) of Well: 10.26

Screened Interval (ft.BGL): 2.0-8.0

Filter Pack Interval (ft.BGL): 1.5-8.5

Casing Stick-Up/Down (ft.):

Starting Water Level (ft. BMP): 8.69

Total Depth (ft. BMP): 5.45 Water Column Height (ft.): 7.26

Casing Diameter (in. ID): 2-Inch Multiplication Factor: 0.163

Casing Volume (gal.): 1.3 2X: 2.6 3X 3.9 4X —

Water Level (ft.BMP) at End of Purge: 1.10

Total Depth (ft. BMP) at End of Purge:

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Liquinox detergent & distilled water solution followed by triple rinse w/ distilled water

Purging: Disposable Teflon Bailer Sampling: Disposable Teflon Bailer

Disposal of Discharged Water: 55-Gallon Drum

INSTRUMENTS (indicate make, model, I.d.):

Water Level: Envirotech LTD, Waterline Model 150 Thermometer: Ultrameter

pH Meter: Ultrameter Field Calibration: pH 4, 7, 10

Conductivity Meter: Ultrameter Field Calibration: 447, 2070 µmhos

Other: TDS Ultrameter Field Calibration: 300,1500 ppm

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics: Cumul.Vol. (gal)	Purge Rate (gpm)	Water Quality Data: Temp. (°C)	pH	Specific Conductance (µmhos/cm): @ Field Temp.	@ 25 °C.	Appearance: Color	Turbidity & Sediment	Intake Depth (ft. BMP)	Remarks
1100	0		21.7	6.26		888		clear		
1101	1		19.7	6.20		891		cloudy		
1102	2		19.4	6.14		884		"		
1103	3		19.0	6.16		881		"		
1104	4		18.1	6.15		876		"		sample

SAMPLE INVENTORY

Water Level (ft. BMP) Before Sampling: 1.10 Recovery %: 95 Sample Intake Depth (ft. BMP):

Bottles Collected: Time	Volume	Composition (glass, plastic)	Quantity	Filtration (Y/N)	Preservation (type)	Analysis	Remarks (quality control sample, other)
1105	125 ml	Glass	2	N	-	PCP/TCP	
	1Qt	Plastic	1	N	-	TDS	

Chain-of-Custody Record No. 46253/46254

McCulley, Frick & Gilman, Inc.

GW Sample Form MAC/CAD Revised: 9-8-95

GROUNDWATER SAMPLING RECORD

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SAMPLE NUMBER: MW-12

Project No: 030275.22 Project Name: SPI Arcata Sawmill Date 05/17/04

Sampling Location (well ID, etc.): MW-12

Sampled by: Matt Hillyard

Measuring Point (MP) of Well: 10.73

Screened Interval (ft.BGL): 2.0-8.0

Filter Pack Interval (ft.BGL): 1.5-9.5

Casing Stick-Up/Down (ft.):

Starting Water Level (ft. BMP): 8.76

Total Depth (ft. BMP): 8.50 Water Column Height (ft.): 1.74

Casing Diameter (in. ID): 2-Inch Multiplication Factor: 0.163

Casing Volume (gal.): 1.3 2X: 2.6 3X: 3.9 4X: —

Water Level (ft.BMP) at End of Purge: ~~8.50~~

Total Depth (ft. BMP) at End of Purge: 8.50

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Liquinox detergent & distilled water solution followed by triple rinse w/ distilled water

Purging: Disposable Teflon Bailer Sampling: Disposable Teflon Bailer

Disposal of Discharged Water: 55-Gallon Drum

INSTRUMENTS (indicate make, model, i.d.):

Water Level: Envirotech LTD, Waterline Model 150 Thermometer: Ultrameter

pH Meter: Ultrameter Field Calibration: pH 4, 7, 10

Conductivity Meter: Ultrameter Field Calibration: 447, 2070 µmhos

Other: TDS Ultrameter Field Calibration: 300,1500 ppm

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics: Cumul.Vol. (gal)	Purge Rate (gpm)	Water Quality Data: Temp. (°C)	pH	Specific Conductance (µmhos/cm): @ Field Temp.	@ 25 °C.	Appearance: Color	Turbidity & Sediment	Intake Depth (ft. BMP)	Remarks
1019	0		19.7	5.82		891	clear	clear		
1021	1		20.2	4.84		890	yellow	clear		
1022	2		19.9	4.93		908	brown	slightly		
1023	3		19.8	6.00		904	"	"		
1025	4		19.7	6.09		905				Sample

SAMPLE INVENTORY

Water Level (ft. BMP) Before Sampling: 2.03 Recovery %: 84 Sample Intake Depth (ft. BMP):

Bottles Collected: Time	Volume	Composition (glass, plastic)	Quantity	Filtration (Y/N)	Preservation (type)	Analysis	Remarks (quality control sample, other)
1027	125 ml	Glass	2	N	-	PCP/TCP	
	1 Qt	Plastic	1	N	-	TDS	

Chain-of-Custody Record No. 46254

McCulley, Frick & Gilman, Inc.

GROUNDWATER SAMPLING RECORD

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SAMPLE NUMBER: MW-13D

Project No: 030275.22 Project Name: SPI Arcata Sawmill Date 05/17/04

Sampling Location (well ID, etc.): MW-13D

Sampled by: Matt Hillyard

Measuring Point (MP) of Well: 9.84

Screened Interval (ft.BGL): 15.0-20.0

Filter Pack Interval (ft.BGL): 13.5-21.0

Casing Stick-Up/Down (ft.):

Starting Water Level (ft. BMP): 4.54

Total Depth (ft. BMP): 19.10 Water Column Height (ft.): 14.56

Casing Diameter (in. ID): 2-Inch Multiplication Factor: 0.163

Casing Volume (gal.): 2.4 2X: 4.75 3X: 7.1 4X:

Water Level (ft.BMP) at End of Purge: 6.10

Total Depth (ft. BMP) at End of Purge:

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Liquinox detergent & distilled water solution followed by triple rinse w/ distilled water

Purging: Disposable Teflon Bailer Sampling: Disposable Teflon Bailer

Disposal of Discharged Water: 55-Gallon Drum

INSTRUMENTS (indicate make, model, i.d.):

Water Level: Envirotech LTD, Waterline Model 150 Thermometer: Ultrameter

pH Meter: Ultrameter Field Calibration: pH 4, 7, 10

Conductivity Meter: Ultrameter Field Calibration: 447, 2070 µmhos

Other: TDS Ultrameter Field Calibration: 300,1500 ppm

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics: Cumul.Vol. (gal)	Purge Rate (gpm)	Water Quality Data: Temp. (°C)	pH	Specific Conductance (µmhos/cm): @ Field Temp.	@ 25 °C.	Appearance: Color	Turbidity & Sediment	Intake Depth (ft. BMP)	Remarks
1415	0		15.5	6.98		632	clear	clear		
1417	2		14.3	5.75		690	lt. gray	slightly cloudy		
1419	4		13.9	5.72		735	"	"		
1421	6		13.9	5.78		920	"	"		
1423	7.5		13.8	5.79		1035	"	Cloudy TDS: 698ppm		sample

SAMPLE INVENTORY

Water Level (ft. BMP) Before Sampling: 6.10 Recovery %: 89 Sample Intake Depth (ft. BMP):

Bottles Collected: Time	Volume	Composition (glass, plastic)	Quantity	Filtration (Y/N)	Preservation (type)	Analysis	Remarks (quality control sample, other)
1425	125 ml	Glass	2	N	-	PCP/TCP	
	1 Qt	Plastic	1	N	-	TDS	

Chain-of-Custody Record No. 46254

McCulley, Frick & Gilman, Inc.

GROUNDWATER SAMPLING RECORD

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SAMPLE NUMBER: MW-14

Project No: 030275.22 Project Name: SPI Arcata Sawmill Date 05/17/04

Sampling Location (well ID, etc.): MW-14

Sampled by: Matt Hillyard

Measuring Point (MP) of Well: 9.02

Screened Interval (ft.BGL): 2.0-8.0

Filter Pack Interval (ft.BGL): 1.5-8.0

Casing Stick-Up/Down (ft.):

Starting Water Level (ft. BMP): 2.15

Total Depth (ft. BMP): 7.90 Water Column Height (ft.): 5.75

Casing Diameter (in. ID): 2-Inch Multiplication Factor: 0.163

Casing Volume (gal.): .94 2X: 1.9 3X: 2.8 4X:

Water Level (ft.BMP) at End of Purge: 7.35

Total Depth (ft. BMP) at End of Purge:

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Liquinox detergent & distilled water solution followed by triple rinse w/ distilled water

Purging: Disposable Teflon Bailer Sampling: Disposable Teflon Bailer

Disposal of Discharged Water: 55-Gallon Drum

INSTRUMENTS (indicate make, model, i.d.):

Water Level: Envirotech LTD, Waterline Model 150 Thermometer: Ultrameter

pH Meter: Ultrameter Field Calibration: pH 4, 7, 10

Conductivity Meter: Ultrameter Field Calibration: 447, 2070 µmhos

Other: TDS Ultrameter Field Calibration: 300,1500 ppm

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics: Cumul.Vol. (gal)	Purge Rate (gpm)	Water Quality Data: Temp. (°C)	pH	Specific Conductance (µmhos/cm): @ Field Temp.	@ 25 °C.	Appearance: Color	Turbidity & Sediment	Intake Depth (ft. BMP)	Remarks
1327	0		18.0	6.11		2920	Yellow	clear		
1328	1		17.9	6.19		2813	"	"		
1329	2		16.8	6.20		3150	"	cloudy		
1332	3		15.8	6.21		3480	gray	very turbid		bottom of well, poor recharge
										wait 2 hrs
1555			16.9	6.38		2824	Yellow	clear TDS: 2046ppm		Sample

SAMPLE INVENTORY

Water Level (ft. BMP) Before Sampling: 4.93 Recovery %: 52 Sample Intake Depth (ft. BMP):

Bottles Collected: Time	Volume	Composition (glass, plastic)	Quantity	Filtration (Y/N)	Preservation (type)	Analysis	Remarks (quality control sample, other)
1555	125 ml	Glass	2	N	-	PCP/TCP	
	1 Qt	Plastic	1	N	-	TDS	

Chain-of-Custody Record No. 46254

McCulley, Frick & Gilman, Inc.

GROUNDWATER SAMPLING RECORD

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SAMPLE NUMBER: MW-15D

Project No: 030275.22 Project Name: SPI Arcata Sawmill Date 05/17/04

Sampling Location (well ID, etc.): MW-15D
Sampled by: Matt Hillyard
Measuring Point (MP) of Well: 11.08
Screened Interval (ft.BGL): 15.0-20.0
Filter Pack Interval (ft.BGL): 14.0-21.0
Casing Stick-Up/Down (ft.):

Starting Water Level (ft. BMP): 5.77
Total Depth (ft. BMP): 19.90 Water Column Height (ft.): 14.13
Casing Diameter (in. ID): 2-Inch Multiplication Factor: 0.163
Casing Volume (gal.): 2.3 2X: 4.6 3X 6.9 4X
Water Level (ft.BMP) at End of Purge: 5.55
Total Depth (ft. BMP) at End of Purge:

QUALITY ASSURANCE

METHODS (describe):
Cleaning Equipment: Liquinox detergent & distilled water solution followed by triple rinse w/ distilled water
Purging: Disposable Teflon Bailer Sampling: Disposable Teflon Bailer
Disposal of Discharged Water: 55-Gallon Drum

INSTRUMENTS (indicate make, model, i.d.):
Water Level: Envirotech LTD, Waterline Model 150 Thermometer: Ultrameter
pH Meter: Ultrameter Field Calibration: pH 4, 7, 10
Conductivity Meter: Ultrameter Field Calibration: 447, 2070 µmhos
Other: TDS Ultrameter Field Calibration: 300,1500 ppm

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics: Cumul.Vol. (gal)	Purge Rate (gpm)	Water Quality Data: Temp. (°C)	pH	Specific Conductance (µmhos/cm): @ Field Temp.	@ 25 °C.	Appearance: Color	Turbidity & Sediment	Intake Depth (ft. BMP)	Remarks
1436	0		13.5	6.70		802	clear	clear		
1438	2		13.3	5.95		1090	"	"		
1440	4		13.4	6.22		1311	lt. yellow	clear		
1443	6		13.4	6.35		1350	"	"		
1445	7		13.4	6.30		1360	"	TDS=928	ppm	Sample

SAMPLE INVENTORY

Water Level (ft. BMP) Before Sampling: 5.55 Recovery %: ~~98~~ 102 Sample Intake Depth (ft. BMP):

Bottles Collected: Time	Volume	Composition (glass, plastic)	Quantity	Filtration (Y/N)	Preservation (type)	Analysis	Remarks (quality control sample, other)
1448	125 ml	Glass	2	N	-	PCP/TCP	
	1 Qt	Plastic	1	N	-	TDS	

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McCulley, Frick & Gilman, Inc.

GROUNDWATER SAMPLING RECORD

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SAMPLE NUMBER: MW-16D

Project No: 030275.22 Project Name: SPI Arcata Sawmill Date 05/7/04

Sampling Location (well ID, etc.): MW-16D

Sampled by: Matt Hillyard

Measuring Point (MP) of Well: 9.80

Screened Interval (ft.BGL): 15.0-20.0

Filter Pack Interval (ft.BGL): 14.0-21.5

Casing Stick-Up/Down (ft.):

Starting Water Level (ft. BMP): 4.13

Total Depth (ft. BMP): 19.65 Water Column Height (ft.): 15.52

Casing Diameter (in. ID): 2-Inch Multiplication Factor: 0.163

Casing Volume (gal.): 2.5 2X: 5.0 3X: 7.5 4X: —

Water Level (ft.BMP) at End of Purge: 4.50

Total Depth (ft. BMP) at End of Purge:

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Liquinox detergent & distilled water solution followed by triple rinse w/ distilled water

Purging: Disposable Teflon Bailer Sampling: Disposable Teflon Bailer

Disposal of Discharged Water: 55-Gallon Drum

INSTRUMENTS (indicate make, model, i.d.):

Water Level: Envirotech LTD, Waterline Model 150 Thermometer: Ultrameter

pH Meter: Ultrameter Field Calibration: pH 4, 7, 10

Conductivity Meter: Ultrameter Field Calibration: 447, 2070 µmhos

Other: TDS Ultrameter Field Calibration: 300,1500 ppm

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics: Cumul.Vol. (gal)	Purge Rate (gpm)	Water Quality Data: Temp. (°C)	pH	Specific Conductance (µmhos/cm): @ Field Temp.	@ 25 °C.	Appearance: Color	Turbidity & Sediment	Intake Depth (ft. BMP)	Remarks
1250	0		16.4	6.66		3837	amber	clear		
1252	2		15.0	7.19		3950	"	"		
1254	4		14.9	7.16		4860	"	"		
1257	6		14.9	7.24		4695	"	"		
1300	8		14.9	7.26		4562		TDS 3457 ppm		sample

SAMPLE INVENTORY

Water Level (ft. BMP) Before Sampling: 4.50 Recovery %: 95 Sample Intake Depth (ft. BMP):

Bottles Collected: Time	Volume	Composition (glass, plastic)	Quantity	Filtration (Y/N)	Preservation (type)	Analysis	Remarks (quality control sample, other)
1302	125 ml	Glass	2	N	-	PCP/TCP	
	1Qt	Plastic	1	N	-	TDS	

Chain-of-Custody Record No. 46271

McCulley, Frick & Gilman, Inc.

GROUNDWATER SAMPLING RECORD

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SAMPLE NUMBER: MW-17

Project No: 030275.22 Project Name: SPI Arcata Sawmill Date 05/17/04

Sampling Location (well ID, etc.): MW-17

Sampled by: Matt Hillyard

Measuring Point (MP) of Well: 9.98

Screened Interval (ft.BGL): 2.0-8.0

Filter Pack Interval (ft.BGL): 1.5-9.0

Casing Stick-Up/Down (ft.):

Starting Water Level (ft. BMP): 3.74

Total Depth (ft. BMP): 7.60 Water Column Height (ft.): 3.86

Casing Diameter (in. ID): 2-Inch Multiplication Factor: 0.163

Casing Volume (gal.): 1.1 2X: 2.2 3X: 3.3 4X:

Water Level (ft.BMP) at End of Purge: 3.10

Total Depth (ft. BMP) at End of Purge:

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Liquinox detergent & distilled water solution followed by triple rinse w/ distilled water

Purging: Disposable Teflon Bailer Sampling: Disposable Teflon Bailer

Disposal of Discharged Water: 55-Gallon Drum

INSTRUMENTS (indicate make, model, i.d.):

Water Level: Envirotech LTD, Waterline Model 150 Thermometer: Ultrameter

pH Meter: Ultrameter Field Calibration: pH 4, 7, 10

Conductivity Meter: Ultrameter Field Calibration: 447, 2070 µmhos

Other: TDS Ultrameter Field Calibration: 300,1500 ppm

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics: Cumul.Vol. (gal)	Purge Rate (gpm)	Water Quality Data: Temp. (°C)	pH	Specific Conductance (µmhos/cm): @ Field Temp.	@ 25 °C.	Appearance: Color	Turbidity & Sediment	Intake Depth (ft. BMP)	Remarks
1308	0		17.2	7.16		911	clear	clear		
1309	1		16.0	7.00		908	"	"		
1310	2		15.6	6.67		922	"	"		
1311	3		15.4	6.52		941	lt gray	slightly cloudy		
1312	3.5		15.3	6.50		944	"	TDS=620ppm		sample

SAMPLE INVENTORY

Water Level (ft. BMP) Before Sampling: 2.04 Recovery %: 81 Sample Intake Depth (ft. BMP):

Bottles Collected: Time	Volume	Composition (glass, plastic)	Quantity	Filtration (Y/N)	Preservation (type)	Analysis	Remarks (quality control sample, other)
1315	125 ml	Glass	2	N	-	PCP/TCP	
	1 Qt	Plastic	1	N	-	TDS	

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McCulley, Frick & Gilman, Inc.

GROUNDWATER SAMPLING RECORD

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SAMPLE NUMBER: MW-18

Project No: 030275.22 Project Name: SPI Arcata Sawmill Date 05/17/04

Sampling Location (well ID, etc.): MW-18

Sampled by: Matt Hillyard

Measuring Point (MP) of Well:

Screened Interval (ft.BGL):

Filter Pack Interval (ft.BGL):

Casing Stick-Up/Down (ft.):

Starting Water Level (ft. BMP): 1.47

Total Depth (ft. BMP): 8.35 Water Column Height (ft.): 7.88

Casing Diameter (in. ID): 4-Inch Multiplication Factor: 0.653

Casing Volume (gal.): 5.1 2X: 10.2 3X 15.3 4X

Water Level (ft.BMP) at End of Purge: 1.60

Total Depth (ft. BMP) at End of Purge:

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Liquinox detergent & distilled water solution followed by triple rinse w/ distilled water

Purging: Disposable Teflon Bailer Sampling: Disposable Teflon Bailer

Disposal of Discharged Water: 55-Gallon Drum

INSTRUMENTS (indicate make, model, i.d.):

Water Level: Envirotech LTD, Waterline Model 150 Thermometer: Ultrameter

pH Meter: Ultrameter Field Calibration: pH 4, 7, 10

Conductivity Meter: Ultrameter Field Calibration: 447, 2070 µmhos

Other: TDS Ultrameter Field Calibration: 300,1500 ppm

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics: Cumul.Vol. (gal)	Purge Rate (gpm)	Water Quality Data: Temp. (°C)	pH	Specific Conductance (µmhos/cm): @ Field Temp.	@ 25 °C.	Appearance: Color	Turbidity & Sediment	Intake Depth (ft. BMP)	Remarks
1128	0		20.6	6.20		877	clear	clear		
1131	4		19.7	6.14		922	"	"		
1135	8		19.4	6.24		968	"	"		
1139	12		19.6	6.28		1029	"	"		
1144	16		19.4	6.33		945				sample

SAMPLE INVENTORY

Water Level (ft. BMP) Before Sampling: 1.60 Recovery %: 86 Sample Intake Depth (ft. BMP):

Bottles Collected: Time	Volume	Composition (glass, plastic)	Quantity	Filtration (Y/N)	Preservation (type)	Analysis	Remarks (quality control sample, other)
1144	125 ml	Glass	2	N	-	PCP/TCP	
	1 Qt	Plastic	1	N	-	TDS	

Chain-of-Custody Record No. 46271/46272

McCulley, Frick & Gilman, Inc.

GROUNDWATER SAMPLING RECORD

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SAMPLE NUMBER: MW-19D

Project No: 030275.22 Project Name: SPI Arcata Sawmill Date 05/17/04

Sampling Location (well ID, etc.): MW-19D

Sampled by: Matt Hillyard

Measuring Point (MP) of Well: 11.0

Screened Interval (ft.BGL): 15.0-20.0

Filter Pack Interval (ft.BGL): 14.0-21.0

Casing Stick-Up/Down (ft.):

Starting Water Level (ft. BMP): 4.63

Total Depth (ft. BMP): 19.85 Water Column Height (ft.): 15.22

Casing Diameter (in. ID): 2-Inch Multiplication Factor: 0.163

Casing Volume (gal.): 2.5 2X: 5 3X 7.5 4X

Water Level (ft.BMP) at End of Purge: 7.30

Total Depth (ft. BMP) at End of Purge:

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Liquinox detergent & distilled water solution followed by triple rinse w/ distilled water

Purging: Disposable Teflon Bailer Sampling: Disposable Teflon Bailer

Disposal of Discharged Water: 55-Gallon Drum

INSTRUMENTS (indicate make, model, Ld.):

Water Level: Envirotech LTD, Waterline Model 150 Thermometer: Ultrameter

pH Meter: Ultrameter Field Calibration: pH 4, 7, 10

Conductivity Meter: Ultrameter Field Calibration: 447, 2070 µmhos

Other: TDS Ultrameter Field Calibration: 300,1500 ppm

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics: Cumul.Vol. (gal)	Purge Rate (gpm)	Water Quality Data: Temp. (°C)	pH	Specific Conductance (µmhos/cm): @ Field Temp.	@ 25 °C.	Appearance: Color	Turbidity & Sediment	Intake Depth (ft. BMP)	Remarks
1519	0		16.9	6.71		827	lt. Yellow	clear		
1521	2		16.2	6.54		834	"	"		
1524	4		16.0	6.34		838	lt. gray	cloudy		"
1527	6		15.9	6.38		840	"	"		
1529	7		15.9	6.51		841	"	"		
1530	8		15.9	6.50		843		TDS: 562ppm		sample

SAMPLE INVENTORY

Water Level (ft. BMP) Before Sampling: 6.90 Recovery %: 85 Sample Intake Depth (ft. BMP):

Bottles Collected: Time	Volume	Composition (glass, plastic)	Quantity	Filtration (Y/N)	Preservation (type)	Analysis	Remarks (quality control sample, other)
1532	125 ml	Glass	2	N	-	PCP/TCP	
	1Qt	Plastic	1	N	-	TDS	

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McCulley, Frick & Gilman, Inc.

GROUNDWATER SAMPLING RECORD

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SAMPLE NUMBER: MW-20

Project No: 030275.22 Project Name: SPI Arcata Sawmill Date 05/18/04

Sampling Location (well ID, etc.): MW-20

Sampled by: Matt Hillyard

Measuring Point (MP) of Well:

Screened Interval (ft.BGL):

Filter Pack Interval (ft.BGL):

Casing Stick-Up/Down (ft.):

Starting Water Level (ft. BMP): 2.35

Total Depth (ft. BMP): 6.50 Water Column Height (ft.): 4.15

Casing Diameter (in. ID): 4-inch Multiplication Factor: .653

Casing Volume (gal.): 2.7 2X: 5.42 3X 8.13 4X

Water Level (ft.BMP) at End of Purge: ~~After~~ 2.60

Total Depth (ft. BMP) at End of Purge: [illegible]

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Liquinox detergent & distilled water solution followed by triple rinse w/ distilled water.

Purging: Disposable Teflon Barter Sampling: Disposable Teflon Bailer

Disposal of Discharged Water: 55-Gallon Drum

INSTRUMENTS (indicate make, model, i.d.):

Water Level: Envirotech LTD, Waterline Model 150 Thermometer: Ultrameter

pH Meter: Ultrameter Field Calibration: pH 4, 7, 10

Conductivity Meter: Ultrameter Field Calibration: 447,2070 µmhos

Other: TDS Ultrameter Field Calibration: 300,1500 ppm

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics: Cumul.Vol. (gal)	Purge Rate (gpm)	Water Quality Data: Temp. (°C)	pH	Specific Conductance (µmhos/cm): @ Field Temp.	@ 25 °C.	Appearance: Color	Turbidity & Sediment	Intake Depth (ft. BMP)	Remarks
1012	0		17.0	7.20		478	clear	clear		
1014	2		18.1	6.95		466	"	"		
1016	4		18.2	6.71		467	"	"		
1018	6		18.4	6.67		468	"	"		
1020	8		18.3	6.66		467	"	"		
1021	8.5		18.3	6.67		469	"	TDS=306ppm		sample

SAMPLE INVENTORY

Water Level (ft. BMP) Before Sampling: 2.60 Recovery %: 94 Sample Intake Depth (ft. BMP):

Bottles Collected: Time	Volume	Composition (glass, plastic)	Quantity	Filtration (Y/N)	Preservation (type)	Analysis	Remarks (quality control sample, other)
1023	125 ml	Glass	4	N	-	PCP/TCP	MS/MSD
	1 Qt	Plastic	1	N	-	TDS	

Chain-of-Custody Record No. 46272/46273

McCulley, Frick & Gilman, Inc.

GROUNDWATER SAMPLING RECORD

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SAMPLE NUMBER: MW-21

Project No: 030275.22 Project Name: SPI Arcata Sawmill Date 05/18/04

Sampling Location (well ID, etc.): MW-21

Sampled by: Matt Hillyard

Measuring Point (MP) of Well:

Screened Interval (ft.BGL):

Filter Pack Interval (ft.BGL):

Casing Stick-Up/Down (ft.):

Starting Water Level (ft. BMP): 3.99

Total Depth (ft. BMP): 10.8 Water Column Height (ft.): 6.01

Casing Diameter (in.ID): ~~1/2~~ 3/4-inch Multiplication Factor: ~~.0102~~ .023

Casing Volume (gal.): ~~.04~~ .14 2X: .28 3X: .42 4X:

Water Level (ft.BMP) at End of Purge: 4.40

Total Depth (ft. BMP) at End of Purge:

QUALITY ASSURANCE

METHODS (describe):

Cleaning Equipment: Liquinox detergent & distilled water solution followed by triple rinse w/ distilled water.

Purging: Peristaltic pump w/ teflon tubing Sampling: Peristaltic pump w/ teflon tubing

Disposal of Discharged Water: 55-Gallon Drum

INSTRUMENTS (indicate make, model, i.d.):

Water Level: Envirotech LTD, Waterline Model 150 Thermometer: Ultrameter

pH Meter: Ultrameter Field Calibration: pH 4, 7, 10

Conductivity Meter: Ultrameter Field Calibration: 447,2070 µmhos

Other: TDS Ultrameter Field Calibration: 300,1500 ppm

SAMPLING MEASUREMENTS

Date/ Time	Purge Characteristics: Cumul.Vol. (gal)	Purge Rate (gpm)	Water Quality Data: Temp. (°C)	pH	Specific Conductance (µmhos/cm): @ Field Temp.	@ 25 °C.	Appearance: Color	Turbidity & Sediment	Intake Depth (ft. BMP)	Remarks
1038	0		14.9	6.23		1432	Clear	clear		
1039	.2		13.7	6.56		984	"	"		
1040	.4		13.6	6.32		982	"	"		
1041	.5		13.6	6.27		994	"	"		
1042	.6		13.5	6.25		995	"	"		
1043	.7		13.5	6.25		1003	"	[illegible]		sample

SAMPLE INVENTORY

Water Level (ft. BMP) Before Sampling: 4.40 Recovery %: 93 Sample Intake Depth (ft. BMP):

Bottles Collected: Time	Volume	Composition (glass, plastic)	Quantity	Filtration (Y/N)	Preservation (type)	Analysis	Remarks (quality control sample, other)
1045	125 ml	Glass	4	N	-	PCP/TCP	Duplicate MW-A
	1 Qt	Plastic	1	N	-	TDS	
					-		
					-		

Chain-of-Custody Record No. 46272/46273

McCulley, Frick & Gilman, Inc.

APPENDIX B

Chain-of-Custody Records and Laboratory Analytical Reports for Groundwater Samples – Groundwater Monitoring Program

Laboratory reports in order of appearance:

Alpha Analytical Work Order A405439
Alpha Analytical Work Order A405465

FILE 9329

Alpha Analytical Laboratories Inc.
208 Mason St. Ukiah, California 95482
e-mail: clientservices@alpha-labs.com • Phone: (707) 468-0401 • Fax: (707) 468-5267

RECEIVED 6/1/2004

28 May 2004

Geomatrix Consultants
Attn: Ross Steenson
2101 Webster Street, 12th Floor
Oakland, CA 94612
RE: SPI - Arcata
Work Order: A405439

TASK 22 GW MONITORING
All wells

Enclosed are the results of analyses for samples received by the laboratory on 05/19/04 14:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Sheri Speaks

Sheri L. Speaks
Project Manager

Alpha Analytical Laboratories Inc.
208 Mason St. Ukiah, California 95482
e-mail: clientservices@alpha-labs.com • Phone: (707) 468-0401 • Fax: (707) 468-5267

CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Ross Steenson

Report Date: 05/28/04 11:06
Project No: 9329.000/030275.22
Project ID: SPI - Arcata

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405439	05/19/2004 14:45	GEOMAT	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-01-200405	A405439-01	Water	05/17/04 13:53	05/19/04 14:45
MW-02-200405	A405439-02	Water	05/17/04 14:05	05/19/04 14:45
MW-03-200405	A405439-03	Water	05/17/04 15:10	05/19/04 14:45
MW-04-200405	A405439-04	Water	05/17/04 15:46	05/19/04 14:45
MW-05-200405	A405439-05	Water	05/17/04 16:10	05/19/04 14:45
MW-06-200405	A405439-06	Water	05/17/04 16:26	05/19/04 14:45
MW-07-200405	A405439-07	Water	05/18/04 11:00	05/19/04 14:45
MW-08-200405	A405439-08	Water	05/17/04 10:44	05/19/04 14:45
MW-09-200405	A405439-09	Water	05/17/04 11:20	05/19/04 14:45
MW-10-200405	A405439-10	Water	05/17/04 12:44	05/19/04 14:45
MW-11-200405	A405439-11	Water	05/17/04 11:05	05/19/04 14:45
MW-12-200405	A405439-12	Water	05/17/04 10:27	05/19/04 14:45
MW-13D-200405	A405439-13	Water	05/17/04 14:25	05/19/04 14:45
MW-14-200405	A405439-14	Water	05/17/04 15:55	05/19/04 14:45
MW-15D-200405	A405439-15	Water	05/17/04 14:48	05/19/04 14:45
MW-16D-200405	A405439-16	Water	05/17/04 13:02	05/19/04 14:45
MW-17-200405	A405439-17	Water	05/17/04 13:15	05/19/04 14:45
MW-18-200405	A405439-18	Water	05/17/04 11:45	05/19/04 14:45
MW-19D-200405	A405439-19	Water	05/17/04 15:32	05/19/04 14:45
MW-20-200405	A405439-20	Water	05/18/04 10:23	05/19/04 14:45
MW-21-200405	A405439-21	Water	05/18/04 10:45	05/19/04 14:45

Sheri Speaks

Sheri L. Speaks
Project Manager

5/28/04

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Report Date: 05/28/04 11:06
Project No: 9329.000/030275.22
Project ID: SPI - Arcata

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A405439	05/19/2004 14:45	GEOMAT	

Sheri Speaks

Sheri L. Speaks
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Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405439	05/19/2004 14:45	GEOMAT	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		POL	NOTE
MW-01-200405 (A405439-01)			**Sample Type: Water**			**Sampled: 05/17/04 13:53**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AE42114	05/21/04	05/21/04	1	ND ug/l		1.0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
Pentachlorophenol	"	"	"	"	"	ND "		1.0	
Surrogate: Tribromophenol	"	"	"	"		*84.8 %*	*79-119*		
Conventional Chemistry Parameters by APHA/EPA Methods									
Total Dissolved Solids	EPA 160.1	AE42417	05/24/04	05/27/04	1	**1400 mg/l**		**10**	
MW-02-200405 (A405439-02)			**Sample Type: Water**			**Sampled: 05/17/04 14:05**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AE42114	05/21/04	05/21/04	1	ND ug/l		1.0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
Pentachlorophenol	"	"	"	"	"	ND "		1.0	
Surrogate: Tribromophenol	"	"	"	"		*87.6 %*	*79-119*		
Conventional Chemistry Parameters by APHA/EPA Methods									
Total Dissolved Solids	EPA 160.1	AE42417	05/24/04	05/27/04	1	**730 mg/l**		**10**	
MW-03-200405 (A405439-03)			**Sample Type: Water**			**Sampled: 05/17/04 15:10**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AE42114	05/21/04	05/26/04	1	ND ug/l		1.0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
Pentachlorophenol	"	"	"	"	"	ND "		1.0	
Surrogate: Tribromophenol	"	"	"	"		*96.8 %*	*79-119*		

Sheri Speaks

Sheri L. Speaks
Project Manager

5/28/04

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Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405439	05/19/2004 14:45	GEOMAT	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		POL	NOTE
MW-03-200405 (A405439-03)			**Sample Type: Water**			**Sampled: 05/17/04 15:10**			
Conventional Chemistry Parameters by APHA/EPA Methods									
Total Dissolved Solids	EPA 160.1	AE42417	05/24/04	05/27/04	1	**510 mg/l**		**10**	
MW-04-200405 (A405439-04)			**Sample Type: Water**			**Sampled: 05/17/04 15:46**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AE42114	05/21/04	05/26/04	1	ND ug/l		1.0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
Pentachlorophenol	"	"	"	"	"	ND "		1.0	
Surrogate: Tribromophenol	"	"	"	"		*96.8 %*	*79-119*		
Conventional Chemistry Parameters by APHA/EPA Methods									
Total Dissolved Solids	EPA 160.1	AE42417	05/24/04	05/27/04	1	**360 mg/l**		**10**	
MW-05-200405 (A405439-05)			**Sample Type: Water**			**Sampled: 05/17/04 16:10**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AE42114	05/21/04	05/26/04	1	ND ug/l		1.0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
Pentachlorophenol	"	"	"	"	"	ND "		1.0	
Surrogate: Tribromophenol	"	"	"	"		*106 %*	*79-119*		

Sheri Speaks

Sheri L. Speaks
Project Manager

5/28/04

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Project ID: SPI - Arcata

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405439	05/19/2004 14:45	GEOMAT	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		POL	NOTE
MW-05-200405 (A405439-05)			**Sample Type: Water**			**Sampled: 05/17/04 16:10**			
Conventional Chemistry Parameters by APHA/EPA Methods									
Total Dissolved Solids	EPA 160.1	AE42417	05/24/04	05/27/04	1	**360 mg/l**		**10**	
MW-06-200405 (A405439-06)			**Sample Type: Water**			**Sampled: 05/17/04 16:26**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AE42114	05/21/04	05/26/04	1	ND ug/l		1.0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
Pentachlorophenol	"	"	"	"	"	ND "		1.0	
Surrogate: Tribromophenol	"	"	"	*05/27/04*		*100 %*	*79-119*		
Conventional Chemistry Parameters by APHA/EPA Methods									
Total Dissolved Solids	EPA 160.1	AE42417	05/24/04	05/27/04	1	**420 mg/l**		**10**	
MW-07-200405 (A405439-07)			**Sample Type: Water**			**Sampled: 05/18/04 11:00**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AE42114	05/21/04	05/27/04	1	ND ug/l		2.5	R-06
2,3,5,6-Tetrachlorophenol	"	"	"	"	20	**86 "**		**20**	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	**480 "**		**20**	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	**41 "**		**20**	
Pentachlorophenol	"	"	"	05/26/04	1000	**25000 "**		**1000**	
Surrogate: Tribromophenol	"	"	"	"		*114 %*	*79-119*		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Sheri Speaks

Sheri L. Speaks
Project Manager

5/28/04

Alpha Analytical Laboratories Inc.
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CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Ross Steenson

Report Date: 05/28/04 11:06
Project No: 9329.000/030275.22
Project ID: SPI - Arcata

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405439	05/19/2004 14:45	GEOMAT	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	POL	NOTE
MW-07-200405 (A405439-07)			**Sample Type: Water**			**Sampled: 05/18/04 11:00**		
Conventional Chemistry Parameters by APHA/EPA Methods								
Total Dissolved Solids	EPA 160.1	AE42417	05/24/04	05/27/04	1	**370 mg/l**	**10**	
MW-08-200405 (A405439-08)			**Sample Type: Water**			**Sampled: 05/17/04 10:44**		
Chlorinated Phenols by Canadian Pulp Method								
2,4,6-Trichlorophenol	EnvCan	AE42114	05/21/04	05/26/04	1	ND ug/l	1.0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "	1.0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "	1.0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "	1.0	
Pentachlorophenol	"	"	"	"	"	ND "	1.0	
Surrogate: Tribromophenol	"	"	"	"		*102 %* *79-119*		
Conventional Chemistry Parameters by APHA/EPA Methods								
Total Dissolved Solids	EPA 160.1	AE42417	05/24/04	05/27/04	1	**390 mg/l**	**10**	
MW-09-200405 (A405439-09)			**Sample Type: Water**			**Sampled: 05/17/04 11:20**		
Chlorinated Phenols by Canadian Pulp Method								
2,4,6-Trichlorophenol	EnvCan	AE42114	05/21/04	05/26/04	1	ND ug/l	1.0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "	1.0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "	1.0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "	1.0	
Pentachlorophenol	"	"	"	"	"	ND "	1.0	
Surrogate: Tribromophenol	"	"	"	"		*108 %* *79-119*		

Sheri Speaks

Sheri L. Speaks
Project Manager

5/28/04

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A405439	05/19/2004 14:45	GEOMAT	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		POL	NOTE
MW-09-200405 (A405439-09)			**Sample Type: Water**			**Sampled: 05/17/04 11:20**			
Conventional Chemistry Parameters by APHA/EPA Methods									
Total Dissolved Solids	EPA 160.1	AE42417	05/24/04	05/27/04	1	**380 mg/l**		**10**	
MW-10-200405 (A405439-10)			**Sample Type: Water**			**Sampled: 05/17/04 12:44**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AE42114	05/21/04	05/26/04	1	ND ug/l		1.0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
Pentachlorophenol	"	"	"	"	"	ND "		1.0	
Surrogate: Tribromophenol	"	"	"	"		*94.0 %*	*79-119*		
Conventional Chemistry Parameters by APHA/EPA Methods									
Total Dissolved Solids	EPA 160.1	AE42417	05/24/04	05/27/04	1	**420 mg/l**		**10**	
MW-11-200405 (A405439-11)			**Sample Type: Water**			**Sampled: 05/17/04 11:05**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AE42114	05/21/04	05/26/04	1	ND ug/l		1.0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
Pentachlorophenol	"	"	"	"	"	ND "		1.0	
Surrogate: Tribromophenol	"	"	"	"		*91.2 %*	*79-119*		

Sheri Speaks

Sheri L. Speaks
Project Manager

5/28/04

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Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405439	05/19/2004 14:45	GEOMAT	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	POL	NOTE
MW-11-200405 (A405439-11)			**Sample Type: Water**			**Sampled: 05/17/04 11:05**		
Conventional Chemistry Parameters by APHA/EPA Methods								
Total Dissolved Solids	EPA 160.1	AE42417	05/24/04	05/27/04	1	**430 mg/l**	**10**	
MW-12-200405 (A405439-12)			**Sample Type: Water**			**Sampled: 05/17/04 10:27**		
Chlorinated Phenols by Canadian Pulp Method								
2,4,6-Trichlorophenol	EnvCan	AE42114	05/21/04	05/26/04	1	ND ug/l	1.0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "	1.0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "	1.0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "	1.0	
Pentachlorophenol	"	"	"	"	"	ND "	1.0	
Surrogate: Tribromophenol	"	"	"	"		*91.2 %*	*79-119*	
Conventional Chemistry Parameters by APHA/EPA Methods								
Total Dissolved Solids	EPA 160.1	AE42417	05/24/04	05/27/04	1	**490 mg/l**	**10**	
MW-13D-200405 (A405439-13)			**Sample Type: Water**			**Sampled: 05/17/04 14:25**		
Chlorinated Phenols by Canadian Pulp Method								
2,4,6-Trichlorophenol	EnvCan	AE42114	05/21/04	05/26/04	1	ND ug/l	1.0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "	1.0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "	1.0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "	1.0	
Pentachlorophenol	"	"	"	"	"	ND "	1.0	
Surrogate: Tribromophenol	"	"	"	"		*92.4 %*	*79-119*	

Sheri Speaks

Sheri L. Speaks
Project Manager

5/28/04

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Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405439	05/19/2004 14:45	GEOMAT	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		POL	NOTE
MW-13D-200405 (A405439-13)			**Sample Type: Water**			**Sampled: 05/17/04 14:25**			
Conventional Chemistry Parameters by APHA/EPA Methods									
Total Dissolved Solids	EPA 160.1	AE42417	05/24/04	05/27/04	1	**610 mg/l**		**10**	
MW-14-200405 (A405439-14)			**Sample Type: Water**			**Sampled: 05/17/04 15:55**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AE42114	05/21/04	05/26/04	1	ND ug/l		1.0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
Pentachlorophenol	"	"	"	"	"	ND "		1.0	
Surrogate: Tribromophenol	"	"	"	"		*105 %*	*79-119*		
Conventional Chemistry Parameters by APHA/EPA Methods									
Total Dissolved Solids	EPA 160.1	AE42417	05/24/04	05/27/04	1	**1800 mg/l**		**10**	
MW-15D-200405 (A405439-15)			**Sample Type: Water**			**Sampled: 05/17/04 14:48**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AE42114	05/21/04	05/26/04	1	ND ug/l		1.0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
Pentachlorophenol	"	"	"	"	"	ND "		1.0	
Surrogate: Tribromophenol	"	"	"	"		*87.2 %*	*79-119*		

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Sheri Speaks

Sheri L. Speaks
Project Manager

5/28/04

Alpha Analytical Laboratories Inc.
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CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Ross Steenson

Report Date: 05/28/04 11:06
Project No: 9329.000/030275.22
Project ID: SPI - Arcata

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405439	05/19/2004 14:45	GEOMAT	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		POL	NOTE
MW-15D-200405 (A405439-15)			**Sample Type: Water**			**Sampled: 05/17/04 14:48**			
Conventional Chemistry Parameters by APHA/EPA Methods									
Total Dissolved Solids	EPA 160.1	AE42417	05/24/04	05/27/04	1	**800 mg/l**		**10**	
MW-16D-200405 (A405439-16)			**Sample Type: Water**			**Sampled: 05/17/04 13:02**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AE42114	05/21/04	05/26/04	1	ND ug/l		1.0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
Pentachlorophenol	"	"	"	"	"	ND "		1.0	
Surrogate: Tribromophenol	"	"	"	"		*97.6 %*	*79-119*		
Conventional Chemistry Parameters by APHA/EPA Methods									
Total Dissolved Solids	EPA 160.1	AE42417	05/24/04	05/27/04	1	**2800 mg/l**		**10**	
MW-17-200405 (A405439-17)			**Sample Type: Water**			**Sampled: 05/17/04 13:15**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AE42114	05/21/04	05/26/04	1	ND ug/l		1.0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
Pentachlorophenol	"	"	"	"	"	ND "		1.0	
Surrogate: Tribromophenol	"	"	"	"		*88.4 %*	*79-119*		

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CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Ross Steenson

Report Date: 05/28/04 11:06
Project No: 9329.000/030275.22
Project ID: SPI - Arcata

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405439	05/19/2004 14:45	GEOMAT	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		POL	NOTE
MW-17-200405 (A405439-17)			**Sample Type: Water**			**Sampled: 05/17/04 13:15**			
Conventional Chemistry Parameters by APHA/EPA Methods									
Total Dissolved Solids	EPA 160.1	AE42417	05/24/04	05/27/04	1	**440 mg/l**		**10**	
MW-18-200405 (A405439-18)			**Sample Type: Water**			**Sampled: 05/17/04 11:45**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AE42114	05/21/04	05/26/04	1	ND ug/l		1.0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
Pentachlorophenol	"	"	"	"	"	ND "		1.0	
Surrogate: Tribromophenol	"	"	"	"		*90.0 %*	*79-119*		
Conventional Chemistry Parameters by APHA/EPA Methods									
Total Dissolved Solids	EPA 160.1	AE42417	05/24/04	05/27/04	1	**430 mg/l**		**10**	
MW-19D-200405 (A405439-19)			**Sample Type: Water**			**Sampled: 05/17/04 15:32**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AE42114	05/21/04	05/26/04	1	ND ug/l		1.0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
Pentachlorophenol	"	"	"	"	"	ND "		1.0	
Surrogate: Tribromophenol	"	"	"	"		*104 %*	*79-119*		

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Geomatrix Consultants
2101 Webster Street, 12th Floor
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Attn: Ross Steenson

Report Date: 05/28/04 11:06
Project No: 9329.000/030275.22
Project ID: SPI - Arcata

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405439	05/19/2004 14:45	GEOMAT	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	POL	NOTE
MW-19D-200405 (A405439-19)			**Sample Type: Water**			**Sampled: 05/17/04 15:32**		
Conventional Chemistry Parameters by APHA/EPA Methods								
Total Dissolved Solids	EPA 160.1	AE42417	05/24/04	05/27/04	1	**430 mg/l**	**10**	
MW-20-200405 (A405439-20)			**Sample Type: Water**			**Sampled: 05/18/04 10:23**		
Chlorinated Phenols by Canadian Pulp Method								
2,4,6-Trichlorophenol	EnvCan	AE42114	05/21/04	05/21/04	1	ND ug/l	1.0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "	1.0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	**1.1 "**	**1.0**	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "	1.0	
Pentachlorophenol	"	"	"	"	"	**3.6 "**	**1.0**	
Surrogate: Tribromophenol	"	"	"	"		*95.6 %*	*79-119*	
Conventional Chemistry Parameters by APHA/EPA Methods								
Total Dissolved Solids	EPA 160.1	AE42417	05/24/04	05/27/04	1	**280 mg/l**	**10**	
MW-21-200405 (A405439-21)			**Sample Type: Water**			**Sampled: 05/18/04 10:45**		
Chlorinated Phenols by Canadian Pulp Method								
2,4,6-Trichlorophenol	EnvCan	AE42114	05/21/04	05/21/04	1	ND ug/l	1.0	
2,3,5,6-Tetrachlorophenol	"	"	"	05/27/04	10	**11 "**	**10**	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	**36 "**	**10**	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	**11 "**	**10**	
Pentachlorophenol	"	"	"	05/26/04	1000	**1900 "**	**1000**	
Surrogate: Tribromophenol	"	"	"	"		*103 %*	*79-119*	

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Sheri L. Speaks
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2101 Webster Street, 12th Floor
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Attn: Ross Steenson

Report Date: 05/28/04 11:06
Project No: 9329.000/030275.22
Project ID: SPI - Arcata

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405439	05/19/2004 14:45	GEOMAT	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	POL	NOTE
MW-21-200405 (A405439-21)			**Sample Type: Water**			**Sampled: 05/18/04 10:45**		
Conventional Chemistry Parameters by APHA/EPA Methods								
Total Dissolved Solids	EPA 160.1	AE42417	05/24/04	05/27/04	1	**420 mg/l**	**10**	

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Report Date: 05/28/04 11:06
Project No: 9329.000/030275.22
Project ID: SPI - Arcata

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405439	05/19/2004 14:45	GEOMAT	

Chlorinated Phenols by Canadian Pulp Method - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AE42114 - Solvent Extraction										
Blank (AE42114-BLK1)				Prepared & Analyzed: 05/21/04						
2,4,6-Trichlorophenol	ND	1.0	ug/l							
2,3,5,6-Tetrachlorophenol	ND	1.0	"							
2,3,4,6-Tetrachlorophenol	ND	1.0	"							
2,3,4,5-Tetrachlorophenol	ND	1.0	"							
Pentachlorophenol	ND	1.0	"							
Surrogate: Tribromophenol	*23.7*		"	*25.0*		*94.8*	*79-119*			
LCS (AE42114-BS1)				Prepared & Analyzed: 05/21/04						
2,4,6-Trichlorophenol	4.12	1.0	ug/l	5.00		82.4	81-120			
2,3,5,6-Tetrachlorophenol	4.66	1.0	"	5.00		93.2	78-108			
2,3,4,6-Tetrachlorophenol	4.33	1.0	"	5.00		86.6	76-108			
2,3,4,5-Tetrachlorophenol	4.27	1.0	"	5.00		85.4	80-116			
Pentachlorophenol	4.67	1.0	"	5.00		93.4	86-109			
Surrogate: Tribromophenol	*22.1*		"	*25.0*		*88.4*	*79-119*			
Matrix Spike (AE42114-MS1)	**Source: A405439-20**			Prepared & Analyzed: 05/21/04						
2,4,6-Trichlorophenol	4.67	1.0	ug/l	5.00	ND	93.4	75-125			
2,3,5,6-Tetrachlorophenol	5.58	1.0	"	5.00	ND	103	69-115			
2,3,4,6-Tetrachlorophenol	5.62	1.0	"	5.00	1.1	90.4	66-117			
2,3,4,5-Tetrachlorophenol	5.30	1.0	"	5.00	ND	94.0	70-115			
Pentachlorophenol	8.09	1.0	"	5.00	3.6	89.8	55-124			
Surrogate: Tribromophenol	*24.3*		"	*25.0*		*97.2*	*79-119*			
Matrix Spike Dup (AE42114-MSD1)	**Source: A405439-20**			Prepared & Analyzed: 05/21/04						
2,4,6-Trichlorophenol	4.63	1.0	ug/l	5.00	ND	92.6	75-125	0.860	20	
2,3,5,6-Tetrachlorophenol	5.45	1.0	"	5.00	ND	100	69-115	2.36	20	

Sheri Speaks

Sheri L. Speaks
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5/28/04

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CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
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Report Date: 05/28/04 11:06
Project No: 9329.000/030275.22
Project ID: SPI - Arcata

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405439	05/19/2004 14:45	GEOMAT	

Chlorinated Phenols by Canadian Pulp Method - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AE42114 - Solvent Extraction										
Matrix Spike Dup (AE42114-MSD1)	**Source: A405439-20**			Prepared & Analyzed: 05/21/04						
2,3,4,6-Tetrachlorophenol	5.48	1.0	"	5.00	1.1	87.6	66-117	2.52	20	
2,3,4,5-Tetrachlorophenol	5.19	1.0	"	5.00	ND	91.8	70-115	2.10	20	
Pentachlorophenol	7.84	1.0	"	5.00	3.6	84.8	55-124	3.14	20	
Surrogate: Tribromophenol	*24.0*		"	*25.0*		*96.0*	*79-119*			

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5/28/04

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Report Date: 05/28/04 11:06
Project No: 9329.000/030275.22
Project ID: SPI - Arcata

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405439	05/19/2004 14:45	GEOMAT	

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AE42417 - General Preparation										
Blank (AE42417-BLK1)				Prepared: 05/24/04 Analyzed: 05/27/04						
Total Dissolved Solids	ND	10	mg/l							
Duplicate (AE42417-DUP1)		**Source: A405439-14**		Prepared: 05/24/04 Analyzed: 05/27/04						
Total Dissolved Solids	1750	10	mg/l		1800			2.82	30	

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5/28/04

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CHEMICAL EXAMINATION REPORT

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Report Date: 05/28/04 11:06
Project No: 9329.000/030275.22
Project ID: SPI - Arcata

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405439	05/19/2004 14:45	GEOMAT	

Notes and Definitions

R-06	The Reporting Limits for this analysis have been raised to account for matrix interference.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
PQL	Practical Quantitation Limit

MFG, INC.

CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS

COC No. 46251

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* Geomatrix
2101 Webster St 12th Flr
Oakland, CA 94612
(510) 663-4107

PROJECT NO: 030275.22 PROJECT NAME: SPI Arcata PAGE: 1 OF: 6

SAMPLER (Signature): Matt Hillyard PROJECT MANAGER: Ross Steenson DATE: 5/18/04

METHOD OF SHIPMENT: Courier CARRIER/WAYBILL NO: _____ DESTINATION: Alpha

Field Sample Identification	SAMPLES: Sample DATE	Sample TIME	Matrix*	Preservation: HCl	HNO_3	H_2SO_4	COLD		FILTRATION*	Containers: VOLUME (ml/oz)	TYPE*	NO.	ANALYSIS REQUEST: Constituents/Method: PCP/TCP	TDS				Handling: HOLD	RUSH	STANDARD	Remarks
A405439																					
MW-01-200405 -1	5/17	1353	AQ				X		U	125ml	G	2	X							X	PCP/TCP by Canadian pulp method
MW-01-200405	5/17	1353								1Qt	P	1		X							
MW-02-200405 -2	5/17	1405								125ml	G	2	X								
MW-02-200405	5/17	1405								1Qt	P	1		X							TDS by EPA 160.1
MW-03-200405 -3	5/17	1510								125ml	G	2	X								
MW-03-200405	5/17	1510								~~1Qt~~	P	1		X							
MW-04-200405 -4	5/17	1546								125ml	G	2	X								
				TOTAL NUMBER OF CONTAINERS								11	LABORATORY COMMENTS/CONDITION OF SAMPLES								Cooler Temp: 3.3

RELINQUISHED BY: SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	RECEIVED BY: SIGNATURE	PRINTED NAME	COMPANY
Matt Hillyard	Matt Hillyard	MFG	5/19/04	900		John Taylor	Alpha
John Taylor	John Taylor	Alpha	5/19/04	1445	Shon Speaks	Shon Speaks	Alpha
							LABORATORY

*KEY Matrix: AQ - aqueous NA - nonaqueous SO - soil SL - sludge P - petroleum A - air OT - other Containers: P - plastic G - glass T - teflon B - brass OT - other Filtration: F - filtered U - unfiltered

DISTRIBUTION: PINK: Field Copy YELLOW: Laboratory Copy WHITE: Return to Originator

MFG, INC.

CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS

COC No. 46252

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Geomatrix
Oakland

PROJECT NO: 030275.22 PROJECT NAME: SPI Arcata PAGE: 2 OF: 6

SAMPLER (Signature): Matt Hillyard PROJECT MANAGER: Ross Steenson DATE: 5/18/04

METHOD OF SHIPMENT: Courier CARRIER/WAYBILL NO: — DESTINATION: Alpha

Field Sample Identification	SAMPLES: Sample DATE	Sample TIME	Matrix*	Preservation: HCl	HNO_3	H_2SO_4	COLD		FILTRATION*	Containers: VOLUME (ml/oz)	TYPE*	NO.	ANALYSIS REQUEST: Constituents/Method: PCB/TCP	TDS				Handling: HOLD	RUSH	STANDARD	Remarks
A405439																					
MW-04-200405	5/17	1546	AQ				X		U	1QT	P	1		X						X	
MW-05-200405 -5	5/17	1610								125ml	G	2	X								
MW-05-200405	5/17	1610								1QT	P	1		X							
MW-06-200405 -6	5/17	1626								125ml	G	2	X								
MW-06-200405	5/17	1626								1QT	P	1		X							
MW-07-200405 -7	5/18	1100								125ml	G	2	X								
MW-07-200405	5/18	1100	↓				↓		↓	1QT	P	1		X						↓	

TOTAL NUMBER OF CONTAINERS 10

LABORATORY COMMENTS/CONDITION OF SAMPLES Cooler Temp: 3.3

RELINQUISHED BY: SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	RECEIVED BY: SIGNATURE	PRINTED NAME	COMPANY
	Matt Hillyard	MFG	5-19-04	900		John Taylor	Alpha
	John Taylor	Alpha	5-19-04	1435	Shon Speaks	Shon Speaks	Alpha LABORATORY

*KEY: Matrix: AQ - aqueous NA - nonaqueous SO - soil SL - sludge P - petroleum A - air OT - other Containers: P - plastic G - glass T - teflon B - brass OT - other Filtration: F - filtered U - unfiltered

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PROJECT NO: 030275.22 PROJECT NAME: SPI Arcata PAGE: 3 OF: 6

SAMPLER (Signature): Matt Hillyard PROJECT MANAGER: Ross Steenson DATE: 5/18/04

METHOD OF SHIPMENT: courier CARRIER/WAYBILL NO: — DESTINATION: Alpha

Field Sample Identification	SAMPLES: Sample DATE	TIME	Matrix*	Preservation: HCl	HNO_3	H_2SO_4	COLD		FILTRATION*	Containers: VOLUME (ml/oz)	TYPE*	NO.	ANALYSIS REQUEST: Constituents/Method: PCB/TCP	TDS				Handling: HOLD	RUSH	STANDARD	Remarks
A405439																					
MW-08-200405 -8	5/17	1044	AQ				X		U	125ml	G	2	X							X	
MW-08-200405	5/17	1044								1QT	P	1		X							
MW-09-200405 -9	5/17	1120								125ml	G	2	X								
MW-09-200405	5/17	1120								1QT	P	1		X							
MW-10-200405 -10	5/17	1244								125ml	G	2	X								
MW-10-200405	5/17	1244								1QT	P	1		X							
MW-11-200405 11	5/17	1105								125ml	G	2	X								

TOTAL NUMBER OF CONTAINERS 11

LABORATORY COMMENTS/CONDITION OF SAMPLES Cooler Temp: 3.3

RELINQUISHED BY: SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	RECEIVED BY: SIGNATURE	PRINTED NAME	COMPANY
Matt Hillyard	Matt Hillyard	MFG	5-19-04	900 PST	John Taylor	John Taylor	Alpha
John Taylor	John Taylor	Alpha	5-19-04	1445	Shari Speaks	Shari Speaks	Alpha LABORATORY

*KEY Matrix: AQ - aqueous NA - nonaqueous SO - soil SL - sludge P - petroleum A - air OT - other Containers: P - plastic G - glass T - teflon B - brass OT - other Filtration: F - filtered U - unfiltered

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6 Comatrix
Oakland

PROJECT NO: 030275.22 PROJECT NAME: SPI Arcata PAGE: 4 OF: 6

SAMPLER (Signature): Matt Hillyard PROJECT MANAGER: Ross Steenson DATE: 5/18/04

METHOD OF SHIPMENT: Courier CARRIER/WAYBILL NO: — DESTINATION: Alpha

Field Sample Identification	SAMPLES: Sample DATE	Sample TIME	Matrix*	Preservation: HCl	HNO_3	H_2SO_4	COLD		FILTRATION*	Containers: VOLUME (ml/oz)	TYPE*	NO.	ANALYSIS REQUEST: Constituents/Method: PCP/ACP	TDS				Handling: HOLD	RUSH	STANDARD	Remarks
A405439-																					
MW-11-200405	5/17	1105	AQ				X		S	1Qt	P	1		X						X	
MW-12-200405 12	5/17	1027								125ml	G	2	X								
MW-12-200405	5/17	1027								1Qt	P	1		X							
MW-13D-200405 13	5/17	1425								125ml	G	2	X								
MW-13D-200405	5/17	1425								1Qt	P	1		X							
MW-14-200405 14	5/17	1555								125ml	G	2	X								
MW-14-200405	5/17	1555								1Qt	P	1		X							

TOTAL NUMBER OF CONTAINERS 10

LABORATORY COMMENTS/CONDITION OF SAMPLES Cooler Temp: 3.3

RELINQUISHED BY: SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	RECEIVED BY: SIGNATURE	PRINTED NAME	COMPANY
	Matt Hillyard	MFG	5-19-04	900		John Taylor	Alpha
	John Taylor	Alpha	5-19-04	1445	Shari Speaks	Shari Speaks	Alpha
							LABORATORY

*KEY Matrix: AQ - aqueous NA - nonaqueous SO - soil SL - sludge P - petroleum A - air OT - other Containers: P - plastic G - glass T - teflon B - brass OT - other Filtration: F - filtered U - unfiltered

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PROJECT NO: 030275.22 PROJECT NAME: SPI Arcata PAGE: 5 OF: 6

SAMPLER (Signature): Matt Hillyard PROJECT MANAGER: Ross Steenson DATE: 5/18/04

METHOD OF SHIPMENT: Courier CARRIER/WAYBILL NO: — DESTINATION: Alpha

	SAMPLES												ANALYSIS REQUEST								
	Sample			Preservation					FILTRATION*	Containers			Constituents/Method					Handling			Remarks
A4054 39 Field Sample Identification	DATE	TIME	Matrix*	HCl	HNO_3	H_2SO_4	COLD			VOLUME (ml/oz)	TYPE*	NO.	PCB/TCP	TDS				HOLD	RUSH	STANDARD	
MW-15D-200405 15	5/17	1448	AQ				X		U	125ml	G	2	X							X	
MW-15D-200405	5/17	1448								1Q+	P	1		X							
MW-16D-200405 16	5/17	1302								125ml	G	2	X								
MW-16D-200405	5/17	1302								1Q+	P	1		X							
MW-17-200405 17	5/17	1315								125ml	G	2	X								
MW-17-200405	5/17	1315								1Q+	P	1		X							
MW-18-200405 18	5/17	1145								125ml	G	2	X								
										TOTAL NUMBER OF CONTAINERS		11									LABORATORY COMMENTS/CONDITION OF SAMPLES

Cooler Temp: 3.3

RELINQUISHED BY:					RECEIVED BY:		
SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	SIGNATURE	PRINTED NAME	COMPANY
	Matt Hillyard	MFG	5-19-04	900		John Taylor	Alpha
	John Taylor	Alpha	5-19-04	1445	Sheri Speaks	Sheri Speaks	Alpha
							LABORATORY

*KEY Matrix: AQ - aqueous NA - nonaqueous SO - soil SL - sludge P - petroleum A - air OT - other Containers: P - plastic G - glass T - teflon B - brass OT - other Filtration: F - filtered U - unfiltered

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PROJECT NO: 030275.22 PROJECT NAME: SPI Arcata PAGE: 6 OF: 6

SAMPLER (Signature): Matt Hillyard PROJECT MANAGER: Ross Steenson DATE: 5/18/04

METHOD OF SHIPMENT: courier CARRIER/WAYBILL NO: — DESTINATION: Alpha

A405439

Field Sample Identification	SAMPLES: Sample DATE	Sample TIME	Matrix*	Preservation: HCl	HNO_3	H_2SO_4	COLD		FILTRATION*	Containers: VOLUME (ml/oz)	TYPE*	NO.	ANALYSIS REQUEST: Constituents/Method: PCP/TCP	TDS				Handling: HOLD	RUSH	STANDARD	Remarks
MW-18-200405	5/17	1145	AQ				X		N	1QT	P	1		X						Y	
MW-19D-200405 19	5/17	1532								125ml	G	2	X								
MW-19D-200405	5/17	1532								1QT	P	1		X							
MW-20-200405 20	5/18	1023								125ml	G	2	X								
MW-20-200405	5/18	1023								1QT	P	1		X							
MW-21-200405 21	5/18	1045								125ml	G	2	X								
MW-21-200405	5/18	1045								1QT	P	1		X							

TOTAL NUMBER OF CONTAINERS 10

LABORATORY COMMENTS/CONDITION OF SAMPLES Cooler Temp: 3.3

RELINQUISHED BY: SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	RECEIVED BY: SIGNATURE	PRINTED NAME	COMPANY
Matt Hillyard	Matt Hillyard	MFG	5-19-04	900	John Taylor	John Taylor	Alpha
John Taylor	John Taylor	Alpha	5-19-04	1445	Sheri Speaks	Sheri Speaks	Alpha
							LABORATORY

*KEY Matrix: AQ - aqueous NA - nonaqueous SO - soil SL - sludge P - petroleum A - air OT - other Containers: P - plastic G - glass T - teflon B - brass OT - other Filtration: F - filtered U - unfiltered

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RECEIVED 6/04/2004

28 May 2004

Geomatrix Consultants
Attn: Ross Steenson
2101 Webster Street, 12th Floor
Oakland, CA 94612
RE: SPI - Arcata
Work Order: A405465

TASK 22 GW MONITORING
BLIND DUPLICATE (MW-21)

Enclosed are the results of analyses for samples received by the laboratory on 05/19/04 14:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Sheri Speaks

Sheri L. Speaks
Project Manager

Alpha Analytical Laboratories Inc.
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e-mail: clientservices@alpha-labs.com • Phone: (707) 468-0401 • Fax: (707) 468-5267

CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Ross Steenson

Report Date: 05/28/04 11:47
Project No: 9329.000/030275.22
Project ID: SPI - Arcata

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405465	05/19/2004 14:45	GEOMAT	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-A-200405	A405465-01	Water	05/18/04 00:00	05/19/04 14:45

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Sheri Speaks

Sheri L. Speaks
Project Manager

5/28/04

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CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Ross Steenson

Report Date: 05/28/04 11:47
Project No: 9329.000/030275.22
Project ID: SPI - Arcata

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405465	05/19/2004 14:45	GEOMAT	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	POL	NOTE
MW-A-200405 (A405465-01)			**Sample Type: Water**			**Sampled: 05/18/04 00:00**		
Chlorinated Phenols by Canadian Pulp Method								
2,4,6-Trichlorophenol	EnvCan	AE42114	05/21/04	05/26/04	1	ND ug/l	1.0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	**3.5 "**	**1.0**	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	**16 "**	**1.0**	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	**4.4 "**	**1.0**	
Pentachlorophenol	"	"	"	"	50	**670 "**	**50**	
Surrogate: Tribromophenol	"	"	"	"		*103 %*	*79-119*	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Sheri Speaks

Sheri L. Speaks
Project Manager

5/28/04

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CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
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Attn: Ross Steenson

Report Date: 05/28/04 11:47
Project No: 9329.000/030275.22
Project ID: SPI - Arcata

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405465	05/19/2004 14:45	GEOMAT	

Chlorinated Phenols by Canadian Pulp Method - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AE42114 - Solvent Extraction										
Blank (AE42114-BLK1)				Prepared & Analyzed: 05/21/04						
2,4,6-Trichlorophenol	ND	1.0	ug/l							
2,3,5,6-Tetrachlorophenol	ND	1.0	"							
2,3,4,6-Tetrachlorophenol	ND	1.0	"							
2,3,4,5-Tetrachlorophenol	ND	1.0	"							
Pentachlorophenol	ND	1.0	"							
Surrogate: Tribromophenol	*23.7*		"	*25.0*		*94.8*	*79-119*			
LCS (AE42114-BS1)				Prepared & Analyzed: 05/21/04						
2,4,6-Trichlorophenol	4.12	1.0	ug/l	5.00		82.4	81-120			
2,3,5,6-Tetrachlorophenol	4.66	1.0	"	5.00		93.2	78-108			
2,3,4,6-Tetrachlorophenol	4.33	1.0	"	5.00		86.6	76-108			
2,3,4,5-Tetrachlorophenol	4.27	1.0	"	5.00		85.4	80-116			
Pentachlorophenol	4.67	1.0	"	5.00		93.4	86-109			
Surrogate: Tribromophenol	*22.1*		"	*25.0*		*88.4*	*79-119*			
Matrix Spike (AE42114-MS1)	**Source: A405439-20**			Prepared & Analyzed: 05/21/04						
2,4,6-Trichlorophenol	4.67	1.0	ug/l	5.00	ND	93.4	75-125			
2,3,5,6-Tetrachlorophenol	5.58	1.0	"	5.00	ND	103	69-115			
2,3,4,6-Tetrachlorophenol	5.62	1.0	"	5.00	1.1	90.4	66-117			
2,3,4,5-Tetrachlorophenol	5.30	1.0	"	5.00	ND	94.0	70-115			
Pentachlorophenol	8.09	1.0	"	5.00	3.6	89.8	55-124			
Surrogate: Tribromophenol	*24.3*		"	*25.0*		*97.2*	*79-119*			
Matrix Spike Dup (AE42114-MSD1)	**Source: A405439-20**			Prepared & Analyzed: 05/21/04						
2,4,6-Trichlorophenol	4.63	1.0	ug/l	5.00	ND	92.6	75-125	0.860	20	
2,3,5,6-Tetrachlorophenol	5.45	1.0	"	5.00	ND	100	69-115	2.36	20	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Sheri Speaks

Sheri L. Speaks
Project Manager

5/28/04

Alpha Analytical Laboratories Inc.
208 Mason St. Ukiah, California 95482
e-mail: clientservices@alpha-labs.com • Phone: (707) 468-0401 • Fax: (707) 468-5267

CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Ross Steenson

Report Date: 05/28/04 11:47
Project No: 9329.000/030275.22
Project ID: SPI - Arcata

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405465	05/19/2004 14:45	GEOMAT	

Chlorinated Phenols by Canadian Pulp Method - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AE42114 - Solvent Extraction										
Matrix Spike Dup (AE42114-MSD1)	**Source: A405439-20**			Prepared & Analyzed: 05/21/04						
2,3,4,6-Tetrachlorophenol	5.48	1.0	"	5.00	1.1	87.6	66-117	2.52	20	
2,3,4,5-Tetrachlorophenol	5.19	1.0	"	5.00	ND	91.8	70-115	2.10	20	
Pentachlorophenol	7.84	1.0	"	5.00	3.6	84.8	55-124	3.14	20	
Surrogate: Tribromophenol	*24.0*		"	*25.0*		*96.0*	*79-119*			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Sheri Speaks

Sheri L. Speaks
Project Manager

5/28/04

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CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Ross Steenson

Report Date: 05/28/04 11:47
Project No: 9329.000/030275.22
Project ID: SPI - Arcata

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405465	05/19/2004 14:45	GEOMAT	

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
PQL	Practical Quantitation Limit

MFG, INC.

CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS

COC No. 46273

☐ CA - Arcata
1165 G St., Ste. E
Arcata, CA 95521
Tel (707) 826-8430
Fax (707) 826-8437

☐ CA - Irvine
17770 Cartwright Rd.
Ste. 500
Irvine, CA 92614
Tel (949) 253-2951
Fax (949) 253-2954

☐ CA - San Francisco
180 Howard St., Ste. 200
San Francisco, CA 94105
Tel (415) 495-7110
Fax (415) 495-7107

☐ CO - Boulder
4900 Pearl East Cir.
Ste. 300W
Boulder, CO 80301
Tel (303) 447-1823
Fax (303) 447-1836

☐ ID - Osburn
PO Box 30
Wallace, ID 83873
Tel (208) 556-6811
Fax (208) 556-7271

☐ MT - Missoula
PO Box 7158
Missoula, MT 59807
Tel (406) 728-4600
Fax (406) 728-4698

☐ NJ - Edison
1090 King Georges Post Rd.
Ste. 703
Edison, NJ 08837
Tel (732) 738-5707
Fax (732) 738-5711

☐ OR - Portland
1020 SW Taylor St.
Ste. 530
Portland, OR 97205
Tel (503) 228-8616
Fax (503) 228-8631

☐ PA - Pittsburgh
800 Vinial St., Bldg. A
Pittsburgh, PA 15212
Tel (412) 321-2278
Fax (412) 321-2283

☐ TX - Austin
4807 Spicewood Springs Rd.
Bldg. IV, 1st Floor
Austin, TX 78759
Tel (512) 338-1667
Fax (512) 338-1331

☐ TX - Houston
12337 Jones Rd.
Ste. 230
Houston, TX 77070
Tel (281) 890-5068
Fax (281) 890-5044

☐ TX - Port Lavaca
320 East Main
Port Lavaca, TX 77979
Tel (361) 552-8839
Fax (361) 553-6115

☐ TX - Texarkana
4532 Summerhill Rd.
Texarkana, TX 75503
Tel (903) 794-0625
Fax (903) 794-0626

☐ WA - Seattle
19203 36th Ave. W.
Ste. 100
Lynnwood, WA 98036
Tel (425) 921-4000
Fax (425) 921-4040

Geomatrix
2101 Webster St, 12th Floor
Oakland, CA 94612
(510) 663-4107

PROJECT NO: 030275.22 PROJECT NAME: SPI Arcata PAGE: 1 OF: 1

SAMPLER (Signature): Matt Hillyard PROJECT MANAGER: Ross Steenson DATE: 5/18/04

METHOD OF SHIPMENT: courier CARRIER/WAYBILL NO: — DESTINATION: Alpha

	SAMPLES												ANALYSIS REQUEST								
	Sample			Preservation					FILTRATION*	Containers			Constituents/Method					Handling			Remarks
A405465- Field Sample Identification	DATE	TIME	Matrix*	HCl	HNO_3	H_2SO_4	COLD			VOLUME (ml/oz)	TYPE*	NO.	PCP/TCP	MS/MSD				HOLD	RUSH	STANDARD	
MW-20-200405	5/18	1023	AQ				X		4	125ml	G	2	X	X						X	PCP/TCP by
MW-A-200405-1	5/18		AQ				X		4	125ml	G	2	X							X	Canadian Pulp Method
																					USE MW-20 AS QC,
																					DO NOT LOG PER
																					ROSS STEENSON.
																					JW 5.19.04 4:55 PM

TOTAL NUMBER OF CONTAINERS 4

LABORATORY COMMENTS/CONDITION OF SAMPLES Cooler Temp: 3.3

RELINQUISHED BY:					RECEIVED BY:		
SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	SIGNATURE	PRINTED NAME	COMPANY
Matt Hillyard	Matt Hillyard	MFG	5-18-04	900	John Taylor	John Taylor	Alpha
John Taylor	John Taylor	Alpha	5-19-04	1448	Shon Speaks	Shon Speaks	Alpha
							LABORATORY

*KEY Matrix: AQ - aqueous NA - nonaqueous SO - soil SL - sludge P - petroleum A - air OT - other Containers: P - plastic G - glass T - teflon B - brass OT - other Filtration: F - filtered U - unfiltered

DISTRIBUTION: PINK: Field Copy YELLOW: Laboratory Copy WHITE: Return to Originator

APPENDIX C

Laboratory Data Quality Review

APPENDIX C

LABORATORY DATA QUALITY REVIEW

Geomatrix reviewed quality assurance and quality control (QA/QC) procedures to assess quality of the analytical results by evaluating the precision, accuracy, and completeness of the data. We performed the data quality review using U.S. Environmental Protection Agency National Functional Guidelines for Organic Data Review (U.S. EPA, 1999), for Inorganic Review (U.S. EPA, 2002a), and for Chlorinated Dioxin/Furan Data Review (U.S. EPA, 2002b).

PRECISION

Data precision is evaluated by comparing analytical results for the following:

- concentrations in primary and (blind) duplicate field samples
- concentrations of matrix spike (MS) and matrix spike duplicate (MSD) concentrations
- laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) concentrations

Concentrations detected in the primary or spiked samples are compared with respective concentrations in duplicate or duplicate spiked samples. Relative percent differences (RPDs) are used to calculate results, using the following equation:

$$RPD = \frac{[S - D]}{(S + D)/2} \times 100$$

Where,

S = Sample concentration

D = Duplicate sample concentration

RPDs for primary and duplicate field samples are calculated in Table C-1. RPDs are only calculated when primary and duplicate sample concentrations are greater than or equal to two times the laboratory reporting limits. In cases where the detection in either the primary or duplicate sample, or both, are less than two times the reporting limit, the absolute difference between the primary and duplicate sample concentration is calculated. RPDs for MS/MSD and LCS/LCSD analysis are reported in laboratory analytical reports, included in Appendix B and D.

RPDs for the groundwater monitoring program and pilot study program data were acceptable, except for the RPDs for primary sample MW-21 and its blind duplicate sample MW-A. These field samples were collected from monitoring well MW-21 during quarterly groundwater sampling. Previous results of samples collected from nearby well MW-7 have been variable, and the RPDs similarly have been high.

ACCURACY

Data accuracy is assessed by evaluating holding times required by analytical methods, sample preservation, method blank results, recovery of laboratory surrogates, MS/MSD results, and LCS/LCSD results. We evaluated these criteria for quarterly groundwater, pilot study groundwater, and storm water samples. Results of the review are summarized below.

- **Hold times.** Samples were analyzed within the holding time for each analytical method.
- **Preservation.** Samples were collected in laboratory-supplied containers with preservatives, if applicable. Samples were stored and transported to analytical laboratories in chilled coolers.
- **Method blanks.** No detections were observed in any of the method blanks analyzed by the laboratory.
- **Surrogate Recoveries.** Laboratory surrogates were recovered at concentrations within acceptable ranges.
- **MS/MSD analysis.** RPDs were acceptable.
- **LCS/LCSD analysis.** RPDs were acceptable.

COMPLETENESS

Based on our laboratory data quality review, data contained in this report is considered complete and representative.

TABLE C-1

RELATIVE PERCENT DIFFERENCES BETWEEN DUPLICATE SAMPLES[1]

Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

Concentrations reported in micrograms per liter (µg/L).

Constituent	Reporting Limit	Quarterly Groundwater Sampling		Relative Percent Difference
		Sample Concentration MW-21	Duplicate Sample Concentration MW-A	
PCP	1	1900	670	95.7%
2,3,4,5-TeCP	1	11	4.4	85.7%
2,3,4,6-TeCP	1	36	16	76.9%
2,3,5,6-TeCP	1	11	3.5	103.4%

Notes:

1. Quarterly groundwater samples collected on May 17 and 18, 2004 and analyzed by Alpha Analytical Laboratory, of Ukiah, California, for chlorinated phenols using the Canadian Pulp Method. Only constituents with detections in either the primary and/or secondary sample are listed in this table.
2. RPD calculated as ([2(S-D)]/[S+D]) x 100 where S is the sample concentration and D is the blind duplicate sample concentration.
3. For sample concentrations less than two times the reporting limit, the absolute difference between the sample concentration and the blind duplicate sample is calculated.

Abbreviations:
PCP = pentachlorophenol
TeCP = tetrachlorophenol

APPENDIX D

Copy of Manifest for Wastewater Disposal

Form Approved OMB No. 2050-0039 (Expires 9-30-99)
Please print or type. Form designed for use on elite (12-pitch) typewriter.

See instructions on back of page 6.

Department of Toxic Substances Control
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.
CAD047403696	80257		

3. Generator's Name and Mailing Address
Sierra Pacific Industries
PO Box 1189, Arcata, CA 95518

4. Generator's Phone (707) 443-3111

A. State Manifest Document Number: 23580257

B. State Generator's ID:

5. Transporter 1 Company Name: ASBURY ENVIRONMENTAL SERVICES

6. US EPA ID Number: CAD028277036

C. State Transporter's ID [Reserved.]:

D. Transporter's Phone: (800)974-4495

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID [Reserved.]:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
DEMENNO / KERDOON
2000 NORTH ALAMEDA STREET
COMPTON CA 90222

10. US EPA ID Number: CAT080013352

G. State Facility's ID: CAT080013352

H. Facility's Phone: (310)537-7100

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	K. Waste Number
a. non rcra hazardous waste liquid (water with trace pentachlorophenol)	002	DM	0110	G	State 343 EPA/Other NONE
b.					State EPA/Other
c.					State EPA/Other
d.					State EPA/Other

THIS WASTE STREAM HAS BEEN QUALIFIED FOR RECYCLING/TREATMENT AT THE DeMENNO/KERDOON FACILITY IN COMPTON, CALIFORNIA. THIS FACILITY HAS THE NECESSARY PERMITS TO RECEIVE YOUR WASTE STREAM AS DESCRIBED. OUR EPA NUMBER IS CAT080013352

J. Additional Descriptions for Materials Listed Above
IFA# 208829 2X55 G

K. Handling Codes for Wastes Listed Above
a. 91 b.
c. d.

15. Special Handling Instructions and Additional Information
USE PPE
NAERG#: 171
EMERGENCY CONTACT: CHEMTREC 1-800-424-9300
Site: 2593 New Navy Base Rd., Arcata, CA DTSC# 38935-AUS

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Jay Cooney	Jay Cooney	05	06	04

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
GABRIEL ARANDA		05	06	04

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Jesse Cuellar		05	13	04

DO NOT WRITE BELOW THIS LINE.

(DTSC SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS. Generators who submit hazardous waste for export out-of-state, must submit a copy of this copy and send to DTSC within 30 days.)

DTSC 8022A (7/99)
EPA 8700-22

GENERATOR

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

APPENDIX E

Chain-of-Custody Records and Laboratory Analytical Reports for Surface Water and Debris Samples – Pilot Study Program

Laboratory reports in order of appearance:

Alpha Analytical Work Order A404339
Alpha Analytical Work Order A404473
Alpha Analytical Work Order A404474
Friedman & Bruya Project 404199
Friedman & Bruya Project 404200
Alpha Analytical Work Order A405657
Frontier Analytical Project ID 2633
Frontier Analytical Project ID 2633 (Addendum)
Alpha Analytical Work Order A406328
Alpha Analytical Work Order A406329

FILE 9329

Alpha Analytical Laboratories Inc
208 Mason St. Ukiah, California 95482
e-mail clientservices@alpha-labs.com • Phone (707) 468-0401 • Fax (707) 468-5267

RECEIVED 4/29/2004

22 April 2004

TASK 6 STORM WATER
SL-1 SAMPLING 4/14/2004

Geomatrix Consultants
Attn: Ross Steenson
2101 Webster Street, 12th Floor
Oakland, CA 94612
RE: SPI Arcata GW Monitoring
Work Order: A404339

Enclosed are the results of analyses for samples received by the laboratory on 04/15/04 09:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Cheryl Watson For Sheri L. Speaks
Project Manager

This represents an amended copy of the original report

Alpha Analytical Laboratories Inc
208 Mason St. Ukiah, California 95482
e-mail clientservices@alpha-labs com • Phone (707) 468-0401 • Fax (707) 468-5267

CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Ross Steenson

Report Date 04/22/04 10:46
Project No 030275.22
Project ID SPI Arcata GW Monitoring

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A404339	04/15/2004 09 30	GEOMAT	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SL-1	A404339-01	Water	04/14/04 10 45	04/15/04 09 30

The results in this report apply to the samples analyzed in accordance with the chain of custody document This analytical report must be reproduced in its entirety

Cheryl Watson For Sheri L Speaks
Project Manager

4/22/04

Alpha Analytical Laboratories Inc
208 Mason St. Ukiah, California 95482
e-mail clientservices@alpha-labs.com • Phone (707) 468-0401 • Fax (707) 468-5267

CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Ross Steenson

Report Date: 04/22/04 10:46
Project No: 030275.22
Project ID: SPI Arcata GW Monitoring

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A404339	04/15/2004 09:30	GEOMAT	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		PQL	NOTE
SL-1 (A404339-01)			**Sample Type: Water**			**Sampled: 04/14/04 10:45**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AD41613	04/16/04	04/19/04	1	ND ug/l		1.0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
Pentachlorophenol	"	"	"	"	"	**0.70** "		**0.30**	
Surrogate Tribromophenol	"	"	"	"		*102 %*	*79-119*		

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Cheryl Watson For Sheri L. Speaks
Project Manager

4/22/04

Alpha Analytical Laboratories Inc
208 Mason St Ukiah, California 95482
e-mail clientservices@alpha-labs com • Phone (707) 468-0401 • Fax (707) 468-5267

CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Ross Steenson

Report Date: 04/22/04 10:46
Project No: 030275.22
Project ID: SPI Arcata GW Monitoring

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A404339	04/15/2004 09 30	GEOMAT	

SourceResult

Chlorinated Phenols by Canadian Pulp Method - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AD41613 - Solvent Extraction										
Blank (AD41613-BLK1)				Prepared 04/16/04 Analyzed 04/19/04						
2,4,6-Trichlorophenol	ND	1 0	ug/l							
2,3,5,6-Tetrachlorophenol	ND	1 0	"							
2,3,4,6-Tetrachlorophenol	ND	1 0	"							
2,3,4,5-Tetrachlorophenol	ND	1 0	"							
Pentachlorophenol	ND	1 0	"							
Surrogate Tribromophenol	*24 5*		"	*25 0*		*98 0*	*79-119*			
LCS (AD41613-BS1)				Prepared 04/16/04 Analyzed 04/19/04						
2,4,6-Trichlorophenol	4 34	1 0	ug/l	5 00		86 8	81-120			
2,3,5,6-Tetrachlorophenol	4 24	1 0	"	5 00		84 8	78-108			
2,3,4,6-Tetrachlorophenol	4 93	1 0	"	5 00		98 6	76-108			
2,3,4,5-Tetrachlorophenol	4 47	1 0	"	5 00		89 4	80-116			
Pentachlorophenol	4 97	1 0	"	5 00		99 4	86-109			
Surrogate Tribromophenol	*24 7*		"	*25 0*		*98 8*	*79-119*			
Matrix Spike (AD41613-MS1)	**Source: A404339-01**			Prepared 04/16/04 Analyzed 04/19/04						
2,4,6-Trichlorophenol	4 50	1 0	ug/l	5 00	ND	90 0	75-125			
2,3,5,6-Tetrachlorophenol	5 02	1 0	"	5 00	ND	100	69-115			
2,3,4,6-Tetrachlorophenol	4 76	1 0	"	5 00	ND	95 2	66-117			
2,3,4,5-Tetrachlorophenol	4 76	1 0	"	5 00	ND	95 2	70-115			
Pentachlorophenol	5 67	1 0	"	5 00	ND	99 4	55-124			
Surrogate Tribromophenol	*24 6*		"	*25 0*		*98 4*	*79-119*			
Matrix Spike Dup (AD41613-MSD1)	**Source: A404339-01**			Prepared 04/16/04 Analyzed 04/19/04						
2,4,6-Trichlorophenol	4 40	1 0	ug/l	5 00	ND	88 0	75-125	2 25	20	
2,3,5,6-Tetrachlorophenol	4 85	1 0	"	5 00	ND	97 0	69-115	3 44	20	

The results in this report apply to the samples analyzed in accordance with the chain of custody document This analytical report must be reproduced in its entirety

Cheryl Watson For Sheri L Speaks
Project Manager

4/22/04

Alpha Analytical Laboratories Inc
208 Mason St. Ukiah, California 95482
e-mail clientservices@alpha-labs.com • Phone (707) 468-0401 • Fax (707) 468-5267

CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Ross Steenson

Report Date: 04/22/04 10:46
Project No: 030275.22
Project ID: SPI Arcata GW Monitoring

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A404339	04/15/2004 09 30	GEOMAT	

Chlorinated Phenols by Canadian Pulp Method - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AD41613 - Solvent Extraction										
Matrix Spike Dup (AD41613-MSD1)	**Source: A404339-01**			Prepared 04/16/04		Analyzed 04/19/04				
2,3,4,6-Tetrachlorophenol	4 66	1 0	"	5 00	ND	93 2	66-117	2 12	20	
2,3,4,5-Tetrachlorophenol	4 68	1 0		5 00	ND	93 6	70-115	1 69	20	
Pentachlorophenol	5 52	1 0	"	5 00	ND	96 4	55-124	2 68	20	
Surrogate Tribromophenol	*24 4*		"	*25 0*		*97 6*	*79-119*			

The results in this report apply to the samples analyzed in accordance with the chain of custody document This analytical report must be reproduced in its entirety

Cheryl Watson For Sheri L Speaks
Project Manager

4/22/04

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208 Mason St. Ukiah, California 95482
e-mail clientservices@alpha-labs.com • Phone (707) 468-0401 • Fax (707) 468-5267

CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
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Attn: Ross Steenson

Report Date: 04/22/04 10:46
Project No: 030275.22
Project ID: SPI Arcata GW Monitoring

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A404339	04/15/2004 09 30	GEOMAT	

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
PQL	Practical Quantitation Limit

MFG, INC.

CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS

COC No 46243

Arcata Office
15 Crescent Way
rcata, CA 95521-6741
one (707) 826-8430- FAX (707) 826-8437

☐CA Irvine
17770 Cartwright Rd
Ste 500
Irvine, CA 92614
Tel (949) 253-2951
Fax (949) 253-2954

☐CA San Francisco
180 Howard St , Ste 200
San Francisco, CA 94105
Tel (415) 495-7110
Fax (415) 495-7107

☐CO - Boulder
4900 Pearl East Cir
Ste 300W
Boulder, CO 80301
Tel (303) 447-1823
Fax (303) 447-1836

☐ID - Osburn
PO Box 30
Wallace, ID 83873
Tel (208) 556-6811
Fax (208) 556-7271

☐MT - Missoula
PO Box 7158
Missoula, MT 59807
Tel (406) 728-4600
Fax (406) 728-4698

☐NJ - Edison
1090 King Georges Post Rd
Ste 703
Edison, NJ 08837
Tel (732) 738-5707
Fax (732) 738-5711

☐OR Portland
1020 SW Taylor St
Ste 530
Portland, OR 97205
Tel (503) 228-8616
Fax (503) 228-8631

☐PA - Pittsburgh
800 Vinial St , Bldg A
Pittsburgh PA 15212
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Fax (412) 321-2283

☐TX - Austin
4807 Spicewood Springs Rd
Bldg IV, 1st Floor
Austin, TX 78759
Tel (512) 338-1667
Fax (512) 338-1331

☐TX - Houston
12337 Jones Rd
Ste 230
Houston, TX 77070
Tel (281) 890-5068
Fax (281) 890-5044

☐TX - Port Lavaca
320 East Main
Port Lavaca TX 77979
Tel (361) 552-8839
Fax (361) 553-6115

☐TX - Texarkana
4532 Summerhill Rd
Texarkana, TX 75503
Tel (903) 794-0625
Fax (903) 794-0626

☐WA - Seattle
19203 36th Ave W
Ste 100
Lynnwood, WA 98036
Tel (425) 921-4000
Fax (425) 921-4040

☒ Geomatrix
2101 Webster St, 12th floor
Oakland, CA 94612
(510) 663-4107

PROJECT NO 030275.6 PROJECT NAME SPI Arcata PAGE 1 OF 1

SAMPLER (Signature) Matt Hillyard PROJECT MANAGER Ross Steenson DATE 4/14/04

METHOD OF SHIPMENT UPS CARRIER/WAYBILL NO below DESTINATION Alpha

1Z 602 YW5 02 9667 4472

	SAMPLES												ANALYSIS REQUEST								
	Sample			Preservation					FILTRATION*	Containers			Constituents/Method					Handling			Remarks
Field Sample Identification	DATE	TIME	Matrix*	HCl	HNO_3	H_2SO_4	COLD			VOLUME (ml/oz)	TYPE*	NO	PCP/TCP					HOLD	RUSH	STANDARD	
SL-1	4/14	1045	AQ				X		4	125mL	G	2	X							X	Chlorinated phenols
																					by Canadian Pulp

TOTAL NUMBER OF CONTAINERS 2

LABORATORY COMMENTS/CONDITION OF SAMPLES Cooler Temp

RELINQUISHED BY:					RECEIVED BY:		
SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	SIGNATURE	PRINTED NAME	COMPANY
Matt Hillyard	Matt Hillyard	MFG	4/14/04	1315	Lisa Jansen 4/15/04 0930	Lisa Jansen	Alpha Labs
							LABORATORY

*KEY Matrix AQ aqueous NA nonaqueous SO soil SL - sludge P petroleum A air OT other Containers P plastic G glass T teflon B brass OT other Filtration F filtered U unfiltered

DISTRIBUTION PINK Field Copy YELLOW Laboratory Copy WHITE Return to Originator

FILE 9329

Alpha Analytical Laboratories Inc
208 Mason St Ukiah, California 95482
e-mail clientservices@alpha-labs.com • Phone (707) 468-0401 • Fax (707) 468-5267

RECEIVED 5/5/04

27 April 2004

Geomatrix Consultants
Attn: Ross Steenson
2101 Webster Street, 12th Floor
Oakland, CA 94612
RE: SPI - Arcata Stormwater
Work Order: A404473

TASK 6 STORM WATER
DITCH 2 COMPOSITE 4/20/04

Enclosed are the results of analyses for samples received by the laboratory on 04/21/04 16:50 If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Sheri Speaks

Sheri L. Speaks
Project Manager

Alpha Analytical Laboratories Inc
208 Mason St. Ukiah, California 95482
e-mail clientservices@alpha-labs.com • Phone (707) 468-0401 • Fax (707) 468-5267

CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Ross Steenson

Report Date: 04/27/04 10.01
Project No: 9329.000/030275.6
Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A404473	04/21/2004 16 50	GEOMAT	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Ditch 2 Composite 1,2,3,4	A404473-01	Water	04/20/04 15 20	04/21/04 16 50

Sheri Speaks

Sheri L. Speaks
Project Manager

4/27/04

Alpha Analytical Laboratories Inc
208 Mason St Ukiah, California 95482
e-mail clientservices@alpha-labs com • Phone (707) 468-0401 • Fax (707) 468-5267

CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Ross Steenson

Report Date: 04/27/04 10.01
Project No: 9329.000/030275.6
Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A404473	04/21/2004 16 50	GEOMAT	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		PQL	NOTE
Ditch 2 Composite 1,2,3,4 (A404473-01)			**Sample Type: Water**			**Sampled: 04/20/04 15:20**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AD42310	04/23/04	04/23/04	1	ND ug/l		1 0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
Pentachlorophenol	"	"	"		"	ND "		1 0	
Surrogate Tribromophenol	"	"	"	"		*79 6 %*	*79-119*		

The results in this report apply to the samples analyzed in accordance with the chain of custody document This analytical report must be reproduced in its entirety

Sheri Speaks

Sheri L Speaks
Project Manager

4/27/04

Alpha Analytical Laboratories Inc
208 Mason St. Ukiah, California 95482
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CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn Ross Steenson

Report Date: 04/27/04 10:01
Project No: 9329.000/030275 6
Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A404473	04/21/2004 16 50	GEOMAT	

SourceResult

Chlorinated Phenols by Canadian Pulp Method - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AD42310 - Solvent Extraction										
Blank (AD42310-BLK1)				Prepared & Analyzed 04/23/04						
2,4,6-Trichlorophenol	ND	1 0	ug/l							
2,3,5,6-Tetrachlorophenol	ND	1 0	"							
2,3,4,6-Tetrachlorophenol	ND	1 0	"							
2,3,4,5-Tetrachlorophenol	ND	1 0	"							
Pentachlorophenol	ND	1 0	"							
Surrogate Tribromophenol	*32 4*		"	*25 0*		*130*	*79-119*			*S-01*
LCS (AD42310-BS1)				Prepared & Analyzed 04/23/04						
2,4,6-Trichlorophenol	4 32	1 0	ug/l	5 00		86 4	81-120			
2,3,5,6-Tetrachlorophenol	4 17	1 0	"	5 00		83 4	78-108			
2,3,4,6-Tetrachlorophenol	4 97	1 0	"	5 00		99 4	76-108			
2,3,4,5-Tetrachlorophenol	4 37	1 0		5 00		87 4	80-116			
Pentachlorophenol	4 91	1 0	"	5 00		98 2	86-109			
Surrogate Tribromophenol	*29 7*		"	*25 0*		*119*	*79-119*			
Matrix Spike (AD42310-MS1)	**Source: A404473-01**			Prepared & Analyzed 04/23/04						
2,4,6-Trichlorophenol	4 36	1 0	ug/l	5 00	ND	87 2	75-125			
2,3,5,6-Tetrachlorophenol	5 52	1 0	"	5 00	ND	110	69-115			
2,3,4,6-Tetrachlorophenol	5 07	1 0	"	5 00	ND	99 5	66-117			
2,3,4,5-Tetrachlorophenol	4 40	1 0	"	5 00	ND	88 0	70-115			
Pentachlorophenol	5 56	1 0	"	5 00	ND	105	55-124			
Surrogate Tribromophenol	*24 9*		"	*25 0*		*99 6*	*79-119*			
Matrix Spike Dup (AD42310-MSD1)	**Source: A404473-01**			Prepared & Analyzed 04/23/04						
2,4,6-Trichlorophenol	4 55	1 0	ug/l	5 00	ND	91 0	75-125	4 26	20	
2,3 5 6-Tetrachlorophenol	5 70	1 0	"	5 00	ND	114	69-115	3 21	20	

The results in this report apply to the samples analyzed in accordance with the chain of custody document This analytical report must be reproduced in its entirety

Sheri Speaks

Sheri L Speaks
Project Manager

4/27/04

Alpha Analytical Laboratories Inc
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CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Ross Steenson

Report Date: 04/27/04 10:01
Project No: 9329.000/030275 6
Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A404473	04/21/2004 16 50	GEOMAT	

Chlorinated Phenols by Canadian Pulp Method - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AD42310 - Solvent Extraction										
Matrix Spike Dup (AD42310-MSD1)	**Source: A404473-01**			Prepared & Analyzed 04/23/04						
2,3,4,6-Tetrachlorophenol	5 29	1 0	"	5 00	ND	104	66-117	4 25	20	
2,3,4,5-Tetrachlorophenol	4 64	1 0	"	5 00	ND	92 8	70-115	5 31	20	
Pentachlorophenol	5 76	1 0	"	5 00	ND	109	55-124	3 53	20	
Surrogate Tribromophenol	*25 6*		"	*25 0*		*102*	*79-119*			

The results in this report apply to the samples analyzed in accordance with the chain of custody document This analytical report must be reproduced in its entirety

Sheri Speaks

Sheri L. Speaks
Project Manager

4/27/04

Alpha Analytical Laboratories Inc
208 Mason St Ukiah, California 95482
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CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn Ross Steenson

Report Date: 04/27/04 10:01
Project No: 9329.000/030275.6
Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A404473	04/21/2004 16 50	GEOMAT	

Notes and Definitions

S-01	The surrogate recovery for this sample is outside of established control limits
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
PQL	Practical Quantitation Limit

2.3

MFG, INC.

CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS

COC No 46246

☐ **Arcata Office**
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Tel (425) 921-4000
Fax (425) 921-4040

Geomatrix
2101 Webster St, 12th Floor
Oakland, CA 94612
(510) 663-4107

PROJECT NO. 030275.6 PROJECT NAME. SPI Arcata Storm Water PAGE. 1 OF 1

SAMPLER (Signature) Matt Hollyard PROJECT MANAGER: Ross Steenson DATE 4/20/04

METHOD OF SHIPMENT Courier CARRIER/WAYBILL NO. — DESTINATION. Alpha

	SAMPLES												ANALYSIS REQUEST								
	Sample			Preservation					Containers				Constituents/Method					Handling			Remarks
Field Sample Identification	DATE	TIME	Matrix*	HCl	HNO_3	H_2SO_4	COLD	FILTRATION*	VOLUME (ml/oz)	TYPE*	NO	PCP/TCP						HOLD	RUSH	STANDARD	
Ditch 2 Comp 1	4/20	1320					X	S	125ml	G	1	X	A4044473-01							X	Canadian pulp
Ditch 2 Comp 2	↓	1400					↓	↓	↓	↓	1	X								X	
Ditch 2 Comp 3		1440									1	X								X	composite into
Ditch 2 Comp 4	↓	1520					↓	↓	↓	↓	1	X								X	single sample
																					report as
Ditch 2 Composite																					"Ditch 2 Composite"
				TOTAL NUMBER OF CONTAINERS									LABORATORY COMMENTS/CONDITION OF SAMPLES								Cooler Temp 2.3

RELINQUISHED BY:					RECEIVED BY:		
SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	SIGNATURE	PRINTED NAME	COMPANY
	Matt Hollyard	MFG	4/21/04	1220		John Taylor	Alpha
	John Taylor	Alpha	4/21/04	1650		Dale Burgess	Alpha LABORATORY

KEY Matrix AQ aqueous NA nonaqueous SO - soil SL - sludge P petroleum A air OT other Containers P plastic G glass T - teflon B brass OT - other Filtration F filtered U unfiltered

DISTRIBUTION PINK Field Copy YELLOW Laboratory Copy WHITE Return to Originator

FILE 9329

Alpha Analytical Laboratories Inc
208 Mason St. Ukiah, California 95482
e-mail clientservices@alpha-labs.com • Phone (707) 468-0401 • Fax (707) 468-5267

RECEIVED 5/5/04

27 April 2004

Geomatrix Consultants
Attn: Ross Steenson
2101 Webster Street, 12th Floor
Oakland, CA 94612
RE: SPI - Arcata Stormwater
Work Order: A404474

TASK 6 STORM WATER
DITCH #2 4/20/04

Enclosed are the results of analyses for samples received by the laboratory on 04/21/04 16:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Sheri Speaks

Sheri L. Speaks
Project Manager

Alpha Analytical Laboratories Inc
208 Mason St. Ukiah, California 95482
e-mail clientservices@alpha-labs com • Phone (707) 468-0401 • Fax (707) 468-5267

CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Ross Steenson

Report Date. 04/27/04 10:06
Project No: 9329.000/030275.6
Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A404474	04/21/2004 16 50	GEOMAT	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Ditch 2-20040420	A404474-01	Water	04/20/04 13 20	04/21/04 16 50

Sheri Speaks

Sheri L Speaks
Project Manager

4/27/04

Alpha Analytical Laboratories Inc
208 Mason St Ukiah, California 95482
e-mail clientservices@alpha-labs com • Phone (707) 468-0401 • Fax (707) 468-5267

CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn. Ross Steenson

Report Date: 04/27/04 10:06
Project No 9329 000/030275.6
Project ID. SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A404474	04/21/2004 16 50	GEOMAT	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		PQL	NOTE
Ditch 2-20040420 (A404474-01)			**Sample Type: Water**			**Sampled: 04/20/04 13:20**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AD42310	04/23/04	04/24/04	1	ND ug/l		1 0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
Pentachlorophenol	"	"	"	"	"	ND "		1 0	
Surrogate Tribromophenol	"	"	"	"		*98 4 %*	*79-119*		

The results in this report apply to the samples analyzed in accordance with the chain of custody document This analytical report must be reproduced in its entirety

Sheri Speaks

Sheri L Speaks
Project Manager

4/27/04

Alpha Analytical Laboratories Inc
208 Mason St Ukiah, California 95482
e-mail clientservices@alpha-labs com • Phone (707) 468-0401 • Fax (707) 468-5267

CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Ross Steenson

Report Date: 04/27/04 10:06
Project No: 9329.000/030275 6
Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A404474	04/21/2004 16 50	GEOMAT	

SourceResult

Chlorinated Phenols by Canadian Pulp Method - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AD42310 - Solvent Extraction										
Blank (AD42310-BLK1)				Prepared & Analyzed 04/23/04						
2,4,6-Trichlorophenol	ND	1 0	ug/l							
2,3,5,6-Tetrachlorophenol	ND	1 0	"							
2,3,4,6-Tetrachlorophenol	ND	1 0	"							
2,3,4,5-Tetrachlorophenol	ND	1 0	"							
Pentachlorophenol	ND	1 0	"							
Surrogate Tribromophenol	*32 4*		"	*25 0*		*130*	*79-119*			*S-01*
LCS (AD42310-BS1)				Prepared & Analyzed 04/23/04						
2,4,6-Trichlorophenol	4 32	1 0	ug/l	5 00		86 4	81-120			
2,3,5,6-Tetrachlorophenol	4 17	1 0	"	5 00		83 4	78-108			
2,3,4,6-Tetrachlorophenol	4 97	1 0	"	5 00		99 4	76-108			
2,3,4,5-Tetrachlorophenol	4 37	1 0	"	5 00		87 4	80-116			
Pentachlorophenol	4 91	1 0	"	5 00		98 2	86-109			
Surrogate Tribromophenol	*29 7*		"	*25 0*		*119*	*79-119*			
Matrix Spike (AD42310-MS1)	**Source: A404473-01**			Prepared & Analyzed 04/23/04						
2,4,6-Trichlorophenol	4 36	1 0	ug/l	5 00	ND	87 2	75-125			
2,3,5,6-Tetrachlorophenol	5 52	1 0	"	5 00	ND	110	69-115			
2,3,4,6-Tetrachlorophenol	5 07	1 0	"	5 00	ND	99 5	66-117			
2,3,4,5-Tetrachlorophenol	4 40	1 0	"	5 00	ND	88 0	70-115			
Pentachlorophenol	5 56	1 0	"	5 00	ND	105	55-124			
Surrogate Tribromophenol	*24 9*		"	*25 0*		*99 6*	*79-119*			
Matrix Spike Dup (AD42310-MSD1)	**Source: A404473-01**			Prepared & Analyzed 04/23/04						
2,4,6-Trichlorophenol	4 55	1 0	ug/l	5 00	ND	91 0	75-125	4 26	20	
2,3,5,6-Tetrachlorophenol	5 70	1 0	"	5 00	ND	114	69-115	3 21	20	

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Sheri Speaks

Sheri L Speaks
Project Manager

4/27/04

Alpha Analytical Laboratories Inc
208 Mason St Ukiah, California 95482
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CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Ross Steenson

Report Date. 04/27/04 10:06
Project No 9329.000/030275.6
Project ID. SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A404474	04/21/2004 16 50	GEOMAT	

Chlorinated Phenols by Canadian Pulp Method - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AD42310 - Solvent Extraction										
Matrix Spike Dup (AD42310-MSD1)	**Source: A404473-01**			Prepared & Analyzed 04/23/04						
2,3,4,6-Tetrachlorophenol	5 29	1 0	"	5 00	ND	104	66-117	4 25	20	
2,3,4,5-Tetrachlorophenol	4 64	1 0	"	5 00	ND	92 8	70-115	5 31	20	
Pentachlorophenol	5 76	1 0	"	5 00	ND	109	55-124	3 53	20	
Surrogate Tribromophenol	*25 6*		"	*25 0*		*102*	*79-119*			

The results in this report apply to the samples analyzed in accordance with the chain of custody document This analytical report must be reproduced in its entirety

Sheri Speaks

Sheri L Speaks
Project Manager

4/27/04

Alpha Analytical Laboratories Inc
208 Mason St Ukiah, California 95482
e-mail clientservices@alpha-labs com • Phone (707) 468-0401 • Fax (707) 468-5267

CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Ross Steenson

Report Date: 04/27/04 10:06
Project No: 9329.000/030275.6
Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A404474	04/21/2004 16 50	GEOMAT	

Notes and Definitions

S-01	The surrogate recovery for this sample is outside of established control limits
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
PQL	Practical Quantitation Limit

MFG, INC.

CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS

COC No. 46245

Arcata Office
875 Crescent Way
Arcata, CA 95521-4741
Phone (707) 826-8430- FAX (707) 826-8437

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Fax (415) 495-7107

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Fax (303) 447-1836

☐ ID - Osburn
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Fax (208) 556-7271

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Fax (425) 921-4040

* Geomatrix
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Oakland, CA 94612
(510) 663-4107

PROJECT NO: 030275-6 PROJECT NAME: SPI Arcata Storm Water PAGE 1 OF 1

SAMPLER (Signature) Matt Hillyard PROJECT MANAGER: Ross Steenson DATE 4/20/04

METHOD OF SHIPMENT Courier CARRIER/WAYBILL NO _____ DESTINATION Alpha

	SAMPLES												ANALYSIS REQUEST						
	Sample			Preservation					Containers				Constituents/Method					Handling			Remarks
Field Sample Identification	DATE	TIME	Matrix*	HCl	HNO_3	H_2SO_4	COLD		FILTRATION*	VOLUME (ml/oz)	TYPE*	NO	PCB/TCP					HOLD	RUSH	STANDARD	
Ditch2-20040420	4/20	1320	AQ				X		N	125ml	G	2	A4044474-01							X	Chloraphenols by Canadian pulp
				TOTAL NUMBER OF CONTAINERS								2	LABORATORY COMMENTS/CONDITION OF SAMPLES					Cooler Temp 2.3			

RELINQUISHED BY					RECEIVED BY:		
SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	SIGNATURE	PRINTED NAME	COMPANY
	Matt Hillyard	MFG	4/21/04	1220		John Baker	Alpha
	John Taylor	Alpha	4/21/04	1650		Nina Burgess	
							LABORATORY

KEY Matrix AQ aqueous NA - nonaqueous SO soil SL sludge P petroleum A air OT other Containers P plastic G glass T teflon B brass OT other Filtration F filtered U unfiltered

DISTRIBUTION PINK Field Copy YELLOW Laboratory Copy WHITE Return to Originator

FILE 9329

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

May 5, 2004

RECEIVED 5/10/2004

TASK 6 STORM WATER
APRIL 20, 2004 DITCH 3
COMPOSITE SAMPLES

Ross Steenson, Project Manager
Geomatrix Consultants, Inc.
2101 Webster Street, 12th Floor
Oakland, CA 94612

Dear Mr. Steenson:

Included are the results from the testing of material submitted on April 22, 2004 from the SPI Arcata Storm Water, F&BI 404199 project. There are 5 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Charlene Morrow

Charlene Morrow
Chemist

Enclosures
GMC0505R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on April 22, 2004 by Friedman & Bruya, Inc. from the Geomatrix Consultants, Inc. SPI Arcata Storm Water, F&BI 404199 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Geomatrix Consultants, Inc.
404199-01	Ditch 3 Comp1
404199-02	Ditch 3 Comp2
404199-03	Ditch 3 Comp3
404199-04	Ditch 3 Comp4

As requested the samples were composited to make sample "Ditch 3 2-Hr Composite" prior to extraction. All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/05/04
Date Received: 04/22/04
Project: SPI Arcata Storm Water, F&BI 404199
Date Extracted: 04/29/04
Date Analyzed: 04/29/04

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL USING EPA METHOD 8015M

Results Reported as µg/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Surrogate (% Recovery) (Limit 59-126)
Ditch 3 2-Hr Composite d 404199-01/02/03/04 Composite	9,500	104
Method Blank	<50	67

d - The sample was diluted

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/05/04
Date Received: 04/22/04
Project: SPI Arcata Storm Water, F&BI 404199
Date Extracted: 04/22/04
Date Analyzed: 04/29/04

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL USING EPA METHOD 8015M

Results Reported as µg/L (ppb)

Sample ID Laboratory ID	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
Ditch 3 2-Hr Composite d 404199-01/02/03/04 Composite	24,000	86
Method Blank	<50	67

d - The sample was diluted

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/05/04
Date Received: 04/22/04
Project: SPI Arcata Storm Water, F&BI 404199

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL USING EPA METHOD 8015M

Laboratory Code 404200-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Diesel	µg/L (ppb)	8,700	9,400	8	0-20

Laboratory Code 404200-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	% Recovery MS	Acceptance Criteria
Diesel	µg/L (ppb)	2,500	8,700	132	50-150

Laboratory Code Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel	µg/L (ppb)	2,500	117	79-121

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/05/04
Date Received: 04/22/04
Project: SPI Arcata Storm Water, F&BI 404199

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL USING EPA METHOD 8015M

Laboratory Code: 404200-01 (Duplicate)

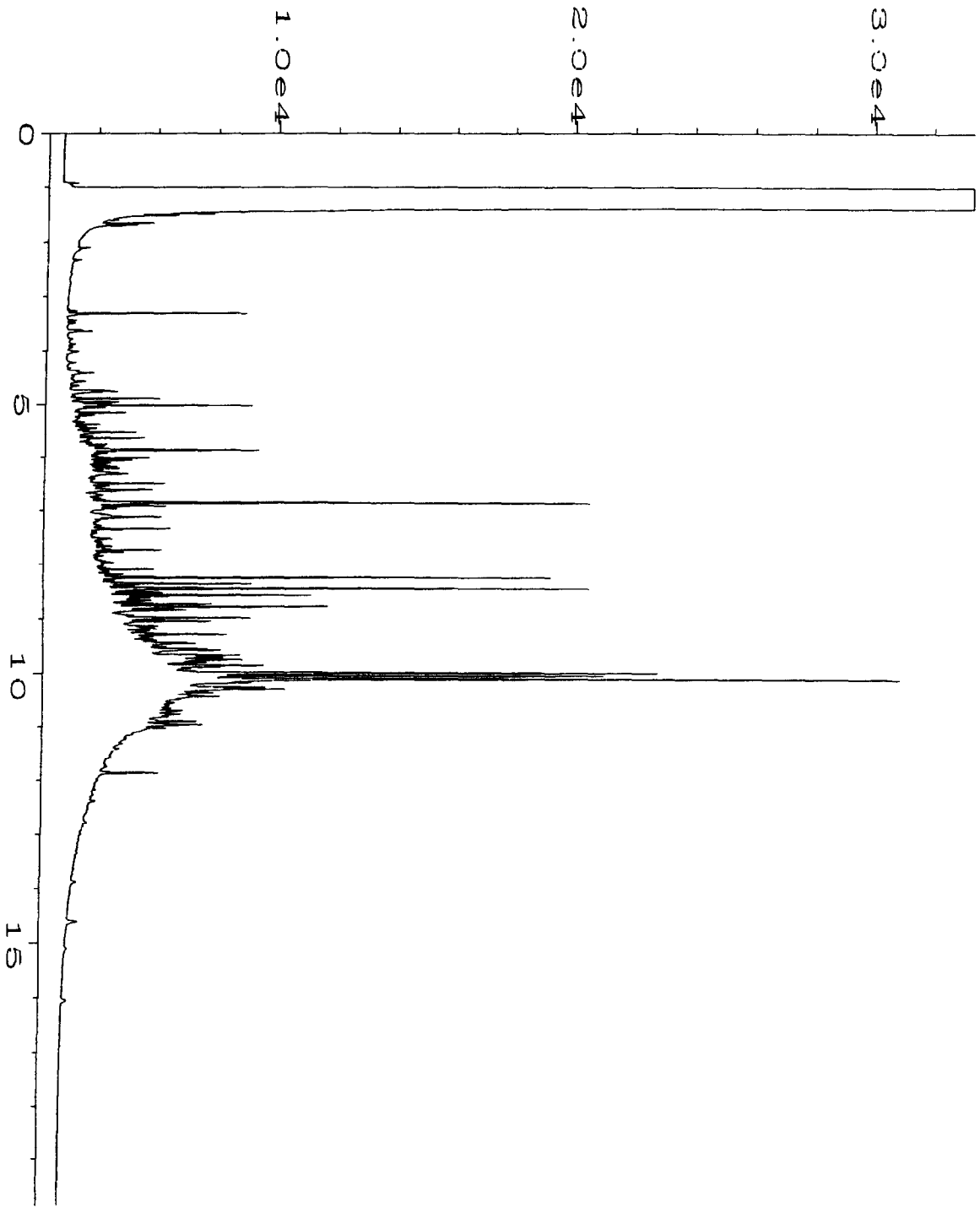
Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Motor Oil	µg/L (ppb)	22,000	25,000	13	0-20

Laboratory Code 404200-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	% Recovery MS	Acceptance Criteria
Motor Oil	µg/L (ppb)	10,000	22,000	71	50-150

Laboratory Code Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Motor Oil	µg/L (ppb)	10,000	90	70-130



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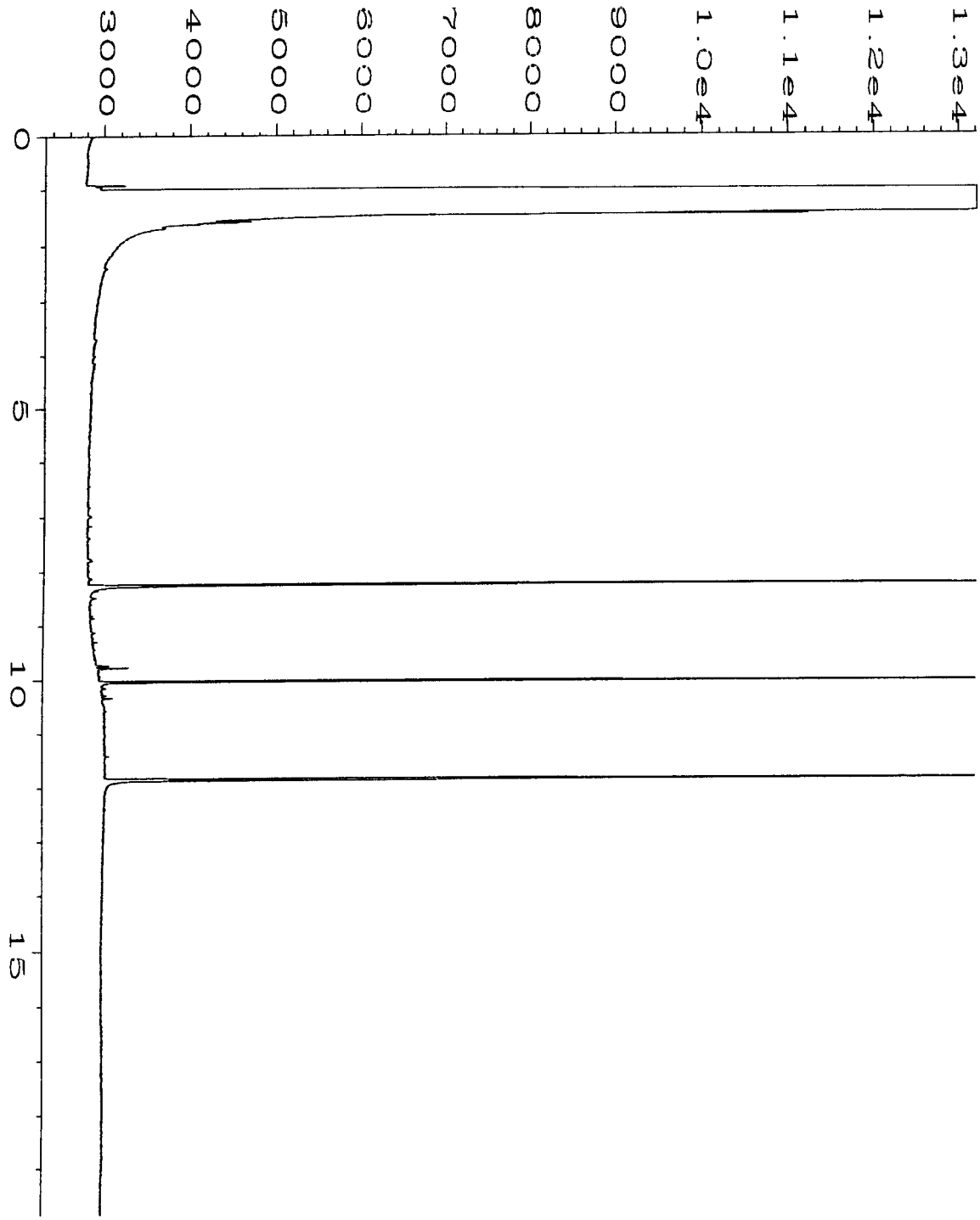
Operator	: ME	Page Number	: 1
Instrument	: GC #6	Vial Number	: 14
Sample Name	: 404199-COMP 1:10	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 6
Acquired on	: 29 Apr 04 02:09 PM	Instrument Method	: TPHDAK.MTH
Report Created on	: 30 Apr 04 10:41 AM	Analysis Method	: DEFAULT.MTH



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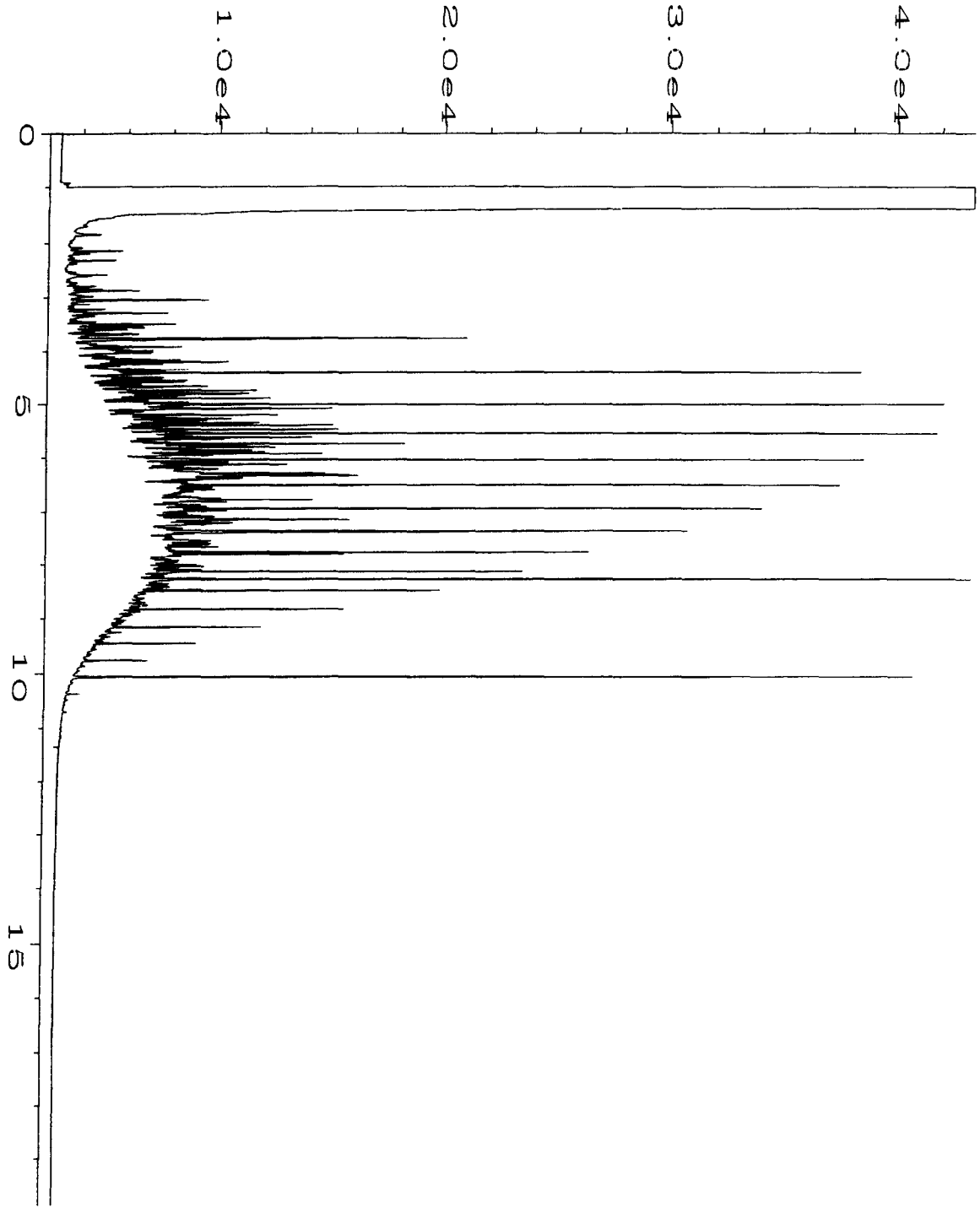
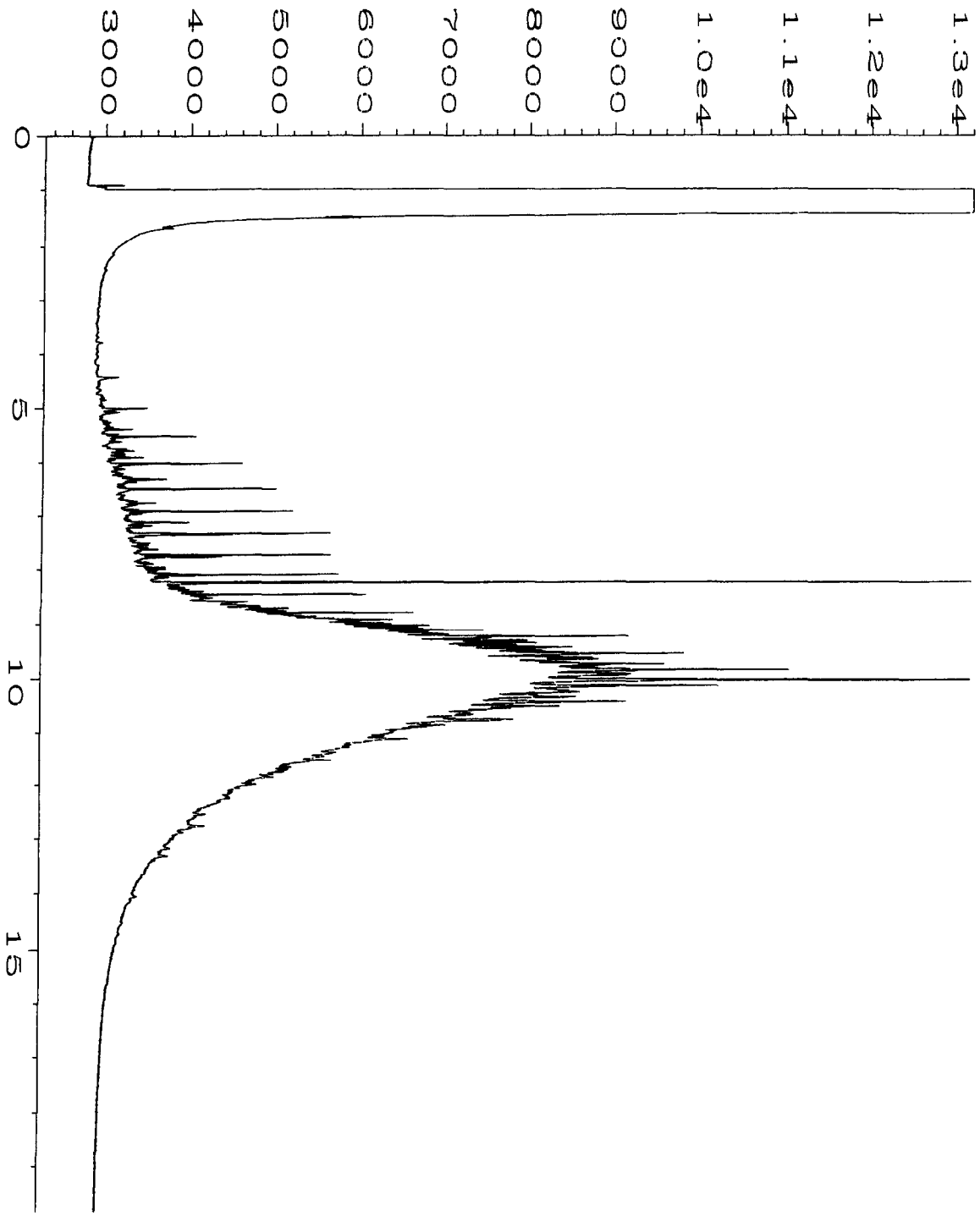
Operator : ME
Instrument : GC #6
Sample Name : 04-399 MB
Run Time Bar Code:
Acquired on : 29 Apr 04 04:18 PM
Report Created on: 30 Apr 04 10:40 AM

Page Number : 1
Vial Number : 11
Injection Number : 1
Sequence Line : 7
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.MTH



Data File Name : D:\GC6\04-29-04\002F0201.D
Operator : ME
Instrument : GC #6
Sample Name : 500 WADF 17-43
Run Time Bar Code:
Acquired on : 29 Apr 04 08:26 AM
Report Created on: 30 Apr 04 10:41 AM

Page Number : 1
Vial Number : 2
Injection Number : 1
Sequence Line : 2
Instrument Method: TPHD.MTH
Analysis Method : DEFAULT.MTH



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Operator : ME
Instrument : GC #6
Sample Name : 500 MO 18-16
Run Time Bar Code:
Acquired on : 29 Apr 04 05:35 PM
Report Created on: 30 Apr 04 10:42 AM

Page Number : 1
Vial Number : 6
Injection Number : 1
Sequence Line : 9
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.MTH

404199

CM 04/22/04

D04

MFG, INC.

CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS

COC No. 46248

☐ Arcata Office
875 Crescent Way
Arcata, CA 95521-6741
Phone (707) 826-8430- FAX (707) 826-8437

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Tel (949) 253-2951
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☐ CA - San Francisco
180 Howard St., Ste 200
San Francisco, CA 94105
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Fax (415) 495-7107

☐ CO - Boulder
4900 Pearl East Cir
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Missoula MT 59807
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☐ NJ - Edison
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☐ OR - Portland
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Ste 530
Portland OR 97205
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Fax (503) 228-8631

☐ PA - Pittsburgh
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☐ TX - Austin
4807 Spicewood Springs Rd
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☐ TX - Houston
12337 Jones Rd
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Tel (281) 890-5068
Fax (281) 890-5044

☐ TX - Port Lavaca
320 East Main
Port Lavaca, TX 77979
Tel (361) 552-8839
Fax (361) 553-6115

☐ TX - Texarkana
4532 Summerhill Rd
Texarkana, TX 75503
Tel (903) 794-0625
Fax (903) 794-0626

☐ WA - Seattle
19203 36th Ave W
Ste. 100
Lynnwood, WA 98036
Tel (425) 921-4000
Fax (425) 921-4040

*Geomatrix
2101 Webster St, 12th floor
Oakland, CA 94612
(510) 663-4107

PROJECT NO: 030275-6 PROJECT NAME: SPI Arcata Storm Water PAGE: 1 OF: 1

SAMPLER (Signature): Matt Hillyard PROJECT MANAGER: Ross Steenson DATE: 4/20/04

METHOD OF SHIPMENT: FedEx CARRIER/WAYBILL NO: below DESTINATION: Friedman & Bruya

7901 2472 2961

Lab ID	Field Sample Identification	SAMPLES: Sample DATE	TIME	Matrix*	Preservation: HCl	HNO_3	H_2SO_4	COLD	FILTRATION*	Containers: VOLUME (ml/oz)	TYPE*	NO.	ANALYSIS REQUEST: Constituents/Method: TPH-D/MO	Handling: HOLD	RUSH	STANDARD	Remarks
01	Ditch 3 Comp1	4/20	1330	AQ				X	U	1liter	G	1	X			X	Bill Geomatrix
02	Ditch 3 Comp2	↓	1405	↓				↓	↓	↓	↓	1	X			X	Composite into
03	Ditch 3 Comp3		1445									1	X			X	Single Sample
04	Ditch 3 Comp4	↓	1525	↓				↓	↓	↓	↓	1	X			X	report as "Ditch 3 2-hr Composite"
	Ditch 3 2-hr Composite																

TOTAL NUMBER OF CONTAINERS 4

LABORATORY COMMENTS/CONDITION OF SAMPLES Cooler Temp:

RELINQUISHED BY: SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	RECEIVED BY: SIGNATURE	PRINTED NAME	COMPANY
Matt Hillyard	Matt Hillyard	MFG	4/21/04	1000		Nhan Phan	Friedman & Bruya 4/22/04 09:30
							LABORATORY

*KEY Matrix: AQ - aqueous NA - nonaqueous SO - soil SL - sludge P - petroleum A - air OT - other Containers: P - plastic G - glass T - teflon B - brass OT - other Filtration: F - filtered U - unfiltered

DISTRIBUTION: PINK: Field Copy YELLOW: Laboratory Copy WHITE: Return to Originator

FILE 9329

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

May 7, 2004

RECEIVED 5/10/2004

Ross Steenson, Project Manager
Geomatrix Consultants, Inc.
2101 Webster Street, 12th Floor
Oakland, CA 94612

TASK 6 STORM WATER
APRIL 20, 2004 DITCH 3
SILICA GEL / NON SILICA GEL
SAMPLES

Dear Mr. Steenson:

Included are the results from the testing of material submitted on April 22, 2004 from the SPI Arcata Storm Water, F&BI 404200 project. There are 9 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Charlene Morrow

Charlene Morrow
Chemist

Enclosures
GMC0507R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on April 22, 2004 by Friedman & Bruya, Inc. from the Geomatrix Consultants, Inc. SPI Arcata Storm Water, F&BI 404200 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Geomatrix Consultants, Inc.
404200-01	Ditch3-20040420

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/07/04
Date Received: 04/22/04
Project: SPI Arcata Storm Water, F&BI 404200
Date Extracted: 04/22/04
Date Analyzed: 04/29/04

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL USING EPA METHOD 8015M

Results Reported as µg/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Surrogate (% Recovery) (Limit 59-126)
Ditch3-20040420 d 404200-01	8,700	83
Method Blank	<50	90

d - The sample was diluted

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/07/04
Date Received: 04/22/04
Project: SPI Arcata Storm Water, F&BI 404200
Date Extracted: 04/22/04
Date Analyzed: 04/29/04

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL USING EPA METHOD 8015M

Results Reported as µg/L (ppb)

Sample ID Laboratory ID	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
Ditch3-20040420 d 404200-01	22,000	88
Method Blank	<50	67

d - The sample was diluted

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/07/04
Date Received: 04/22/04
Project: SPI Arcata Storm Water, F&BI 404200
Date Extracted: 04/22/04
Date Analyzed: 04/30/04

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL USING EPA METHOD 8015M
Sample Extracts Passed Through a Silica Gel Column Prior to Analysis
Results Reported as µg/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Surrogate (% Recovery) (Limit 59-126)
Ditch3-20040420 404200-01	1,300	88
Method Blank	<50	88

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/07/04
Date Received: 04/22/04
Project: SPI Arcata Storm Water, F&BI 404200
Date Extracted: 04/22/04
Date Analyzed: 05/05/04

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL USING EPA METHOD 8015M
Sample Extracts Passed Through a Silica Gel Column Prior to Analysis
Results Reported as µg/L (ppb)

Sample ID Laboratory ID	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
Ditch3-20040420 404200-01	7,300	97
Method Blank	<250	100

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/07/04
Date Received: 04/22/04
Project: SPI Arcata Storm Water, F&BI 404200

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL USING EPA METHOD 8015M

Laboratory Code: 404200-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Diesel	µg/L (ppb)	8,900	9,400	5	0-20

Laboratory Code 404200-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	% Recovery MS	Acceptance Criteria
Diesel	µg/L (ppb)	2,500	8,700	132	50-150

Laboratory Code Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel	µg/L (ppb)	2,500	117	79-121

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/07/04
Date Received: 04/22/04
Project: SPI Arcata Storm Water, F&BI 404200

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL USING EPA METHOD 8015M

Laboratory Code 404200-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Motor Oil	µg/L (ppb)	22,000	25,000	13	0-20

Laboratory Code 404200-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	% Recovery MS	Acceptance Criteria
Motor Oil	µg/L (ppb)	10,000	22,000	71	50-150

Laboratory Code Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Motor Oil	µg/L (ppb)	10,000	90	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/07/04
Date Received: 04/22/04
Project: SPI Arcata Storm Water, F&BI 404200

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL USING EPA METHOD 8015M

Laboratory Code 404200-01 (Duplicate) Silica Gel

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Diesel	µg/L (ppb)	1,300	1,200	8	0-20

Laboratory Code 404200-01 (Matrix Spike) Silica Gel

Analyte	Reporting Units	Spike Level	Sample Result	% Recovery MS	Acceptance Criteria
Diesel	µg/L (ppb)	2,500	1,300	100	50-150

Laboratory Code Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel	µg/L (ppb)	2,500	107	79-121

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/07/04
Date Received: 04/22/04
Project: SPI Arcata Storm Water, F&BI 404200

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL USING EPA METHOD 8015M

Laboratory Code 404200-01 (Duplicate) Silica Gel

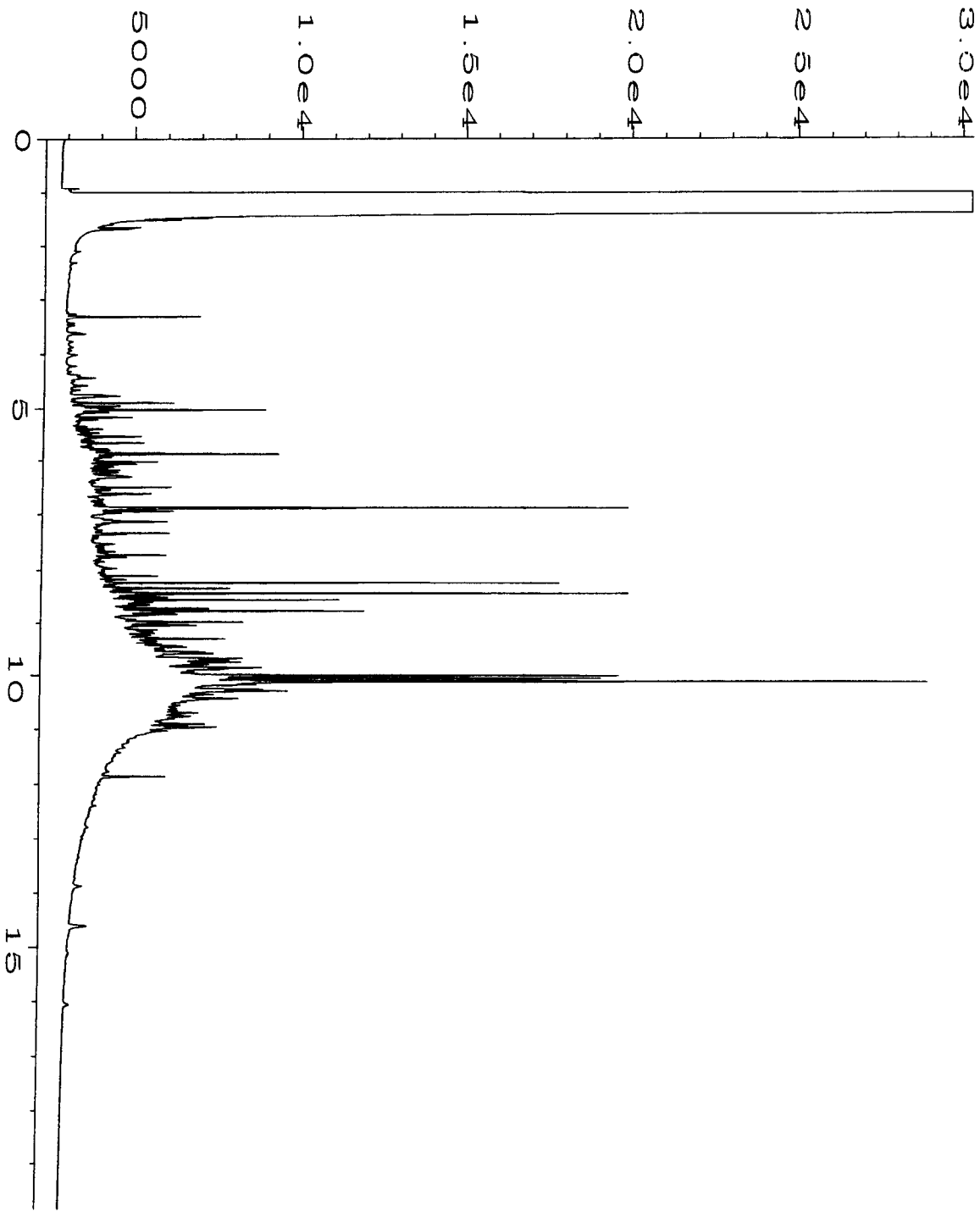
Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Motor Oil	µg/L (ppb)	7,900	7,300	8	0-20

Laboratory Code 404200-01 (Matrix Spike) Silica Gel

Analyte	Reporting Units	Spike Level	Sample Result	% Recovery MS	Acceptance Criteria
Motor Oil	µg/L (ppb)	10,000	7,900	51	50-150

Laboratory Code Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Motor Oil	µg/L (ppb)	10,000	87	70-130



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Instrument	: GC #6	Vial Number	: 15
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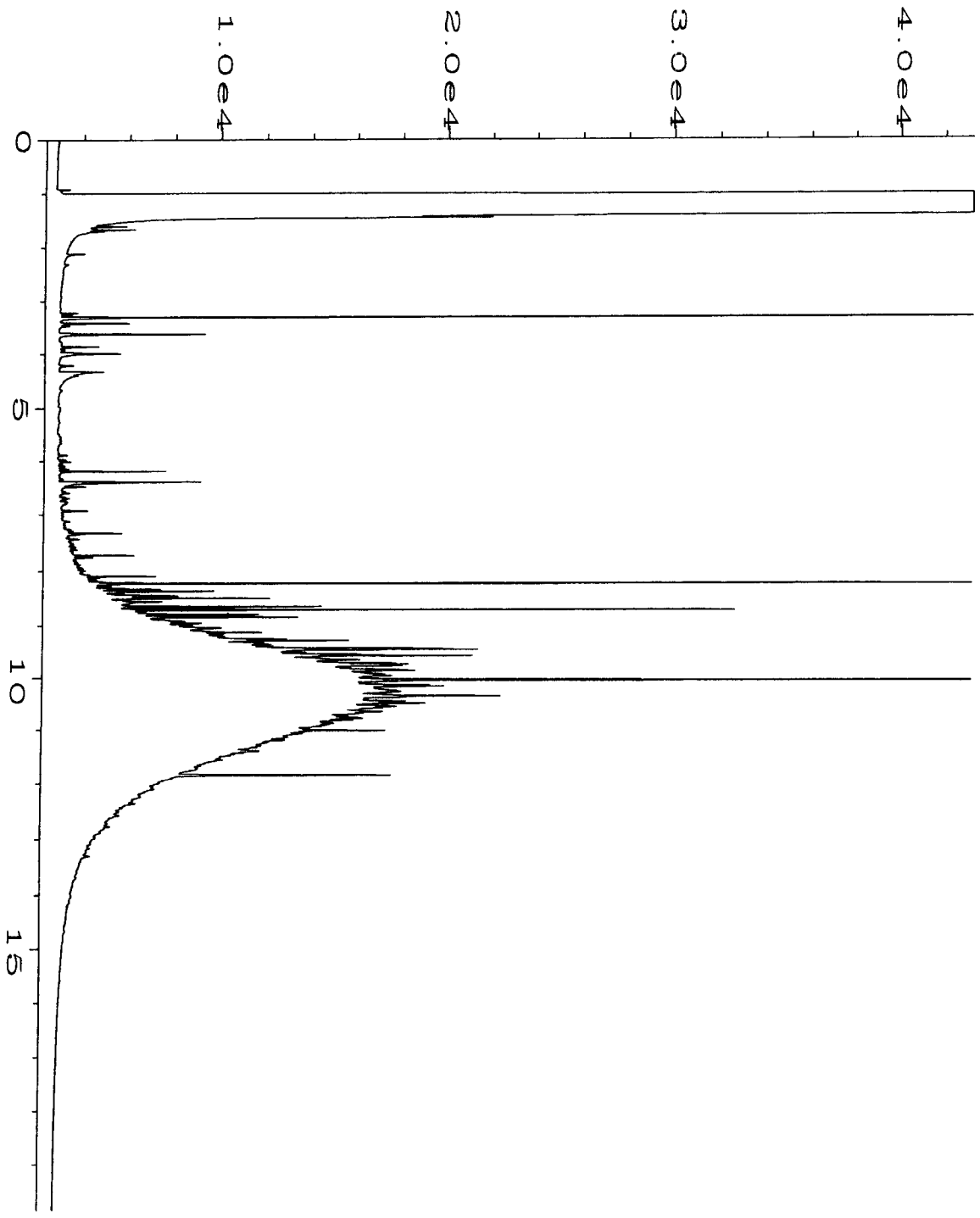
Run Time Bar Code:		Sequence Line	: 6
Acquired on	: 29 Apr 04 02:35 PM	Instrument Method	: TPHDAK.MTH
Report Created on	: 30 Apr 04 10:41 AM	Analysis Method	: DEFAULT.MTH



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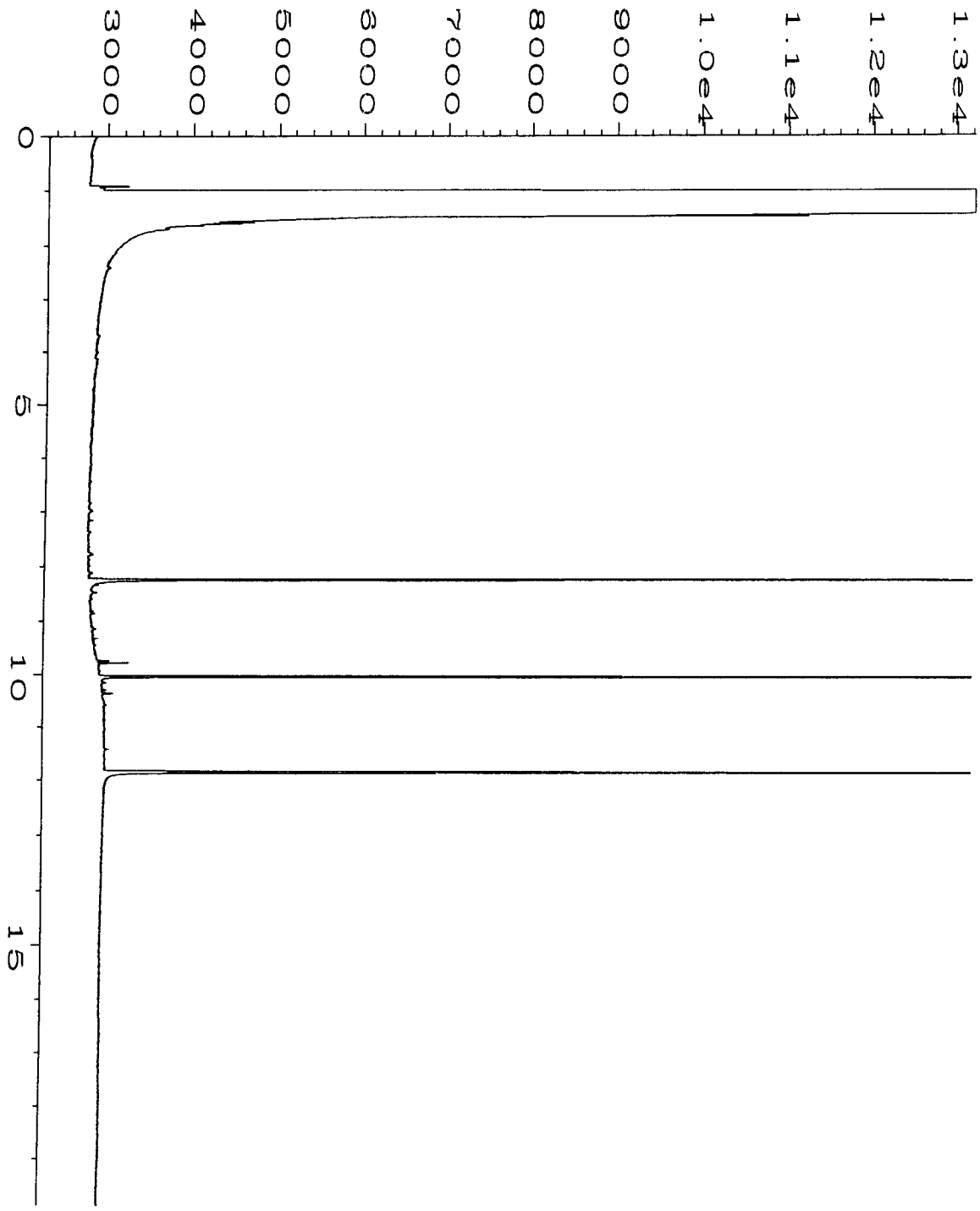
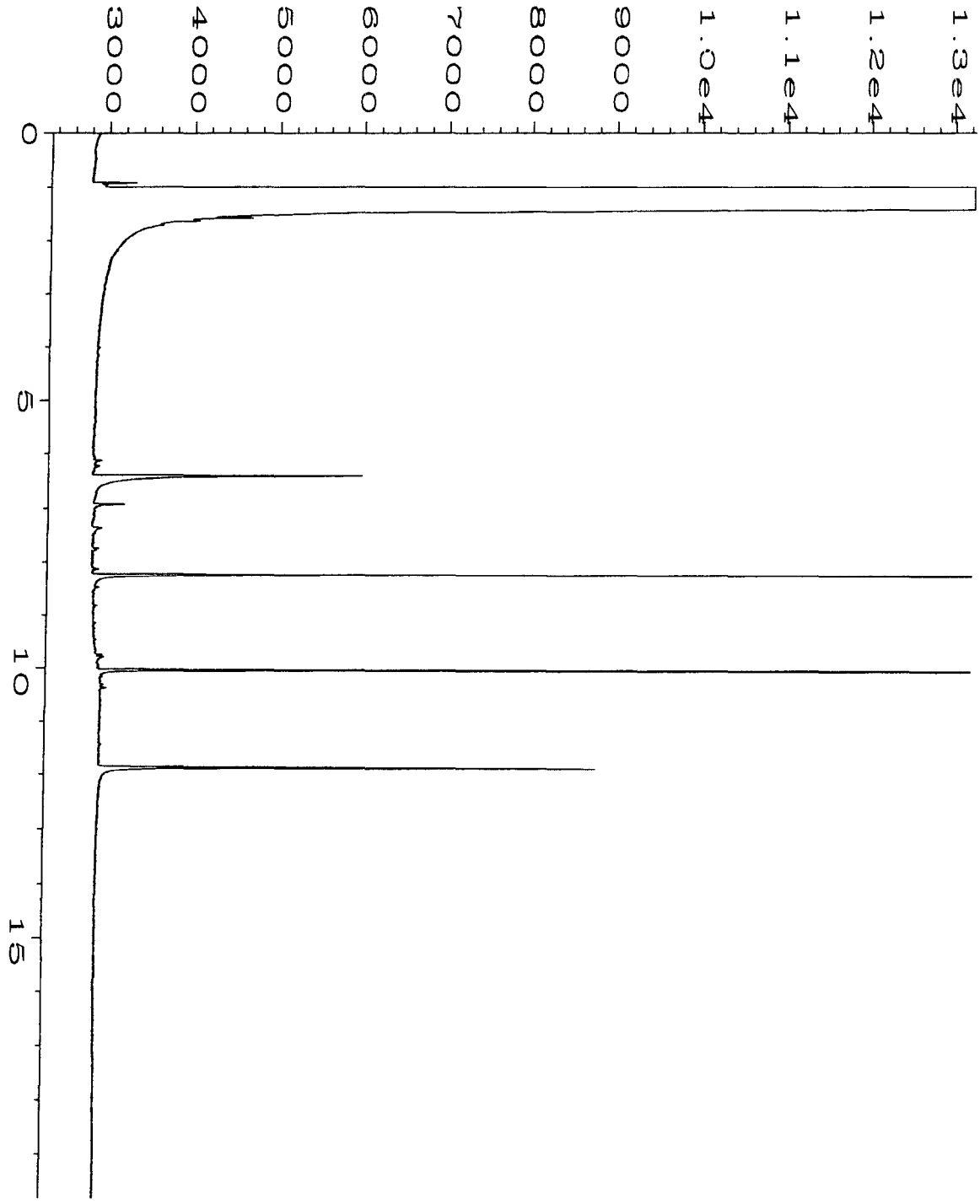
Operator	: ME	Page Number	: 1
Instrument	: GC #6	Vial Number	: 9
Sample Name	: 404200-01 sg	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 4
Acquired on	: 30 Apr 04 12:42 PM	Instrument Method	: TPHDAK.MTH
Report Created on	: 03 May 04 09:02 AM	Analysis Method	: DEFAULT.MTH



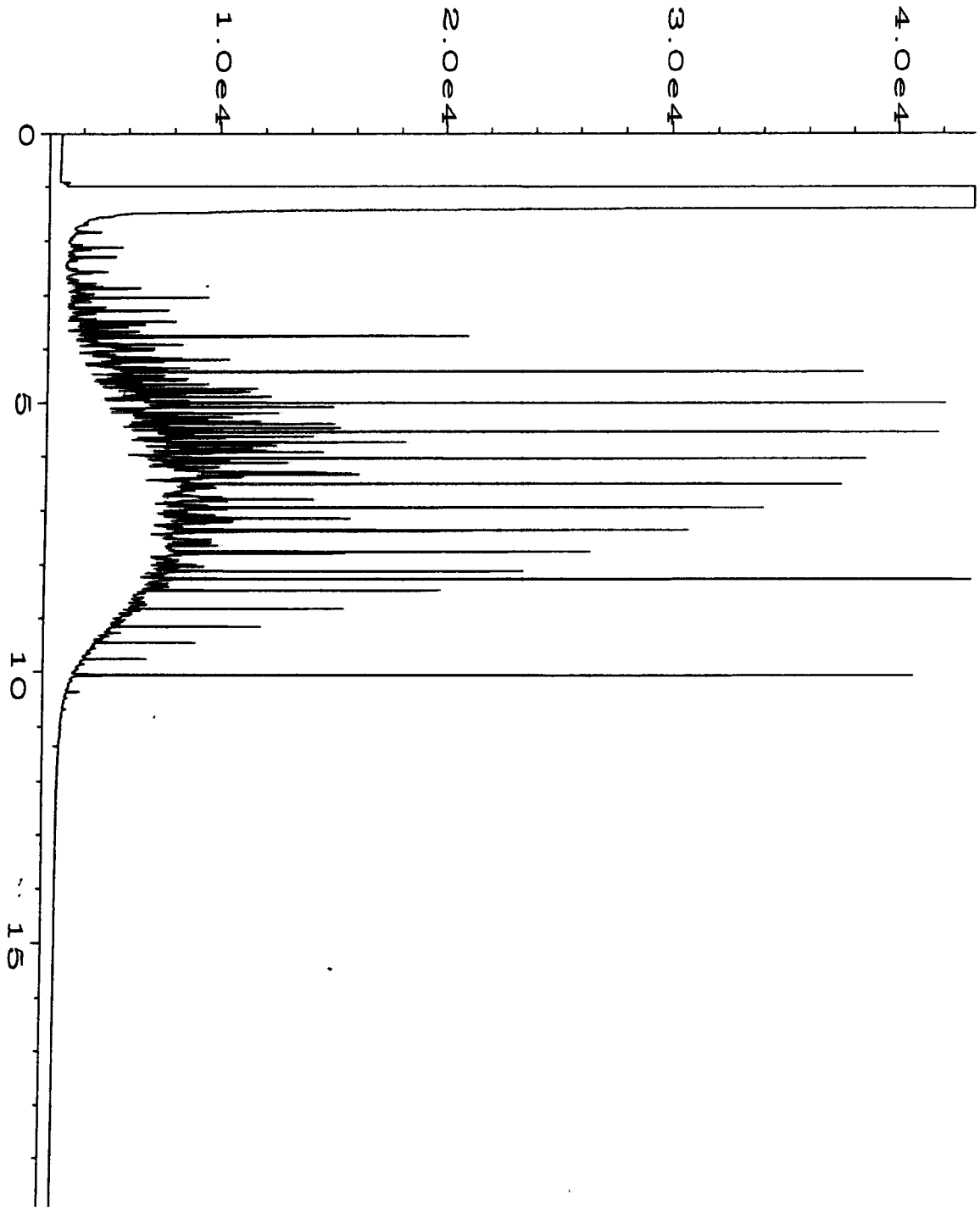
Data File Name : D:\GC6\04-29-04\011F0701.D
Operator : ME
Instrument : GC #6
Sample Name : 04-399 MB
Run Time Bar Code:
Acquired on : 29 Apr 04 04:18 PM
Report Created on: 30 Apr 04 10:40 AM

Page Number : 1
Vial Number : 11
Injection Number : 1
Sequence Line : 7
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.MTH

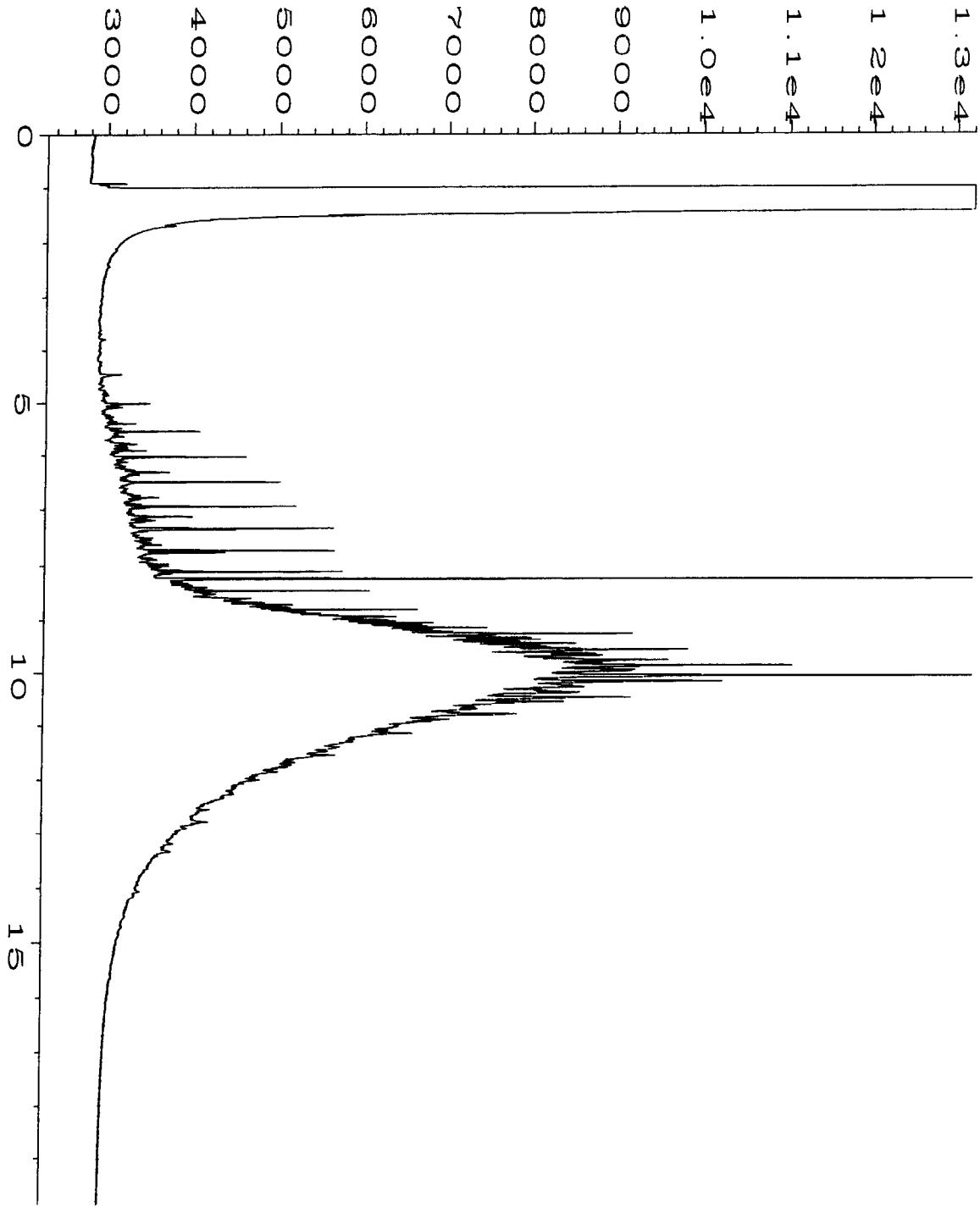


Data File Name : D:\GC6\04-30-04\006F0401.D
Operator : ME
Instrument : GC #6
Sample Name : 04-399 mb sg
Run Time Bar Code:
Acquired on : 30 Apr 04 11:25 AM
Report Created on: 03 May 04 09:02 AM

Page Number : 1
Vial Number : 6
Injection Number : 1
Sequence Line : 4
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.MTH



Data File Name	: D:\GC6\04-29-04\002F0201.D		
Operator	: ME	Page Number	: 1
Instrument	: GC #6	Vial Number	: 2
Sample Name	: 500 WADF 17-43	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 2
Acquired on	: 29 Apr 04 08:26 AM	Instrument Method	: TPHD.MTH
Report Created on	: 30 Apr 04 10:42 AM	Analysis Method	: DEFAULT.MTH



Data File Name : D:\GC6\04-29-04\006F0901.D
Operator : ME
Instrument : GC #6
Sample Name : 500 MO 18-16
Run Time Bar Code:
Acquired on : 29 Apr 04 05:35 PM
Report Created on: 30 Apr 04 10:42 AM

Page Number : 1
Vial Number : 6
Injection Number : 1
Sequence Line : 9
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.MTH

404200 CM 04/22/04 D04

MFG, INC.

CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS

COC No. 46247

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Arcata, CA 95521-6741
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Geomatrix
2101 Webster St, 12th Floor
Oakland, CA 94612
(510) 663-4107

PROJECT NO: 030275.6 PROJECT NAME: SPI Arcata Storm Water PAGE: 1 OF: 1

SAMPLER (Signature): Matt Hillyard PROJECT MANAGER: Ross Steenson DATE: 4/20/04

METHOD OF SHIPMENT: FedEx CARRIER/WAYBILL NO: below DESTINATION: Friedman + Bruya

7901 2472 2961

Lab ID	Field Sample Identification	SAMPLES: Sample DATE	TIME	Matrix*	Preservation: HCl	HNO_3	H_2SO_4	COLD		FILTRATION*	Containers: VOLUME (ml/oz)	TYPE*	NO.	ANALYSIS REQUEST: Constituents/Method: TPH-D/MO	TPH-D/MO Silica Gel				Handling: HOLD	RUSH	STANDARD	Remarks
01 A-D	Ditch3-20040420	4/20	1330	AQ				X		F	1 Liter	G	4	X							X	Bill Geomatrix
01 E	Ditch3-20040420-SG	4/20	1330	AQ				X		F	1 Liter	G	4		X						X	

TOTAL NUMBER OF CONTAINERS 8

LABORATORY COMMENTS/CONDITION OF SAMPLES Cooler Temp:

RELINQUISHED BY: SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	RECEIVED BY: SIGNATURE	PRINTED NAME	COMPANY
Matt Hillyard	Matt Hillyard	MFG	4/21/04	1000		Nhan Phan	Friedman & Bruya 4/22/04 9:30
							LABORATORY

*KEY Matrix: AQ - aqueous NA - nonaqueous SO - soil SL - sludge P - petroleum A - air OT - other Containers: P - plastic G - glass T - teflon B - brass OT - other Filtration: F - filtered U - unfiltered

DISTRIBUTION: PINK: Field Copy YELLOW: Laboratory Copy WHITE: Return to Originator

FILE 9329

Alpha Analytical Laboratories Inc
208 Mason St Ukiah, California 95482
e-mail clientservices@alpha-labs.com • Phone (707) 468-0401 • Fax (707) 468-5267

RECEIVED 6/21/2004

14 June 2004

TASK 6 STORM WATER

MAY 27, 2004 STORM WATER SAMPLES

Geomatrix Consultants
Attn: Ross Steenson
2101 Webster Street, 12th Floor
Oakland, CA 94612
RE: SPI - Arcata Stormwater
Work Order: A405657

Enclosed are the results of analyses for samples received by the laboratory on 05/28/04 13:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Melanie B. Neece

Melanie B. Neece For Sheri L. Speaks
Project Manager

Alpha Analytical Laboratories Inc
208 Mason St Ukiah, California 95482
e-mail clientservices@alpha-labs com • Phone (707) 468-0401 • Fax (707) 468-5267

CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Ross Steenson

Report Date 06/14/04 13:43
Project No 9329.000/030275
Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405657	05/28/2004 13 00	GEOMAT	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SL-1	A405657-01	Water	05/27/04 13 15	05/28/04 13 00
SL-2	A405657-02	Water	05/27/04 14 00	05/28/04 13 00
SL-3	A405657-03	Water	05/27/04 12 35	05/28/04 13 00
SL-4	A405657-04	Water	05/27/04 13 45	05/28/04 13 00

Melanie B Neece For Sheri L Speaks
Project Manager

6/14/2004

Alpha Analytical Laboratories Inc
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CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Ross Steenson

Report Date 06/14/04 13:43
Project No 9329.000/030275
Project ID SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405657	05/28/2004 13 00	GEOMAT	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
SL-1 (A405657-01)			**Sample Type: Water**			**Sampled: 05/27/04 13:15**		
Metals by EPA 200 Series Methods								
Arsenic	EPA 200 9	AF40106	06/01/04	06/10/04	1	**0.0034 mg/l**	**0.0020**	
Copper	EPA 200 7	"	"	06/04/04	"	**0.030 "**	**0.020**	
Zinc	"	"	"	"	"	**1.9 "**	**0.020**	
Chlorinated Phenols by Canadian Pulp Method								
2,4,6-Trichlorophenol	EnvCan	AF40125	06/01/04	06/01/04	1	ND ug/l	1 0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "	1 0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "	1 0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "	1 0	
Pentachlorophenol	"	"	"	"	"	ND "	1 0	
Surrogate Tribromophenol	"	"	"	"		*96 0 %* *79-119*		
Conventional Chemistry Parameters by APHA/EPA Methods								
Chemical Oxygen Demand	SM5220D	AF40707	06/07/04	06/08/04	1	**230 mg/l**	**10**	
Specific Conductance (EC)	EPA 120 1	AE42809	05/28/04	05/28/04	"	**180 umhos/cm**	**20**	
Oil & Grease (HEM-SG)	EPA 1664	AF40811	06/08/04	06/11/04	"	ND mg/l	5 0	
Total Suspended Solids	EPA 160 2	AF40119	06/01/04	06/03/04	"	**100 "**	**1.0**	
Tannins & Lignins	SM 5550B	AF40210	06/02/04	06/02/04	2	**6.6 "**	**0.20**	
TPH as Diesel and Motor Oil by EPA Method 8015 Modified								
TPH as Diesel	8015DRO	AF40303	06/02/04	06/04/04	1	**92 ug/l**	**50**	D-09
TPH as Motor Oil	"	"	"	"	"	**550 "**	**100**	
Surrogate 1 4-Bromofluorobenzene	"	"	"	"		*64 5 %* *38-120*		

The results in this report apply to the samples analyzed in accordance with the chain of custody document This analytical report must be reproduced in its entirety

Melanie B. Neece

Melanie B Neece For Sheri L. Speaks 6/14/2004
Project Manager

Alpha Analytical Laboratories Inc
208 Mason St Ukiah, California 95482
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CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn Ross Steenson

Report Date: 06/14/04 13 43
Project No 9329.000/030275
Project ID. SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405657	05/28/2004 13 00	GEOMAT	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		PQL	NOTE
SL-1 (A405657-01)			**Sample Type: Water**			**Sampled: 05/27/04 13:15**			
TPH as Gasoline by GCFID/5030									
TPH as Gasoline	8015GRO	AF40308	06/03/04	06/03/04	1	ND ug/l		50	
Surrogate 1,4-Bromofluorobenzene	"	"	"	"		*108 %*	*63-150*		
SL-2 (A405657-02)			**Sample Type: Water**			**Sampled: 05/27/04 14:00**			
Metals by EPA 200 Series Methods									
Arsenic	EPA 200 9	AF40106	06/01/04	06/10/04	1	**0.0046 mg/l**		**0.0020**	
Cadmium	EPA 200 7	"	"	06/04/04	"	ND "		0 010	
Chromium	"	"	"	"	"	ND "		0 010	
Copper	"	"	"	"	"	ND "		0 020	
Nickel	"	"	"	"	"	ND "		0 010	
Lead	"	"	"	"	"	ND "		0 050	
Zinc	"	"	"	"	"	**0.46 "**		**0.020**	
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AF40125	06/01/04	06/01/04	1	ND ug/l		1 0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4.6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
Pentachlorophenol	"	"	"	"	"	ND "		1 0	
Surrogate Tribromophenol	"	"	"	"		*98 4 %*	*79-119*		
Conventional Chemistry Parameters by APHA/EPA Methods									
Chemical Oxygen Demand	SM5220D	AF40707	06/07/04	06/08/04	1	**630 mg/l**		**10**	
Specific Conductance (EC)	EPA 120 1	AE42809	05/28/04	05/28/04	"	**1200 umhos/cm**		**20**	
Oil & Grease (HEM-SG)	EPA 1664	AF40811	06/08/04	06/11/04	"	ND mg/l		5 0	
Total Suspended Solids	EPA 160 2	AF40119	06/01/04	06/03/04	"	**150 "**		**1.0**	
Tannins & Lignins	SM 5550B	AF40210	06/02/04	06/02/04	50	**100 "**		**5.0**	

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Melanie B. Neece For Sheri L Speaks
Project Manager

6/14/2004

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CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Ross Steenson

Report Date 06/14/04 13.43
Project No: 9329.000/030275
Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405657	05/28/2004 13 00	GEOMAT	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		PQL	NOTE
SL-2 (A405657-02)			**Sample Type: Water**			**Sampled: 05/27/04 14:00**			
TPH as Diesel and Motor Oil by EPA Method 8015 Modified									
TPH as Diesel	8015DRO	AF40303	06/02/04	06/04/04	1	**280 ug/l**		**50**	D-09
TPH as Motor Oil	"	"	"	"	"	**1100** "		**100**	
Surrogate 1,4-Bromofluorobenzene	"	"	"	"		*50 2 %*	*38-120*		
TPH as Gasoline by GCFID/5030									
TPH as Gasoline	8015GRO	AF40308	06/03/04	06/03/04	2	**340 ug/l**		**100**	
Surrogate 1 4-Bromofluorobenzene	"	"	"	"		*99 6 %*	*63-150*		
SL-3 (A405657-03)			**Sample Type: Water**			**Sampled: 05/27/04 12:35**			
Metals by EPA 200 Series Methods									
Arsenic	EPA 200 9	AF40106	06/01/04	06/10/04	1	**0.037 mg/l**		**0.0020**	
Copper	EPA 200 7	"	"	06/04/04	4	ND "		0 080	
Zinc	"	"	"	"	"	**0.85** "		**0.080**	
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AF40125	06/01/04	06/01/04	1	ND ug/l		1 0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
Pentachlorophenol	"	"	"	"	"	ND "		1 0	
Surrogate Tribromophenol	"	"	"	"		*94 4 %*	*79-119*		

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Melanie B Neece For Sheri L Speaks
Project Manager

6/14/2004

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CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Ross Steenson

Report Date: 06/14/04 13.43
Project No 9329 000/030275
Project ID. SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405657	05/28/2004 13 00	GEOMAT	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		PQL	NOTE
SL-3 (A405657-03)			**Sample Type: Water**			**Sampled: 05/27/04 12:35**			
Conventional Chemistry Parameters by APHA/EPA Methods									
Chemical Oxygen Demand	SM5220D	AF40707	06/07/04	06/08/04	5	**2100 mg/l**		**50**	
Specific Conductance (EC)	EPA 120 1	AE42809	05/28/04	05/28/04	1	**1300 umhos/cm**		**20**	
Oil & Grease (HEM-SG)	EPA 1664	AF40811	06/08/04	06/11/04	"	ND mg/l		5 0	
Total Suspended Solids	EPA 160 2	AF40119	06/01/04	06/03/04	"	**1900 "**		**1.0**	
Tannins & Lignins	SM 5550B	AF40210	06/02/04	06/02/04	100	**240 "**		**10**	
TPH as Diesel and Motor Oil by EPA Method 8015 Modified									
TPH as Diesel	8015DRO	AF40303	06/02/04	06/04/04	1	**2300 ug/l**		**50**	D-09, D-13
TPH as Motor Oil	"	"	"	"	"	**6000 "**		**100**	
Surrogate 1,4-Bromofluorobenzene	"	"	"	"		*58 7 %*	*38-120*		
TPH as Gasoline by GCFID/5030									
TPH as Gasoline	8015GRO	AF40308	06/03/04	06/03/04	2	**190 ug/l**		**100**	
Surrogate 1,4-Bromofluorobenzene	"	"	"	"		*106 %*	*63-150*		
SL-4 (A405657-04)			**Sample Type: Water**			**Sampled: 05/27/04 13:45**			
Metals by EPA 200 Series Methods									
Arsenic	EPA 200 9	AF40106	06/01/04	06/10/04	1	**0 039 mg/l**		**0.0020**	
Copper	EPA 200 7	"	"	06/04/04	4	ND "		0 080	
Zinc	"	"	"	"	"	**0.75 "**		**0.080**	
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AF40125	06/01/04	06/01/04	1	ND ug/l		1 0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
Pentachlorophenol	"	"	"	"	"	ND "		1 0	
Surrogate Tribromophenol	"	"	"	"		*102 %*	*79-119*		

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Melanie B Neece For Sheri L. Speaks
Project Manager

6/14/2004

Alpha Analytical Laboratories Inc
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CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Ross Steenson

Report Date: 06/14/04 13:43
Project No: 9329.000/030275
Project ID. SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405657	05/28/2004 13 00	GEOMAT	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		PQL	NOTE
SL-4 (A405657-04)			**Sample Type: Water**			**Sampled: 05/27/04 13:45**			
Conventional Chemistry Parameters by APHA/EPA Methods									
Chemical Oxygen Demand	SM5220D	AF40707	06/07/04	06/08/04	5	**1500 mg/l**		**50**	
Specific Conductance (EC)	EPA 120 1	AE42809	05/28/04	05/28/04	1	**160 umhos/cm**		**20**	
Oil & Grease (HEM-SG)	EPA 1664	AF40811	06/08/04	06/11/04	"	ND mg/l		5 0	
Total Suspended Solids	EPA 160 2	AF40119	06/01/04	06/03/04	"	**2900** "		**1.0**	
Tannins & Lignins	SM 5550B	AF40210	06/02/04	06/02/04	100	**160** "		**10**	
TPH as Diesel and Motor Oil by EPA Metnod 8015 Modified									
TPH as Diesel	8015DRO	AF40303	06/02/04	06/04/04	1	**720 ug/l**		**50**	D-09, D-13
TPH as Motor Oil	"	"	"	"	"	**3200** "		**100**	
Surrogate 1,4-Bromofluorobenzene	"	"	"	"		*58 0 %*	*38-120*		
TPH as Gasoline by GCFID/5030									
TPH as Gasoline	8015GRO	AF40308	06/03/04	06/03/04	2	**85 ug/l**		**10**	
Surrogate 1,4-Bromofluorobenzene	"	"	"	"		*105 %*	*63-150*		

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Project Manager

6/14/2004

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CHEMICAL EXAMINATION REPORT

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2101 Webster Street, 12th Floor
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Attn: Ross Steenson

Report Date. 06/14/04 13·43
Project No. 9329.000/030275
Project ID SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405657	05/28/2004 13 00	GEOMAT	

Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AF40106 - EPA 3005A										
Blank (AF40106-BLK1)				Prepared 06/01/04 Analyzed 06/10/04						
Arsenic	ND	0 0020	mg/l							
Cadmium	ND	0 010	"							
Copper	ND	0 020	"							
Nickel	ND	0 010	"							
Zinc	ND	0 020	"							
LCS (AF40106-BS1)				Prepared 06/01/04 Analyzed 06/10/04						
Arsenic	0 0199	0 0020	mg/l	0 0200		99 5	85-115			
Cadmium	0 204	0 010	"	0 200		102	85-115			
Copper	0 189	0 020	"	0 200		94 5	85-115			
Nickel	0 203	0 010	"	0 200		102	85-115			
Zinc	0 215	0 020	"	0 200		108	93 4-127			
LCS Dup (AF40106-BSD1)				Prepared 06/01/04 Analyzed 06/10/04						
Arsenic	0 0203	0 0020	mg/l	0 0200		102	85-115	1 99	20	
Cadmium	0 205	0 010	"	0 200		102	85-115	0 489	20	
Copper	0 191	0 020	"	0 200		95 5	85-115	1 05	20	
Nickel	0 204	0 010	"	0 200		102	85-115	0 491	20	
Zinc	0 215	0 020	"	0 200		108	93 4-127	0 00	20	
Duplicate (AF40106-DUP1)		**Source: A405569-01**		Prepared 06/01/04 Analyzed 06/10/04						
Arsenic	ND	0 0020	mg/l		ND				20	
Cadmium	ND	0 010	"		ND				20	
Copper	ND	0 020	"		ND				20	
Nickel	ND	0 010	"		ND				20	
Zinc	ND	0 020	"		ND				20	
Matrix Spike (AF40106-MS1)		**Source: A405569-01**		Prepared 06/01/04 Analyzed 06/10/04						

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Melanie B. Neece

Melanie B. Neece For Sherri L Speaks
Project Manager

6/14/2004

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CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Ross Steenson

Report Date: 06/14/04 13 43
Project No: 9329 000/030275
Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405657	05/28/2004 13 00	GEOMAT	

Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AF40106 - EPA 3005A										
Matrix Spike (AF40106-MS1)		**Source: A405569-01**		Prepared 06/01/04		Analyzed 06/10/04				
Arsenic	0 0213	0 0020	mg/l	0 0200	ND	106	70-130			
Cadmium	0 203	0 010	"	0 200	ND	102	70-130			
Copper	0 196	0 020	"	0 200	ND	98 0	70-130			
Nickel	0 203	0 010	"	0 200	ND	102	70-130			
Zinc	0 217	0 020	"	0 200	ND	105	70-130			
Matrix Spike Dup (AF40106-MSD1)		**Source: A405569-01**		Prepared 06/01/04		Analyzed 06/10/04				
Arsenic	0 0207	0 0020	mg/l	0 0200	ND	104	70-130	2 86	20	
Cadmium	0 204	0 010	"	0 200	ND	102	70-130	0 491	20	
Copper	0 196	0 020	"	0 200	ND	98 0	70-130	0 00	20	
Nickel	0 206	0 010	"	0 200	ND	103	70-130	1 47	20	
Zinc	0 218	0 020	"	0 200	ND	106	70-130	0 460	20	

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Melanie B. Neece

Melanie B Neece For Sheri L Speaks
Project Manager

6/14/2004

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CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Ross Steenson

Report Date 06/14/04 13:43
Project No 9329.000/030275
Project ID SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405657	05/28/2004 13 00	GEOMAT	

Chlorinated Phenols by Canadian Pulp Method - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AF40125 - Solvent Extraction										
Blank (AF40125-BLK1)				Prepared & Analyzed 06/01/04						
2,4,6-Trichlorophenol	ND	1 0	ug/l							
2,3,5,6-Tetrachlorophenol	ND	1 0	"							
2,3,4,6-Tetrachlorophenol	ND	1 0	"							
2,3,4,5-Tetrachlorophenol	ND	1 0	"							
Pentachlorophenol	ND	1 0	"							
Surrogate Tribromophenol	*24 5*		"	*25 0*		*98 0*	*79-119*			
LCS (AF40125-BS1)				Prepared & Analyzed 06/01/04						
2 4.6-Trichlorophenol	4 79	1 0	ug/l	5 00		95 8	81-120			
2,3,5,6-Tetrachlorophenol	4 72	1 0	"	5 00		94 4	78-108			
2,3,4,6-Tetrachlorophenol	4 68	1 0	"	5 00		93 6	76-108			
2,3,4,5-Tetrachlorophenol	4 65	1 0	"	5 00		93 0	80-116			
Pentachlorophenol	4 73	1 0	"	5 00		94 6	86-109			
Surrogate Tribromophenol	*24 7*		"	*25 0*		*98 8*	*79-119*			
Matrix Spike (AF40125-MS1)	**Source: A405657-01**			Prepared & Analyzed 06/01/04						
2,4,6-Trichlorophenol	4 69	1 0	ug/l	5 00	ND	93 8	75-125			
2,3,5,6-Tetrachlorophenol	4 68	1 0	"	5 00	ND	93 6	69-115			
2,3,4,6-Tetrachlorophenol	4 48	1 0	"	5 00	ND	89 6	66-117			
2,3,4,5-Tetrachlorophenol	4 43	1 0	"	5 00	ND	88 6	70-115			
Pentachlorophenol	5 18	1 0	"	5 00	ND	104	55-124			
Surrogate Tribromophenol	*22 4*		"	*25 0*		*89 6*	*79-119*			
Matrix Spike Dup (AF40125-MSD1)	**Source: A405657-01**			Prepared & Analyzed 06/01/04						
2,4,6-Trichlorophenol	4 65	1 0	ug/l	5 00	ND	93 0	75-125	0 857	20	
2,3,5,6-Tetrachlorophenol	4 66	1 0	"	5 00	ND	93 2	69-115	0 428	20	
2,3,4,6-Tetrachlorophenol	4 46	1 0	"	5 00	ND	89 2	66-117	0 447	20	

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Melanie B Neece For Sheri L. Speaks
Project Manager

6/14/2004

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2101 Webster Street, 12th Floor
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Attn Ross Steenson

Report Date: 06/14/04 13:43
Project No: 9329.000/030275
Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405657	05/28/2004 13 00	GEOMAT	

Chlorinated Phenols by Canadian Pulp Method - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AF40125 - Solvent Extraction										
Matrix Spike Dup (AF40125-MSD1)	**Source: A405657-01**		Prepared & Analyzed 06/01/04							
2,3,4,5-Tetrachlorophenol	4 45	1 0	"	5 00	ND	89 0	70-115	0 450	20	
Pentachlorophenol	5 09	1 0	"	5 00	ND	102	55-124	1 75	20	
Surrogate Tribromophenol	*22 9*		"	*25 0*		*91 6*	*79-119*			

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Melanie B. Neece

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Project Manager

6/14/2004

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Report Date: 06/14/04 13.43
Project No 9329.000/030275
Project ID SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405657	05/28/2004 13 00	GEOMAT	

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AE42809 - General Preparation										
Duplicate (AE42809-DUP1)	**Source: A405649-01**			Prepared & Analyzed 05/28/04						
Specific Conductance (EC)	519	20	umhos/cm		520			0 192	10	
Batch AF40119 - General Preparation										
Blank (AF40119-BLK1)				Prepared 06/01/04 Analyzed 06/03/04						
Total Suspended Solids	ND	1 0	mg/l							
Duplicate (AF40119-DUP1)	**Source: A405657-04**			Prepared 06/01/04 Analyzed 06/03/04						
Total Suspended Solids	2800	1 0	mg/l		2900			3 51	30	
Batch AF40210 - General Preparation										
Blank (AF40210-BLK1)				Prepared & Analyzed 06/02/04						
Tannins & Lignins	ND	0 10	mg/l							
LCS (AF40210-BS1)				Prepared & Analyzed 06/02/04						
Tannins & Lignins	4 92	0 10	mg/l	5 00		98 4	80-120			
LCS Dup (AF40210-BSD1)				Prepared & Analyzed 06/02/04						
Tannins & Lignins	4 71	0 10	mg/l	5 00		94 2	80-120	4 36	20	
Duplicate (AF40210-DUP1)	**Source: A405657-01**			Prepared & Analyzed 06/02/04						
Tannins & Lignins	6 90	0 20	mg/l		6 6			4 44	200	
Matrix Spike (AF40210-MS1)	**Source: A405657-01**			Prepared & Analyzed 06/02/04						
Tannins & Lignins	9 39	0 20	mg/l	3 00	6 6	93 0	80-120			

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Project ID SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405657	05/28/2004 13 00	GEOMAT	

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AF40210 - General Preparation										
Matrix Spike Dup (AF40210-MSD1)	**Source: A405657-01**			Prepared & Analyzed 06/02/04						
Tannins & Lignins	9 71	0 20	mg/l	3 00	6 6	104	80-120	3 35	20	
Batch AF40707 - General Preparation										
Blank (AF40707-BLK1)				Prepared 06/07/04		Analyzed 06/08/04				
Chemical Oxygen Demand	ND	10	mg/l							
LCS (AF40707-BS1)				Prepared 06/07/04		Analyzed 06/08/04				
Chemical Oxygen Demand	106	10	mg/l	100		106	85-115			
LCS Dup (AF40707-BSD1)				Prepared 06/07/04		Analyzed 06/08/04				
Chemical Oxygen Demand	106	10	mg/l	100		106	85-115	0 00	10	
Duplicate (AF40707-DUP1)	**Source: A406159-03**			Prepared 06/07/04		Analyzed 06/08/04				
Chemical Oxygen Demand	ND	10	mg/l		ND				200	
Matrix Spike (AF40707-MS1)	**Source: A406159-03**			Prepared 06/07/04		Analyzed 06/08/04				
Chemical Oxygen Demand	410	10	mg/l	400	ND	102	85-115			
Matrix Spike Dup (AF40707-MSD1)	**Source: A406159-03**			Prepared 06/07/04		Analyzed 06/08/04				
Chemical Oxygen Demand	413	10	mg/l	400	ND	103	85-115	0 729	10	
Batch AF40811 - General Preparation										
Blank (AF40811-BLK1)				Prepared 06/08/04		Analyzed 06/11/04				
Oil & Grease (HEM-SG)	ND	5 0	mg/l							

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Report Date: 06/14/04 13:43
Project No: 9329.000/030275
Project ID SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405657	05/28/2004 13 00	GEOMAT	

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AF40811 - General Preparation										
LCS (AF40811-BS1)				Prepared: 06/08/04		Analyzed 06/11/04				
Oil & Grease (HEM-SG)	9 10	5 0	mg/l	10 0		91 0	64-116			
LCS Dup (AF40811-BSD1)				Prepared 06/08/04		Analyzed 06/11/04				
Oil & Grease (HEM-SG)	9 80	5 0	mg/l	10 0		98 0	64-116	7 41	132	

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Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405657	05/28/2004 13 00	GEOMAT	

TPH as Diesel and Motor Oil by EPA Method 8015 Modified - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AF40303 - EPA 3510B Water										
Blank (AF40303-BLK1)				Prepared & Analyzed 06/03/04						
TPH as Diesel	ND	50	ug/l							
TPH as Motor Oil	ND	100	"							
Surrogate 1,4-Bromofluorobenzene	*337*		"	*448*		*75 2*	*38-120*			
LCS (AF40303-BS1)				Prepared 06/03/04 Analyzed 06/04/04						
TPH as Diesel	1880	50	ug/l	2060		91 3	57-136			
TPH as Motor Oil	2120	100	"	1990		107	58-138			
Surrogate 1,4-Bromofluorobenzene	*326*		"	*448*		*72 8*	*38-120*			
LCS Dup (AF40303-BSD1)				Prepared 06/03/04 Analyzed 06/04/04						
TPH as Diesel	1780	50	ug/l	2060		86 4	57-136	5 46	25	
TPH as Motor Oil	2030	100	"	1990		102	58-138	4 34	25	
Surrogate 1,4-Bromofluorobenzene	*378*		"	*448*		*84 4*	*38-120*			

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6/14/2004

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Oakland, CA 94612
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Report Date 06/14/04 13:43
Project No 9329.000/030275
Project ID SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405657	05/28/2004 13 00	GEOMAT	

TPH as Gasoline by GCFID/5030 - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AF40308 - EPA 5030 Water GC										
Blank (AF40308-BLK1)				Prepared & Analyzed 06/03/04						
TPH as Gasoline	ND	50	ug/l							
Surrogate 1,4-Bromofluorobenzene	*26 1*		"	*23 1*		*113*	*63-150*			
LCS (AF40308-BS1)				Prepared & Analyzed 06/03/04						
TPH as Gasoline	48 1	50	ug/l	50 0		96 2	79-123			
Surrogate 1,4-Bromofluorobenzene	*19 7*		"	*20 0*		*98 5*	*63-150*			
LCS Dup (AF40308-BSD1)				Prepared & Analyzed 06/03/04						
TPH as Gasoline	49 6	50	ug/l	50 0		99 2	79-123	3 07	15	
Surrogate 1,4-Bromofluorobenzene	*19 6*		"	*20 0*		*98 0*	*63-150*			

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Project Manager

6/14/2004

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Report Date 06/14/04 13.43
Project No 9329.000/030275
Project ID SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A405657	05/28/2004 13 00	GEOMAT	

Notes and Definitions

D-09	Results in the diesel organics range are primarily due to overlap from a heavy oil range product
D-13	The sample chromatogram contains resolved peaks within the diesel range that do not resemble diesel
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
PQL	Practical Quantitation Limit

MFG, INC.

CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS

COC No 46274

Arcata Office
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PROJECT NO 030275.6 PROJECT NAME SPI Arcata PAGE 1 OF 5

SAMPLER (Signature) Matt Hillyard PROJECT MANAGER Ross Steenson DATE 5/27/04

METHOD OF SHIPMENT courier CARRIER/WAYBILL NO — DESTINATION Alpha

Field Sample Identification	Sample DATE	Sample TIME	Matrix*	Preservation HCl	HNO_3	H_2SO_4	COLD	FILTRATION*	Containers VOLUME (ml/oz)	TYPE*	NO	Constituents/Method TSS, EC	Turbidity + Lignins	COD	Handling HOLD	RUSH	STANDARD	Remarks
SL-1 AHC5657-1	5/27	1315	W				X	U	½ gal	P	1	X	X				X	USE 200 SERIES ON ALL METALS, SM - 5550B ON T&L, 1664 ON O&G PER JIM HANIBAL MW 5.28.04 14:20
SL-2 -2		1400							½ gal	P	1	X	X					
SL-3 -3		1235							½ gal	P	1	X	X					
SL-4 -4		1345							½ gal	P	1	X	X					
SL-1		1315				X			1 pt	P	1			X				
SL-2		1400				X			1 pt	P	1			X				
SL-3		1235				X	X		1 pt	P	1			X				

TOTAL NUMBER OF CONTAINERS 7

LABORATORY COMMENTS/CONDITION OF SAMPLES Cooler Temp: 3.2

RELINQUISHED BY SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	RECEIVED BY: SIGNATURE	PRINTED NAME	COMPANY
Matt Hillyard	Matt Hillyard	MFG	5/27/04	1630	John Mills	John Mills	MFG
John Mills	John Mills	MFG	5/28/04	900	John Taylor	John Taylor	Alpha LABORATORY
John Taylor	John Taylor	Alpha	5/28/04	900 AM	Sheri Speaks	Sheri Speaks	ALPHA 5.28.04 13°C

KEY Matrix AQ aqueous NA - nonaqueous SO soil SL sludge P petroleum A air OT other Containers P plastic G glass T teflon B brass OT other Filtration F filtered U unfiltered

DISTRIBUTION PINK Field Copy YELLOW Laboratory Copy WHITE Return to Originator

MFG, INC.

CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS

COC No 46275

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875 Crescent Way
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Lynnwood WA 98036
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☐ Geomatrix
Oakland

PROJECT NO. 030275.6 PROJECT NAME SPI Arcata PAGE 2 OF 5

SAMPLER (Signature) Matt Hillyard PROJECT MANAGER Ross Stevenson DATE 5/27/04

METHOD OF SHIPMENT courier CARRIER/WAYBILL NO _____ DESTINATION Alpha

Field Sample Identification	SAMPLES: Sample DATE	TIME	Matrix*	Preservation: HCl	HNO_3	H_2SO_4	COLD	FILTRATION*	Containers: VOLUME (ml/oz)	TYPE*	NO	ANALYSIS REQUEST: Constituents/Method: COD	Zn, As, Cu	Cd, Cr, Ni, Pb	Handling: HOLD	RUSH	STANDARD	Remarks
SL-4	5/27	1345	AQ			X	X	N	1pt	P	1	X					X	
SL-1		1315			X								X					
SL-2		1400			X								X	X				
SL-3		1235			X								X					
SL-4		1345			X								X					
SL-1																		
SL-2																		

TOTAL NUMBER OF CONTAINERS 5

LABORATORY COMMENTS/CONDITION OF SAMPLES Cooler Temp 3.2

RELINQUISHED BY: SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	RECEIVED BY: SIGNATURE	PRINTED NAME	COMPANY
Matt Hillyard	Matt Hillyard	MFG	1630	5/27/04	Julie Mills	Julie Mills	MFG
Julie Mills	Julie Mills	MFG	900	5/28/04	John Taylor	John Taylor	Alpha
John Taylor	John Taylor	Alpha	~~5/28/04~~ 5/27/04	900	Shari Speaks	Shari Speaks	Alpha

LABORATORY

5-28-04 13:00

KEY Matrix AQ aqueous NA nonaqueous SO soil SL sludge P petroleum A air OT other Containers P plastic G glass T teflon B brass OT other Filtration F filtered U unfiltered

DISTRIBUTION PINK Field Copy YELLOW Laboratory Copy WHITE Return to Originator

MFG, INC.

CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS

COC No 46276

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PROJECT NO 030275-6 PROJECT NAME SPI Arcata PAGE 3 OF 5

SAMPLER (Signature) Matt Hillyard PROJECT MANAGER Ross Steenson DATE 5/27/04

METHOD OF SHIPMENT Courier CARRIER/WAYBILL NO. — DESTINATION Alpha

Field Sample Identification	SAMPLES: Sample DATE	TIME	Matrix*	Preservation: HCl	HNO_3	H_2SO_4	COLD	FILTRATION*	Containers: VOLUME (ml/oz)	TYPE*	NO	ANALYSIS REQUEST: Constituents/Method: TPH-G	TPH-Diesel	TPH-MO			Handling: HOLD	RUSH	STANDARD	Remarks
SL-1	5/27	1315	AQ			X	X	U	1L	G	1	X							X	
SL-2		1400				X			1L	G	1	X								
SL-3		1235				X			1L	G	1	X								
SL-4		1745				X			1L	G	1	X								
SL-1		1315							1L	G	1		X	X						
SL-2		1400							1L	G	1		X	X						
SL-3		1235							1L	G	1		X	X						

TOTAL NUMBER OF CONTAINERS 7

LABORATORY COMMENTS/CONDITION OF SAMPLES Cooler Temp 3.2

RELINQUISHED BY: SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	RECEIVED BY: SIGNATURE	PRINTED NAME	COMPANY
Matt Hillyard	Matt Hillyard	MFG	5/27/04	1630		Julie Mills	MFG
	Julie Mills	MFG	5/28/04	900 AM		John Taylor	Alpha
	John Taylor	Alpha	5/28/04	1300	Shari Speaks	Shari Speaks	Alpha

LABORATORY

KEY Matrix AQ aqueous NA nonaqueous SO soil SL sludge P petroleum A air OT other Containers P plastic G glass T teflon B brass OT other Filtration F filtered U unfiltered

DISTRIBUTION PINK Field Copy YELLOW Laboratory Copy WHITE Return to Originator

5-28-04 13:20

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PROJECT NO 030275.10 PROJECT NAME SPI Arcata PAGE 4 OF 5

SAMPLER (Signature) Matt Hillyard PROJECT MANAGER Ross Steenson DATE 5/27/04

METHOD OF SHIPMENT Courier CARRIER/WAYBILL NO _____ DESTINATION Alpha

	SAMPLES												ANALYSIS REQUEST							
	Sample			Preservation					FILTRATION*	Containers			Constituents/Method				Handling			Remarks
Field Sample Identification	DATE	TIME	Matrix*	HCl	HNO_3	H_2SO_4	COLD			VOLUME (ml/oz)	TYPE*	NO	TPH-Diesel	TPH-MO	TPH-Gas	PCP/TCP	HOLD	RUSH	STANDARD	
SL-4	5/27	1345	AQ				X		U	1L	G	1	X	X					X	
SL-1		1315		X						40ml	G	3			X					
SL-2		1400		X						40ml	G	3			X					
SL-3		1235		X						40ml	G	3			X					
SL-4		1345		X						40ml	G	3			X					
SL-1		1315								125ml	G	2				X				
SL-2	↓	1400	↓				↓		↓	125ml	G	2				X			↓	
				TOTAL NUMBER OF CONTAINERS								17	LABORATORY COMMENTS/CONDITION OF SAMPLES							Cooler Temp 3.2

RELINQUISHED BY:					RECEIVED BY:		
SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	SIGNATURE	PRINTED NAME	COMPANY
Matt Hillyard	Matt Hillyard	MFG	5/27/04	1630	Julie Mills	Julie Mills	MFG
Julie Mills	Julie Mills	MFG	5/28/04	900AM	John Taylor	John Taylor	Alpha LABORATORY
John Taylor	John Taylor	Alpha	5/28/04	1300	Shon Speeks	Shon Speeks	Alpha 5:28:04 13:00

KEY Matrix AQ aqueous NA nonaqueous SO soil SL sludge P petroleum A air OT other Containers P plastic G glass T teflon B brass O other Filtration F filtered U unfiltered

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PROJECT NO 050275.6 PROJECT NAME. SPI Arcata PAGE 5 OF 5

SAMPLER (Signature) Matt Hillyard PROJECT MANAGER Ross Stevenson DATE 5/24/04

METHOD OF SHIPMENT Courier CARRIER/WAYBILL NO - DESTINATION Alpha

Field Sample Identification	SAMPLES: Sample DATE	TIME	Matrix*	Preservation: HCl	HNO_3	H_2SO_4	COLD	FILTRATION*	Containers: VOLUME (ml/oz)	TYPE*	NO	ANALYSIS REQUEST: Constituents/Method: PCB/TCB	Dioxin/Furan	Handling: HOLD	RUSH	STANDARD	Remarks
SL-3	5/27	1235	AQ				X	L	125ml	G	2	X				X	
SL-4	"	1345	"				"	"	125ml	G	2	X				"	
SL-2	"	1400	"				"	"	1L	G	2		X				
SL-3	"	1235	"				"	"	1L	G	2		X				
SL-4	↓	1345	↓				↓	↓	1L	G	2		X			↓	

TOTAL NUMBER OF CONTAINERS 10

LABORATORY COMMENTS/CONDITION OF SAMPLES Cooler Temp 3.2

RELINQUISHED BY: SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	RECEIVED BY: SIGNATURE	PRINTED NAME	COMPANY
Matt Hillyard	Matt Hillyard	MFG	5/27/04	1630		Julie Mills	MFG
	Julie Mills	MFG	5/28/04	900		John Taylor	Alpha LABORATORY
	John Taylor	Alpha	5/28/04	1300		Shon Speck	Alpha

5-28-04 13.0

KEY Matrix AQ aqueous NA nonaqueous SO soil SL sludge P petroleum A - air OT other Containers P plastic G glass T teflon B brass OT other Filtration F filtered U unfiltered

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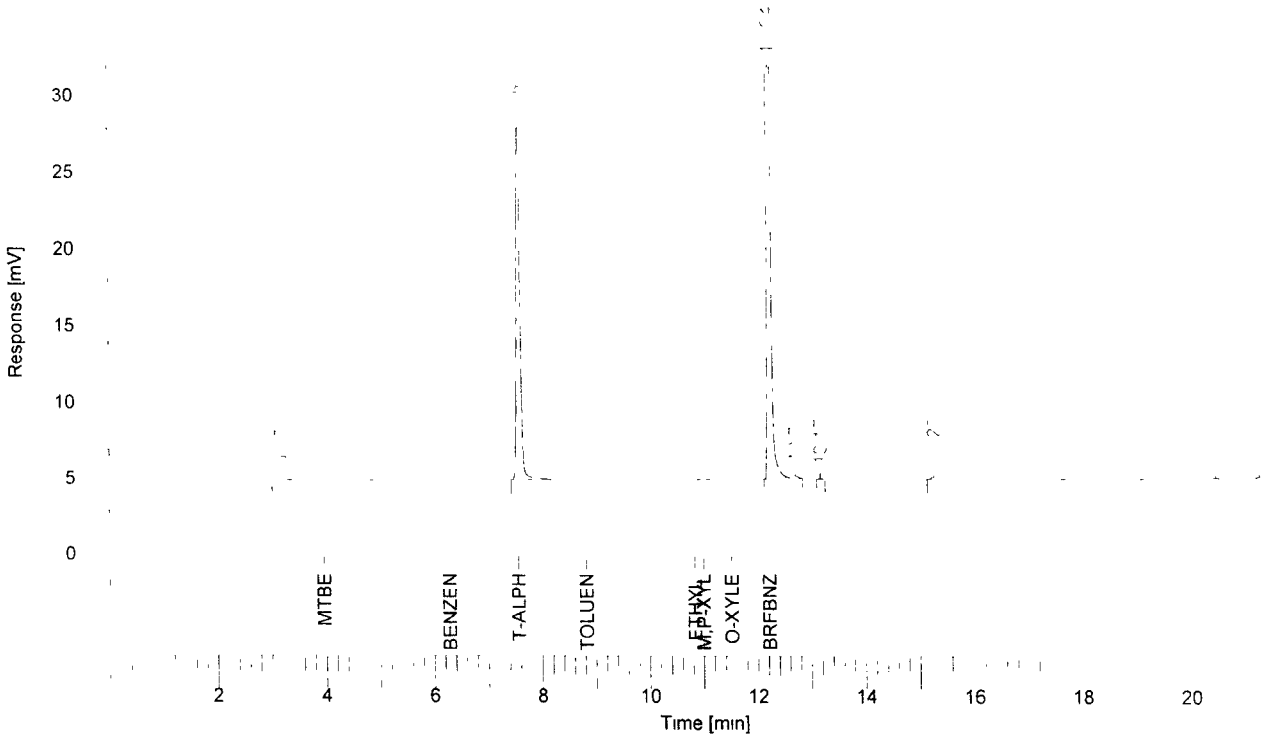
ALPHA 405657

Software Version	: 6.2.0.0.0:B27	Date	: 6/16/04 2:29:41 PM
Sample Name	: METHOD BLANK	Data Acquisition Time	: 6/3/04 11:46:15 AM
Instrument Name	: 3400-624	Channel	: A
Rack/Vial	. 0/0	Operator	: CAM
Sample Amount	. 1.000000	Dilution Factor	: 1.000000
Cycle	1		

Result File : C:\PenExe\TcWS\Stats\2003-2004 RST ARCHIVE\dtxe1679.rst
Sequence File : C:\PenExe\TcWS\Stats\Sequences\DB624_WATER.seq



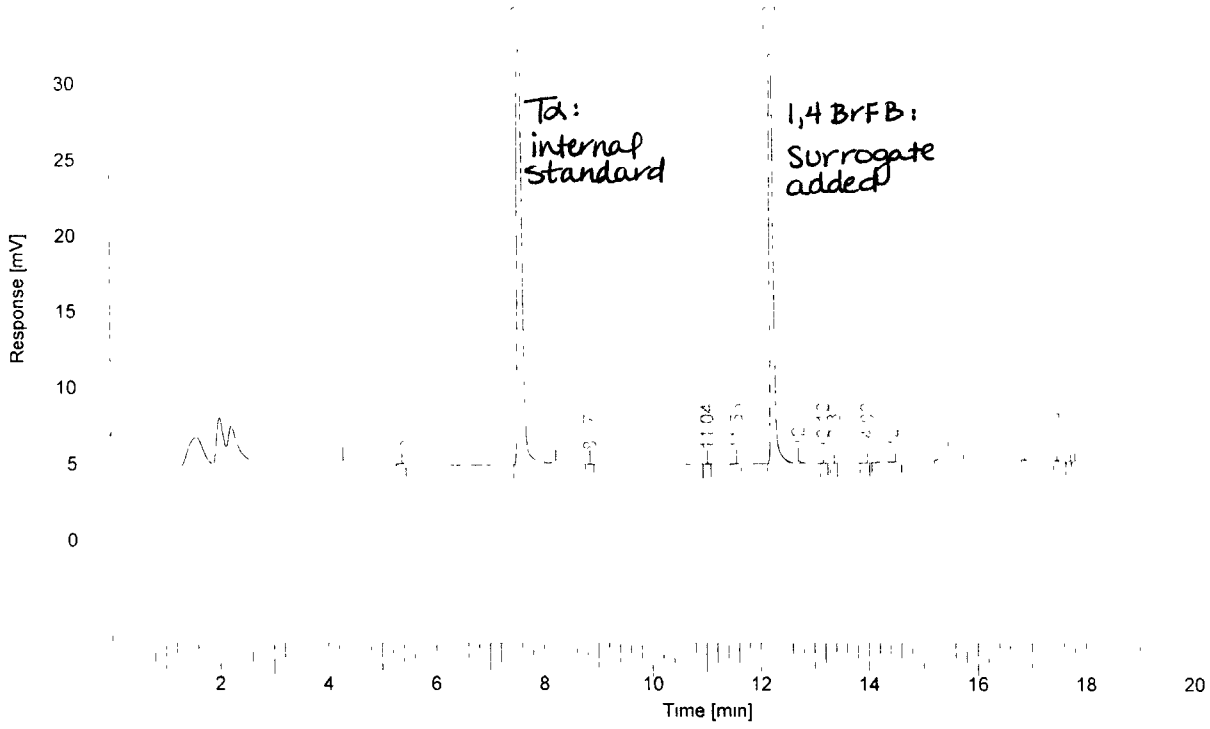
MBTXE DB624

Peak #	Time [min]	Component Name	Raw Amount	Area [uV*sec]	Height [uV]
2	7.59	T-alpha	-------	111158	23105
3	12.24	BrFBnz	26.051	359738	107526
			26.051	470895	130631

Report stored in ASCII file: C:\PenExe\TcWS\Stats\2003-2004 RST ARCHIVE\dtxe1679 TX0

Software Version	: 6.2.0.0.0·B27	Date	: 6/16/04 2:30:03 PM
Sample Name	: METHOD BLANK	Data Acquisition Time	: 6/3/04 11:46:15 AM
Instrument Name	: 3400-624	Channel	: B
Rack/Vial	: 0/0	Operator	: CAM
Sample Amount	: 1.000000	Dilution Factor	: 1.000000
Cycle	. 1		

Result File : C:\PenExe\TcWS\Stats\2003-2004 RST ARCHIVE\etxe1679 rst
Sequence File : C:\PenExe\TcWS\Stats\Sequences\DB624_WATER.seq



GASOLINE DB624

Peak #	Time [min]	Component Name	Raw Amount	Area [uV*sec]	Height [uV]
1	5.39		0.000	443	50
2	7.60 Tol		0.226	226394	43633
6	12.25 BrFB		0.190	190083	53000
7	12 72		0.001	1330	125
11	14.51		0 001	782	18
12	15.49		0.003	3430	154
15	17.73		0.001	952	227
16	17.83		0.001	1026	169
17	17.93		0.000	491	90
			0.425	424929	97467

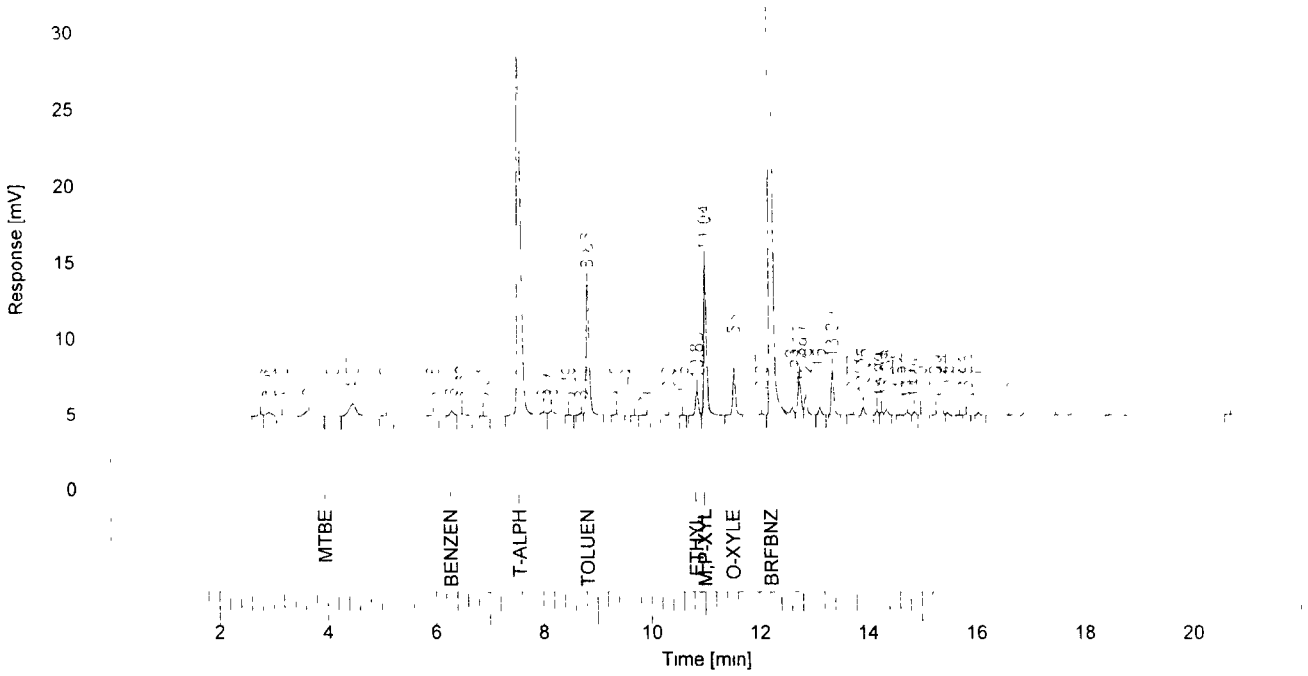
Calculating gasoline:

425 - 226 - 190 = 9

9 (.1699) = 1.5 ppb < 50 ppb

Software Version	: 6.2.0.0.0:B27	Date	: 6/16/04 2:30:21 PM
Sample Name	: GAS	Data Acquisition Time	: 6/3/04 12:21:37 PM
Instrument Name	: 3400-624	Channel	: A
Rack/Vial	: 0/0	Operator	. CAM
Sample Amount	: 1.000000	Dilution Factor	: 1.000000
Cycle	. 2		

Result File . C:\PenExe\TcWS\Stats\2003-2004 RST ARCHIVE\dtxe1680.rst
Sequence File : C:\PenExe\TcWS\Stats\Sequences\DB624_WATER.seq



MBTXE DB624

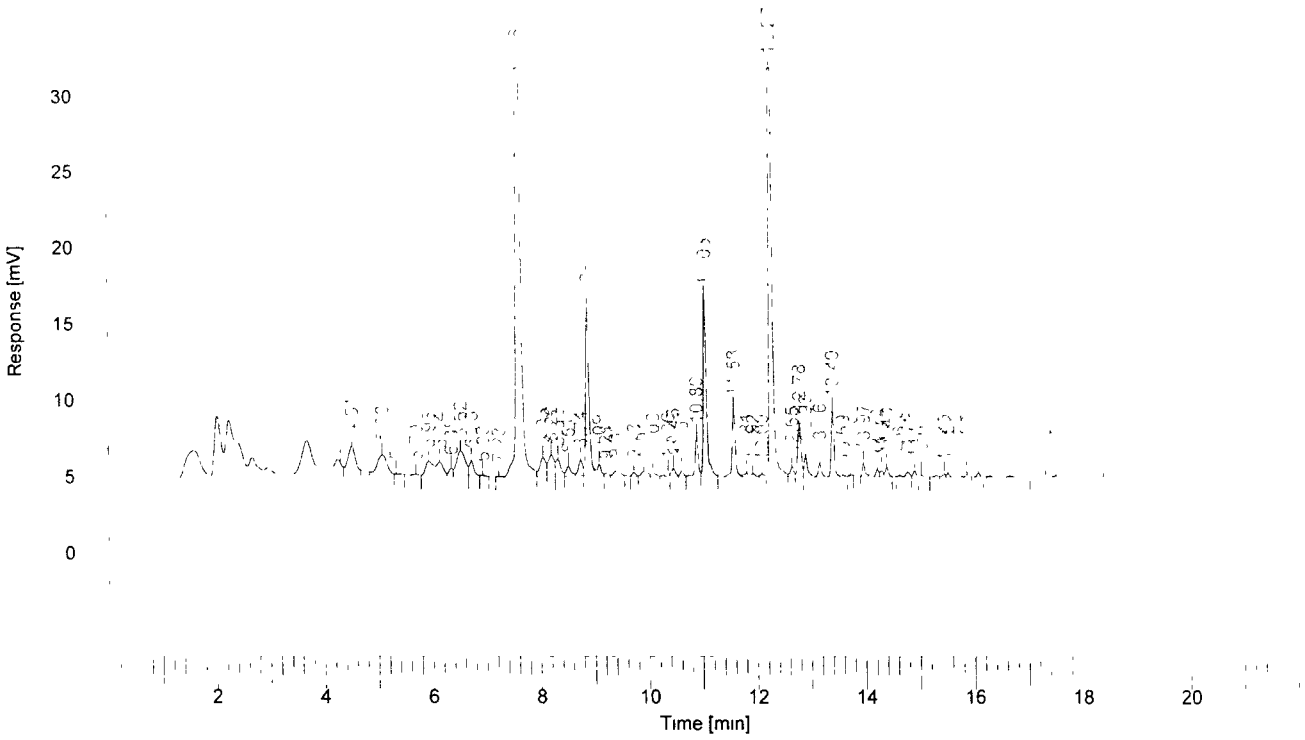
Peak #	Time [min]	Component Name	Raw Amount	Area [uV*sec]	Height [uV]
5	4.13	MTBE	-0.255	689	80
9	6.33	Benzene	-0.045	1714	313
12	7.60	T-alpha	-------	113553	23465
17	8.86	Toluene	2 788	33837	8662
23	10 88	Ethyl Benzene	0.414	5700	1529
24	11.04	m,p-xylene	2.474	35370	9870
25	11.56	o-xylene	0.814	9727	2615
27	12.26	BrFBnz	20.427	284792	85023
			26.616	485382	131556

$20.427/23.1 = 88\%$ recovery

Report stored in ASCII file: C:\PenExe\TcWS\Stats\2003-2004 RST ARCHIVE\dtxe1680.TX0

Software Version	: 6.2.0.0.0:B27	Date	: 6/16/04 2:30:36 PM
Sample Name	: GAS	Data Acquisition Time	: 6/3/04 12.21:37 PM
Instrument Name	: 3400-624	Channel	: B
Rack/Vial	: 0/0	Operator	: CAM
Sample Amount	: 1.000000	Dilution Factor	: 1.000000
Cycle	: 2		

Result File : C:\PenExe\TcWS\Stats\2003-2004 RST ARCHIVE\etxe1680.rst
Sequence File : C:\PenExe\TcWS\Stats\Sequences\DB624_WATER.seq



GASOLINE DB624

Peak #	Time [min]	Component Name	Raw Amount	Area [uV*sec]	Height [uV]
1	4.51		0.011	11416	1420
2	5.08		0.014	13710	1176
3	5.33		0.000	305	52
4	5.70		0 000	341	66
5	5.93		0.009	9334	919
6	6.14		0.007	7305	886
7	6 35		0.002	2360	471
8	6.52		0.018	17794	1610
9	6.73		0.005	5499	934
12	7 61		0.243	242776	44585
13	8.05		0.009	9277	1222
14	8.20		0.011	10868	1364
15	8.32		0.007	6934	1109
16	8.51		0.004	4175	639
17	8.74		0.006	5574	986

6/16/04 2:30:36 PM Result: C:\PenExe\TcWS\Stats\2003-2004 RST ARCHIVE\etxe1680.rst

Peak #	Time [min]	Component Name	Raw Amount	Area [uV*sec]	Height [uV]
18	8.88		0.046	46393	10695
19	9.09		0.004	4241	732
20	9.21		0.001	730	145
21	9 38		0.002	2447	261
22	9.73		0.001	1072	256
23	9.91		0.003	2577	330
24	10.08		0 001	1346	195
25	10.36		0.001	1346	223
26	10.46		0.002	2467	493
27	10.61		0.002	1555	387
28	10.89		0.010	9936	2518
29	11.05		0.046	45923	11568
30	11.58		0.017	16994	4286
31	11.81		0 001	1396	196
32	11.92		0.001	979	169
33	12 09		0.001	680	154
34	12.27		0.155	154970	42690
35	12.65		0.003	2793	629
36	12.78		0.015	14789	3348
37	12.90		0.006	5892	1392
38	13.16		0.003	3171	840
39	13.40		0.015	15380	4276
42	13.97		0.003	2536	764
43	14.22		0.002	1537	444
44	14.30		0.001	1395	370
45	14.40		0.002	2435	580
46	14.63		0.000	304	86
47	14 79		0.001	1391	287
48	14.91		0.001	1360	377
49	15.03		0.001	673	123
50	15.31		0.000	478	109
51	15.45		0.001	623	162
52	15.52		0.001	830	231
53	15.74		0.000	301	63
54	15.87		0.001	540	137
55	16.08		0.001	785	235
58	16 93		0.001	569	138
			0.701	700502	147329

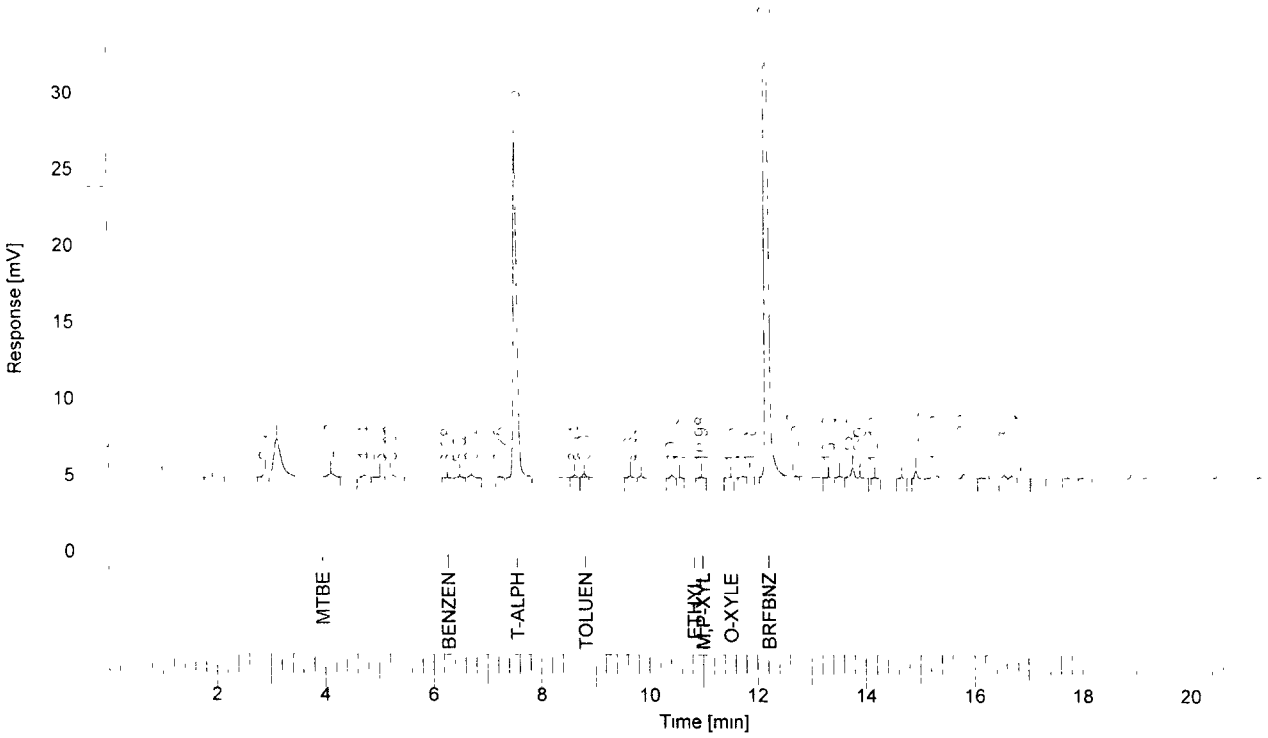
$= 303(.1699) = 51.5$

$51.5/50 = 103\%$ recovery on gasoline standard.

samples were diluted 2X due to excess foam

Software Version	: 6.2.0.0.0:B27	Date	: 6/16/04 2:31:14 PM
Sample Name	: A405657-01@2XF	Data Acquisition Time	: 6/3/04 6:09:52 PM
Instrument Name	: 3400-624	Channel	: A
Rack/Vial	. 0/0	Operator	: CAM
Sample Amount	: 1.000000	Dilution Factor	: 1.000000
Cycle	9		

Result File : C:\PenExe\TcWS\Stats\2003-2004 RST ARCHIVE\dtxe1689.rst
Sequence File . C:\PenExe\TcWS\Stats\Sequences\DB624_WATER.seq



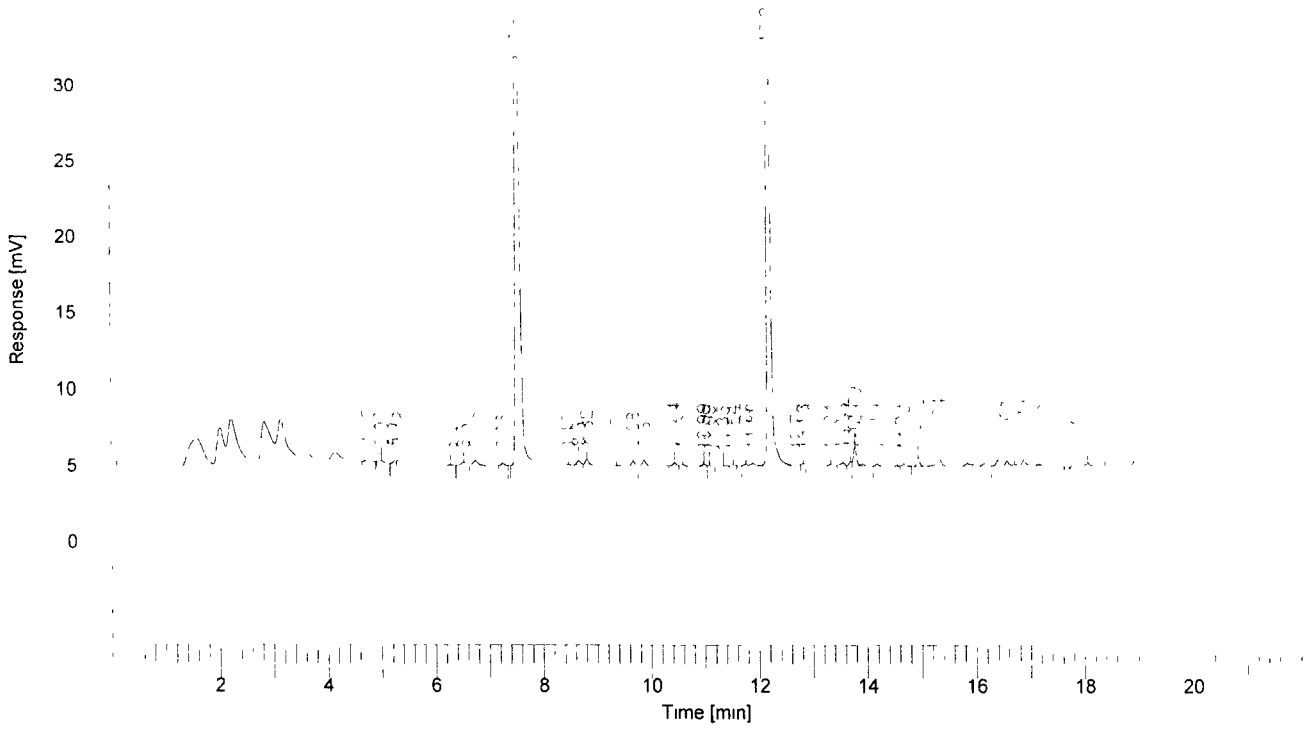
MBTXE DB624

Peak #	Time [min]	Component Name	Raw Amount	Area [uV*sec]	Height [uV]
4	4.12	MTBE	0.104	1603	213
12	7.55	T-alpha	-------	102328	21868
14	8.81	Toluene	-0.125	914	238
19	10.98	m,p-xylene	-0.292	339	88
23	12.20	BrFBnz	24.942	344960	101653
			24.628	450145	124060

Report stored in ASCII file: C.\PenExe\TcWS\Stats\2003-2004 RST ARCHIVE\dtxe1689.TX0

Software Version	: 6.2.0.0.0:B27	Date	: 6/16/04 2:31:27 PM
Sample Name	: A405657-01@2XF	Data Acquisition Time	: 6/3/04 6:09:52 PM
Instrument Name	: 3400-624	Channel	: B
Rack/Vial	: 0/0	Operator	: CAM
Sample Amount	: 1.000000	Dilution Factor	: 1.000000
Cycle	: 9		

Result File : C:\PenExe\TcWS\Stats\2003-2004 RST ARCHIVE\etxe1689.rst
Sequence File : C:\PenExe\TcWS\Stats\Sequences\DB624_WATER.seq



GASOLINE DB624

Peak #	Time [min]	Component Name	Raw Amount	Area [uV*sec]	Height [uV]
1	4.75		0.002	1589	197
2	5.00		0.001	1134	159
3	5.26		0.001	664	155
4	5.32		0.001	1002	154
6	6.53		0.001	1389	214
7	6.75		0.002	2019	296
8	7.26		0.001	569	130
9	7.56		0.216	216464	43044
11	8.67		0.001	1246	266
12	8.82		0.001	1409	355
14	9 68		0.001	1203	284
15	9.88		0.002	1500	352
16	10.44		0.001	862	197
17	10.60		0.000	428	91
18	10.99		0.001	514	129

6/16/04 2:31:27 PM Result: C:\PenExe\TcWS\Stats\2003-2004 RST ARCHIVE\etxe1689.rst

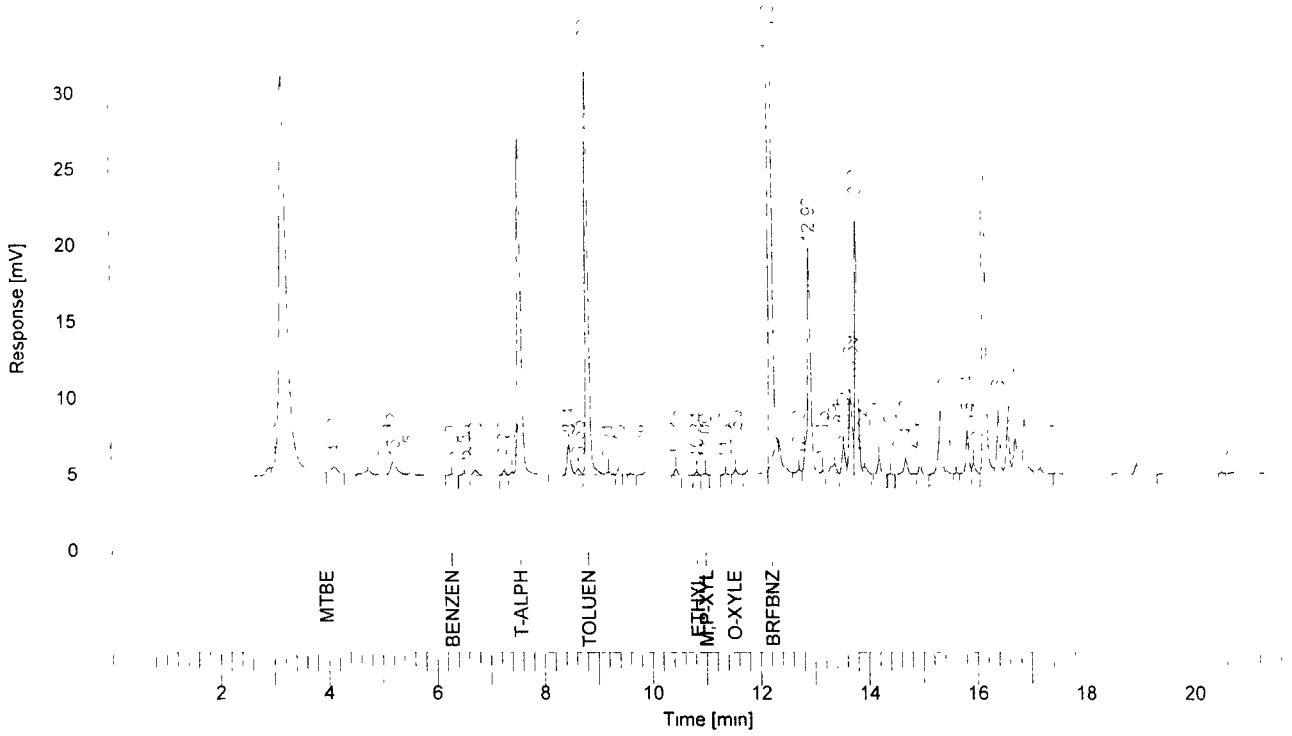
Peak #	Time [min]	Component Name	Raw Amount	Area [uV*sec]	Height [uV]
22	11.77		0.000	494	114
23	11 89		0.001	935	152
24	12.21		0.193	193361	52340
25	12.71		0.001	1384	125
26	12.83		0 001	601	129
27	12 93		0.001	695	129
28	13.34		0.001	683	127
29	13.56		0.001	1112	199
30	13 71		0.001	927	286
31	13.79		0.005	4821	1239
32	13.92		0.001	557	111
33	14.19		0.000	452	121
35	14.69		0.001	650	130
36	14.95		0.002	1958	552
37	15.34		0.003	2638	511
38	15.86		0.001	509	108
39	16.16		0.001	617	128
40	16.40		0.001	1380	337
41	16.58		0.001	1136	287
42	16.72		0.000	322	68
43	16.89		0.002	1526	317
45	17.72		0.001	951	233
46	17.88		0.002	1908	149
47	18.08		0.001	1197	190
			0.453	452804	104106

$44(2)(.1699) = 15 < 50 ppb$

diluted 2x due to excess foam

Software Version	: 6.2.0.0.0:B27	Date	: 6/16/04 2.31.50 PM
Sample Name	: A405657-02@2XF	Data Acquisition Time	: 6/3/04 6:45:12 PM
Instrument Name	: 3400-624	Channel	: A
Rack/Vial	: 0/0	Operator	: CAM
Sample Amount	: 1.000000	Dilution Factor	: 1.000000
Cycle	: 10		

Result File : C:\PenExe\TcWS\Stats\2003-2004 RST ARCHIVE\dtxe1690.rst
Sequence File : C:\PenExe\TcWS\Stats\Sequences\DB624_WATER.seq



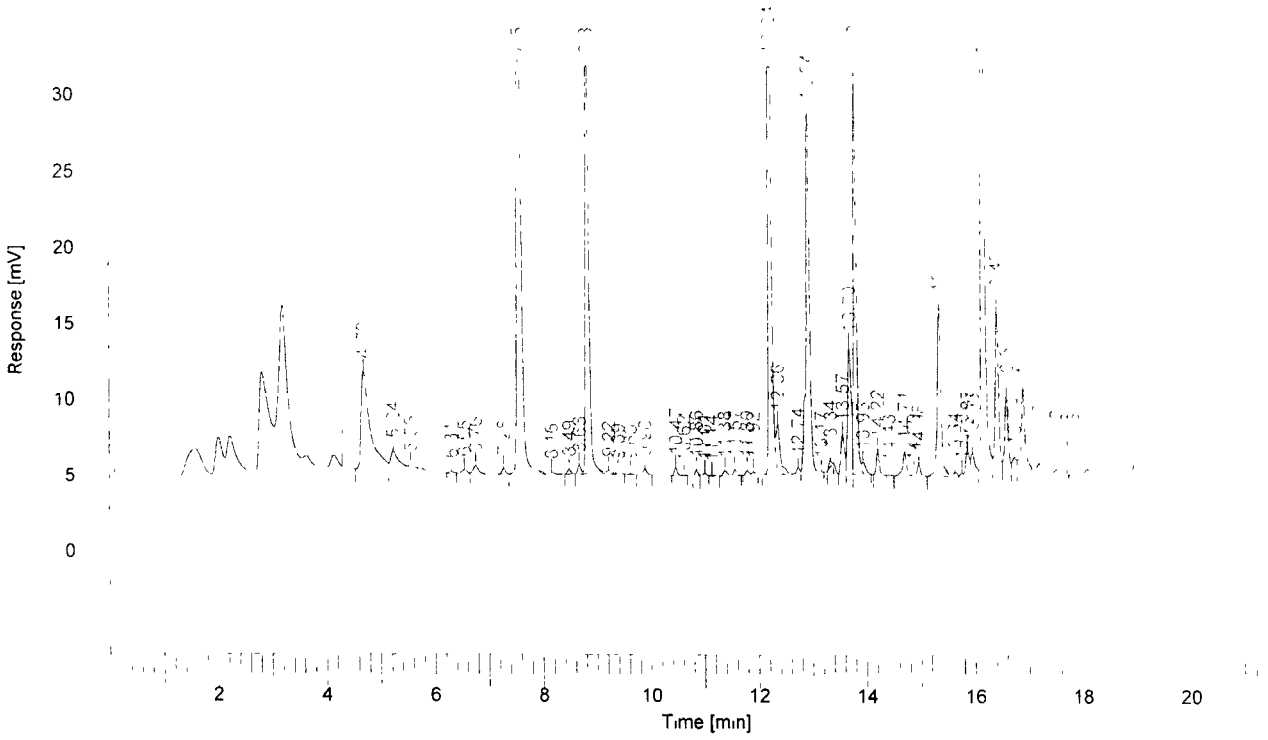
MBTXE DB624

Peak #	Time [min]	Component Name	Raw Amount	Area [uV*sec]	Height [uV]
3	4.12	MTBE	1.015	3966	457
8	6.30	Benzene	-0.149	464	84
13	7.57	T-alpha	-------	106974	22195
16	8.83	Toluene	8 784	106027	26672
22	10.84	Ethyl Benzene	-0.111	738	208
23	11.00	m,p-xylene	-0.281	478	108
25	11.56	o-xylene	-0.073	1145	292
27	12.23	BrFBnz	23.012	319243	97951
			32.197	539033	147967

Report stored in ASCII file: C:\PenExe\TcWS\Stats\2003-2004 RST ARCHIVE\dtxe1690 TX0

Software Version	: 6.2.0.0.0:B27	Date	: 6/16/04 2:32:04 PM
Sample Name	: A405657-02@2XF	Data Acquisition Time	: 6/3/04 6:45:12 PM
Instrument Name	: 3400-624	Channel	: B
Rack/Vial	: 0/0	Operator	: CAM
Sample Amount	: 1.000000	Dilution Factor	: 1.000000
Cycle	: 10		

Result File : C:\PenExe\TcWS\Stats\2003-2004 RST ARCHIVE\etxe1690.rst
Sequence File : C:\PenExe\TcWS\Stats\Sequences\DB624_WATER.seq



GASOLINE DB624

Peak #	Time [min]	Component Name	Raw Amount	Area [uV*sec]	Height [uV]
1	4.70		0.074	73752	6382
2	5.24		0.012	11810	1158
3	5.56		0.001	1050	138
4	6.31		0.001	663	122
5	6.55		0.002	1694	256
6	6.76		0.003	3161	505
7	7.28		0.001	1496	348
8	7.58		0.226	225605	43418
9	8.16		0.002	1807	107
10	8.49		0.001	1307	304
11	8.68		0.002	2478	555
12	8.84		0.129	128874	30301
13	9.22		0.002	2243	231
14	9.39		0.000	409	93
16	9.90		0.002	2013	371

6/16/04 2:32:04 PM Result: C:\PenExe\TcWS\Stats\2003-2004 RST ARCHIVE\etxe1690.rst

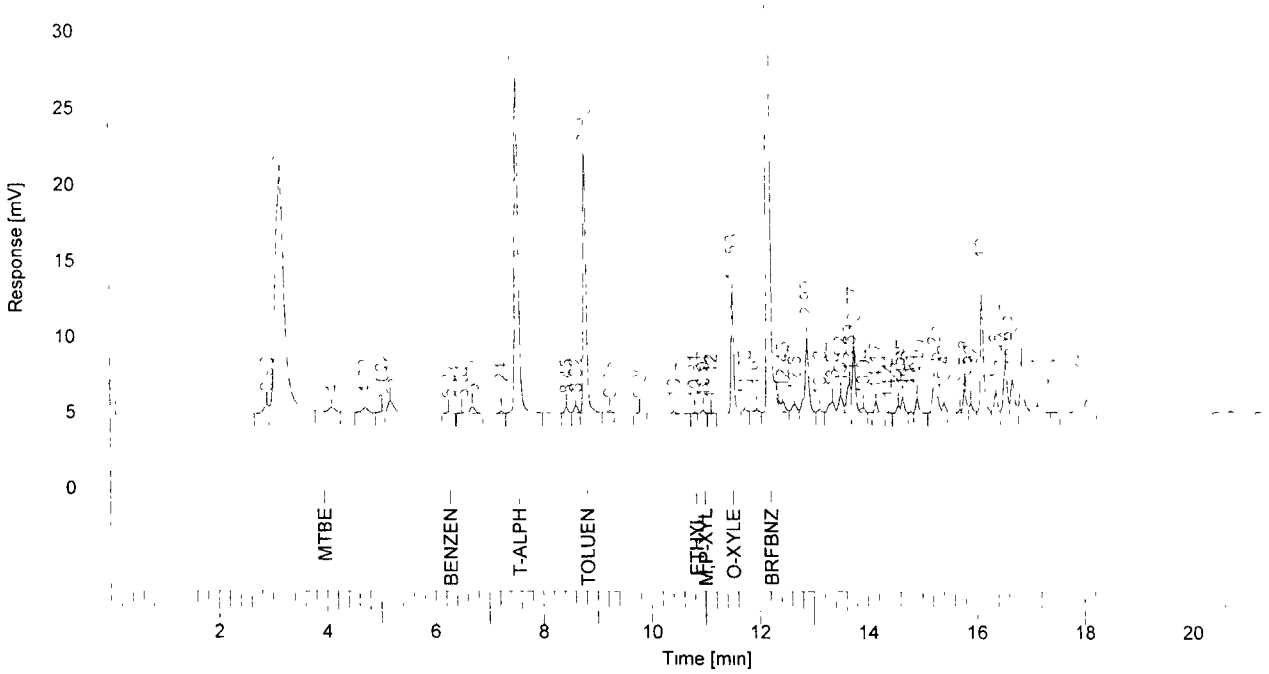
Peak #	Time [min]	Component Name	Raw Amount	Area [uV*sec]	Height [uV]
17	10.47		0.002	1908	479
19	10.86		0.001	1240	339
20	11.01		0.001	801	162
21	11.14		0.000	322	44
22	11.38		0.002	1571	314
23	11 57		0.001	1370	356
24	11.80		0.001	1249	278
25	11.92		0.001	618	158
26	12 24		0.182	182098	51096
27	12.36		0.017	17295	3062
28	12.74		0.002	1543	392
29	12.94		0.111	111430	23498
30	13.17		0.000	365	73
31	13.34		0.001	1457	423
32	13.57		0.013	12589	2632
33	13.70		0.038	37842	8396
34	13.82		0 097	97441	25410
35	13.95		0.004	4173	705
36	14.22		0 006	6138	1624
38	14.71		0.008	7818	1564
39	14.89		0.000	477	118
40	14.98		0.003	3019	783
41	15.36		0.051	51417	11193
42	15.64		0 002	1836	246
43	15.76		0.001	774	208
44	15.87		0.008	8151	1707
45	15.96		0.009	8542	1507
46	16 17		0.238	238065	57897
47	16.43		0.050	49802	10746
48	16.60		0.026	25727	5203
49	16.74		0.007	6637	1232
50	16.91		0.035	35418	5686
51	17.20		0.009	9212	749
52	17.52		0.004	3956	450
53	17 72		0.001	1254	253
54	17.83		0.002	2246	201
55	18.10		0.002	2191	339
			1.396	1396352	303811

$= 988(2) = 1976(.1699) = 336 ppb$

diluted 2x due to excess foam

Software Version	6.2.0.0.0:B27	Date	: 6/16/04 2:32:22 PM
Sample Name	. A405657-03@2XF	Data Acquisition Time	: 6/3/04 7:20:34 PM
Instrument Name	: 3400-624	Channel	: A
Rack/Vial	: 0/0	Operator	: CAM
Sample Amount	: 1.000000	Dilution Factor	: 1.000000
Cycle	: 11		

Result File : C:\PenExe\TcWS\Stats\2003-2004 RST ARCHIVE\dtxe1691.rst
Sequence File : C.\PenExe\TcWS\Stats\Sequences\DB624_WATER.seq



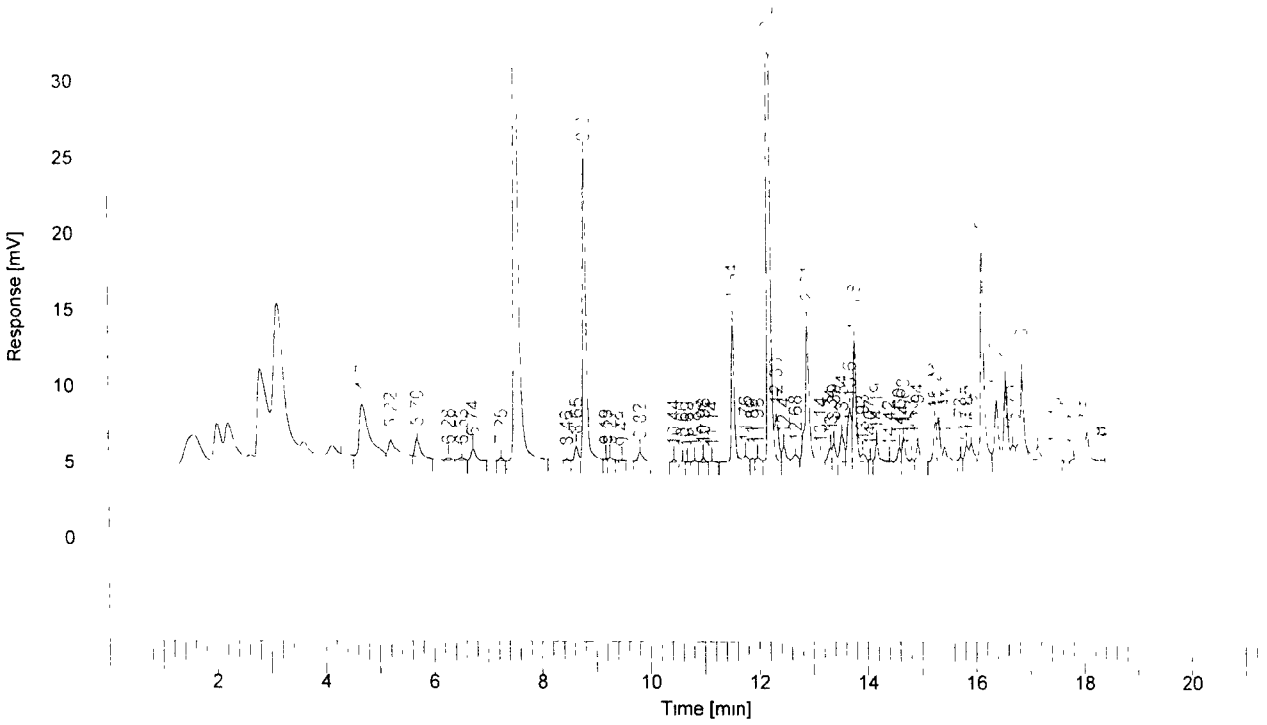
MBTXE DB624

Peak #	Time [min]	Component Name	Raw Amount	Area [uV*sec]	Height [uV]
3	4.11	MTBE	0.232	1932	267
7	6 27	Benzene	-0.137	604	109
11	7.54	T-alpha	-------	107199	22193
14	8.80	Toluene	5.556	66427	16887
19	10 97	m,p-xylene	-0 256	795	191
21	11.53	o-xylene	2.480	26179	7746
24	12.20	BrFBnz	24.502	339094	98942
			32.376	542229	146336

Report stored in ASCII file: C:\PenExe\TcWS\Stats\2003-2004 RST ARCHIVE\dtxe1691.TX0

Software Version	: 6.2.0.0.0:B27	Date	: 6/16/04 2:32:33 PM
Sample Name	: A405657-03@2XF	Data Acquisition Time	: 6/3/04 7:20:34 PM
Instrument Name	: 3400-624	Channel	: B
Rack/Vial	: 0/0	Operator	: CAM
Sample Amount	: 1.000000	Dilution Factor	: 1.000000
Cycle	: 11		

Result File : C:\PenExe\TcWS\Stats\2003-2004 RST ARCHIVE\etxe1691.rst
Sequence File : C \PenExe\TcWS\Stats\Sequences\DB624_WATER.seq



GASOLINE DB624

Peak #	Time [min]	Component Name	Raw Amount	Area [uV*sec]	Height [uV]
1	4.70		0.040	40415	3368
2	5.22		0.009	9335	943
3	5.70		0.007	7113	1126
4	6.28		0.001	746	146
5	6.53		0.001	878	149
6	6.74		0.004	4152	710
7	7.25		0 001	851	193
8	7.56		0.234	234274	43597
10	8.65		0.004	3938	860
11	8.81		0.086	85685	19946
12	9 19		0.000	387	100
13	9.27		0.001	639	131
15	9.82		0.003	2986	564
16	10 44		0.001	582	143
19	10.83		0.000	362	101

6/16/04 2:32:33 PM Result: C:\PenExe\TcWS\Stats\2003-2004 RST ARCHIVE\etxe1691.rst

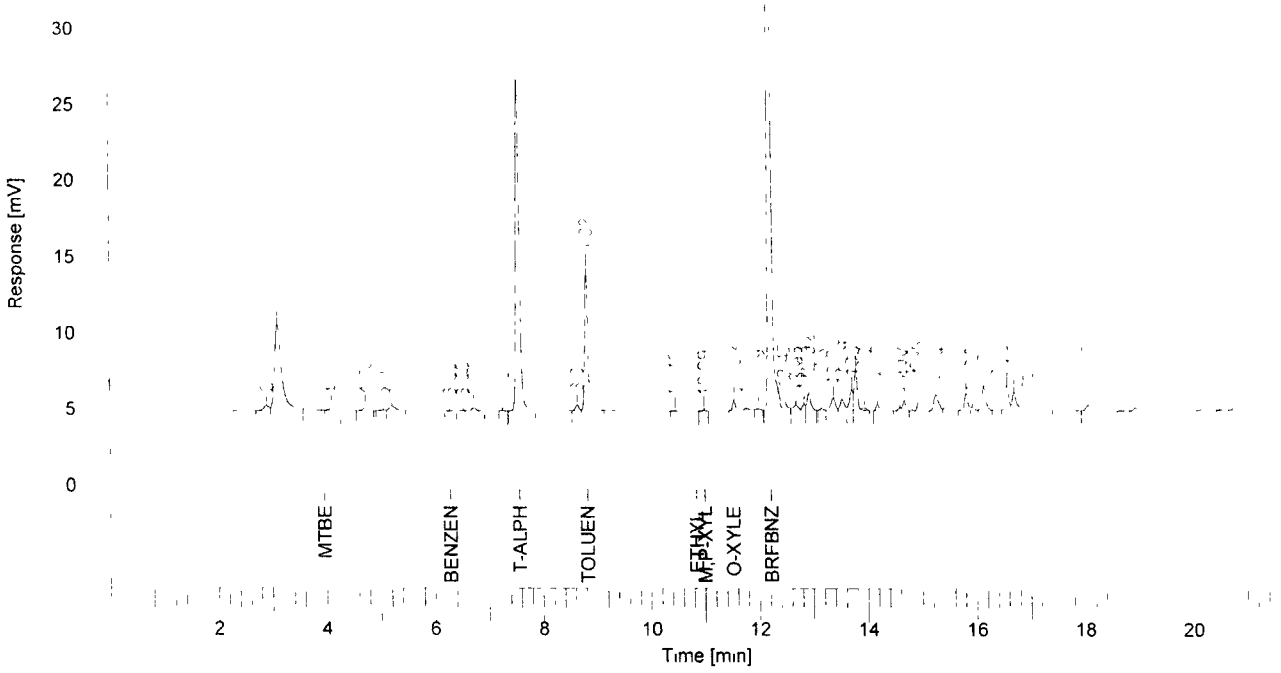
Peak #	Time [min]	Component Name	Raw Amount	Area [uV*sec]	Height [uV]
20	10.98		0.001	1148	267
21	11 14		0.000	433	67
22	11.54		0.033	33357	9037
23	11.76		0.003	2951	404
24	11.89		0.001	1022	223
25	11.98		0.002	1637	268
26	12 21		0.185	184990	51887
27	12.33		0.013	13243	2634
28	12 47		0.005	5216	968
29	12.68		0.003	3159	457
30	12.91		0.046	46015	8951
31	13.14		0.002	2102	311
32	13.34		0.004	3902	897
33	13.39		0.005	5308	1162
34	13.54		0.010	10353	1756
35	13.69		0.018	17825	3323
36	13.78		0.032	32011	7676
37	13.93		0.003	2898	449
38	14.07		0.001	676	164
39	14 19		0.005	5337	1223
40	14.42		0.001	555	105
41	14.60		0.003	3467	889
42	14.68		0.007	6695	1518
43	14.83		0.001	609	150
44	14.94		0.005	4538	1184
45	15.26		0.010	9815	2314
46	15.32		0.011	10674	2663
47	15.44		0.004	4091	859
48	15.73		0.001	771	226
49	15.85		0.004	4318	944
50	15.93		0.006	5735	1063
51	16.14		0.061	60527	13515
52	16.39		0.018	18087	3923
53	16.57		0.026	25649	5122
54	16 70		0.004	3648	819
55	16.87		0.030	30421	5372
56	17.16		0.008	7670	829
57	17.48		0.001	701	128
58	17.71		0.001	986	238
59	17.82		0.002	2474	258
60	18.07		0.010	9524	1856
61	18.33		0.000	399	45
			0.977	977276	208219

558(2)(.1099) = 190ppb

diluted 2x due to excess foam

Software Version	: 6.2.0.0.0:B27	Date	: 6/16/04 2.32.44 PM
Sample Name	. A405657-04@2XF	Data Acquisition Time	: 6/3/04 7:55.53 PM
Instrument Name	: 3400-624	Channel	: A
Rack/Vial	0/0	Operator	: CAM
Sample Amount	: 1.000000	Dilution Factor	: 1.000000
Cycle	: 12		

Result File C:\PenExe\TcWS\Stats\2003-2004 RST ARCHIVE\dtxe1692.rst
Sequence File : C:\PenExe\TcWS\Stats\Sequences\DB624_WATER.seq



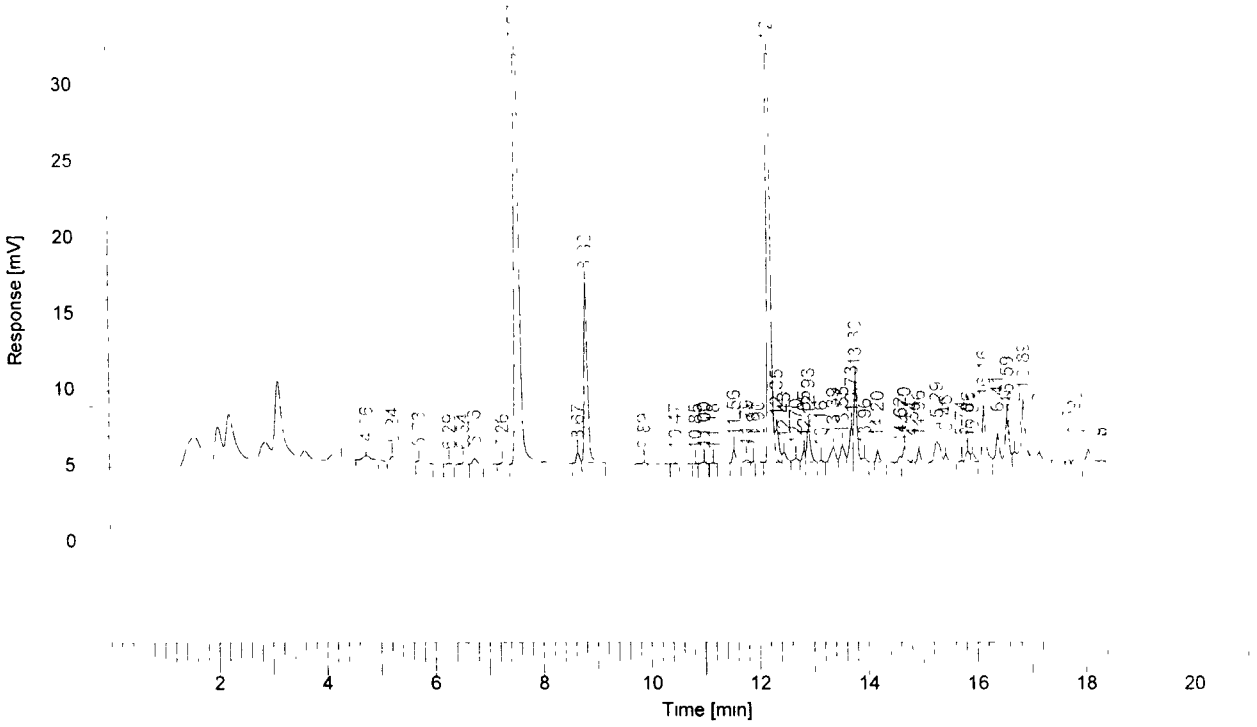
MBTXE DB624

Peak #	Time [min]	Component Name	Raw Amount	Area [uV*sec]	Height [uV]
3	4.11	MTBE	-0.170	904	121
11	7.56	T-alpha	-------	101907	21648
13	8.82	Toluene	3.033	36680	9367
15	10.99	m,p-xylene	-0.288	388	97
16	11.54	o-xylene	0.051	2342	657
19	12.22	BrFBnz	24.169	334666	98478
			26.795	476887	130368

Report stored in ASCII file: C:\PenExe\TcWS\Stats\2003-2004 RST ARCHIVE\dtxe1692.TX0

Software Version	: 6.2.0.0.0:B27	Date	: 6/16/04 2:32:54 PM
Sample Name	: A405657-04@2XF	Data Acquisition Time	: 6/3/04 7:55:53 PM
Instrument Name	: 3400-624	Channel	: B
Rack/Vial	: 0/0	Operator	: CAM
Sample Amount	. 1.000000	Dilution Factor	. 1.000000
Cycle	: 12		

Result File : C:\PenExe\TcWS\Stats\2003-2004 RST ARCHIVE\etxe1692.rst
Sequence File : C:\PenExe\TcWS\Stats\Sequences\DB624_WATER.seq



GASOLINE DB624

Peak #	Time [min]	Component Name	Raw Amount	Area [uV*sec]	Height [uV]
1	4.76		0.002	2247	264
2	5.24		0.003	2644	313
3	5.73		0.001	523	86
4	6.29		0.000	387	71
5	6.54		0.001	580	94
6	6.76		0.002	1982	337
7	7.26		0.000	481	103
8	7.57		0.220	219690	42782
9	8.67		0.003	2971	666
10	8.83		0.050	50123	11777
11	9.89		0.000	407	72
14	11.00		0.001	626	142
16	11.56		0.003	3240	860
17	11.79		0.001	1280	225
18	11.91		0.000	330	78

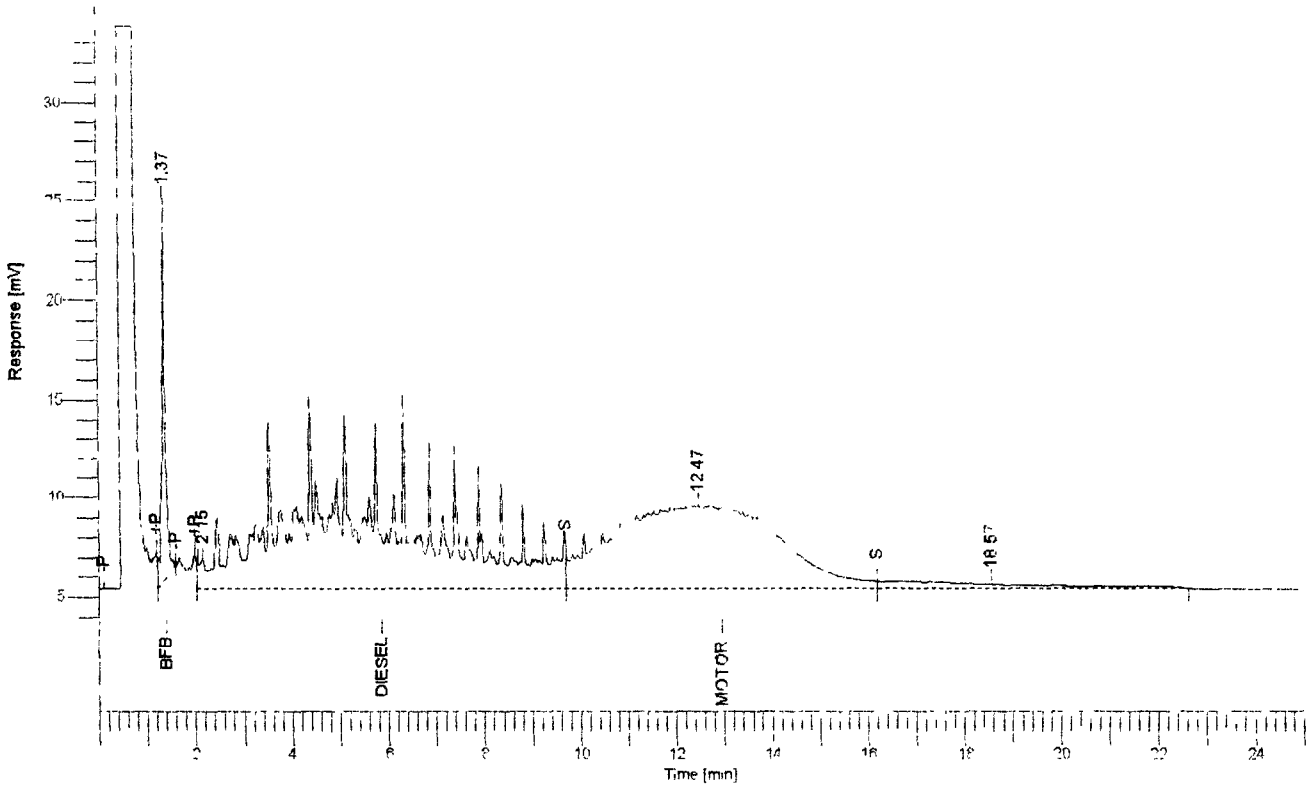
6/16/04 2:32:54 PM Result: C.\PenExe\TcWS\Stats\2003-2004 RST ARCHIVE\etxe1692.rst

Peak #	Time [min]	Component Name	Raw Amount	Area [uV*sec]	Height [uV]
19	12.00		0.001	764	125
20	12.23		0.182	181819	51240
21	12.35		0.010	9947	1869
22	12.48		0.004	3593	668
23	12.70		0.002	1680	251
24	12.85		0.003	2675	757
25	12.93		0.010	10466	2223
26	13.16		0.001	530	126
27	13.39		0.006	6226	946
28	13 55		0.006	5867	1022
29	13.73		0.009	9429	2343
30	13.80		0.022	21684	5315
31	13.96		0.001	1216	217
32	14.20		0.003	2724	703
33	14 62		0.001	1493	395
34	14.70		0.004	4424	1012
35	14.84		0.000	473	112
36	14.96		0.003	3071	799
37	15.29		0.010	10055	1345
38	15.46		0.002	2349	462
40	15.86		0.003	3426	674
41	15.94		0.003	2946	554
42	16.16		0.017	16879	3345
43	16.41		0.008	8063	1705
44	16.59		0.014	14100	2898
45	16.72		0.003	2631	584
46	16.89		0.021	21168	3771
47	17.18		0.005	4946	490
48	17.73		0.001	945	232
49	17.82		0.002	2303	254
50	18.09		0.005	5006	814
51	18.33		0.000	332	65
			0.651	650739	145185

$= 249(2)(.1699) = 85 ppb$

Software Version	: 6.2.0.0.0:B27	Date	: 6/3/04 10:0
Reprocess Number	: galfield 325		
Sample Name	: DM(42)	Data Acquisition Time	: 6/3/04 9.35: AM
Instrument Name	: DsMo		
Rack/Vial	: 0/0	Channel	: A
Sample Amount	: 1.000000	Operator	: Marvin
Cycle	: 3	Dilution Factor	: 1.000000

Result File : G:\Stats\Data\ATDAT996.rst
Sequence File : G:\Stats\Sequences\Seq_DsMo_WATER_G.Seq



Diesel/Motor Oil

Peak #	Time [min]	Component Name	Raw Amount	Area [uV*sec]	Height [uV]
1	1.37	BFB	7.620	105371	17810
2	2.15	Diesel	42.340	1201759	1546
3	12.47	Motor Oil	40.252	1010074	4165
4	18.57		0.077	77025	211
			90.289	2394229	23731

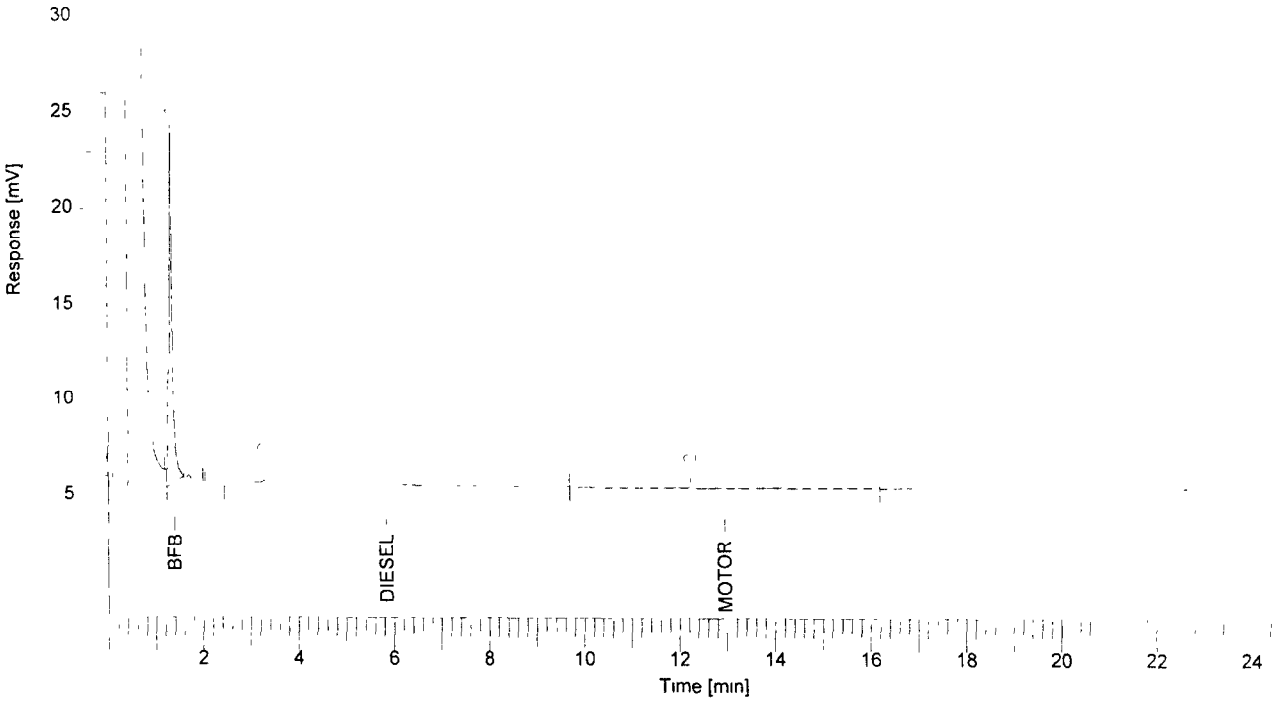
DsMo within +/-15%.

Report stored in ASCII file: G:\Stats\Data\ATDAT996.TXO

6/3/04 3:51:55
6/3/04 3:26:42

Software Version	: 6.2.0.0.0:B27	Date	: 6/21/04 9:43:22 AM
Sample Name	: AF40303-BLK1	Data Acquisition Time	: 6/3/04 11:36:05 PM
Instrument Name	: DsMo	Channel	: A
Rack/Vial	: 0/0	Operator	: Marvin
Sample Amount	: 1.000000	Dilution Factor	: 1.000000
Cycle	: 13		

Result File : G:\Stats\Data\atdat112.rst
Sequence File : G:\Stats\Sequences\Seq_DsMo_WATER_G.seq



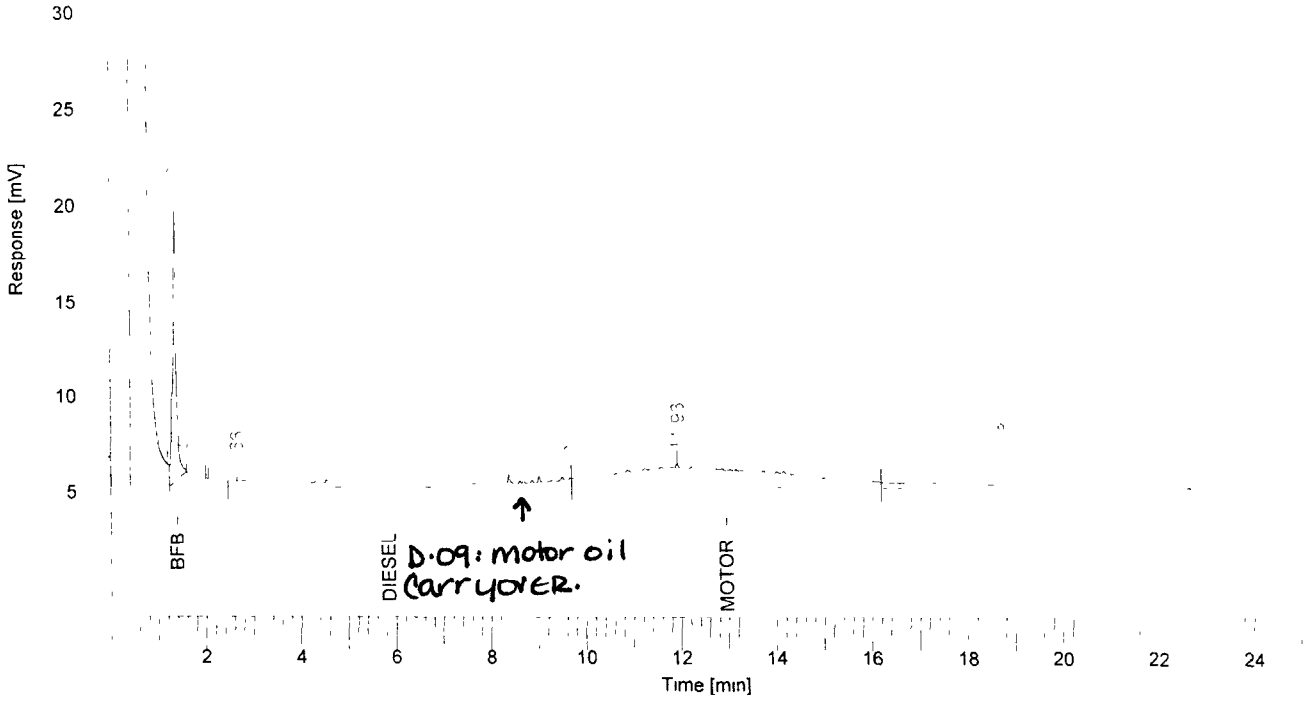
Diesel/Motor Oil

Peak #	Time [min]	Component Name	Raw Amount	Area [uV*sec]	Height [uV]
1	1.35	BFB	6.731	92695	16617
2	3.29	Diesel	0.369	57483	320
3	12.24	Motor Oil	0.139	10106	27
4	22.28		0.034	33621	114
			7.272	193904	17078

Report stored in ASCII file: G:\Stats\Data\atdat112 TX0

Software Version	: 6.2.0.0.0:B27	Date	: 6/21/04 9:45:27 AM
Sample Name	: A405657-01	Data Acquisition Time	: 6/4/04 7:03:25 PM
Instrument Name	: DsMo	Channel	: A
Rack/Vial	: 0/0	Operator	: Marvin
Sample Amount	: 1.000000	Dilution Factor	: 1.000000
Cycle	: 7		

Result File . G:\Stats\Data\atdat138.rst
Sequence File : G:\Stats\Sequences\Seq_DsMo_WATER_G.seq



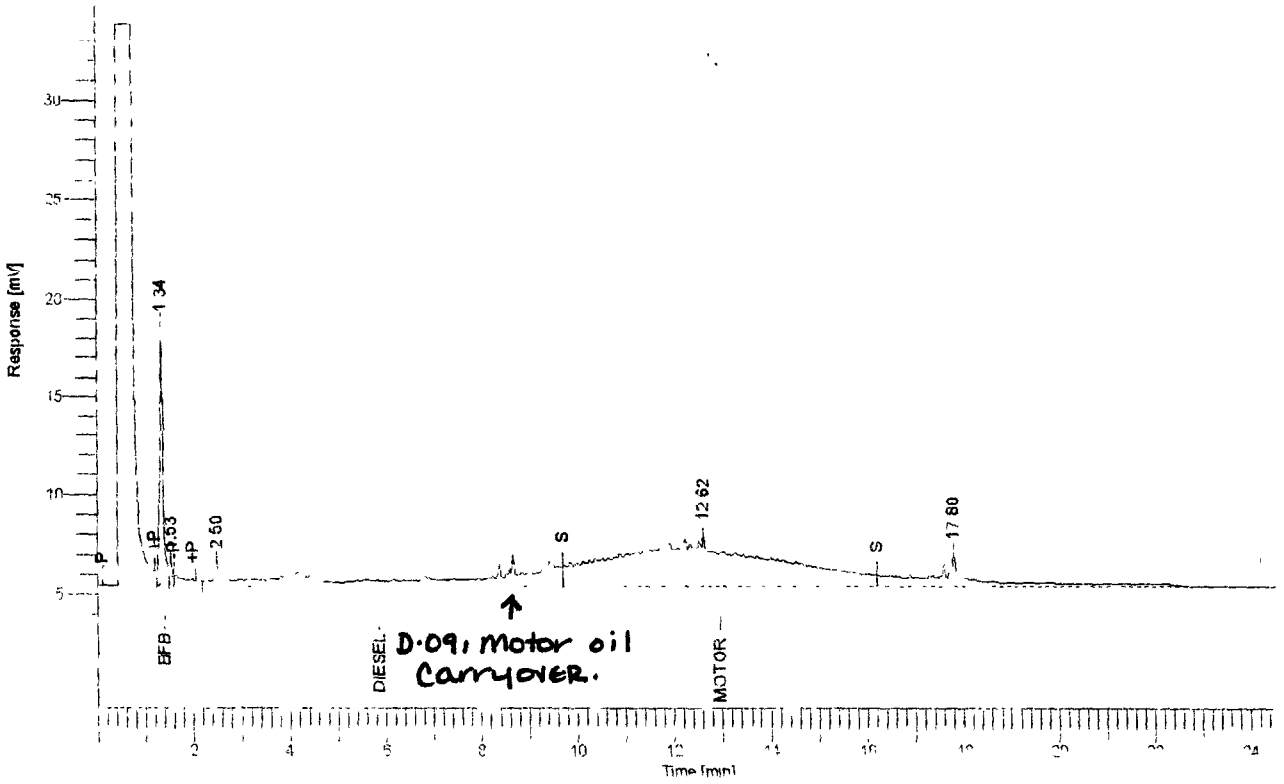
Diesel/Motor Oil

Peak #	Time [min]	Component Name	Raw Amount	Area [uV*sec]	Height [uV]
1	1.36	BFB	5.777	79493	13254
2	2.66	Diesel	1.844	97301	312
3	11.93	Motor Oil	11.062	280635	1249
4	18 78		0.063	63405	157
			18.746	520833	14973

Report stored in ASCII file: G:\Stats\Data\atdat138 TX0

Software Version	:	6.2.0.0.0:B27	Date	:	6/4/04 5:24:
Reprocess Number	:	garfield: 3278			
Sample Name	:	A405657-02	Data Acquisition Time	:	6/4/04 5:00:4 AM
Instrument Name	:	DsMo			
Rack/Vial	:	0/0	Channel	:	A
Sample Amount	:	1.000000	Operator	:	Marvin
Cycle	:	21	Dilution Factor	:	1.000000

Result File : G:\Stats\Data\ATDAT120.rst
Sequence File : G:\Stats\Sequences\Seq_DsMo_WATER_G.seq



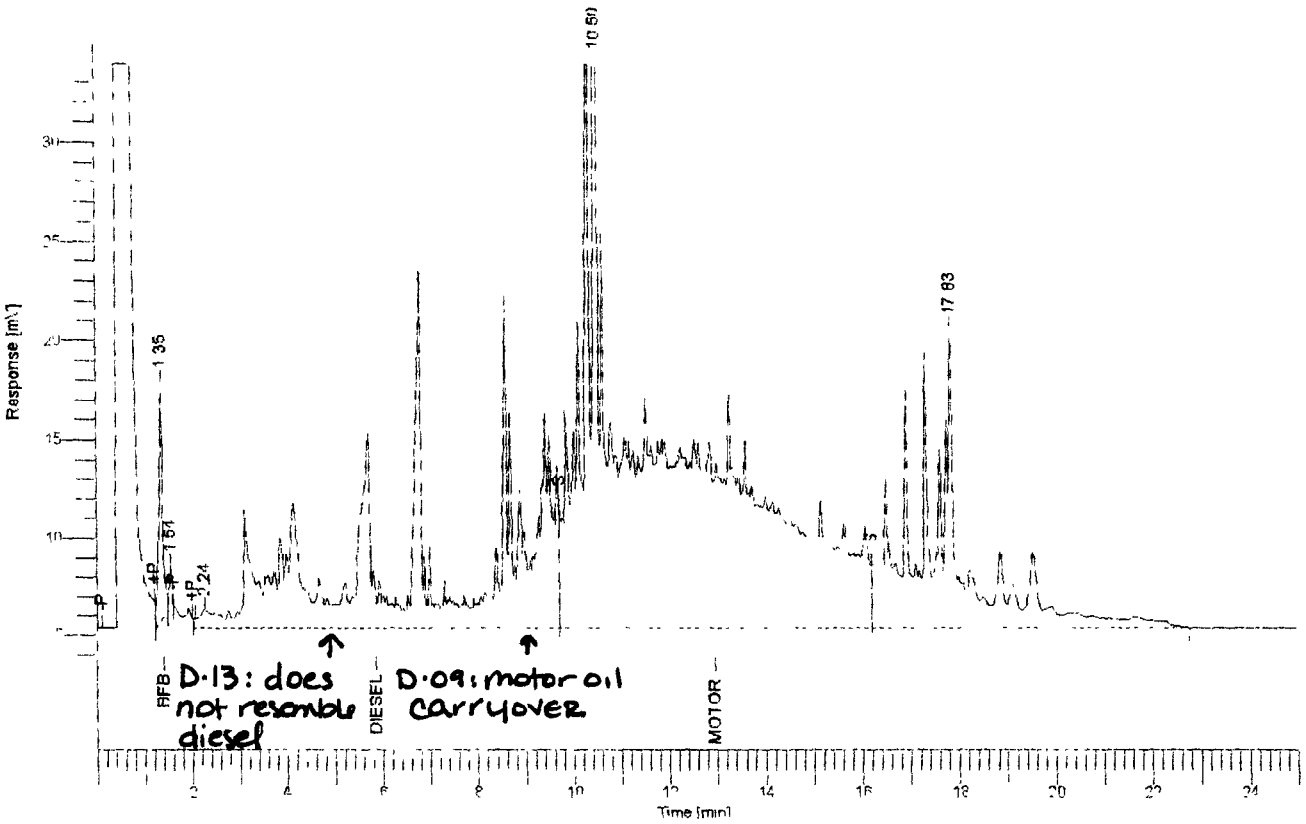
Diesel/Motor Oil

Peak #	Time [min]	Component Name	Raw Amount	Area [uV*sec]	Height [uV]
1	1.34	BFB	4.491	62312	11666
2	1.53		0.005	4968	1032
3	2.50	Diesel	5.638	199860	1118
4	12.62	Motor Oil	21.603	542982	2562
5	17.80		0.107	106884	1608
			31.844	917006	17985

Report stored in ASCII file: G:\Stats\Data\ATDAT120.TXO

Software Version	:	6.2.0.0.0:B27	Date	:	6/4/04 6:00:
Reprocess Number	:	garfield: 3279			
Sample Name	:	n405657-03	Data Acquisition Time	:	6/4/04 5:41:1 AM
Instrument Name	:	DsMo			
Rack/Vial	:	0/0	Channel	:	A
Sample Amount	:	1.000000	Operator	:	Marvin
Cycle	:	21	Dilution Factor	:	1.000000

Result File : G:\Stats\Data\ATDAT121.rst
Sequence File : G:\Stats\Sequences\Seq_DsMo_WATER_G.seq



Diesel/Motor Oil

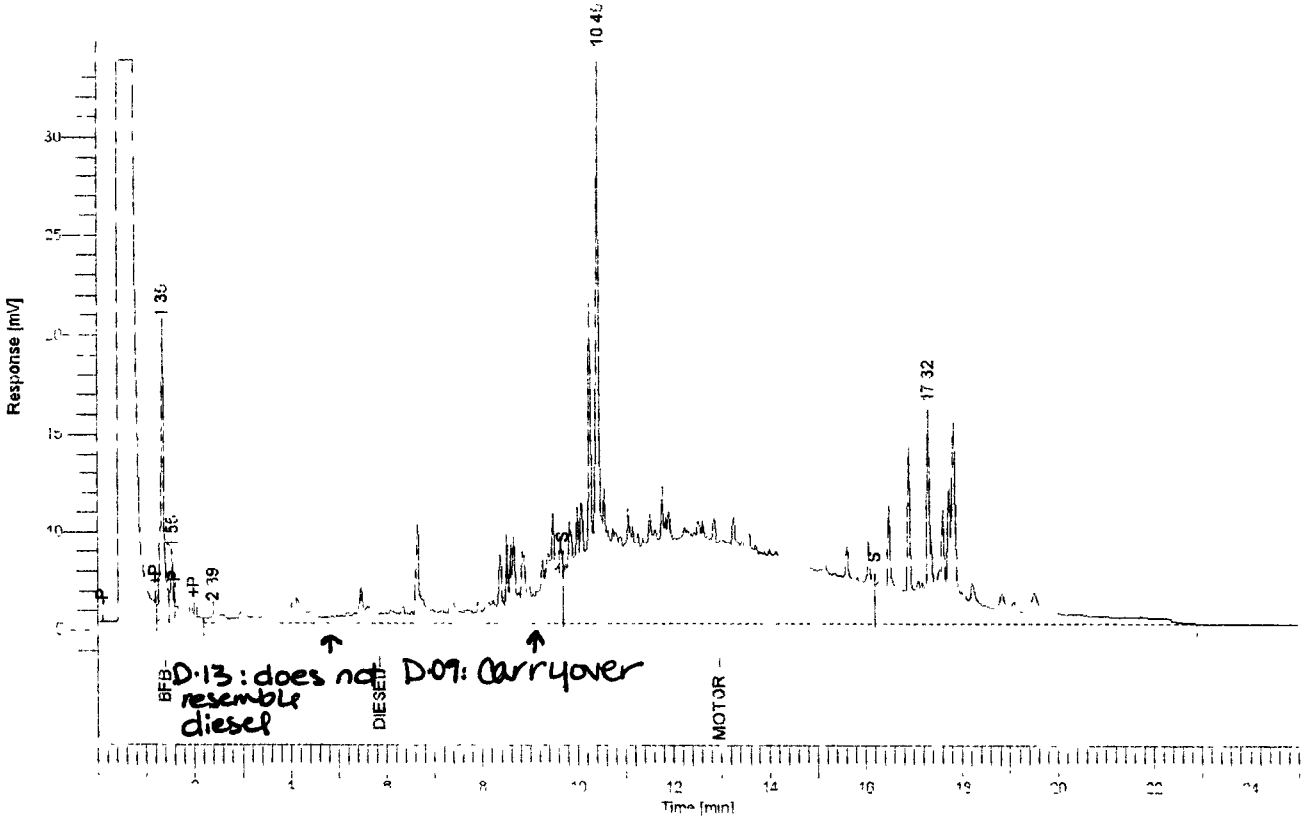
Peak #	Time [min]	Component Name	Raw Amount	Area [uV*sec]	Height [uV]
1	1.35	BFB	5.256	72443	11663
2	1.54		0.015	15459	2994
3	2.24	Diesel	45.253	1282024	924
4	10.50	Motor Oil	120.986	3076610	48419
5	17.83		0.758	757726	15140
			172.268	5204261	79139

Report stored in ASCII file. G:\Stats\Data\ATDAT121.TXO

: 6/4/04
6:22:12

Soft
Repro
Sample Nam
Instrument Name : DSMo
Rack/Vial : 0/0
Sample Amount : 1.000000
Cycle : 23
Channel
Operator : Marvin
Dilution Factor : 1.000000

Result File : G:\Stats\Data\ATDAT122.rst
Sequence File : G:\Stats\Sequences\Seq_DsMo_WATER_G.seq



Diesel/Motor Oil

Peak #	Time [min]	Component Name	Raw Amount	Area [uV*sec]	Height [uV]
1	1.33	BFB	3.194	71613	13117
2	1.35		0.014	14228	2849
3	2.39	Diesel	14.385	437057	414
4	10.45	Motor Oil	64.744	1629384	29372
5	17.32		0.512	512343	10584
			84.850	2664625	56337

Report stored in ASCII file: G:\Stats\Data\ATDAT122.TXT

FILE 9329

FRONTIER
ANALYTICAL LABORATORY

June 14, 2004

FAL Project ID: 2633

RECEIVED 6/16/2004

TASK 6 STORM WATER

MAY 27, 2004 STORM WATER SAMPLES

Ms. Sheri Speaks
Alpha Analytical Laboratories, Inc.
208 Mason Street
Ukiah, CA 95482

Dear Ms. Speaks,

Enclosed are the results for Frontier Analytical Laboratory project **2633**. This corresponds to your subcontract order # A405657. The three aqueous samples received on 6/2/04 was extracted and analyzed by EPA Method 1613 for tetra through octa chlorinated dibenzo dioxins and furans. The sampling time on the sample bottle label for sample 2633-003-SA (Alpha Analytical ID: A405657-04) did not match the sampling time on the chain of custody. Alpha Analytical Laboratories was contacted and you instructed us to use the sampling time from the chain of custody for our purposes. Alpha Analytical Laboratories, Inc. requested a turnaround time of ten business days for project **2633**. Frontier Analytical Laboratory successfully fulfilled this request.

The following report consists of an Analytical Data section and a Sample Receipt section. The Analytical Data section contains the project-sample tracking log, a qualifier reference guide, a ML/MDL form and the analytical results. The Sample Receipt section contains your original chain of custody, our sample login form and a sample photo.

If you have any questions regarding project **2633**, please feel free to contact me at (916) 934-0900. Thank you for choosing Frontier Analytical Laboratory for your analytical testing needs.

Sincerely,

Bradley B. Silverbush
Director of Operations

FRONTIER ANALYTICAL LABORATORY
5172 Hillsdale Circle • El Dorado Hills, CA 95762
Tel (916) 934-0900 • Fax (916) 934-0999
dioxin@frontieranalytical.com

Frontier Analytical Laboratory

Sample Tracking Log

FAL Project ID: **2633**

Received on: **06/02/2004** Project Due: **06/17/2004** Storage: **R2**

FAL Sample ID	Dup	Client Project ID	Client Sample ID	Requested Method	Matrix	Sampling Date	Sampling Time	Hold Time Due Date
2633-001-SA	1	A405657	A405657-02	EPA 1613 D/F	Aqueous	05/27/2004	02:00 pm	05/27/2005
2633-002-SA	1	A405657	A405657-03	EPA 1613 D/F	Aqueous	05/27/2004	12.35 pm	05/27/2005
2633-003-SA	1	A405657	A405657-04	EPA 1613 D/F	Aqueous	05/27/2004	01:45 pm	05/27/2005

FAL Sample ID	Notes
2633-003-SA	Sample time from bottle label is incorrect Using time from COC for our purposes

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Qualifier Reference Guide

A	Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1
B	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range
F	Analyte confirmation on secondary column
J‡	Analyte concentration is below calibration range
M	Maximum possible concentration
NP	Not Provided
S	Sample acceptance criteria not met
X	Matrix interferences
*	Result taken from dilution or reinjection
-	Analyte Not Detected

‡ "J" values are equivalent to DNQ (detected but not quantified) for California Toxics Rule (CTR)/National Pollutant Discharge Elimination System (NPDES) samples

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EPA Method 1613/8290 Aqueous MDL
(SPE Extraction)

FRONTIER ANALYTICAL LABORATORY

Analyte	ML	MDL
2,3,7,8-TCDD	5.00	1.32
1,2,3,7,8-PeCDD	25.0	1.97
1,2,3,4,7,8-HxCDD	25.0	2.86
1,2,3,6,7,8-HxCDD	25.0	2.82
1,2,3,7,8,9-HxCDD	25.0	2.68
1,2,3,4,6,7,8-HpCDD	25.0	2.40
OCDD	50.0	4.89
2,3,7,8-TCDF	5.00	1.01
1,2,3,7,8-PeCDF	25.0	1.80
2,3,4,7,8-PeCDF	25.0	1.77
1,2,3,4,7,8-HxCDF	25.0	1.00
1,2,3,6,7,8-HxCDF	25.0	1.01
1,2,3,7,8,9-HxCDF	25.0	1.01
2,3,4,6,7,8-HxCDF	25.0	1.06
1,2,3,4,6,7,8-HpCDF	25.0	1.03
1,2,3,4,7,8,9-HpCDF	25.0	1.25
OCDF	50.0	3.97

Project **2413**, extracted 1/22/04; analyzed 2/10/04. Based on a 1.0 Liter sample, pg/L.

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 2633-001-MB
Client ID: Method Blank
Matrix: Aqueous
Extraction Batch No.: X0277

Date Extracted: 6/10/04
Date Received: NA
Amount: 1.000 L

ICal: PCDDFAL1-2-26-04 Acquired: 11-JUN-04
GC Column: DB5
Units: pg/L WHO TEQ: 0.00
MS/MSD Batch No.: X0198

Compound	Conc	DL	Qual	WHO Tox	Compound	Conc	DL	Qual	#Hom
2,3,7,8-TCDD	-	1.11		-					
1,2,3,7,8-PeCDD	-	2.43		-					
1,2,3,4,7,8-HxCDD	-	3.09		-					
1,2,3,6,7,8-HxCDD	-	3.51		-	Total Tetra-Dioxins	-	1.11		0
1,2,3,7,8,9-HxCDD	-	2.92		-	Total Penta-Dioxins	-	2.43		0
1,2,3,4,6,7,8-HpCDD	-	3.34		-	Total Hexa-Dioxins	-	3.51		0
OCDD	-	5.02		-	Total Hepta-Dioxins	-	3.34		0
2,3,7,8-TCDF	-	1.01		-					
1,2,3,7,8-PeCDF	-	2.25		-					
2,3,4,7,8-PeCDF	-	2.36		-					
1,2,3,4,7,8-HxCDF	-	0.813		-					
1,2,3,6,7,8-HxCDF	-	1.11		-					
2,3,4,6,7,8-HxCDF	-	1.15		-					
1,2,3,7,8,9-HxCDF	-	1.62		-	Total Tetra-Furans	-	1.01		0
1,2,3,4,6,7,8-HpCDF	-	1.32		-	Total Penta-Furans	-	2.38		0
1,2,3,4,7,8,9-HpCDF	-	1.86		-	Total Hexa-Furans	-	1.62		0
OCDF	-	3.38		-	Total Hepta-Furans	-	1.86		0

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	96.7	25.0 - 164	
13C-1,2,3,7,8-PeCDD	94.7	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	99.0	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	90.3	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	89.2	23.0 - 140	
13C-OCDD	87.9	17.0 - 157	
13C-2,3,7,8-TCDF	94.6	24.0 - 169	
13C-1,2,3,7,8-PeCDF	89.0	24.0 - 185	
13C-2,3,4,7,8-PeCDF	87.1	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	97.8	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	104	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	102	29.0 - 147	
13C-1,2,3,7,8,9-HxCDF	93.1	28.0 - 136	
13C-1,2,3,4,6,7,8-HpCDF	97.3	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	92.2	26.0 - 138	
13C-OCDF	95.4	17.0 - 157	

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	94.0	35.0 - 197

Analyst: _____
Date: 6/14/04

Reviewed by: _____
Date: 6/14/04

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 2633-001-OPR | Date Extracted: 6/10/04 | ICal: PCDDFAL1-2-26-04 | Acquired: 11-JUN-04
Client ID: OPR | Date Received: NA | GC Column: DB5
Matrix: Aqueous | Amount: 1.000 L | Units: ng/mL | WHO TEQ: NA
Extraction Batch No.: X0277 | MS/MSD Batch No.: X0198

Compound	Conc	QC Limits
2,3,7,8-TCDD	9.51	6.70 - 15.8
1,2,3,7,8-PeCDD	49.9	35.0 - 71.0
1,2,3,4,7,8-HxCDD	49.1	35.0 - 82.0
1,2,3,6,7,8-HxCDD	53.9	38.0 - 67.0
1,2,3,7,8,9-HxCDD	52.4	32.0 - 81.0
1,2,3,4,6,7,8-HpCDD	50.8	35.0 - 70.0
OCDD	98.7	78.0 - 144
2,3,7,8-TCDF	9.84	7.50 - 15.8
1,2,3,7,8-PeCDF	51.9	40.0 - 67.0
2,3,4,7,8-PeCDF	52.6	34.0 - 80.0
1,2,3,4,7,8-HxCDF	53.4	36.0 - 67.0
1,2,3,6,7,8-HxCDF	52.5	42.0 - 65.0
2,3,4,6,7,8-HxCDF	51.4	39.0 - 65.0
1,2,3,7,8,9-HxCDF	52.8	35.0 - 78.0
1,2,3,4,6,7,8-HpCDF	52.6	41.0 - 61.0
1,2,3,4,7,8,9-HpCDF	52.4	39.0 - 69.0
OCDF	105	63.0 - 170

Internal Standards	% Rec	QC Limits
13C-2,3,7,8-TCDD	101	20.0 - 175
13C-1,2,3,7,8-PeCDD	104	21.0 - 227
13C-1,2,3,4,7,8-HxCDD	100	21.0 - 193
13C-1,2,3,6,7,8-HxCDD	93.7	25.0 - 163
13C-1,2,3,4,6,7,8-HpCDD	89.4	26.0 - 166
13C-OCDD	92.5	13.0 - 198
13C-2,3,7,8-TCDF	100	22.0 - 152
13C-1,2,3,7,8-PeCDF	94.3	21.0 - 192
13C-2,3,4,7,8-PeCDF	94.7	13.0 - 328
13C-1,2,3,4,7,8-HxCDF	104	19.0 - 202
13C-1,2,3,6,7,8-HxCDF	108	21.0 - 159
13C-2,3,4,6,7,8-HxCDF	104	17.0 - 205
13C-1,2,3,7,8,9-HxCDF	101	22.0 - 176
13C-1,2,3,4,6,7,8-HpCDF	96.6	21.0 - 158
13C-1,2,3,4,7,8,9-HpCDF	97.8	20.0 - 186
13C-OCDF	97.7	13.0 - 198

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	98.0	31.0 - 191

Analyst: _____ Date: 6/14/04

Reviewed by: _____ Date: 6/14/04

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EPA Method 1613
PCDD/F

ANALYTICAL LABORATORY

FAL ID: 2633-001-SA | Date Extracted: 6/10/04 | ICal: PCDDFAL1-2-26-04 | Acquired: 11-JUN-04
Client ID: A405657-02 | Date Received: 6/2/04 | GC Column: db5
Matrix: Aqueous | Amount: 0.967 L | Units: pg/L | WHO TEQ: 25.5
Extraction Batch No.: X0277 | MS/MSD Batch No.: X0198

Compound	Conc	DL	Qual	WHO Tox	Compound	Conc	DL	Qual	#Hom
2,3,7,8-TCDD	-	1.50		-					
1,2,3,7,8-PeCDD	6.72	-	J	6.72					
1,2,3,4,7,8-HxCDD	9.02	-	J	0.902					
1,2,3,6,7,8-HxCDD	34.9	-		3.49	Total Tetra-Dioxins	11.9	-		3
1,2,3,7,8,9-HxCDD	16.1	-	J	1.61	Total Penta-Dioxins	34.2	-		5
1,2,3,4,6,7,8-HpCDD	458	-		4.58	Total Hexa-Dioxins	207	-		6
OCDD	3070	-		0.307	Total Hepta-Dioxins	839	-		2
2,3,7,8-TCDF	-	1.32		-					
1,2,3,7,8-PeCDF	2.97	-	J	0.148					
2,3,4,7,8-PeCDF	4.13	-	J	2.06					
1,2,3,4,7,8-HxCDF	6.87	-	J	0.687					
1,2,3,6,7,8-HxCDF	14.4	-	J	1.44					
2,3,4,6,7,8-HxCDF	14.9	-	J	1.49					
1,2,3,7,8,9-HxCDF	-	2.05		-	Total Tetra-Furans	21.2	-		4
1,2,3,4,6,7,8-HpCDF	192	-		1.92	Total Penta-Furans	79.4	-		7
1,2,3,4,7,8,9-HpCDF	11.1	-	J	0.111	Total Hexa-Furans	218	-		7
OCDF	247	-		0.0247	Total Hepta-Furans	380	-		3

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	65.0	25.0 - 164	
13C-1,2,3,7,8-PeCDD	63.4	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	63.3	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	57.1	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	61.2	23.0 - 140	
13C-OCDD	55.6	17.0 - 157	
13C-2,3,7,8-TCDF	71.3	24.0 - 169	
13C-1,2,3,7,8-PeCDF	60.9	24.0 - 185	
13C-2,3,4,7,8-PeCDF	65.3	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	59.8	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	61.8	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	67.4	29.0 - 147	
13C-1,2,3,7,8,9-HxCDF	63.3	28.0 - 136	
13C-1,2,3,4,6,7,8-HpCDF	60.0	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	63.5	26.0 - 138	
13C-OCDF	56.3	17.0 - 157	

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	89.7	35.0 - 197

Analyst: _____
Date: 6/14/04

Reviewed by: _____
Date: 6/14/04

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 2633-002-SA
Client ID: A405657-03
Matrix: Aqueous
Extraction Batch No.: X0277

Date Extracted: 6/10/04
Date Received: 6/2/04
Amount: 0.982 L

ICal: PCDDFAL1-2-26-04 Acquired: 11-JUN-04
GC Column: db5
Units: pg/L WHO TEQ: 30.5
MS/MSD Batch No.: X0198

Compound	Conc	DL	Qual	WHO Tox	Compound	Conc	DL	Qual	#Hom
2,3,7,8-TCDD	-	1.80		-					
1,2,3,7,8-PeCDD	8.37	-	J	8.37					
1,2,3,4,7,8-HxCDD	10.7	-	J	1.07					
1,2,3,6,7,8-HxCDD	42.2	-		4.22	Total Tetra-Dioxins	12.1	-		3
1,2,3,7,8,9-HxCDD	18.7	-	J	1.87	Total Penta-Dioxins	66.4	-	M	7
1,2,3,4,6,7,8-HpCDD	516	-		5.16	Total Hexa-Dioxins	260	-		7
OCDD	3390	-		0.339	Total Hepta-Dioxins	990	-		2
2,3,7,8-TCDF	4.07	-	J	0.407					
1,2,3,7,8-PeCDF	-	4.38		-					
2,3,4,7,8-PeCDF	8.27	-	J	4.14					
1,2,3,4,7,8-HxCDF	5.71	-	J	0.571					
1,2,3,6,7,8-HxCDF	10.9	-	J	1.09					
2,3,4,6,7,8-HxCDF	13.2	-	J	1.32					
1,2,3,7,8,9-HxCDF	-	3.20		-	Total Tetra-Furans	39.9	-		7
1,2,3,4,6,7,8-HpCDF	181	-		1.81	Total Penta-Furans	126	-		4
1,2,3,4,7,8,9-HpCDF	10.1	-	J	0.101	Total Hexa-Furans	225	-		6
OCDF	282	-		0.0282	Total Hepta-Furans	422	-	M	4

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	75.1	25.0 - 164	
13C-1,2,3,7,8-PeCDD	63.0	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	71.3	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	62.7	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	57.4	23.0 - 140	
13C-OCDD	49.2	17.0 - 157	
13C-2,3,7,8-TCDF	81.5	24.0 - 169	
13C-1,2,3,7,8-PeCDF	65.7	24.0 - 185	
13C-2,3,4,7,8-PeCDF	68.8	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	68.1	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	60.6	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	69.7	29.0 - 147	
13C-1,2,3,7,8,9-HxCDF	60.6	28.0 - 136	
13C-1,2,3,4,6,7,8-HpCDF	55.6	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	58.2	26.0 - 138	
13C-OCDF	45.3	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	89.2	35.0 - 197	

Analyst: _____
Date: 6/14/04

Reviewed by: _____
Date: 6/14/04

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EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 2633-003-SA | Date Extracted: 6/10/04 | ICal: PCDDFAL1-2-26-04 | Acquired: 12-JUN-04
Client ID: A405657-04 | Date Received: 6/2/04 | GC Column: db5
Matrix: Aqueous | Amount: 0.967 L | Units: pg/L | WHO TEQ: 45.9
Extraction Batch No.: X0277 | MS/MSD Batch No.: X0198

Compound	Conc	DL	Qual	WHO Tox	Compound	Conc	DL	Qual	#Hom
2,3,7,8-TCDD	-	1.52		-					
1,2,3,7,8-PeCDD	10.4	-	J	10.4					
1,2,3,4,7,8-HxCDD	14.8	-	J	1.48					
1,2,3,6,7,8-HxCDD	79.5	-		7.95	Total Tetra-Dioxins	8.85	-		2
1,2,3,7,8,9-HxCDD	23.8	-	J	2.38	Total Penta-Dioxins	80.6	-	M	7
1,2,3,4,6,7,8-HpCDD	891	-		8.91	Total Hexa-Dioxins	419	-		7
OCDD	5590	-		0.559	Total Hepta-Dioxins	1660	-		2
2,3,7,8-TCDF	2.82	-	J	0.282					
1,2,3,7,8-PeCDF	-	4.20		-					
2,3,4,7,8-PeCDF	10.1	-	J	5.03					
1,2,3,4,7,8-HxCDF	10.5	-	J	1.05					
1,2,3,6,7,8-HxCDF	19.4	-	J	1.94					
2,3,4,6,7,8-HxCDF	23.7	-	J	2.37					
1,2,3,7,8,9-HxCDF	-	2.76		-	Total Tetra-Furans	68.5	-		8
1,2,3,4,6,7,8-HpCDF	328	-		3.28	Total Penta-Furans	194	-	M	6
1,2,3,4,7,8,9-HpCDF	20.6	-	J	0.206	Total Hexa-Furans	387	-		6
OCDF	454	-		0.0454	Total Hepta-Furans	820	-		4

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	70.0	25.0 - 164	
13C-1,2,3,7,8-PeCDD	57.3	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	68.2	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	59.0	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	50.1	23.0 - 140	
13C-OCDD	39.9	17.0 - 157	
13C-2,3,7,8-TCDF	78.2	24.0 - 169	
13C-1,2,3,7,8-PeCDF	61.6	24.0 - 185	
13C-2,3,4,7,8-PeCDF	64.9	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	62.0	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	54.5	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	66.8	29.0 - 147	
13C-1,2,3,7,8,9-HxCDF	58.2	28.0 - 136	
13C-1,2,3,4,6,7,8-HpCDF	46.5	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	48.2	26.0 - 138	
13C-OCDF	35.6	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	88.6	35.0 - 197	

Analyst: _____
Date: 6/14/04

Reviewed by: _____
Date: 6/14/04

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EPA Method 1613
PCDD/F

ANALYTICAL LABORATORY

FAL ID: 2485-001-MS/MSD
Client ID: P403069-01
Matrix: Aqueous
Extraction Batch No.: X0198

Date Extracted: 3/15/04
Date Received: 2/27/04
Sample Amount: 1.022 L
MS Amount: 1.025 L
MSD Amount: 1.019 L

ICal: PCDDFAL1-2-26-04
GC Column: db5
Units: pg
MS/MSD Batch No.: X0198

MS Acquired: 18-MAR-04
MSD Acquired: 18-MAR-04
WHO TEQ: NA

Compound	Amount Spiked	Sample Amount	MS Amount	MSD Amount	% RSD	Qual
2,3,7,8-TCDD	200	-	193	182	6.79	
1,2,3,7,8-PeCDD	1000	-	1060	988	7.62	
1,2,3,4,7,8-HxCDD	1000	-	1040	1000	4.78	
1,2,3,6,7,8-HxCDD	1000	-	1090	1020	7.41	
1,2,3,7,8,9-HxCDD	1000	-	1090	1040	5.50	
1,2,3,4,6,7,8-HpCDD	1000	-	1070	993	8.53	
OCDD	2000	23.5	2110	1990	6.28	
2,3,7,8-TCDF	200	-	200	188	6.55	
1,2,3,7,8-PeCDF	1000	-	1080	1020	6.51	
2,3,4,7,8-PeCDF	1000	-	1080	1030	5.56	
1,2,3,4,7,8-HxCDF	1000	-	1110	1020	9.17	
1,2,3,6,7,8-HxCDF	1000	-	1100	1060	4.52	
2,3,4,6,7,8-HxCDF	1000	-	1070	1020	5.61	
1,2,3,7,8,9-HxCDF	1000	-	1090	1030	6.45	
1,2,3,4,6,7,8-HpCDF	1000	-	1140	1060	8.00	
1,2,3,4,7,8,9-HpCDF	1000	-	1130	1050	8.07	
OCDF	2000	-	2180	2010	8.41	

Internal Standards		% Rec	% Rec	% Rec	QC Limits
13C-2,3,7,8-TCDD	2000	72.4	68.5	84.0	25.0 - 150
13C-1,2,3,7,8-PeCDD	2000	67.8	67.6	80.5	25.0 - 150
13C-1,2,3,4,7,8-HxCDD	2000	76.3	72.0	83.7	25.0 - 150
13C-1,2,3,6,7,8-HxCDD	2000	72.4	68.5	80.7	25.0 - 150
13C-1,2,3,4,6,7,8-HpCDD	2000	74.6	67.8	82.9	25.0 - 150
13C-OCDD	4000	74.0	66.9	82.0	25.0 - 150
13C-2,3,7,8-TCDF	2000	82.7	79.5	87.5	25.0 - 150
13C-1,2,3,7,8-PeCDF	2000	73.1	71.8	83.2	25.0 - 150
13C-2,3,4,7,8-PeCDF	2000	75.3	73.9	83.0	25.0 - 150
13C-1,2,3,4,7,8-HxCDF	2000	73.8	69.8	87.0	25.0 - 150
13C-1,2,3,6,7,8-HxCDF	2000	74.0	70.2	84.1	25.0 - 150
13C-2,3,4,6,7,8-HxCDF	2000	79.1	72.5	85.6	25.0 - 150
13C-1,2,3,7,8,9-HxCDF	2000	77.4	72.5	87.6	25.0 - 150
13C-1,2,3,4,6,7,8-HpCDF	2000	75.2	69.6	85.4	25.0 - 150
13C-1,2,3,4,7,8,9-HpCDF	2000	75.2	70.2	85.3	25.0 - 150
13C-OCDF	4000	74.4	66.7	83.0	25.0 - 150
Cleanup Surrogate					
37Cl-2,3,7,8-TCDD	800	87.0	86.0	88.0	25.0 - 150

Analyst: _____
Date: 6/14/04

Reviewed by: _____
Date: 6/14/04

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SUBCONTRACT ORDER

Alpha Analytical Laboratories, Inc.

A405657

2633/40

SENDING LABORATORY:

Alpha Analytical Laboratories, Inc.
208 Mason St.
Ukiah, CA 95482
Phone: (707)468-0401
Fax: (707)468-5267
Project Manager. Sheri L. Speaks

RECEIVING LABORATORY:

Frontier Analytical Laboratory
5172 Hillsdale Circle
El Dorado, CA 95762
Phone :916-934-0900
Fax: 916-934-0999
Terms: Net 30

Analysis	Due	Expires	Comments
A405657-02 SL-2 [Water] Sampled 05/27/04 14:00 Pacific			
Dioxins Full List	06/14/04 12:00	05/27/05 14:00	
Containers Supplied			
1L Amber- Unpres. (K)	1L Amber- Unpres. (L)		
A405657-03 SL-3 [Water] Sampled 05/27/04 12:35 Pacific			
Dioxins Full List	06/14/04 12 00	05/27/05 12 35	
Containers Supplied			
1L Amber- Unpres. (K)	1L Amber- Unpres. (L)		
★ **A405657-04 SL-4 [Water] Sampled 05/27/04 13:45 Pacific**			
Dioxins Full List	06/14/04 12:00	05/27/05 13:45	
Containers Supplied.			
1L Amber- Unpres. (K)	1L Amber- Unpres. (L)		

☐ *Report to State*

System Name: _____ **Employed by:** _____

User ID: _____ **Sampler:** _____

System Number: _____

★ 6/2/04 Confirmed w/ Sheri to use sample time from COC, not from bottle label. Also, analyze per method 1613.

Sheri Speaks 5.28.04 _____ 6/2/04 @ 0920

Released By Date Received By Date

Released By Date Received By Date

Frontier Analytical Laboratory

Sample Login Form

FAL Project ID: **2633**

Client:	Alpha Analytical Laboratories, Inc.
Client Project ID:	A405657
Date Received:	06/02/2004
Time Received:	09:20 am
Received By:	NM
Logged In By:	KZ
# of Samples Received:	3
Duplicates:	3
Storage Location:	R2

Method of Delivery:	Other
Tracking Number:	
Shipping Container Received Intact	Yes
Custody seals(s) present?	No
Custody seals(s) intact?	No
Sample Arrival Temperature (C)	4
Cooling Method	Blue Ice
Chain Of Custody Present?	Yes
Return Shipping Container To Client	Yes
Test for residual Chlorine	Yes
Thiosulfate Added	No
Earliest Sample Hold Time Expiration	05/27/2005
Adequate Sample Volume	Yes
Anomalies or additional comments:	

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FRONTIER
ANALYTICAL LABORATORY

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FILE 9329

FRONTIER
ANALYTICAL LABORATORY

June 18, 2004

RECEIVED 6/21/2004

FAL Project ID: 2633 (Addendum)

TASK 6 STORM WATER
MAY 27, 2004 STORM WATER SAMPLES

Mr. Jim Honniball
Geomatrix Consultants, Inc.
2101 Webster Street, 12th Floor
Oakland, CA 94612

Dear Mr. Honnibal,

Please include this addendum cover letter with Frontier Analytical Laboratory (FAL) project **2633**. This FAL project corresponds to Alpha Analytical Laboratories, Inc. subcontract order # A405657. This addendum is being issued to include details on method procedures used to extract the three aqueous samples we received on 6/2/04.

Since samples 2633-001-SA, 2633-002-SA and 2633-003-SA contained 0.00%, 0.241% and .243% solids respectively, all samples were classified as aqueous samples. According to EPA Method 1613, any liquid sample containing less than 1% solids can be extracted by solid phase extraction (SPE). Prior to SPE extraction, the samples bottles were spiked with C13 labeled dioxin/furan standard and then homogenized to insure all particulate was suspended in the aqueous portion of the sample. The samples were filtered through a Whatman Brand GF/F filter and a 3M brand C18 SPE disk. The manufacturer listed pore size of the GF/F filter is .7 micron while the pore size of the SPE disk is 12 micron. The liquid that passed through the GF/F filter and the SPE disk was discarded after filtering. The GF/F filter and the SPE disk were soxhlet extracted with toluene for a minimum of sixteen hours. A Dean Stark SDS apparatus was used in conjunction with the soxhlet apparatus to remove any residual water from the GF/F filter and the SPE disk. After extraction, the sample extracts underwent a silica gel cleanup to isolate the dioxin/furans from any possible chemical matrix interferences

If you have any questions regarding this addendum to project **2633**, please feel free to contact me at (916) 934-0900. Thank you for choosing Frontier Analytical Laboratory for your analytical testing needs.

Sincerely,

Dan Vickers

Dan Vickers
Director of Air Toxics

FRONTIER ANALYTICAL LABORATORY
5172 Hillsdale Circle • El Dorado Hills, CA 95762
Tel (916) 934-0900 • Fax (916) 934-0999
dioxin@frontieranalytical.com

FILE 9329

Alpha Analytical Laboratories Inc.
208 Mason St. Ukiah, California 95482
e-mail clientservices@alpha-labs.com • Phone (707) 468-0401 • Fax (707) 468-5267

RECEIVED 7/1/2004

25 June 2004

Geomatrix Consultants
Attn: Ross Steenson
2101 Webster Street, 12th Floor
Oakland, CA 94612
RE: SPI - Arcata
Work Order: A406328

TASK 11 IRM

Debris samples from Ditch #1 drainage area

Enclosed are the results of analyses for samples received by the laboratory on 06/11/04 16:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Sheri Speaks

Sheri L. Speaks
Project Manager

Alpha Analytical Laboratories Inc
208 Mason St. Ukiah, California 95482
e-mail clientservices@alpha-labs com • Phone (707) 468-0401 • Fax (707) 468-5267

CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Ross Steenson

Report Date: 06/25/04 14:01
Project No: 9329.000/030275.11
Project ID: SPI - Arcata

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A406328	06/11/2004 16 00	GEOMAT	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
D1-1-20040610	A406328-01	Soil	06/10/04 14 00	06/11/04 16 00
D1-2-20040610	A406328-02	Soil	06/10/04 14.05	06/11/04 16 00
D1-3-20040610	A406328-03	Soil	06/10/04 14 12	06/11/04 16 00
D1-4-20040610	A406328-04	Soil	06/10/04 14 20	06/11/04 16·00
D1-5-20040610	A406328-05	Soil	06/10/04 14·25	06/11/04 16 00
D1-6-20040610	A406328-06	Soil	06/10/04 14 30	06/11/04 16 00
D1-7-20040610	A406328-07	Soil	06/10/04 14 40	06/11/04 16 00
D1-8-20040610	A406328-08	Soil	06/10/04 14.45	06/11/04 16·00

Sheri Speaks

Sheri L. Speaks
Project Manager

6/25/04

Alpha Analytical Laboratories Inc
208 Mason St. Ukiah, California 95482
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CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Ross Steenson

Report Date: 06/25/04 14:01
Project No: 9329.000/030275.11
Project ID: SPI - Arcata

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A406328	06/11/2004 16:00	GEOMAT	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		POL	NOTE
D1-1-20040610 (A406328-01)			**Sample Type: Soil**			**Sampled: 06/10/04 14:00**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AF42409	06/18/04	06/24/04	1	ND mg/kg		1 0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
Pentachlorophenol	"	"	"	"	"	ND "		1 0	
Surrogate Tribromophenol	"	"	"	"		*35 4 %*	*23-140*		
D1-2-20040610 (A406328-02)			**Sample Type: Soil**			**Sampled: 06/10/04 14:05**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AF42409	06/18/04	06/24/04	1	ND mg/kg		1 0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
Pentachlorophenol	"	"	"	"	"	ND "		1 0	
Surrogate Tribromophenol	"	"	"	"		*62 4 %*	*23-140*		
D1-3-20040610 (A406328-03)			**Sample Type: Soil**			**Sampled: 06/10/04 14:12**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AF42409	06/18/04	06/24/04	1	ND mg/kg		1 0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
Pentachlorophenol	"	"	"	"	"	ND "		1 0	
Surrogate Tribromophenol	"	"	"	"		*68 5 %*	*23-140*		
D1-4-20040610 (A406328-04)			**Sample Type: Soil**			**Sampled: 06/10/04 14:20**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AF42409	06/18/04	06/24/04	1	ND mg/kg		1 0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	

The results in this report apply to the samples analyzed in accordance with the chain of custody document This analytical report must be reproduced in its entirety

Sheri Speaks

Sheri L. Speaks
Project Manager

6/25/04

Alpha Analytical Laboratories Inc
208 Mason St. Ukiah, California 95482
e-mail clientservices@alpha-labs com • Phone (707) 468-0401 • Fax (707) 468-5267

CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Ross Steenson

Report Date: 06/25/04 14:01
Project No: 9329.000/030275.11
Project ID: SPI - Arcata

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A406328	06/11/2004 16.00	GEOMAT	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		POL	NOTE
D1-4-20040610 (A406328-04)			**Sample Type: Soil**			**Sampled: 06/10/04 14:20**			
Chlorinated Phenols by Canadian Pulp Method (cont'd)									
Pentachlorophenol	EnvCan	"	"	06/24/04	"	ND "		1 0	
Surrogate Tribromophenol	"	"	"	"		*65 1 %*	*23-140*		
D1-5-20040610 (A406328-05)			**Sample Type: Soil**			**Sampled: 06/10/04 14:25**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AF42409	06/18/04	06/24/04	1	ND mg/kg		1 0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
Pentachlorophenol	"	"	"	"	"	ND "		1 0	
Surrogate Tribromophenol	"	"	"	"		*58 9 %*	*23-140*		
D1-6-20040610 (A406328-06)			**Sample Type: Soil**			**Sampled: 06/10/04 14:30**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AF42409	06/18/04	06/24/04	1	ND mg/kg		1 0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
Pentachlorophenol	"	"	"	"	"	ND "		1 0	
Surrogate Tribromophenol	"	"	"	"		*66 9 %*	*23-140*		
D1-7-20040610 (A406328-07)			**Sample Type: Soil**			**Sampled: 06/10/04 14:40**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AF42409	06/18/04	06/24/04	1	ND mg/kg		1 0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
Pentachlorophenol	"	"	"	"	"	ND "		1 0	
Surrogate Tribromophenol	"	"	"	"		*57 6 %*	*23-140*		
D1-8-20040610 (A406328-08)			**Sample Type: Soil**			**Sampled: 06/10/04 14:45**			

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Sheri Speaks

Sheri L. Speaks
Project Manager

6/25/04

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CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Ross Steenson

Report Date: 06/25/04 14:01
Project No: 9329.000/030275.11
Project ID: SPI - Arcata

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A406328	06/11/2004 16 00	GEOMAT	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		POL	NOTE
D1-8-20040610 (A406328-08)			**Sample Type: Soil**			**Sampled: 06/10/04 14:45**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AF42409	06/18/04	06/24/04	1	ND mg/kg		1 0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
Pentachlorophenol	"	"	"	"	"	ND "		1 0	
Surrogate Tribromophenol	"	"	"	"		*56 5 %*	*23-140*		

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Sheri Speaks

Sheri L. Speaks
Project Manager

6/25/04

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CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Ross Steenson

Report Date: 06/25/04 14:01
Project No: 9329.000/030275.11
Project ID: SPI - Arcata

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A406328	06/11/2004 16.00	GEOMAT	

Chlorinated Phenols by Canadian Pulp Method - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AF42409 - Solvent Extraction										
Blank (AF42409-BLK1)				Prepared. 06/18/04 Analyzed 06/24/04						
2,4,6-Trichlorophenol	ND	1 0	mg/kg							
2,3,5,6-Tetrachlorophenol	ND	1 0	"							
2,3,4,6-Tetrachlorophenol	ND	1 0	"							
2,3,4,5-Tetrachlorophenol	ND	1 0	"							
Pentachlorophenol	ND	1 0	"							
Surrogate Tribromophenol	*0 0672*		"	*0 125*		*53 8*	*23-140*			
LCS (AF42409-BS1)				Prepared 06/18/04 Analyzed: 06/24/04						
2,4,6-Trichlorophenol	0 0159	1 0	mg/kg	0 0250		63 6	32-116			
2,3,5,6-Tetrachlorophenol	0 0163	1 0	"	0 0250		65 2	18-80			
2,3,4,6-Tetrachlorophenol	0 0169	1 0	"	0 0250		67 6	28-89			
2,3,4,5-Tetrachlorophenol	0 0153	1 0	"	0 0250		61 2	54-85			
Pentachlorophenol	0 0194	1 0	"	0 0250		77 6	17-85			
Surrogate Tribromophenol	*0 0740*		"	*0 125*		*59 2*	*23-140*			
LCS Dup (AF42409-BSD1)				Prepared 06/18/04 Analyzed. 06/24/04						
2,4,6-Trichlorophenol	0 0155	1 0	mg/kg	0 0250		62 0	32-116	2 55	50	
2,3,5,6-Tetrachlorophenol	0 0159	1 0	"	0 0250		63 6	18-80	2 48	50	
2,3,4,6-Tetrachlorophenol	0 0182	1 0	"	0 0250		72 8	28-89	7 41	50	
2,3,4,5-Tetrachlorophenol	0 0152	1 0	"	0 0250		60 8	54-85	0 656	50	
Pentachlorophenol	0 0189	1 0	"	0 0250		75 6	17-85	2 61	50	
Surrogate Tribromophenol	*0 0693*		"	*0 125*		*55 4*	*23-140*			

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Sheri Speaks

Sheri L. Speaks
Project Manager

6/25/04

Alpha Analytical Laboratories Inc
208 Mason St. Ukiah, California 95482
e-mail clientservices@alpha-labs com • Phone (707) 468-0401 • Fax (707) 468-5267

CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Ross Steenson

Report Date: 06/25/04 14:01
Project No: 9329.000/030275.11
Project ID: SPI - Arcata

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A406328	06/11/2004 16 00	GEOMAT	

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
PQL	Practical Quantitation Limit

MFG, INC.

CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS

COC No 46284

Arcata Office
.75 Crescent Way
Arcata, CA 95521-6741
Phone (707) 826-8430- FAX (707) 826-8437

☐CA - Irvine
17770 Cartwright Rd
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San Francisco, CA 94105
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Fax (415) 495-7107

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Boulder, CO 80301
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Fax (303) 447-1836

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Fax (406) 728-4698

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Fax (512) 338-1331

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Fax (281) 890-5044

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☐WA - Seattle
19203 36th Ave W
Ste 100
Lynnwood, WA 98036
Tel (425) 921-4000
Fax (425) 921-4040

Attn: Geomatrix
2101 Webster St, 12th floor
Oakland, CA 94612
510-663-4107

PROJECT NO: 030275.11 PROJECT NAME: SPI Arcata PAGE: 1 OF: 2

SAMPLER (Signature): Matt Hillyard PROJECT MANAGER: Ross Steenson DATE 6/10/04

METHOD OF SHIPMENT: Courier CARRIER/WAYBILL NO. — DESTINATION: Alpha

Field Sample Identification	SAMPLES: Sample DATE	TIME	Matrix*	Preservation: HCl	HNO_3	H_2SO_4	COLD	FILTRATION*	Containers: VOLUME (ml/oz)	TYPE*	NO	ANALYSIS REQUEST: Constituents/Method: PCP/TCP	Handling: HOLD	RUSH	STANDARD	Remarks
D1-1-20040610	6/10	1400	OT				X		16oz	G	1	X	A40632881C1		X	PCP/TCP by
D1-2-20040610		1405									1		2			canadian pulp method
D1-3-20040610		1412									1		3			
D1-4-20040610		1420									1		4			
D1-5-20040610		1425									1		5			
D1-6-20040610		1430									1		6			
D1-7-20040616		1440									1		7			

TOTAL NUMBER OF CONTAINERS 7

LABORATORY COMMENTS/CONDITION OF SAMPLES: Cooler Temp

RELINQUISHED BY: SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	RECEIVED BY: SIGNATURE	PRINTED NAME	COMPANY
	Matt Hillyard	MFG	6/10/04	10:15		John Taylor	Alpha
	John Taylor	Alpha	6/11/04	1600		Nena Burgess	Alpha
							LABORATORY

*KEY Matrix AQ aqueous NA - nonaqueous SO - soil SL - sludge P - petroleum A - air OT other Containers P - plastic G - glass T - teflon B - brass O - other Filtration F filtered U unfiltered

DISTRIBUTION PINK Field Copy YELLOW Laboratory Copy WHITE Return to Originator

MFG, INC.

CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS

COC No. 46286

☐ **Arcata Office**
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Tel (425) 921-4000
Fax (425) 921-4040

PROJECT NO: 030275.11 PROJECT NAME: SPI Arcata PAGE: 2 OF: 2

SAMPLER (Signature): Matt Hillyard PROJECT MANAGER: Ross Steenson DATE: 6/10/04

METHOD OF SHIPMENT: Courier CARRIER/WAYBILL NO: — DESTINATION: Alpha

	SAMPLES												ANALYSIS REQUEST								
	Sample			Preservation					FILTRATION*	Containers			Constituents/Method					Handling			Remarks
Field Sample Identification	DATE	TIME	Matrix*	HCl	HNO_3	H_2SO_4	COLD			VOLUME (ml/oz)	TYPE*	NO	PCB/TCP					HOLD	RUSH	STANDARD	
D1-8-20040610	6/10	1445	OT				X			16oz	G	1	X					-	8	X	

TOTAL NUMBER OF CONTAINERS 1

LABORATORY COMMENTS/CONDITION OF SAMPLES: Cooler Temp

RELINQUISHED BY:					RECEIVED BY:		
SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	SIGNATURE	PRINTED NAME	COMPANY
	Matt Hillyard	MFG	6/11/04	10:15		John Taylor	Alpha
	John Taylor	Alpha	6/11/04	1600		Nena Burgess	Alpha LABORATORY

KEY Matrix AQ aqueous NA - nonaqueous SO - soil SL sludge P petroleum A - air OT other Containers P plastic G - glass T - teflon B - brass OT - other Filtration F - filtered U unfiltered

DISTRIBUTION PINK Field Copy YELLOW Laboratory Copy WHITE Return to Originator

FILE 9329

Alpha Analytical Laboratories Inc
208 Mason St Ukiah, California 95482
e-mail clientservices@alpha-labs.com • Phone (707) 468-0401 • Fax (707) 468-5267

RECEIVED 6/11/2004

25 June 2004

Geomatrix Consultants
Attn: Ross Steenson
2101 Webster Street, 12th Floor
Oakland, CA 94612
RE: SPI - Arcata
Work Order: A406329

TASK 11 IRM
Debris samples from Ditch #2 drainage area

Enclosed are the results of analyses for samples received by the laboratory on 06/11/04 16:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Sheri Speaks

Sheri L. Speaks
Project Manager

Alpha Analytical Laboratories Inc
208 Mason St. Ukiah, California 95482
e-mail clientservices@alpha-labs.com • Phone (707) 468-0401 • Fax (707) 468-5267

CHEMICAL EXAMINATION REPORT

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Ross Steenson

Report Date: 06/25/04 14:13
Project No: 9329.000/030275.11
Project ID: SPI - Arcata

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A406329	06/11/2004 16 00	GEOMAT	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
D2-1-20040610	A406329-01	Soil	06/10/04 15 55	06/11/04 16 00
D2-2-20040610	A406329-02	Soil	06/10/04 16 00	06/11/04 16 00
D2-3-20040610	A406329-03	Soil	06/10/04 16 05	06/11/04 16 00
D2-4-20040610	A406329-04	Soil	06/10/04 16 15	06/11/04 16 00
D2-5-20040610	A406329-05	Soil	06/10/04 16 25	06/11/04 16 00
D2-6-20040610	A406329-06	Soil	06/10/04 16 25	06/11/04 16 00
D2-7-20040610	A406329-07	Soil	06/10/04 16 30	06/11/04 16 00

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Sheri Speaks

Sheri L. Speaks
Project Manager

6/25/04

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Attn: Ross Steenson

Report Date 06/25/04 14:13
Project No 9329.000/030275.11
Project ID SPI - Arcata

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A406329	06/11/2004 16 00	GEOMAT	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		POL	NOTE
D2-1-20040610 (A406329-01)			**Sample Type: Soil**			**Sampled: 06/10/04 15:55**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AF42409	06/18/04	06/24/04	1	ND mg/kg		1 0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
Pentachlorophenol	"	"	"	"	"	ND "		1 0	
Surrogate Tribromophenol	"	"	"	"		*44 5 %*	*23-140*		
D2-2-20040610 (A406329-02)			**Sample Type: Soil**			**Sampled: 06/10/04 16:00**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AF42409	06/18/04	06/24/04	1	ND mg/kg		1 0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
Pentachlorophenol	"	"	"	"	"	ND "		1 0	
Surrogate Tribromophenol	"	"	"	"		*61 6 %*	*23-140*		
D2-3-20040610 (A406329-03)			**Sample Type: Soil**			**Sampled: 06/10/04 16:05**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AF42409	06/18/04	06/24/04	1	ND mg/kg		1 0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
Pentachlorophenol	"	"	"	"	"	ND "		1 0	
Surrogate Tribromophenol	"	"	"	"		*63 2 %*	*23-140*		
D2-4-20040610 (A406329-04)			**Sample Type: Soil**			**Sampled: 06/10/04 16:15**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AF42409	06/18/04	06/24/04	1	ND mg/kg		1 0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	

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Report Date: 06/25/04 14:13
Project No: 9329.000/030275.11
Project ID: SPI - Arcata

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A406329	06/11/2004 16 00	GEOMAT	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		POL	NOTE
D2-4-20040610 (A406329-04)			**Sample Type: Soil**			**Sampled: 06/10/04 16:15**			
Chlorinated Phenols by Canadian Pulp Method (cont'd)									
Pentachlorophenol	EnvCan	"	"	06/24/04	"	ND "		1 0	
Surrogate Tribromophenol	"	"	"	"		*57 3 %*	*23-140*		
D2-5-20040610 (A406329-05)			**Sample Type: Soil**			**Sampled: 06/10/04 16:25**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AF42409	06/18/04	06/24/04	1	ND mg/kg		1 0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
Pentachlorophenol	"	"	"	"	"	ND "		1 0	
Surrogate Tribromophenol	"	"	"	"		*54 9 %*	*23-140*		
D2-6-20040610 (A406329-06)			**Sample Type: Soil**			**Sampled: 06/10/04 16:25**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AF42409	06/18/04	06/24/04	1	ND mg/kg		1 0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
Pentachlorophenol	"	"	"	"	"	ND "		1 0	
Surrogate Tribromophenol	"	"	"	"		*53 8 %*	*23-140*		
D2-7-20040610 (A406329-07)			**Sample Type: Soil**			**Sampled: 06/10/04 16:30**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AF42409	06/18/04	06/25/04	1	ND mg/kg		1 0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1 0	
Pentachlorophenol	"	"	"	"	"	ND "		1 0	
Surrogate Tribromophenol	"	"	"	"		*48 5 %*	*23-140*		

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Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A406329	06/11/2004 16 00	GEOMAT	

Chlorinated Phenols by Canadian Pulp Method - Quality Control

Analyte(s)	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AF42409 - Solvent Extraction										
Blank (AF42409-BLK1)				Prepared: 06/18/04		Analyzed: 06/24/04				
2,4,6-Trichlorophenol	ND	1 0	mg/kg							
2,3,5,6-Tetrachlorophenol	ND	1 0	"							
2,3,4,6-Tetrachlorophenol	ND	1 0	"							
2,3,4,5-Tetrachlorophenol	ND	1 0	"							
Pentachlorophenol	ND	1 0	"							
Surrogate Tribromophenol	*0 0672*		"	*0 125*		*53 8*	*23-140*			
LCS (AF42409-BS1)				Prepared: 06/18/04		Analyzed: 06/24/04				
2,4,6-Trichlorophenol	0 0159	1 0	mg/kg	0 0250		63 6	32-116			
2,3,5,6-Tetrachlorophenol	0 0163	1 0	"	0 0250		65 2	18-80			
2,3,4,6-Tetrachlorophenol	0 0169	1 0	"	0 0250		67 6	28-89			
2,3,4,5-Tetrachlorophenol	0 0153	1 0	"	0 0250		61 2	54-85			
Pentachlorophenol	0 0194	1 0	"	0 0250		77 6	17-85			
Surrogate Tribromophenol	*0 0740*		"	*0 125*		*59 2*	*23-140*			
LCS Dup (AF42409-BSD1)				Prepared: 06/18/04		Analyzed: 06/24/04				
2,4,6-Trichlorophenol	0 0155	1 0	mg/kg	0 0250		62 0	32-116	2 55	50	
2,3,5,6-Tetrachlorophenol	0 0159	1 0	"	0 0250		63 6	18-80	2 48	50	
2,3,4,6-Tetrachlorophenol	0 0182	1 0	"	0 0250		72 8	28-89	7 41	50	
2,3,4,5-Tetrachlorophenol	0 0152	1 0	"	0 0250		60 8	54-85	0 656	50	
Pentachlorophenol	0 0189	1 0	"	0 0250		75 6	17-85	2 61	50	
Surrogate Tribromophenol	*0 0693*		"	*0 125*		*55 4*	*23-140*			

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ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
PQL	Practical Quantitation Limit

MFG, INC.

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PROJECT NO: 030275.11 PROJECT NAME: SPI Arcata PAGE: 1 OF 1

SAMPLER (Signature): Matt Hillyard PROJECT MANAGER: Ross Steenson DATE: 6/10/04

METHOD OF SHIPMENT: Courier CARRIER/WAYBILL NO.: — DESTINATION: Alpha

Field Sample Identification	SAMPLES: Sample DATE	TIME	Matrix*	Preservation: HCl	HNO_3	H_2SO_4	COLD	FILTRATION*	Containers: VOLUME (ml/oz)	TYPE*	NO	ANALYSIS REQUEST: Constituents/Method					Handling: HOLD	RUSH	STANDARD	Remarks
												PCP/TCP								
DZ-1-20040610	6/10	1555	OT				X		16oz	G	1	X	AH06329-					01	X	PCP/TCP by
DZ-2-20040610	↓	1600	↓				↓		↓	↓	1	↓						2	↓	canadian pulp method
DZ-3-20040610		1605									1							3		
DZ-4-20040610		1615									1							4		
DZ-5-20040610		1625									1							5		
DZ-6-20040610		1625									1							6		
DZ-7-20040610	↓	1630	↓				↓		↓	↓	1	↓						7	↓	
				TOTAL NUMBER OF CONTAINERS							7	LABORATORY COMMENTS/CONDITION OF SAMPLES: Cooler Temp								

RELINQUISHED BY: SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	RECEIVED BY: SIGNATURE	PRINTED NAME	COMPANY
	Matt Hillyard	MFG	6/11/04	10:15		John Taylor	Alpha
	John Taylor	Alpha	6/11/04	1600		Nena Burgess	Alpha
							LABORATORY

KEY Matrix AQ aqueous NA nonaqueous SO soil SL sludge P petroleum A - air OT other Containers P plastic G glass T - teflon B brass OT other Filtration F filtered U unfiltered

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