2003–2004 Annual Report for Storm Water Discharges Associated with Industrial Activities

Sierra Pacific Industries
Arcata Division Sawmill
2593 New Navy Base Road
Arcata, California

Prepared for:

Sierra Pacific Industries

June 30, 2004

Project No. 9329, Task 6

Geomatrix Consultants

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GEOMATRIX

June 30, 2004
Project 9329 Task 6

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

Attention: Dean Prat

Subject: 2003–2004 Annual Report for Storm Water Discharges Associated With Industrial Activities
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)

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Prepared for:

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Prepared by:

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Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

1.0 INTRODUCTION

This report presents the results of storm water inspection, storm water monitoring, and other storm water compliance activities performed between July 1, 2003, and June 30, 2004, at the Sierra Pacific Industries (SPI) Arcata Division Sawmill located in Arcata, California (Figure 1). The work was performed in accordance with the facility's *Storm Water Pollution Prevention Plan* (SWPPP; EnviroNet, 2003) and as required by the National Pollutant Discharge Elimination System (NPDES) Permit Order No. 97-03-DWQ (General NPDES No. CAS000001 [General Industrial Storm Water Permit]).

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

- Section 1.0—Introduction
- Section 2.0—Site Description
- Section 3.0—Summary of the State Water Resources Control Board (SWRCB) Annual Reporting Questionnaire
- Section 4.0—Field and Laboratory Methods
- Section 5.0—Summary of Sampling and Response Actions
- Section 6.0—References

2.0 SITE DESCRIPTION

The approximately 68-acre site is located on the Samoa Peninsula, near 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; current features are shown on Figure 2. The sawmill has operated at the site since approximately 1950.

Figure 3 illustrates the general flow direction of surface water across the site and the eight monitoring locations for surface water runoff (designated SL-1 through SL-6, ML-1 and ML-2). Monitoring location ML-1 includes visual observations only, whereas monitoring at locations SL-1 through SL-6 and ML-2 include both visual observations and sampling, as specified in the SWPPP. The monitoring locations are described as follows:

- SL-1 – this location at Drainage Ditch #1 monitors discharge to the Mad River Slough via Outfall 1.
- SL-2 – this location at Drainage Ditch #2 monitors discharge to the Mad River Slough via Outfall 2.
- SL-3 – this location at Drainage Ditch #3 monitors discharge to the Mad River Slough via Outfall 3.
- SL-4 – this location at Drainage Ditch #4 monitors discharge to the Mad River Slough via Outfall 4.
- SL-5 – this location between the settling basin and the vegetated pond monitors discharge to the pond, which drains along Drainage Ditch #5 to Outfall 5.
- SL-6 – this location near the beginning of Drainage Ditch #6 monitors discharge from the truck shop area.
- ML-1 – this location in Drainage Ditch #7 monitors discharge from the truck shop area to Drainage Ditch #7 and the shop retention pond.
- ML-2 – this location in Drainage Ditch #6 monitors discharge from the shop retention pond, which receives water from Drainage Ditch #7, to Drainage Ditch #6.

3.0 SWRCB ANNUAL REPORTING QUESTIONNAIRE

The completed SWRCB form for storm water discharges associated with industrial activities, entitled *2003-2004 Annual Report*, and Forms 1 through 5 are included in Appendix A. The annual report form includes general information, specific information, the annual comprehensive site compliance evaluation, the attachment summary, and the annual report certification. The general information section includes facility identification number, facility operator, and facility billing information. The specific information section, in the form of a questionnaire, addresses the following elements of the monitoring and reporting program: sampling and analysis exemptions and reductions, sampling and analysis results, quarterly visual observations (authorized and unauthorized non-storm water discharges), and monthly wet season visual observations. The annual comprehensive site compliance evaluation (ACSCE) section includes the ACSCE checklist, ACSCE evaluation report, and ACSCE

certification. The attachment summary section indicates those items that must be attached to the annual report (e.g., laboratory analytical reports). The annual report certification is signed by the facility manager.

Forms 1 through 5, included in Appendix A, include the following: Form 1 (Sampling and Analysis Results), Form 2 (Quarterly Visual Observations of Authorized Non-Storm Water Discharges), Form 3 (Quarterly Visual Observations of Unauthorized Non-Storm Water Discharges), Form 4 (Monthly Observations of Storm Water Discharges), and Form 5 (Annual Comprehensive Site Compliance Evaluation Potential Pollution Source/Industrial Activity Best Management Practices Status).

4.0 FIELD AND LABORATORY METHODS

4.1 FIELD METHODS

There are eight storm water monitoring locations (SL-1 through SL-6, ML-1, and ML-2; Figure 3) at the facility. Monitoring at location ML-1 includes visual observations only. Both visual observations and sampling are required at monitoring locations SL-1 through SL-6 and ML-2. Monitoring is performed under the schedule presented in Table 1. MFG, Inc., of Arcata, California, under Geomatrix's direction, performed the field activities in accordance with the SWPPP and additional monitoring as needed. During the October 2003 to May 2004 storm season, storm water discharge samples were collected on October 8, 2003, (first storm event) and May 27, 2004, (second storm event) in accordance with the SWPPP.

Additional storm water discharge and non-storm surface water samples not specifically related to the SWPPP monitoring program were collected to further evaluate current Best Management Practices. Additional sampling and analysis were performed at the vegetated pond, Drainage Ditch #2, Drainage Ditch #4, log deck sprinkle ditch (Drainage Ditch #8), standing water puddles near the former green chain area, and monitoring locations SL-1 through SL-4.

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. Copies of the chain-of-custody records for the samples and laboratory analytical reports are included in Appendix B.

4.2 LABORATORY METHODS AND DATA QUALITY REVIEW

4.2.1 Laboratory Analytical Methods

Samples collected in accordance with the SWPPP (Table 2) and the additional samples were analyzed by California Department of Health Services-certified laboratories. The laboratories included Alpha Analytical Laboratories, Inc. (Alpha) in Ukiah, California, Frontier Analytical Laboratories (Frontier) in El Dorado Hills, California, and Friedman & Bruya in Seattle, Washington. Analytes include the following:

- Total metals (arsenic, copper, zinc, cadmium, chromium, lead, and nickel)—EPA Method 200 Series
- Chlorinated phenols (pentachlorophenol, three tetrachlorophenols, and one trichlorophenol)—Canadian Pulp Method
- General water quality parameters including specific conductance (EPA Method 120.1); chemical oxygen demand (COD [SM 5220D]); total suspended solids (TSS [EPA Method 160.2]); and total dissolved solids (TDS [EPA Method 160.1])
- Tannins and lignins (SM 5550B)
- Total petroleum hydrocarbons (TPH) including TPH quantified as gasoline (TPHg), diesel (TPHd), and motor oil (TPHmo)—EPA Method 8015M
- Oil and grease—EPA Method 1664
- Dioxins and furans—EPA Method 1613
- Semi-volatile organic compounds—EPA Method 8270

4.2.2 Laboratory Data Quality Review

Geomatrix reviewed quality assurance and quality control (QA/QC) procedures to assess the quality of the analytical results by evaluating the precision, accuracy, and completeness of the data. Data quality was reviewed 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).

The laboratory quality assurance and quality control procedures included laboratory method blanks and laboratory control spike and laboratory control spike duplicate analyses.

Based on the results of the quality assurance and quality control procedures, the analytical results for the storm water and non-storm surface water sampling events appear to be representative.

5.0 SUMMARY OF SAMPLING AND RESPONSE ACTIONS

This section summarizes the results of the sampling of storm water conducted in accordance with the SWPPP during the October 2003 to May 2004 wet season. This section also includes the results of additional sampling not specifically related to the SWPPP that was undertaken to further evaluate current Best Management Practices. In addition, actions taken in response to the sample results are described.

Laboratory analytical data generated for the site from the sampling efforts are summarized in Table 3 (SWPPP-required field measurements and laboratory analytical results for selected metals, chlorinated phenols, water quality parameters, and hydrocarbon constituents); Table 4 (SWPPP-required laboratory analytical results for dioxins and furans), Table 5 (non-SWPPP laboratory analytical results for total petroleum hydrocarbons and semivolatile organic compounds); and Table 6 (non-SWPPP laboratory analytical results for total dissolved solids). Copies of laboratory analytical reports and sample chain-of-custody records are included in Appendix B.

The results of sampling and the response actions are summarized chronologically in the following sections.

5.1 NON-STORM SURFACE WATER SAMPLING—SEPTEMBER 10, 2003

On September 10, 2003, prior to the wet season and during dry (non-storm) conditions, surface water runoff and surface water samples were collected to evaluate potential interferences with petroleum hydrocarbon analyses at selected surface water locations (i.e., Drainage Ditch #2 second separator, log deck sprinkle ditch [Drainage Ditch #8], and vegetated pond; Figure 2).

Table 5 presents the analytical results from this sampling event. TPHg and semivolatile organic compounds were not detected in the samples. Silica gel cleanup was performed on all the samples prior to semivolatile organic compound analysis. Silica gel cleanup was not performed prior to TPHd or TPHmo analysis.

TPHd and TPHmo were detected in the sample from Drainage Ditch #2 (second separator) at 29,000 micrograms per liter (µg/L) and 4,500 µg/L, respectively. Based on the elevated TPHd and TPHmo results and the corresponding lack of detection of diesel and motor oil constituents in the semivolatile organic compounds analysis, the TPHd and TPHmo detections likely are not due to the presence of petroleum hydrocarbons.

Similarly, TPHd and TPHmo were detected in the samples from the log deck sprinkle ditch (Drainage Ditch #8) (1,300 µg/L TPHd and 1,100 µg/L TPHmo) and from the vegetated pond (930 µg/L TPHd and 1,100 µg/L TPHmo), but diesel and motor oil constituents were not detected in the semivolatile organic compounds analyses. Therefore, these TPHd and TPHmo detections likely are not due to the presence of petroleum hydrocarbons.

5.2 FIRST STORM EVENT SAMPLING—OCTOBER 8, 2003

The first rain event for the season occurred on October 8, 2003. Sampling was performed 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 at those locations. No flow was observed at location ML-1.

The results from the sampling are presented in Table 3. 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, SL-3, and SL-4. Pentachlorophenol and tetrachlorophenol were detected in the sample from monitoring location SL-2 (2.6 µg/L and 1.8 µg/L, respectively).

The measured pH values ranged from 5.21 to 7.26. Specific electrical conductance ranged from 530 to 4,100 micro-mhos per centimeter. Chemical oxygen demand ranged from 210 to 8,500 milligrams per liter (mg/L). Total suspended solids ranged from 25 to 4,500 mg/L. Tannins and lignins were detected at concentrations ranging from 12 to 290 mg/L.

TPHg was detected in three samples at concentrations of 93 µg/L (SL-2), 93 µg/L (SL-3), and 50 µg/L (SL-4). TPHg was not detected in the sample from monitoring location SL-1. Similarly, TPHd was detected in three samples at concentrations of 940 µg/L (SL-2), 2000 µg/L (SL-3), and 61 µg/L (SL-4). TPHd was not detected in the sample from monitoring location SL-1. TPHmo was detected in samples from monitoring locations SL-1 through SL-4 at concentrations ranging from 220 to 17,000 µg/L (at monitoring location SL-3). Based on these results and the results of the September 10, 2003, sampling event that indicated the TPH detections may not be related to petroleum constituents (see Section 5.1 of this report), additional testing was planned for monitoring location SL-3, where the highest concentrations were detected. This additional testing was performed in April 2004 (see Section 5.10 of this report).

Oil and grease was detected in the sample collected from monitoring location SL-2 at 24 mg/L. Oil and grease was not detected in the samples collected from monitoring locations SL-1, SL-3, and 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 4.46 picograms per liter (pg/L; parts per quadrillion) TEQ and 1.13 pg/L TEQ in the storm water samples from monitoring locations SL-2 and SL-4, respectively (Table 4). These samples were prepared by Frontier using a 0.7 micron filter (EPA Method 1613 use of specifies 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.

According to Frontier, the sample from monitoring location SL-3 contained greater than 1 percent solids. At this threshold, EPA Method 1613 stipulates that the sample be treated as a solid instead of a liquid. Consequently, the sample was filtered using a 0.8 micron filter (EPA Method 1613 specifies the use of a 1.0 micron filter). The filtrate from the storm water sample from monitoring location SL-3 was then analyzed as a solid. Dioxins and furans were detected in the filtrate at 406 picograms per kilogram (pg/kg; parts per trillion). The use of a smaller pore sized filter than specified in EPA Method 1613 likely creates a high bias in the analytical results.

5.3 COMPLETION OF IRM SOURCE AREA REMOVAL—NOVEMBER 25, 2003

In April 2003, a seep was discovered near the former location of the dip tank in the former green chain area where wood surface treatment chemicals containing pentachlorophenol historically were applied to wood products. Subsequent sampling of standing water in the green chain area that could drain toward Drainage Ditch #2 indicated concentrations of pentachlorophenol up to 33,000 µg/L. As a result of this discovery, a series of interim remedial measures (IRM) consisting of excavation and sampling activities were implemented. The source area removal IRM was completed in November 2003 to reduce the potential for discharge of pentachlorophenol to surface water and to reduce impact to groundwater. Approximately 145 cubic yards of solids (soil, woody material, and concrete debris) and approximately 4,550 gallons of water were removed. Following completion of backfilling, the

ground surface in the vicinity of the excavation was pressure washed and the water captured for off-site disposal. Further details regarding these measures are presented in the December 1, 2003, *Report on Interim Remedial Measures: Source Area Removal* (Geomatrix, 2003).

5.4 ADDITIONAL SAMPLING OF STORM WATER—DECEMBER 1, 2003

On December 1, 2003, MFG mobilized to the site in an attempt to collect storm water samples during a storm event at the monitoring locations where there was no storm water discharge on October 8, 2003 (SL-5, SL-6, and ML-2). During this storm event, there was storm water discharge at monitoring location SL-6, but not at monitoring locations SL-5 or ML-2.

The results from this sampling event are presented in Table 3. Total metals (arsenic, copper, and zinc) were detected at low concentrations in the sample collected from monitoring location SL-6. Chlorinated phenols were not detected.

For the general water quality parameters, pH was reported at 6.85, specific electrical conductance at 40 µohms/cm, chemical oxygen demand 180 mg/L, and total suspended solids at 190 mg/L. Tannins and lignins were detected at 3.3 mg/L.

TPHg was not detected, but TPHd and TPHmo were detected at concentrations of 300 µg/L and 5,500 µg/L, respectively.

Oil and grease was not detected.

5.5 ADDITIONAL SAMPLING OF NON-STORM SURFACE WATER—FEBRUARY 5, 2004

On February 5, 2004, grab samples were collected during dry (non-storm) conditions from standing water puddles north and south of the former green chain area and analyzed for chlorinated phenols. These samples were collected to assess whether chlorinated phenols were present in surface water in the vicinity of the source removal was completed in November 2003 (Section 5.3).

Chlorinated phenols were not detected in these samples, as summarized in the April 29, 2004, *Addendum to Report on Interim Remedial Measures: Source Area Removal* (Geomatrix, 2004a).

5.6 ADDITIONAL SAMPLING OF STORM AND NON-STORM SURFACE WATER — FEBRUARY 6, 2004

During a storm event on February 6, 2004, storm water samples were collected at monitoring locations SL-1 through SL-4 for chlorinated phenols analysis. These samples were collected to assess potential discharge of chlorinated phenols, subsequent to the IRM source area removal completed in November 2003. No chlorinated phenols were detected in the samples from monitoring locations SL-1, SL-3, and SL-4; however, pentachlorophenol was detected at 1.6 µg/L in the sample from monitoring location SL-2 (Table 3).

In addition to these samples, grab samples were collected from monitoring locations SL-1 through SL-4 and from the Mad River Slough adjacent to monitoring locations SL-1 through SL-4 for total dissolved solids (TDS) analysis (Table 6). The purpose of these analyses is to assist field personnel in assessing whether water sampled at the monitoring locations in the future represents storm water (relatively low TDS) or slough water that entered the drainage ditches during high tide (relatively high TDS), or a mixture of these two waters. The TDS results for the slough water samples ranged from 18,000 to 23,000 mg/L. The TDS results for the storm water samples ranged from 96 to 270 mg/L.

5.7 OIL-WATER SEPARATORS CLEAN OUT—MARCH 31, 2004

In response to the detection of a low concentration of pentachlorophenol in the storm water sample collected from monitoring location SL-2 on February 6, 2004, SPI personnel and Asbury Environmental Services of Richmond, California pumped out the contents of the oil-water separators in Drainage Ditches #2, #3, and #4 on March 31, 2004. These liquids and solids were disposed off site at an appropriate facility by Asbury Environmental Services.

5.8 RWQCB SAMPLING OF NON-STORM SURFACE WATER—APRIL 6, 2004

On April 6, 2004, RWQCB staff inspected the site during dry (non-storm) conditions. During the inspection, grab water samples were collected by RWQCB staff at monitoring location SL-1 (where standing water was present) and in the last chambers of the oil-water separators in Drainage Ditch #2 and Drainage Ditch #4. These samples were submitted under chain-of-custody to North Coast Laboratories of Arcata, California for analysis of chlorinated phenols. No chlorinated phenols were detected in the samples from Drainage Ditch #2 and Drainage Ditch #4, but pentachlorophenol was detected in the sample from monitoring location SL-1 at 0.42 µg/L (Table 3).

5.9 ADDITIONAL SAMPLING OF NON-STORM SURFACE WATER —APRIL 14, 2004

Based on the April 6, 2004, sample results, confirmation sampling at monitoring location SL-1 was performed on April 14, 2004, also during dry (non-storm) conditions. At that time, 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 3). Because this result was confirmed, additional investigation will be performed during 2004 to identify the potential source of this detection, in accordance with the April 29, 2004, *Pilot Study Work Plan for Implementation of Proposed Remedial Action* (Geomatrix, 2004b).

5.10 ADDITIONAL SAMPLING OF STORM WATER—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 3).

The samples from monitoring location SL-3 were collected as a response to the TPH detections reported in the October 8, 2003, samples (see Section 5.2 of this report) 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

5.11 SECOND 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 3. 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 earlier in this report, it is likely that polar (non-petroleum) constituents significantly contributed to the quantitation of TPHd and TPHmo in these samples (Sections 5.1 and 5.10).

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). 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 4). These samples were prepared by Frontier using a 0.7 micron filter (EPA Method 1613 use of specifies 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.

6.0 REFERENCES

Cal-EPA, 2003, *Adoption of the Revised Toxic Equivalency Factors (TEFWHO-97) for PCDDs, PCDFs, and Dioxin-like PCBs* (memorandum), Office of Environmental Health Hazard Assessment, August 29.

EnviroNet Consulting (EnviroNet), 2003, *Storm Water Pollution Prevention Plan For Sierra Pacific Industries*, Arcata Division Sawmill, Arcata, California, January 30.

Geomatrix, 2003, *Report on Interim Remedial Measures: Source Area Removal*, Arcata Division Sawmill, prepared for Sierra Pacific Industries, Arcata, California, December 1.

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Geomatrix, 2004b, *Pilot Study Work Plan for Implementation of Proposed Remedial Action*, Arcata Division Sawmill, prepared for Sierra Pacific Industries, Arcata, California, April 29.

U.S. Environmental Protection Agency, 1999, *Contract Laboratory Program National Functional Guidelines for Organic Data Review*, Office of Emergency and Remedial Response, October.

U.S. Environmental Protection Agency, 2002a, *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, Office of Emergency and Remedial Response, July.

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TABLES

TABLE 1
STORM WATER MONITORING AND REPORTING SCHEDULE
Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

Month	Weekly Inspections of BMPs[1]	Storm Water Sampling[2]	Storm Visual Observations[3, 4]	Quarterly Visual Observations (Authorized and Unauthorized)[3, 4]	Annual Report[5]	Annual Comprehensive Site Compliance Evaluation[6]	Annual Stom Water Pollution Prevention Plan Review
Year 2003							
September	X			X			
October	X	X	X				
November	X	X	X	X			
December	X	X	X				
Year 2004							
January	X	X	X				
February	X	X	X				
March	X	X	X	X			
April	X	X	X			X	
May	X	X	X				
June	X			X	X		
July	X						X
August	X						

1. BMP = Best management practices; located in the SWPPP dated January 30, 2003, and prepared by EnviroNet in Santa Rosa, California.
2. A minimum of two storm water samples will be collected during the monitoring period (October through May). One storm water sample will be collected during the first flush of the season. Storm water samples shall be collected within the first hour of rainfall. Storm sampling events must have an antecedent period (dry days) of three days (96 hours). Antecedent period includes weekends and holidays.
3. Observations shall be performed during daylight hours within the first hour of rainfall with an antecedent period of three days.
4. Sampling and observations can be postponed if the storm event is dangerous or threatens the safety an individual (i.e., flooding, lightning, etc). Additionally a facility operator may conduct sampling and visual observations 1 hour after discharge begins if the facility operator determines that the objective of the General National Pollutant Destruction Elimination System for Industrial sites will be better served. Any of these changes must be documented in the annual report.
5. Annual report due to the North Coast Regional Water Quality Control Board on July 1.
6. Annual site inspection of BMPs conducted 8 to 16 months of each other with annual review of SWPPP with revisions if necessary within 90 days.

TABLE 2

STORM WATER MONITORING PARAMETERS [1,2]

Sierra Pacific Industries

Arcata Division Sawmill

Arcata, California

Monitoring Location	pH EPA 150.1	Specific Conductance EPA 120.1	Oil and Grease EPA 1664	Total Suspended Solids EPA 160.2	Zinc EPA 200.7	Arsenic EPA 200.9	Cadmium EPA 200.7	Chromium EPA 200.7	Nickel EPA 200.7	Lead EPA 200.9	Copper EPA 200.7	Chemical Oxygen Demand SM 5220D	Tannins and Lignins SM 5550B	PCP Canadian Pulp[3]	Chlorinated Phenols[4] Canadian Pulp	TPH as Gasoline EPA 8015 Modified	TPH as Diesel EPA 8015 Modified	TPH as Motor Oil EPA 8015 Modified	Dioxins/ Furans EPA 1613
SL-1	X	X	X	X	X	X					X	X	X	X	X	X	X	X	
SL-2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
SL-3	X	X	X	X	X	X					X	X	X	X	X	X	X	X	X
SL-4	X	X	X	X	X	X					X	X	X	X	X	X	X	X	X
SL-5	X	X	X	X	X	X					X	X	X	X	X	X	X	X	
SL-6	X	X	X	X	X	X					X	X	X	X	X	X	X	X	
ML-2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

Notes:

1. Storm water discharge monitoring parameters are specified in the SWPPP for the facility, dated January 30, 2003, and prepared by EnviroNet in Santa Rosa, California.
2. Monitoring at location ML-1 includes visual observations only.
3. PCP Canadian Pulp Method includes 2,3,4,5-TCP, 2,3,4,6-TCP, 2,3,5,6-TCP, and 2,4,6-TCP.
4. Chlorinated phenols include PCP, 2,3,4,5-TCP, 2,3,4,6-TCP, 2,3,5,6-TCP, and 2,4,6-TCP.

Abbreviations:
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
PCP = pentachlorophenol
TPH = total petroleum hydrocarbons

TABLE 3

LABORATORY ANALYTICAL RESULTS FOR METALS, CHLORINATED PHENOLS, WATER QUALITY PARAMETERS, AND HYDROCARBON CONSTITUENTS IN STORM WATER [1]

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	10/8/2003 [3]	Grab	0.0025	0.03	0.88	--	--	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	7.26	1,600	210	--	25	12	<50	<50	220	<5.0
SL-1	2/6/2004 [4]	Grab	--	--	--	--	--	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	140	--	--	--	--	--	--
SL-1	4/6/2004	Grab	--	--	--	--	--	--	--	0.42	<0.3	<0.3	<0.3	<0.3	--	--	--	--	--	--	--	--	--	--
SL-1	4/14/2004 [4]	Grab	--	--	--	--	--	--	--	0.7	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--	--	--	--	--	--
SL-1	5/27/2004[5]	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	10/8/2003	Grab	0.0041	<0.020	1.6	<0.010	<0.010	0.0067	0.013	2.6	<1.0	1.8	<1.0	<1.0	6.63	4,100	620	--	130	66	93	940	970	24
SL-2	2/6/2004	Grab	--	--	--	--	--	--	--	1.6	<1.0	<1.0	<1.0	<1.0	--	--	--	150	--	--	--	--	--	--
SL-2	4/6/2004	Grab	--	--	--	--	--	--	--	<0.3	<0.3	<0.3	<0.3	<0.3	--	--	--	--	--	--	--	--	--	--
SL-2	4/20/2004 [4]	Grab	--	--	--	--	--	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	6.3	1,334	--	904	--	--	--	--	--	--
SL-2	4/20/2004 [4, 6]	Composite	--	--	--	--	--	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	5.87	734	--	483	--	--	--	--	--	--
SL-2	5/27/2004	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	10/8/2003	Grab	0.094	0.32	1.4	--	--	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	5.21	1,100	8,500	--	4,500	290	93	2,000	17,000	<5.0
SL-3	2/6/2004	Grab	--	--	--	--	--	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	270	--	--	--	--	--	--
SL-3	4/20/2004 [4]	Grab	--	--	--	--	--	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	6.02	170.4	--	107	--	--	--	8,700/1,300[7]	22,000/7,300[7]	--
SL-3	4/20/2004 [4, 6]	Composite	--	--	--	--	--	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	5.85	185	--	116	--	--	--	9,500	24,000	--
SL-3	5/27/2004	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	10/8/2003	Grab	0.042	0.04	0.62	--	--	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	6.81	530	650	--	750	33	50	61	740	<5.0
SL-4	2/6/2004	Grab	--	--	--	--	--	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	96	--	--	--	--	--	--
SL-4	5/27/2004	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
SL-6	12/1/2003[8]	Grab	0.0022	0.032	0.34	--	--	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	6.85	40	180	--	190	3.3	<50	300	5,500	<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 (total cadmium, chromium, copper, nickel, and zinc 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. First seasonal 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.
4. Additional sampling during rain event not related to the SWPPP.
5. 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.
6. 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.
7. Silica gel clean-up was performed for the second analysis.
8. First storm sample at the monitoring station. Samples were collected in accordance with the SWPPP for the site. No discharge at SL-5 or ML-2.

Abbreviations:
PCP = pentachlorophenol
2,3,4,5-TeCP = 2,3,4,5-tetrachlorophenol+B24
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 centimete
-- = not measured or sample not collected for analysis
< = target analyte was not detected at or above the laboratory reporting limit show

TABLE 4

LABORATORY ANALYTICAL RESULTS FOR DIOXINS AND FURANS

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]
Storm Water Samples (pg/L)[5]																						
SL-2	10/8/2003[6]	<2.8	<4.95	<3.27	13 J	5.74 J	189	1050	423	<2.82	<5.27	<4.91	<3.23	<4.09	<4.08	<4.51	57.6	<2.96	87.7	178.67	4.46	0
SL-2	5/27/2004[7]	<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	<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	10/8/2003	<2.36	<4.83	<4.12	<9.28	<2.65	81.1	370	174.3	<2.36	<5.57	<5.64	<1.39	<1.62	<3.46	<1.63	27.8	<1.9	50.4	123	1.13	0
SL-4	5/27/2004	<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 [8]:	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
Storm Water Solids (pg/kg) [9]																						
SL-3	10/8/2003	<1,000	<1,010	<2,180	<3,580	<2,110	32,900	155,000	73,800	<664	<1,930	<1,670	<588	<676	<809	<849	5,970 J	<950	11,200 J	23,150	406	0
	TEF [8]:	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.
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 calculcation.
5. 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).
6. First seasonal storm sampling event for the 2003 - 2004 wet season. Samples were collected in accordance with the SWPPP for the site.
7. Second seasonal storm sampling event for the 2003 - 2004 wet season. Samples were collected in accordance with the SWPPP for the site.
8. Toxicity equivalency factor (unitless) from the World Health Organization, 1997 (WHO-97), adopted from F.X.R. van Leeuwen, 1997.
9. EPA Method 1613 specifies that, for a sample containing more than 1% solids, the sample will be analyzed as a solid rather than a liquid. Frontier Analytical Laboratory determined that sample SL-3 contained more than 1% solids and, therefore, analzyed the sample as a solid. The laboratory used a 0.8 micron filter to prepare the sample for analysis (a 1.0 micron filter is specified in EPA Method 1613). Concentration reported in picograms per kilogram (pg/kg) dry weight.

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

TABLE 5

LABORATORY ANALYTICAL RESULTS FOR TPH AND SVOCS IN SURFACE WATER[1]

Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

Concentrations in micrograms per liter (µg/L; parts per billion).

Location	Date	TPH as Gasoline	TPH as Diesel	TPH as Motor Oil	SVOC
Ditch #2 Second Separator	9/10/2003[2]	not analyzed	29,000	4,500	ND
Log Deck Sprinkle Ditch	9/10/2003	<200	1,300	1,100	ND
Vegetated Pond	9/10/2003	<200	930	1,100	ND

Notes:

1. Samples collected by MFG, Inc., of Arcata, California and analyzed by Friedman & Bruya, Inc. in Seattle, Washington. Analyzed by EPA Method 8015 Modified (TPH as gasoline, TPH as diesel and motor oil) and EPA Method 8270C (semi-volatile organics) after silica gel cleanup.
2. Additional sampling during non-storm event.

Abbreviations:
TPH = total petroleum hydrocarbons
SVOC = semivolatile organic compounds
EPA = U.S. Environmental Protection Agency
< = target analyte was not detected at or above the laboratory reporting limit.
ND = no target analyte (EPA Method 8270C) was detected above the laboratory reporting limit; see laboratory analytical report for laboratory reporting limits.

TABLE 6

LABORATORY ANALYTICAL RESULTS FOR TOTAL DISSOLVED SOLIDS IN SURFACE WATER[1]

Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

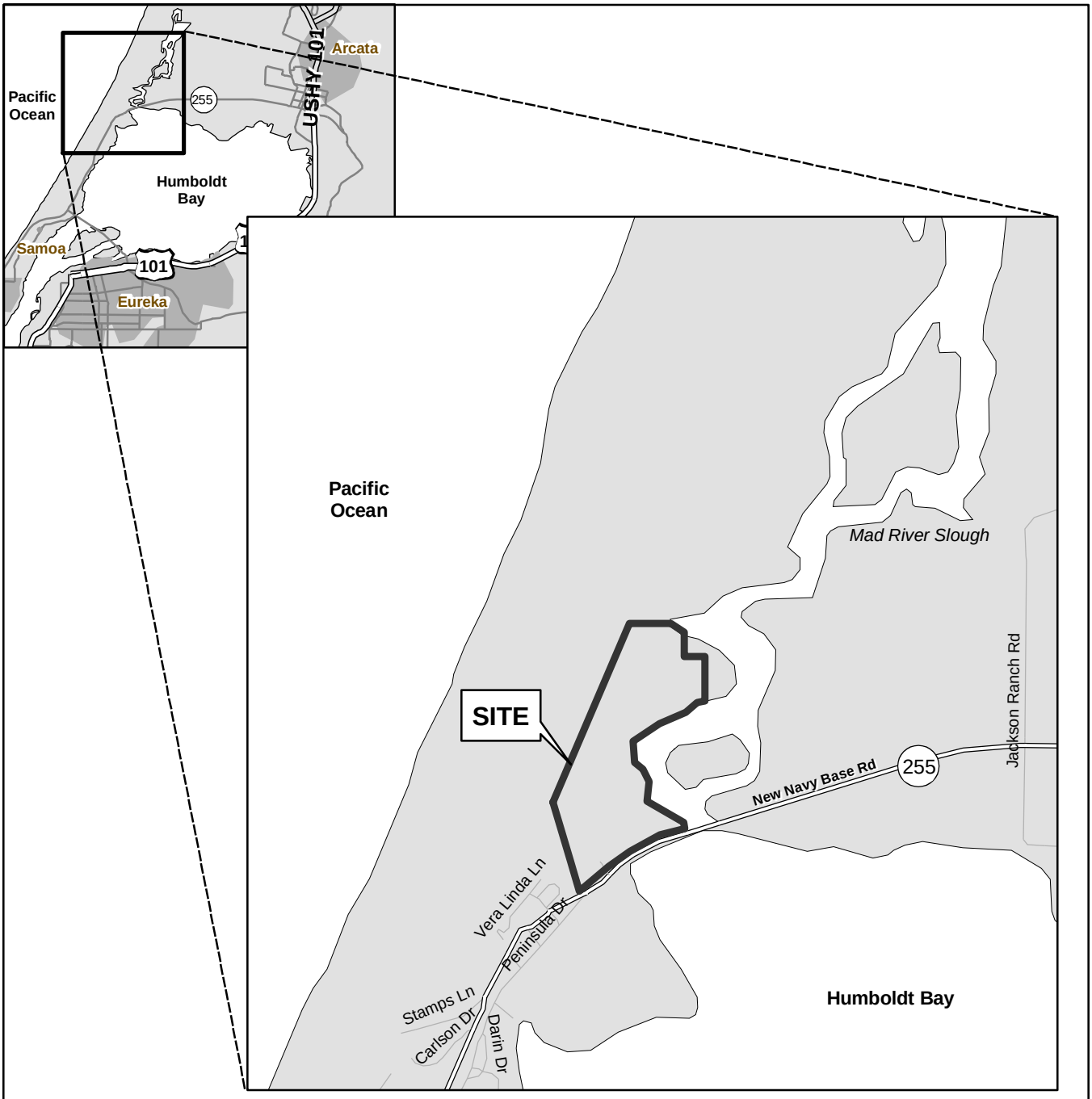
Concentration in milligrams per liter (mg/L; parts per million).

Location	Date	Total Dissolved Solids[2]
SL-1 Slough[3]	2/6/2004[4]	19,000
SL-2 Slough[3]	2/6/2004[4]	18,000
SL-3 Slough[3]	2/6/2004[4]	21,000
SL-4 Slough[3]	2/6/2004[4]	23,000

Notes:

1. Samples collected by MFG, Inc., of Arcata, California and analyzed by Alpha Analytical Laboratories, Inc., in Ukiah, California.
2. Environmental Protection Agency Method 160.1.
3. Samples of Mad River slough water were collected just beyond the discharge point to assess the total dissolved solids concentration of slough water.
4. Additional sampling during storm event not required by the SWPPP for the site.

FIGURES



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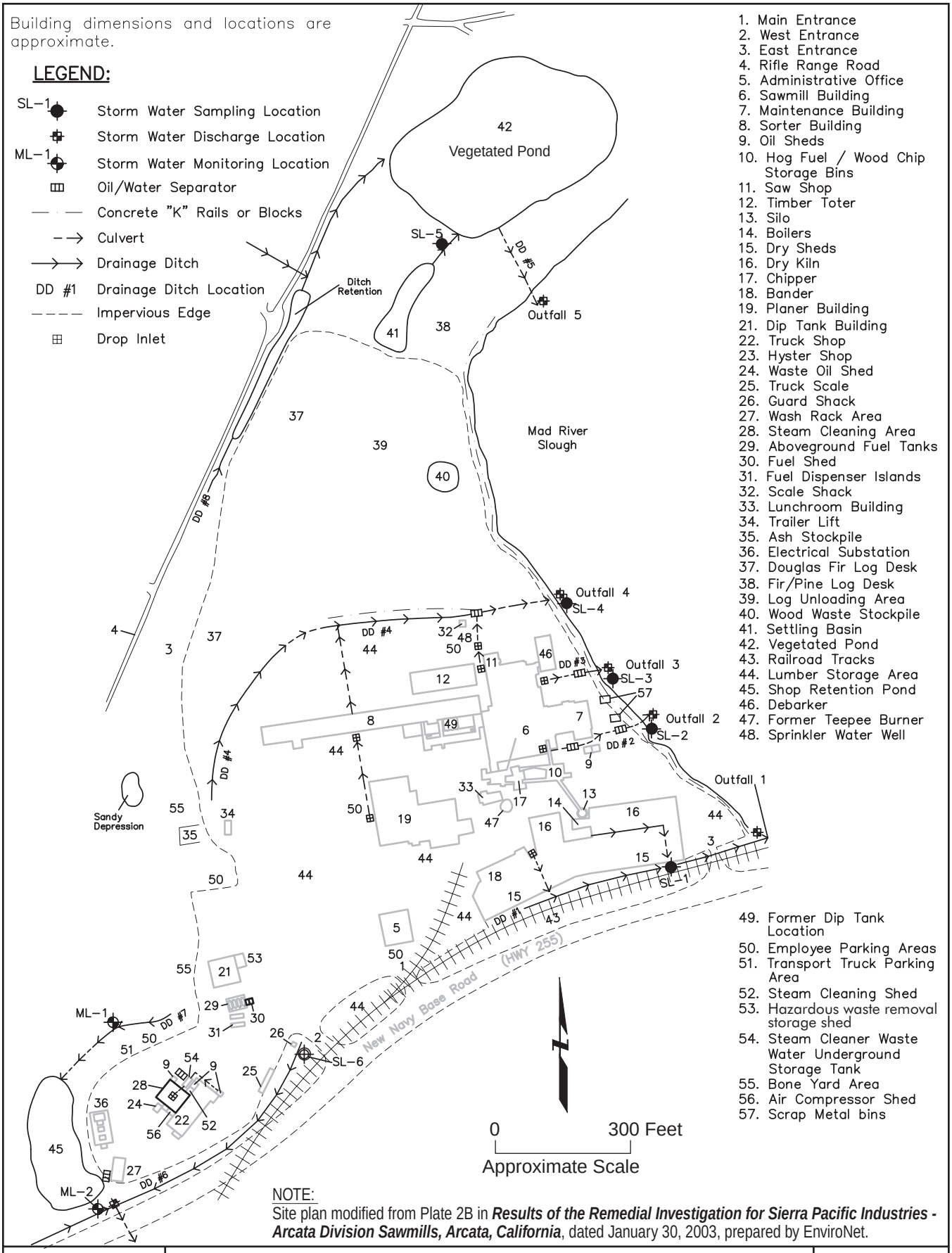
GEOMATRIX

SITE LOCATION
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

FACILITY MAP
Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

Project No.
9329

Figure
2

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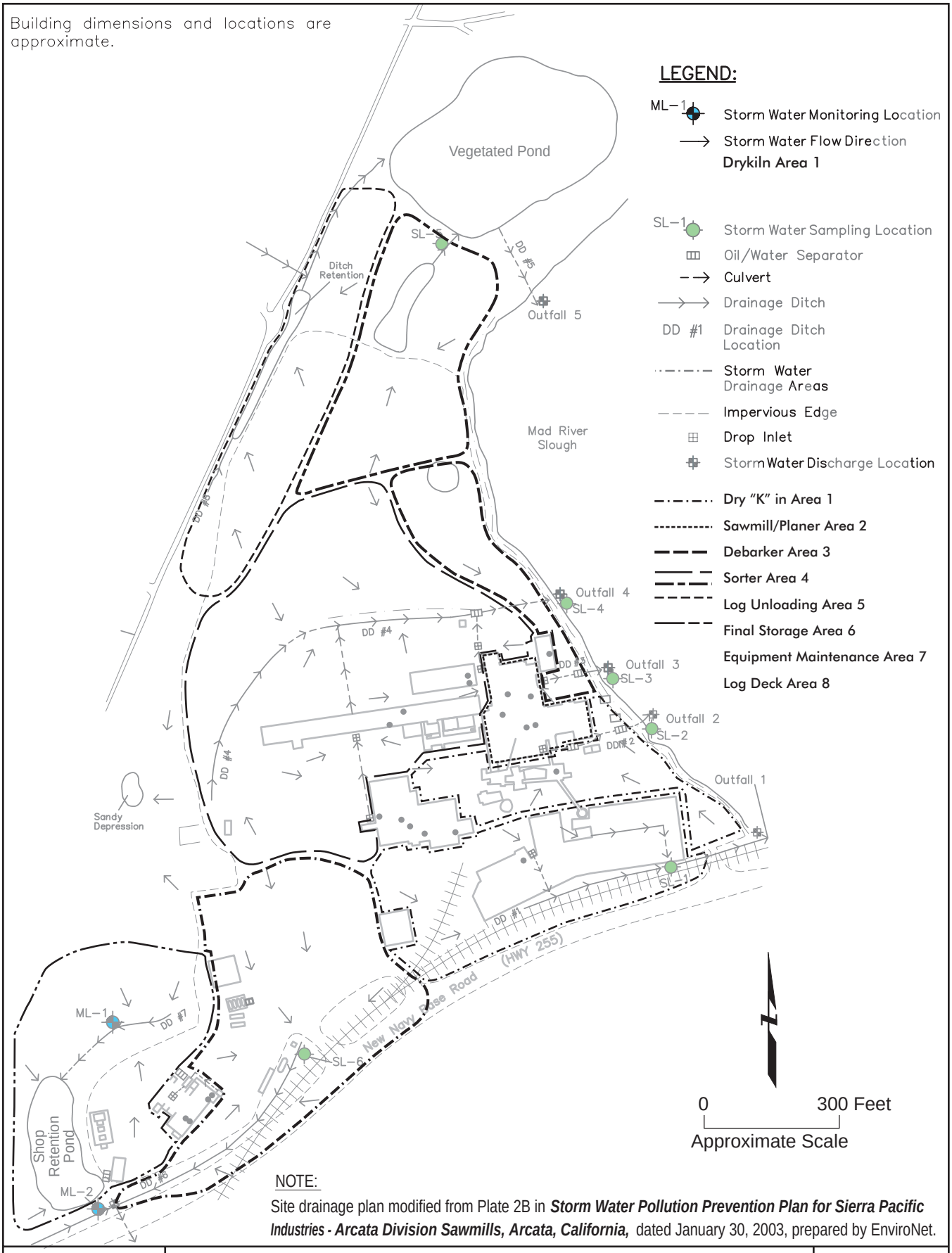

NOTE:

Site drainage plan modified from Plate 2B in ***Storm Water Pollution Prevention Plan for Sierra Pacific Industries - Arcata Division Sawmills, Arcata, California,*** dated January 30, 2003, prepared by EnviroNet.

GEOMATRIX

FACILITY SUB DRAINAGE AREA MAP
Sierra Pacific Industries
Arcata Division Sawmill
Arcata, California

Project No. 9329

Figure **3**

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APPENDIX A

SWRCB Annual Reporting Questionnaire and Forms 1 through 5

State of California
STATE WATER RESOURCES CONTROL BOARD

2003-2004

ANNUAL REPORT

FOR
STORM WATER DISCHARGES ASSOCIATED
WITH INDUSTRIAL ACTIVITIES

Reporting Period July 1, 2003 through June 30, 2004

An annual report is required to be submitted to your local Regional Water Quality Control Board (Regional Board) by July 1 of each year. This document must be certified and signed, under penalty of perjury, by the appropriate official of your company. Many of the Annual Report questions require an explanation. Please provide explanations on a separate sheet as an attachment. **Retain a copy of the completed Annual Report for your records.**

Please circle or highlight any information contained in Items A, B, and C below that is new or revised so we can update our records. Please remember that a Notice of Termination and new Notice of Intent are required whenever a facility operation is relocated or changes ownership.

If you have any questions, please contact your Regional Board Industrial Storm Water Permit Contact. The names, telephone numbers and e-mail addresses of the Regional Board contacts, as well as the Regional Board office addresses can be found at http://www.swrcb.ca.gov/stormwtr/contact.html. To find your Regional Board information, match the first digit of your WDID number with the corresponding number that appears in parenthesis on the first line of each Regional Board office.

GENERAL INFORMATION:

A. Facility Information:

Facility WDID No: 1B12S000440

Facility Business Name: Sierra Pacific Industries – Arcata Division Contact Person: Gordie Amos

Physical Address: 2593 New Navy Base Road e-mail: gamos@spi-ind.com

City: Arcata CA Zip: 95518 Phone:707-443-3111

Standard Industrial Classification (SIC) Code(s): 4214, 2411, 2421

B. Facility Operator Information:

Operator Name: Sierra Pacific Industries – Arcata Division Contact Person: Gordie Amos

Mailing Address: P.O. BOX 1189 e-mail: gamos@spi-ind.com

City: Arcata State: CA Zip: 95518 Phone:707-443-3111

C. Facility Billing Information:

Operator Name: Sierra Pacific Industries – Arcata Division Contact Person: Gordie Amos

Mailing Address: P.O. Box 1189 e-mail: gamos@spi-ind.com

City: Arcata State: CA Zip: 95518 Phone: 707-443-111

2003-2004

ANNUAL REPORT

SPECIFIC INFORMATION

MONITORING AND REPORTING PROGRAM

D. SAMPLING AND ANALYSIS EXEMPTIONS AND REDUCTIONS

1. For the reporting period, was your facility exempt from collecting and analyzing samples from **two** storm events in accordance with sections B.12 or 15 of the General Permit?

   ☐ **YES** Go to Item D.2 ☒ **NO** Go to Section E

2. Indicate the reason your facility is exempt from collecting and analyzing samples from **two** storm events. Attach a copy of the first page of the appropriate certification if you check boxes ii, iii, iv, or v.

   i. ☐ Participating in an Approved Group Monitoring Plan **Group Name:** _____

   ii. ☐ Submitted **No Exposure Certification (NEC)** Date Submitted: ___/___/___

   Re-evaluation Date: ___/___/___

   Does facility continue to satisfy NEC conditions? ☐ YES ☐ NO

   iii. ☐ Submitted **Sampling Reduction Certification (SRC)** Date Submitted: ___/___/___

   Re-evaluation Date: ___/___/___

   Does facility continue to satisfy SRC conditions? ☐ YES ☐ NO

   iv. ☐ Received Regional Board Certification Certification Date: ___/___/___

   v. ☐ Received Local Agency Certification Certification Date: ___/___/___

3. If you checked boxes i or iii above, were you scheduled to sample **one** storm event during the reporting year?

   ☐ **YES** Go to Section E ☐ **NO** Go to Section F

4. If you checked boxes ii, iv, or v, go to Section F.

E. SAMPLING AND ANALYSIS RESULTS

1. How many storm events did you sample? 5

   If less than 2, **attach explanation** (if you checked item D.2.i or iii. above, only attach explanation if you answer "0").

2. Did you collect storm water samples from the first storm of the wet season that produced a discharge during scheduled facility operating hours? (Section B.5 of the General Permit)

   ☒ **YES** ☐ **NO** **attach explanation** **(Please note that if you do not sample the first storm event, you are still required to sample 2 storm events)**

3. How many storm water discharge locations are at your facility? 7

4. For each storm event sampled, did you collect and analyze a sample from each of the facility's' storm water discharge locations? ☐ YES, go to Item E.6 ☒ NO

5. Was sample collection or analysis reduced in accordance with Section B.7.d of the General Permit? ☐ YES ☒ NO, **attach explanation**

   If "YES", **attach documentation** supporting your determination that two or more drainage areas are substantially identical.

   Date facility's drainage areas were last evaluated 1/30/03

6. Were all samples collected during the first hour of discharge? ☐ YES ☒ NO, **attach explanation**

7. Was all storm water sampling preceded by three (3) working days without a storm water discharge? ☒ YES ☐ NO, **attach explanation**

8. Were there any discharges of storm water that had been temporarily stored or contained? (such as from a pond) ☐ YES ☒ NO, go to Item E.10

9. Did you collect and analyze samples of temporarily stored or contained storm water discharges from two storm events? (or one storm event if you checked item D.2.i or iii. above) ☐ YES ☐ NO, **attach explanation**

10. Section B.5. of the General Permit requires you to analyze storm water samples for pH, Total Suspended Solids (TSS), Specific Conductance (SC), Total Organic Carbon (TOC) or Oil and Grease (O&G), other pollutants likely to be present in storm water discharges in significant quantities, and analytical parameters listed in Table D of the General Permit.

    a. Does Table D contain any additional parameters related to your facility's SIC code(s)? ☒ YES ☐ NO, Go to Item E.11

    b. Did you analyze all storm water samples for the applicable parameters listed in Table D? ☐ YES ☒ NO

    c. If you did not analyze all storm water samples for the applicable Table D parameters, check one of the following reasons:

    _____ In prior sampling years, the parameter(s) have not been detected in significant quantities from two consecutive sampling events. **Attach explanation**

    _____ The parameter(s) is not likely to be present in storm water discharges and authorized non-storm water discharges in significant quantities based upon the facility operator's evaluation. **Attach explanation**

    _X_ Other. **Attach explanation**

11. For each storm event sampled, attach a copy of the laboratory analytical reports and report the sampling and analysis results using **Form 1** or its equivalent. The following must be provided for each sample collected:

- Date and time of sample collection
- Name and title of sampler
- Parameters tested
- Name of analytical testing laboratory
- Discharge location identification
- Testing results
- Test methods used
- Test detection limits
- Date of testing
- Copies of the laboratory analytical results

F. QUARTERLY VISUAL OBSERVATIONS

1. **Authorized Non-Storm Water Discharges**

Section B.3.b of the General Permit requires quarterly visual observations of all authorized non-storm water discharges and their sources.

a. Do authorized non-storm water discharges occur at your facility?

☒ **YES** ☐ **NO** Go to Item F.2

b. Indicate whether you visually observed all authorized non-storm water discharges and their sources during the quarters when they were discharged. **Attach an explanation for any "NO" answers**. Indicate "N/A" for quarters without any authorized non-storm water discharges.

July-September	☒ **YES**	☐ **NO**	☐ **N/A**	October-December	☒ **YES**	☐ **NO**	☐ **N/A**
January-March	☒ **YES**	☐ **NO**	☐ **N/A**	April-June	☒ **YES**	☐ **NO**	☐ **N/A**

c. Use **Form 2** to report quarterly visual observations of authorized non-storm water discharges or provide the following information:

i. name of each authorized non-storm water discharge
ii. date and time of observation
iii. source and location of each authorized non-storm water discharge
iv. characteristics of the discharge at its source and impacted drainage area/discharge location
v. name, title, and signature of observer
vi. **any** new or revised BMPs necessary to reduce or prevent pollutants in authorized non-storm water discharges. Provide new or revised BMP implementation date.

2. **Unauthorized Non-Storm Water Discharges**

Section B.3.a of the General Permit requires quarterly visual observations of all drainage areas to detect the presence of unauthorized non-storm water discharges and their sources.

a. Indicate whether you visually observed all drainage areas to detect the presence of unauthorized non- storm water discharges and their sources. **Attach an explanation for any "NO" answers.**

July-September	☒ **YES**	☐ **NO**	October-December	☒ **YES**	☐ **NO**
January-March	☒ **YES**	☐ **NO**	April-June	☒ **YES**	☐ **NO**

b. Based upon the quarterly visual observations, were any unauthorized non-storm water discharges detected?

☐ **YES** ☒ **NO** Go to Item F.2.d

c. Have each of the unauthorized non-storm water discharges been eliminated or permitted?

☐ **YES** ☐ **NO** **Attach explanation**

d. Use **Form 3** to report quarterly unauthorized non-storm water discharge visual observations or provide the following information:

i. name of each unauthorized non-storm water discharge
ii. date and time of observation
iii. source and location of each unauthorized non-storm water discharge
iv. characteristics of the discharge at its source and impacted drainage area/discharge location
v. name, title, and signature of observer
vi. **any** corrective actions necessary to eliminate the source of each unauthorized non-storm water discharge and to clean impacted drainage areas. Provide date unauthorized non-storm water discharge(s) was eliminated or scheduled to be eliminated.

G. MONTHLY WET SEASON VISUAL OBSERVATIONS

Section B.4.a of the General Permit requires you to conduct monthly visual observations of storm water discharges at all storm water discharge locations during the wet season. These observations shall occur during the first hour of discharge or, in the case of temporarily stored or contained storm water, at the time of discharge.

1. Indicate below whether monthly visual observations of storm water discharges occurred at all discharge locations. **Attach an explanation for any "NO" answers**. Include in this explanation whether any eligible storm events occurred during scheduled facility operating hours that did not result in a storm water discharge, and provide the date, time, name and title of the person who observed that there was no storm water discharge.

	YES	NO		YES	NO
October	☒	☐	February	☒	☐
November	☒	☐	March	☒	☐
December	☒	☐	April	☒	☐
January	☒	☐	May	☒	☐

2. Report monthly wet season visual observations using **Form 4** or provide the following information:

   a. date, time, and location of observation
   b. name and title of observer
   c. characteristics of the discharge (i.e., odor, color, etc.) and source of any pollutants observed
   d. **any** new or revised BMPs necessary to reduce or prevent pollutants in storm water discharges. Provide new or revised BMP implementation date.

ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION (ACSCE)

H. ACSCE CHECKLIST

Section A.9 of the General Permit requires the facility operator to conduct one ACSCE in each reporting period (July 1-June 30). Evaluations must be conducted within 8-16 months of each other. The SWPPP and monitoring program shall be revised and implemented, as necessary, within 90 days of the evaluation. The checklist below includes the minimum steps necessary to complete a ACSCE. Indicate whether you have performed each step below. **Attach an explanation for any "NO" answers.**

1. Have you inspected all potential pollutant sources and industrial activities areas? ☒ YES ☐ NO
   The following areas should be inspected:

   - areas where spills and leaks have occurred during the last year
   - outdoor wash and rinse areas
   - process/manufacturing areas
   - loading, unloading, and transfer areas
   - waste storage/disposal areas
   - dust/particulate generating areas
   - erosion areas
   - building repair, remodeling, and construction
   - material storage areas
   - vehicle/equipment storage areas
   - truck parking and access areas
   - rooftop equipment areas
   - vehicle fueling/maintenance areas
   - non-storm water discharge generating areas

2. Have you reviewed your SWPPP to assure that its BMPs address existing potential pollutant sources and industrial activities areas? ☒ YES ☐ NO

3. Have you inspected the entire facility to verify that the SWPPP's site map is up-to-date? The following site map items should be verified: ☒ YES ☐ NO

   - facility boundaries
   - outline of all storm water drainage areas
   - areas impacted by run-on
   - storm water discharges locations
   - storm water collection and conveyance system
   - structural control measures such as catch basins, berms, containment areas, oil/water separators, etc.

4. Have you reviewed all General Permit compliance records generated since the last annual evaluation? ☒ YES ☐ NO

   The following records should be reviewed:

   - quarterly authorized non-storm water discharge visual observations
   - monthly storm water discharge visual observation
   - records of spills/leaks and associated clean-up/response activities
   - quarterly unauthorized non-storm water discharge visual observations
   - Sampling and Analysis records
   - preventative maintenance inspection and maintenance records

5. Have you reviewed the major elements of the SWPPP to assure compliance with the General Permit? ☒ YES ☐ NO

   The following SWPPP items should be reviewed:

   - pollution prevention team
   - list of significant materials
   - description of potential pollutant sources
   - assessment of potential pollutant sources
   - identification and description of the BMPs to be implemented for each potential pollutant source

6. Have you reviewed your SWPPP to assure that a) the BMPs are adequate in reducing or preventing pollutants in storm water discharges and authorized non-storm water discharges, and b) the BMPs are being implemented? ☒ YES ☐ NO

   The following BMP categories should be reviewed:

   - good housekeeping practices
   - spill response
   - employee training
   - erosion control
   - quality assurance
   - preventative maintenance
   - material handling and storage practices
   - waste handling/storage
   - structural BMPs

7. Has all material handling equipment and equipment needed to implement the SWPPP been inspected? ☒ YES ☐ NO

I. ACSCE EVALUATION REPORT

The facility operator is required to provide an evaluation report that includes:

- identification of personnel performing the evaluation
- the date(s) of the evaluation
- necessary SWPPP revisions
- schedule for implementing SWPPP revisions
- any incidents of non-compliance and the corrective actions taken

Use **Form 5** to report the results of your evaluation or develop an equivalent form.

J. ACSCE CERTIFICATION

The facility operator is required to certify compliance with the Industrial Activities Storm Water General Permit. To certify compliance, both the SWPPP and Monitoring Program must be up to date and be fully implemented.

Based upon your ACSCE, do you certify compliance with the Industrial Activities Storm Water General Permit? ☒ YES ☐ NO

If you answered "NO" **attach an explanation** to the ACSCE Evaluation Report why you are not in compliance with the Industrial Activities Storm Water General Permit.

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ATTACHMENT SUMMARY

Answer the questions below to help you determine what should be attached to this annual report. Answer NA (Not Applicable) to questions 2-4 if you are not required to provide those attachments.

1.	Have you attached Forms 1,2,3,4, and 5 or their equivalent?	☒ YES (Mandatory)		
2.	If you conducted sampling and analysis, have you attached the laboratory analytical reports?	☒ YES	☐ NO	☐ NA
3.	If you checked box II, III, IV, or V in item D.2 of this Annual Report, have you attached the first page of the appropriate certifications?	☐ YES	☐ NO	☒ NA
4.	Have you attached an explanation for each "NO" answer in items E.1, E.2, E.5-E.7, E.9, E.10.c, F.1.b, F.2.a, F.2.c, G.1, H.1-H.7, or J?	☒ YES	☐ NO	☐ NA

ANNUAL REPORT CERTIFICATION

I am duly authorized to sign reports required by the INDUSTRIAL ACTIVITIES STORM WATER GENERAL PERMIT (see Standard Provision C.9) and I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those person directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Printed Name: Gordie V Amos

Signature: Gordie V Amos Date: 6/30/04

Title: Plant Manager

EXPLANATIONS FOR 2003-2004 ANNUAL REPORT FOR STORM WATER DISCHARGERS ASSOCIATED WITH INDUSTRIAL ACTIVITIES

Monitoring and Reporting Program, Section E: Sampling and Analysis Results, E.5.

For the October 8, 2003 and May 27, 2004 storm events, some locations did not have discharges and therefore could not be sampled. The December 1, 2003, February 6 and April 30, 2004 storm water sampling events were targeted toward specific discharge locations as discussed in Section 5.0 of the report text.

Monitoring and Reporting Program, Section E: Sampling and Analysis Results, E.6.

The site is large and the time to properly collect samples and travel between locations often takes longer than one hour.

Monitoring and Reporting Program, Section E: Sampling and Analysis Results, E.10.c.

Samples from the October 8 and December 1, 2003, and May 27, 2004 storm events were analyzed for all parameters listed in Table D. Samples from the February 6 and April 30, 2004 events were analyzed for a subset of Table D parameters.

DESCRIPTION OF BASIC ANALYTICAL PARAMETERS

The Industrial Activities Storm Water General Permit (General Permit) requires you to analyze storm water samples for at least four parameters. These are pH, Total Suspended Solids (TSS), Specific Conductance (SC),and Total Organic Carbon (TOC). Oil and Grease (O&G) may be substituted for TOC. In addition, you must monitor for any other pollutants which you believe to be present in your storm water discharge as a result of industrial activity and analytical parameters listed in Table D of the General Permit. There are no numeric limitations for the parameters you test for.

The four parameters which the General Permit requires to be tested are considered *indicator* parameters. In other words, regardless of what type of facility you operate, these parameters are nonspecific and general enough to usually provide some indication whether pollutants are present in your storm water discharge. The following briefly explains what each of these parameters mean:

pH is a numeric measure of the hydrogen-ion concentration. The neutral, or acceptable, range is within 6.5 to 8.5. At values less than 6.5, the water is considered acidic; above 8.5 it is considered alkaline or basic. An example of an acidic substance is vinegar, and a alkaline or basic substance is liquid antacid. Pure rainfall tends to have a pH of a little less than 7. There may be sources of materials or industrial activities which could increase or decrease the pH of your storm water discharge. If the pH levels of your storm water discharge are high or low, you should conduct a thorough evaluation of all potential pollutant sources at your site.

Total Suspended Solids (TSS) is a measure of the undissolved solids that are present in your storm water discharge. Sources of TSS include sediment from erosion of exposed land, and dirt from impervious (i.e. paved) areas. Sediment by itself can be very toxic to aquatic life because it covers feeding and breeding grounds, and can smother organisms living on the bottom of a water body. Toxic chemicals and other pollutants also adhere to sediment particles. This provides a medium by which toxic or other pollutants end up in our water ways and ultimately in human and aquatic life. TSS levels vary in runoff from undisturbed land. It has been shown that TSS levels increase significantly due to land development.

Specific Conductance (SC) is a numerical expression of the ability of the water to carry an electric current. SC can be used to assess the degree of mineralization, salinity, or estimate the total dissolved solids concentration of a water sample. Because of air pollution, most rain water has a SC a little above zero. A high SC could affect the usability of waters for drinking, irrigation, and other commercial or industrial use.

Total Organic Carbon (TOC) is a measure of the total organic matter present in water. (All organic matter contains carbon) This test is sensitive and able to detect small concentrations of organic matter. Organic matter is naturally occurring in animals, plants, and man. Organic matter may also be man made (so called synthetic organics). Synthetic organics include pesticides, fuels, solvents, and paints. Natural organic matter utilizes the oxygen in a receiving water to biodegrade. Too much organic matter could place a significant oxygen demand on the water, and possibly impact its quality. Synthetic organics either do not biodegrade or biodegrade very slowly. Synthetic organics are a source of toxic chemicals that can have adverse affects at very low concentrations. Some of these chemicals bioaccumulate in aquatic life. If your levels of TOC are high, you should evaluate all sources of natural or synthetic organics you may use at your site.

Oil and Grease (O&G) is a measure of the amount of oil and grease present in your storm water discharge. At very low concentrations, O&G can cause a sheen (that floating "rainbow") on the surface of water (1 qt. of oil can pollute 250,000 gallons of water). O&G can adversely affect aquatic life and create unsightly floating material and film on water, thus making it undrinkable. Sources of O&G include maintenance shops, vehicles, machines and roadways.

If you have any questions regarding whether or not your constituent concentrations are too high, please contact your local Regional Board office. The United States Environmental Protection Agency (USEPA) has published stormwater discharge benchmarks for a number of parameters. These benchmarks may be helpful when evaluating whether additional BMPs are appropriate. These benchmarks can be accessed at our website at http://www.swrcb.ca.gov. It is contained in the Sampling and Analysis Reduction Certification.

See Storm Water Contacts at

http://www.swrcb.ca.gov/stormwtr/contact.html

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SIDE A

FORM 1-SAMPLING & ANALYSIS RESULTS

FIRST STORM EVENT

- If analytical results are less than the detection limit (or non detectable), show the value as less than the numerical value of the detection limit (example: <.05)
- If you did not analyze for a required parameter, do not report "0". Instead, leave the appropriate box blank
- When analysis is done using portable analysis (such as portable pH meters, SC meters, etc.), indicate "PA" in the appropriate test method used box.
- Make additional copies of this form as necessary.

NAME OF PERSON COLLECTING SAMPLE(S): Mathew Hillyard **TITLE:** Staff Engineer, MFG Inc., Arcata, California **SIGNATURE:** [signature], Geomatrix Consultants

DESCRIBE DISCHARGE LOCATION Example: NW Out Fall	DATE/TIME OF SAMPLE COLLECTION	TIME DISCHARGE STARTED	ANALYTICAL RESULTS For First Storm Event									
			OTHER PARAMETERS									
			BASIC PARAMETERS					OTHER PARAMETERS				
			PH	TSS	SC	O&G	COD	TPHg	TPHd	TPHmo	Tannins Lignins	Arsenic
SL-1	10/8/03 ☐AM 3:45 ☒PM	☐AM 2:00 ☒PM	7.26	25	1,600	<5.0	210	<50	<50	220	12	0.0025
SL-2	10/8/03 ☐AM 3:15 ☒PM	☐AM 1:30 ☒PM	6.63	130	4,100	24	620	93	940	970	66	0.0041
SL-3	10/8/03 ☐AM 2:45 ☒PM	☐AM 1:30 ☒PM	5.21	4,500	1,100	<5.0	8,500	93	2,000	17,000	290	0.094
SL- 4	10/8/03 ☐AM 4:30 ☒PM	☐AM 1:30 ☒PM	6.81	750	530	<5.0	650	50	61	740	33	0.042
TEST REPORTING UNITS:			pH Units	mg/l	umho/cm	mg/l	mg/l	µg/L	µg/L	µg/L	mg/l	mg/l
TEST METHOD DETECTION LIMIT:			two	1.0	20	5.0	10	50	50	100	0.2	0.002
TEST METHOD USED:			Field	EPA 160.2	EPA 120.1	EPA 1664	SM 5220D	EPA 8015M	EPA 8015M	EPA 8015M	SM 5550B	EPA 200.9
ANALYZED BY (SELF/LAB):			Field	Alpha Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytical

TSS - Total Suspended Solids SC - Specific Conductance O&G - Oil & Grease TOC - Total Organic Carbon

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FORM 1-SAMPLING & ANALYSIS RESULTS

FIRST STORM EVENT

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- When analysis is done using portable analysis (such as portable pH meters, SC meters, etc.), indicate "PA" in the appropriate test method used box.
- Make additional copies of this form as necessary

NAME OF PERSON COLLECTING SAMPLE(S): Mathew Hillyard TITLE: Staff Engineer, MFG Inc., Arcata, California SIGNATURE: Geomatrix Consultants, Inc.

ESCRIBE DISCHARGE LOCATION Example: NW Out Fall	DATE/TIME OF SAMPLE COLLECTION	TIME DISCHARGE STARTED	ANALYTICAL RESULTS For First Storm Event — Other Parameters: Copper	Zinc	Cadmium	Chromium	Lead	Nickel	Dioxins & Furans	PCP	TeCP	TCP
SL-1	10/8/03 3:45 ☐AM ☒PM	2:00 ☐AM x ☒PM	0.03	0.88	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	<1.0	<1.0	<1.0
SL-2	10/8/03 3:15 ☐AM ☒PM	1:30 ☐AM x ☒PM	<0.020	1.6	<0.010	<0.010	0.0067	0.013	4.46	2.6	1.8	<1.0
SL-3	10/8/03 2:45 ☐AM ☒PM	1:30 ☐AM x ☒PM	0.32	1.4	Not applicable	Not applicable	Not applicable	Not applicable	See Table 4	<1.0	<1.0	<1.0
SL-4	10/8/03 4:30 ☐AM x ☒PM	1:30 ☐AM x ☒PM	0.04	0.62	Not applicable	Not applicable	Not applicable	Not applicable	1.13	<1.0	<1.0	<1.0
TEST REPORTING UNITS:			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pg/L	µg/L	µg/L	µg/L
TEST METHOD DETECTION LIMIT:			0.020	0.02	0.010	0.010	0.005	0.010	See Table 4	1.0	1.0	1.0
TEST METHOD USED:			EPA200.7	EPA200.7	EPA200.7	EPA200.7	EPA200.9	EPA200.7	EPA 1613	Canadian Pulp	Canadian Pulp	Canadian Pulp
ANALYZED BY (SELF/LAB):			Alpha Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytical	Frontier Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytical

TSS - Total Suspended Solids SC - Specific Conductance O&G - Oil & Grease TOC - Total Organic Carbon

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FORM 1-SAMPLING & ANALYSIS RESULTS

FIRST STORM EVENT

- If analytical results are less than the detection limit (or non detectable), show the value as less than the numerical value of the detection limit (example: <.05)
- If you did not analyze for a required parameter, do not report "0". Instead, leave the appropriate box blank
- When analysis is done using portable analysis (such as portable pH meters, SC meters, etc.), indicate "PA" in the appropriate test method used box.
- Make additional copies of this form as necessary.

NAME OF PERSON COLLECTING SAMPLE(S): Mathew Hillyard **TITLE:** Staff Engineer of MFG Inc., Arcata, California **SIGNATURE:** Groundwater Consultants, Inc.,

DESCRIBE DISCHARGE LOCATION Example: NW Out Fall	DATE/TIME OF SAMPLE COLLECTION	TIME DISCHARGE STARTED	ANALYTICAL RESULTS For First Storm Event									
			OTHER PARAMETERS					OTHER PARAMETERS				
			PH	TSS	SC	O&G	COD	TPHg	TPHd	THPmo	Tannins & Lignins	Arsenic
SL-5, SL-6 and ML-2 No Discharge	10/ 8/03 ☐AM : ☐PM	☐AM __:__ ☐PM										
SL-6	12/1/03 ☒AM 11:15 ☐PM	☐AM _?_:__ ☐PM	6.85	190	40	<5.0	180	<50	300	5,500	3.3	0.0022
SL-5 and ML-2 No Discharge	12/ 1 /03 ☐AM : ☐PM	☐AM __:__ ☐PM										
	/ / ☐AM : ☐PM	☐AM __:__ ☐PM										
TEST REPORTING UNITS:			pH Units	mg/L	umho/cm	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L
TEST METHOD DETECTION LIMIT:			two	1.0	20	5.0	10	50	50	100	0.1	0.0020
TEST METHOD USED:			Field	EPA 160.2	EPA 120.1	EPA 1664	SM 5220D	EPA 8015M	EPA 8015M	EPA 8015M	SM 5550B	EPA 200.9
ANALYZED BY (SELF/LAB):			Field	Alpha Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytical

TSS - Total Suspended Solids SC - Specific Conductance O&G - Oil & Grease TOC - Total Organic Carbon

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FORM 1-SAMPLING & ANALYSIS RESULTS

FIRST STORM EVENT

- If analytical results are less than the detection limit (or non detectable), show the value as less than the numerical value of the detection limit (example: <.05)
- If you did not analyze for a required parameter, do not report "0". Instead, leave the appropriate box blank
- When analysis is done using portable analysis (such as portable pH meters, SC meters, etc.), indicate "PA" in the appropriate test method used box.
- Make additional copies of this form as necessary.

NAME OF PERSON COLLECTING SAMPLE(S): Mathew Hillyard **TITLE:** Staff Engineer, MFG Inc., Arcata, California **SIGNATURE** Stormatrix Consultants, Inc.

DESCRIBE DISCHARGE LOCATION Example: NW Out Fall	DATE/TIME OF SAMPLE COLLECTION	TIME DISCHARGE STARTED	ANALYTICAL RESULTS For First Storm Event									
			Other Parameters									
			Copper	Zinc	Cadmium	Chromium	Lead	Nickel	Dioxins & Furans	PCP	TeCP	TCP
SL-5, SL-6 and ML-2 No Discharge	10/8 /03 AM : PM	: AM PM										
SL-6	12/1/03 [x] AM 11:15 [ ] PM	_?_ : AM PM	0.032	0.34	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	<1.0	<1.0	<1.0
SL-5 and ML-2 No Discharge	12/ 1 / 03 AM PM	: AM PM										
	/ / AM PM	: AM PM										
TEST REPORTING UNITS:			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	Not applicable	µg/L	µg/L	µg/L
TEST METHOD DETECTION LIMIT:			0.020	0.020	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	1.0	1.0	1.0
TEST METHOD USED:			EPA 200.7	EPA 200.7	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Canadian Pulp	Canadian Pulp	Canadian Pulp
ANALYZED BY (SELF/LAB):			Alpha Analytical	Alpha Analytical	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Alpha Analytical	Alpha Analytical	Alpha Analytical

TSS - Total Suspended Solids SC - Specific Conductance O&G - Oil & Grease TOC - Total Organic Carbon

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FORM 1-SAMPLING & ANALYSIS RESULTS

SECOND STORM EVENT

- If analytical results are less than the detection limit (or non detectable), show the value as less than the numerical value of the detection limit (example: <.05)
- If you did not analyze for a required parameter, do not report "0". Instead, leave the appropriate box blank
- When analysis is done using portable analysis (such as portable pH meters, SC meters, etc.), indicate "PA" in the appropriate test method used box.

NAME OF PERSON COLLECTING SAMPLE(S): Mathew Hillyard **TITLE:** Staff Engineer of MFG Inc., Arcata, California **SIGNATURE:** Cromartie Consulting, Inc.,

DESCRIBE DISCHARGE LOCATION Example: NW Out Fall	DATE/TIME OF SAMPLE COLLECTION	TIME DISCHARGE STARTED	ANALYTICAL RESULTS For Second Storm Event									
			BASIC PARAMETERS					OTHER PARAMETERS				
			PH	TSS	SC	O&G	COD	TPHg	TPHd	TPHmo	Tannins Lignins	Arsenic
SL-1	5/27/04 ☐ AM 1:15 ☒ PM	☐ AM 12:00 ☒ PM	6.19	100	180	<5.0	230	<50	92	550	6.6	0.0034
SL-2	5/27/04 ☐ AM 2:00 ☒ PM	☐ AM 12:10 ☒ PM	6.19	150	1,200	<5.0	630	340	280	1,100	100	0.0046
SL-3	5/27/04 ☐ AM 12:35 ☒ PM	☒ AM 11:50 ☐ PM	5.61	1,900	1,300	<5.0	2,100	190	2,300	6,000	240	0.037
SL-4	5/27/04 ☐ AM 1:45 ☒ PM	☒ AM 11:50 ☐ PM	6.06	2,900	160	<5.0	1,500	85	720	3,200	160	0.039
TEST REPORTING UNITS:			pH Units	mg/L	umho/cm	mg/L	mg/L	µg/L	µg/L	µg/L	mg/L	mg/L
TEST METHOD DETECTION LIMIT:			two	1.0	20	5.0	10	50	50	100	0.1	0.002
TEST METHOD USED:			Field	EPA 160.2	EPA 120.1	EPA 1664	SM 5220D	EPA 8015M	EPA 8015M	EPA 8015M	SM5550B	EPA 200.9
ANALYZED BY (SELF/LAB):			Field	Alpha Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytical

TSS - Total Suspended Solids SC - Specific Conductance O&G - Oil & Grease TOC - Total Organic Carbon

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FORM 1-SAMPLING & ANALYSIS RESULTS

SECOND STORM EVENT

- If analytical results are less than the detection limit (or non detectable), show the value as less than the numerical value of the detection limit (example: <.05)
- If you did not analyze for a required parameter, do not report "0". Instead, leave the appropriate box blank
- When analysis is done using portable analysis (such as portable pH meters, SC meters, etc.), indicate "PA" in the appropriate test method used box.

NAME OF PERSON COLLECTING SAMPLE(S): Mathew Hillyard **TITLE:** Staff Engineer of MFG Inc., Arcata, California **SIGNATURE:** GeoMatrix Consultants, Inc.

DESCRIBE DISCHARGE LOCATION Example: NW Out Fall	DATE/TIME OF SAMPLE COLLECTION	TIME DISCHARGE STARTED	ANALYTICAL RESULTS For Second Storm Event									
			Other Parameters									
			Copper	Zinc	Cadmium	Chromium	Lead	Nickel	Dioxins & Furans	PCP	TeCP	TCP
SL-1	5/27/04 ☐ AM 1:15 ☒ PM	☐ AM 12:00 ☒ PM	0.03	1.9	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	<1.0	<1.0	<1.0
SL-2	5/27/04 ☐ AM 2:00 ☒ PM	☐ AM 12:10 ☒ PM	<0.020	0.46	<0.010	<0.010	<0.050	<0.010	25.5	<1.0	<1.0	<1.0
SL-3	5/27/04 ☐ AM 12:35 ☒ PM	☒ AM 11:50 ☐ PM	<0.080	0.85	Not applicable	Not applicable	Not applicable	Not applicable	30.5	<1.0	<1.0	<1.0
SL-4	5/27/04 ☐ AM 1:45 ☒ PM	☒ AM 11:50 ☐ PM	<0.080	0.75	Not applicable	Not applicable	Not applicable	Not applicable	45.9	<1.0	<1.0	<1.0
TEST REPORTING UNITS:			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	pg/L	µg/L	µg/L	µg/L
TEST METHOD DETECTION LIMIT:			0.020	0.020	0.010	0.010	0.050	0.010	See Table 4	1.0	1.0	1.0
TEST METHOD USED:			EPA 200.7	EPA 200.7	EPA 200.7	EPA 200.7	EPA 200.7	EPA 200.7	EPA 1613	Canadian Pulp	Canadian Pulp	Canadian Pulp
ANALYZED BY (SELF/LAB):			Alpha Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytical	Frontier Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytical

TSS - Total Suspended Solids SC - Specific Conductance O&G - Oil & Grease TOC - Total Organic Carbon

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FORM 2-QUARTERLY VISUAL OBSERVATIONS OF AUTHORIZED NON-STORM WATER DISCHARGES (NSWDs)

- Quarterly dry weather visual observations are required of each authorized NSWD.
- Observe each authorized NSWD source, impacted drainage area, and discharge location.
- Authorized NSWDs must meet the conditions provided in Section D (pages 5-6), of the General Permit.
- Make additional copies of this form as necessary.

QUARTER: **JULY-SEPT.** DATE: 9/30/03	**Observers Name:** Matt H. Hillyard **Title:** Environmental Engineer **Signature:** Matt Hillyard	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?**	☒ **YES** ☐ **NO**	If **YES**, complete reverse side of this form.
QUARTER: **OCT.-DEC.** DATE: / /	**Observers Name:** _____ **Title:** _____ **Signature:** _____	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?**	☐ **YES** ☐ **NO**	If **YES**, complete reverse side of this form.
QUARTER: **JAN.-MARCH** DATE: / /	**Observers Name:** _____ **Title:** _____ **Signature:** _____	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?**	☐ **YES** ☐ **NO**	If **YES**, complete reverse side of this form.
QUARTER: **APRIL-JUNE** DATE: / /	**Observers Name:** _____ **Title:** _____ **Signature:** _____	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?**	☐ **YES** ☐ **NO**	If **YES**, complete reverse side of this form.

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FORM 2-QUARTERLY VISUAL OBSERVATIONS OF AUTHORIZED NON-STORM WATER DISCHARGES (NSWDs)

DATE /TIME OF OBSERVATION	SOURCE AND LOCATION OF AUTHORIZED NSWD EXAMPLE: Air conditioner Units on Building C	NAME OF AUTHORIZED NSWD EXAMPLE: Air conditioner condensate	DESCRIBE AUTHORIZED NSWD CHARACTERISTICS Indicate whether authorized NSWD is clear, cloudy, or discolored, causing staining, contains floating objects or an oil sheen, has odors, etc.		DESCRIBE ANY REVISED OR NEW BMPs AND PROVIDE THEIR IMPLEMENTATION DATE
			At the NSWD Source	At the NSWD Drainage Area and Discharge Location	
9,30,03 1:15 ☐AM ☒PM	Well in Ditch #4 Overfilling water truck	Potable Water	Clear	Clear, no discharge observed	None
9,30,03 1:15 ☐AM ☒PM	Ditch #4 Spring water	Spring Water	Clear w/ floating orange bacteria	Clear w/ some floating orange bacteria. Discharge location not observed due to high tide	None
9,30,03 1:15 ☐AM ☒PM	Humboldt Bay in Ditches #1, #2, #3, #4, #5	Sea water	cloudy in Bay	always cloudy in ditches and at discharge points	None
9,30,03 1:35 ☐AM ☒PM	Spring fed vegetated pond discharge in Ditch #5	Spring water	Spring source not observed, under water or off-site	Clear water in Ditch #5, discharge location not observed, under high tide	None
9,30,03 1:15 ☐AM ☒PM	Air condrtioner in computer room in Sawmill	Potable water	Clear	Clear discharge not observed, under high tide	None
1:15	Fire system water main near sawmill	Fire hydrant flushing	Not observed. System only flushed on Fridays	Not observed during site visit. Would have drained to Ditch #4	None

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- Quarterly dry weather visual observations are required of each authorized NSWD.
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QUARTER: **JULY-SEPT.** DATE: __/__/__	**Observers Name:** _____ **Title:** _____ **Signature:** _____	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?**	☐ **YES** ☐ **NO** If **YES**, complete reverse side of this form.
QUARTER: **OCT.-DEC.** DATE: 12/22/03	**Observers Name:** Matt Hillyard **Title:** Environmental Engineer **Signature:** Matt Hillyard	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?**	☒ **YES** ☐ **NO** If **YES**, complete reverse side of this form.
QUARTER: **JAN.-MARCH** DATE: __/__/__	**Observers Name:** _____ **Title:** _____ **Signature:** _____	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?**	☐ **YES** ☐ **NO** If **YES**, complete reverse side of this form.
QUARTER: **APRIL-JUNE** DATE: __/__/__	**Observers Name:** _____ **Title:** _____ **Signature:** _____	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?**	☐ **YES** ☐ **NO** If **YES**, complete reverse side of this form.

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FORM 2-QUARTERLY VISUAL OBSERVATIONS OF AUTHORIZED NON-STORM WATER DISCHARGES (NSWDs)

DATE /TIME OF OBSERVATION	SOURCE AND LOCATION OF AUTHORIZED NSWD EXAMPLE: Air conditioner Units on Building C	NAME OF AUTHORIZED NSWD EXAMPLE: Air conditioner condensate	DESCRIBE AUTHORIZED NSWD CHARACTERISTICS Indicate whether authorized NSWD is clear, cloudy, or discolored, causing staining, contains floating objects or an oil sheen, has odors, etc.		DESCRIBE ANY REVISED OR NEW BMPs AND PROVIDE THEIR IMPLEMENTATION DATE
			At the NSWD Source	At the NSWD Drainage Area and Discharge Location	
12/22/03 9:30 ☒AM ☐PM	Humboldt Bay Ditches 1–5	Sea water	Clear greenish tint	Clear greenish tint	None
12/22/03 9:30 ☒AM ☐PM	Dry kiln Southside	Condensate	clear	clear w/ gray + orange bacterial films small floating woody particles	None
12/22/03 10:00 ☒AM ☐PM	Fire System water main near Sawmill and dry Shed	Fire hydrant flushing	Not observed during site visit. Only flushed on Fridays.	would have drained to ditch 4 and 1	None
12/22/03 10:00 ☒AM ☐PM	Ditch 4+5	Spring water	clear	clear	None
/ / : ☐AM ☐PM					

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QUARTER: **OCT.-DEC.** DATE: __/__/__	**Observers Name:** _____ **Title:** _____ **Signature:** _____	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?**	☐ **YES** ☐ **NO** If **YES**, complete reverse side of this form.
QUARTER: **JAN.-MARCH** DATE: 3/18/04	**Observers Name:** Matt Hillyard **Title:** Environmental Engineer **Signature:** Matt Hillyard	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?**	☒ **YES** ☐ **NO** If **YES**, complete reverse side of this form.
QUARTER: **APRIL-JUNE** DATE: __/__/__	**Observers Name:** _____ **Title:** _____ **Signature:** _____	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?**	☐ **YES** ☐ **NO** If **YES**, complete reverse side of this form.

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DATE /TIME OF OBSERVATION	SOURCE AND LOCATION OF AUTHORIZED NSWD EXAMPLE: Air conditioner Units on Building C	NAME OF AUTHORIZED NSWD EXAMPLE: Air conditioner condensate	DESCRIBE AUTHORIZED NSWD CHARACTERISTICS Indicate whether authorized NSWD is clear, cloudy, or discolored, causing staining, contains floating objects or an oil sheen, has odors, etc.		DESCRIBE ANY REVISED OR NEW BMPs AND PROVIDE THEIR IMPLEMENTATION DATE
			At the NSWD Source	At the NSWD Drainage Area and Discharge Location	
3/18/04 9:40 ☒AM ☐PM	Dry Kiln Condensate South side	Condensate	Some sludge in ditch and fine wood particles near dry kiln ditch	Clear at discharge location	Clean ditch adjacent to dry kiln, clean concrete surface and rails between dry kiln and ditch
3/18/04 9:40 ☒AM ☐PM	Humboldt Bay Ditches 1-5	Sea water	Clear, greenish tint	Clear, greenish tint	None
3/18/04 10:00 ☒AM ☐PM	water truck drips and drains to ditch 4	Potable water	Clear from truck	Ponds at straw wattle before seeping into ground adjacent to ditch 4	clean wood debris from asphalt parking area near water truck
3/18/04 10:00 ☒AM ☐PM	Near Sawmill + dry sled fire system valve	fire hydrant flushing	not observed during site visit, occurs on Fridays	would drain to ditch 4 or 1	None
3/18/04 10:00 ☒AM ☐PM	Ditch 4 + Ditch 5	Spring water	Clear	Clear	None

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FORM 2-QUARTERLY VISUAL OBSERVATIONS OF AUTHORIZED NON-STORM WATER DISCHARGES (NSWDs)

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QUARTER: **JULY-SEPT.** DATE: __/__/__	**Observers Name:** _____ **Title:** _____ **Signature:** _____	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?** ☐ **YES** ☐ **NO** If **YES**, complete reverse side of this form.
QUARTER: **OCT.-DEC.** DATE: __/__/__	**Observers Name:** _____ **Title:** _____ **Signature:** _____	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?** ☐ **YES** ☐ **NO** If **YES**, complete reverse side of this form.
QUARTER: **JAN.-MARCH** DATE: __/__/__	**Observers Name:** _____ **Title:** _____ **Signature:** _____	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?** ☐ **YES** ☐ **NO** If **YES**, complete reverse side of this form.
QUARTER: **APRIL-JUNE** DATE: 6/1/04	**Observers Name:** Matt Hillyard **Title:** Environmental Engineer **Signature:** Matt Hillyard	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?** ☒ **YES** ☐ **NO** If **YES**, complete reverse side of this form.

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FORM 2-QUARTERLY VISUAL OBSERVATIONS OF AUTHORIZED NON-STORM WATER DISCHARGES (NSWDs)

DATE /TIME OF OBSERVATION	SOURCE AND LOCATION OF AUTHORIZED NSWD EXAMPLE: Air conditioner Units on Building C	NAME OF AUTHORIZED NSWD EXAMPLE: Air conditioner condensate	DESCRIBE AUTHORIZED NSWD CHARACTERISTICS Indicate whether authorized NSWD is clear, cloudy, or discolored, causing staining, contains floating objects or an oil sheen, has odors, etc.		DESCRIBE ANY REVISED OR NEW BMPs AND PROVIDE THEIR IMPLEMENTATION DATE
			At the NSWD Source	At the NSWD Drainage Area and Discharge Location	
6/1/04 2:45 ☐AM ☒PM	Potable water from fire system testing near Dry Kilns	Potable water in fire system	Clear	No discharge observed from ditch 1	fix valve by 6/8/04
6/1/04 2:45 ☐AM ☒PM	Dry Kiln	Condensate	Clear	some woody debris & dirt in ditch by dry kilns but not discharging	clean ditch and surface by dry kilns as regular maintenance
6/1/04 2:55 ☐AM ☒PM	water truck drips next to ditch 4	Potable water	clear	Ditch 4 discharge Clear	clean area (dirt & wood) from water truck parking area
6/1/04 3:00 ☐AM ☒PM	Humboldt Bay Ditches 1-5	Sea water	Clear, greenish tint	Low tide during site visit no discharge of sea water observed	
6/1/04 3:00 ☐AM ☒PM	Springs in Ditch 4 + Ditch 5	Spring water	Clear	Clear	

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DATE /TIME OF OBSERVATION	SOURCE AND LOCATION OF AUTHORIZED NSWD EXAMPLE: Air conditioner Units on Building C	NAME OF AUTHORIZED NSWD EXAMPLE: Air conditioner condensate	DESCRIBE AUTHORIZED NSWD CHARACTERISTICS Indicate whether authorized NSWD is clear, cloudy, or discolored, causing staining, contains floating objects or an oil sheen, has odors, etc.		DESCRIBE ANY REVISED OR NEW BMPs AND PROVIDE THEIR IMPLEMENTATION DATE
			At the NSWD Source	At the NSWD Drainage Area and Discharge Location	
6/1/04 3:00 ☐AM ☒PM	Fire system near Sawmill + dry shed	Fire Hydrant Flushing	Not observed during site visit, occurs on Fridays	rolled down to ditch 4 or 1	
/ / : ☐AM ☐PM					
/ / : ☐AM ☐PM					
/ / : ☐AM ☐PM					
/ / : ☐AM ☐PM					

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FORM 3-QUARTERLY VISUAL OBSERVATIONS OF UNAUTHORIZED NON-STORM WATER DISCHARGES (NSWDs)

- Unauthorized NSWDs are discharges (such as wash or rinse waters) that do not meet the conditions provided in Section D (pages 5-6) of the General Permit.
- Quarterly visual observations are required to observe current and detect prior unauthorized NSWDs.
- Quarterly visual observations are required during dry weather and at all facility drainage areas.
- Each unauthorized NSWD source, impacted drainage area, and discharge location must be identified and observed.
- Unauthorized NSWDs that can not be eliminated within 90 days of observation must be reported to the Regional Board in accordance with Section A.10.e of the General Permit.
- Make additional copies of this form as necessary.

QUARTER: **JULY-SEPT.** **DATE/TIME OF OBSERVATIONS** 9/30/03 1:00 ☐ AM ☒ PM	**Observers Name:** Matt Hillyard **Title:** Environmental Engineer **Signature:** Matt Hillyard	**WERE UNAUTHORIZED NSWDs OBSERVED?** ☐ YES ☒ NO **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** ☐ YES ☒ NO	If **YES** to either question, complete reverse side.
QUARTER: **OCT.-DEC.** **DATE/TIME OF OBSERVATIONS** __/__/__ __:__ ☐ AM ☐ PM	**Observers Name:** **Title:** **Signature:**	**WERE UNAUTHORIZED NSWDs OBSERVED?** ☐ YES ☐ NO **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** ☐ YES ☐ NO	If **YES** to either question, complete reverse side.
QUARTER: **JAN.-MARCH** **DATE/TIME OF OBSERVATIONS** __/__/__ __:__ ☐ AM ☐ PM	**Observers Name:** **Title:** **Signature:**	**WERE UNAUTHORIZED NSWDs OBSERVED?** ☐ YES ☐ NO **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** ☐ YES ☐ NO	If **YES** to either question, complete reverse side.
QUARTER: **APRIL-JUNE** **DATE/TIME OF OBSERVATIONS** __/__/__ __:__ ☐ AM ☐ PM	**Observers Name:** **Title:** **Signature:**	**WERE UNAUTHORIZED NSWDs OBSERVED?** ☐ YES ☐ NO **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** ☐ YES ☐ NO	If **YES** to either question, complete reverse side.

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FORM 3 QUARTERLY VISUAL OBSERVATIONS OF UNAUTHORIZED NON-STORM WATER DISCHARGES (NSWDs)

OBSERVATION DATE (FROM REVERSE SIDE)	NAME OF UNAUTHORIZED NSWD EXAMPLE: Vehicle Wash Water	SOURCE AND LOCATION OF UNAUTHORIZED NSWD EXAMPLE: NW Corner of Parking Lot	DESCRIBE UNAUTHORIZED NSWD CHARACTERISTICS Indicate whether unauthorized NSWD is clear, cloudy, discolored, causing stains; contains floating objects or an oil sheen, has odors, etc.		DESCRIBE CORRECTIVE ACTIONS TO ELIMINATE UNAUTHORIZED NSWD AND TO CLEAN IMPACTED DRAINAGE AREAS. PROVIDE UNAUTHORIZED NSWD ELIMINATION DATE.
			AT THE UNAUTHORIZED NSWD SOURCE	AT THE UNAUTHORIZED NSWD AREA AND DISCHARGE LOCATION	
__/__/__ __:__ ☐AM ☐PM					
__/__/__ __:__ ☐AM ☐PM					
__/__/__ __:__ ☐AM ☐PM					
__/__/__ __:__ ☐AM ☐PM					

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QUARTER: **JULY-SEPT.** **DATE/TIME OF OBSERVATIONS** ☐ AM __/__/__ __:__ ☐ PM	**Observers Name:** _____ **Title:** _____ **Signature:** _____	**WERE UNAUTHORIZED NSWDs OBSERVED?** ☐ YES ☐ NO **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** ☐ YES ☐ NO	If **YES** to either question, complete reverse side.
QUARTER: **OCT.-DEC.** **DATE/TIME OF OBSERVATIONS** ☒ AM 12/22/03 9:45 ☐ PM	**Observers Name:** Matt Hillyard **Title:** Environmental Engineer **Signature:** Matt Hillyard	**WERE UNAUTHORIZED NSWDs OBSERVED?** ☐ YES ☒ NO **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** ☐ YES ☒ NO	If **YES** to either question, complete reverse side.
QUARTER: **JAN.-MARCH** **DATE/TIME OF OBSERVATIONS** ☐ AM __/__/__ __:__ ☐ PM	**Observers Name:** _____ **Title:** _____ **Signature:** _____	**WERE UNAUTHORIZED NSWDs OBSERVED?** ☐ YES ☐ NO **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** ☐ YES ☐ NO	If **YES** to either question, complete reverse side.
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FORM 3 QUARTERLY VISUAL OBSERVATIONS OF UNAUTHORIZED NON-STORM WATER DISCHARGES (NSWDs)

OBSERVATION DATE (FROM REVERSE SIDE)	NAME OF UNAUTHORIZED NSWD EXAMPLE: Vehicle Wash Water	SOURCE AND LOCATION OF UNAUTHORIZED NSWD EXAMPLE: NW Corner of Parking Lot	DESCRIBE UNAUTHORIZED NSWD CHARACTERISTICS Indicate whether unauthorized NSWD is clear, cloudy, discolored, causing stains; contains floating objects or an oil sheen, has odors, etc.		DESCRIBE CORRECTIVE ACTIONS TO ELIMINATE UNAUTHORIZED NSWD AND TO CLEAN IMPACTED DRAINAGE AREAS. PROVIDE UNAUTHORIZED NSWD ELIMINATION DATE.
			AT THE UNAUTHORIZED NSWD SOURCE	AT THE UNAUTHORIZED NSWD AREA AND DISCHARGE LOCATION	
__/__/__ __:__ ☐AM ☐PM					
__/__/__ __:__ ☐AM ☐PM					
__/__/__ __:__ ☐AM ☐PM					
__/__/__ __:__ ☐AM ☐PM					

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QUARTER: **OCT.-DEC.** **DATE/TIME OF OBSERVATIONS** __/__/__ __:__ ☐ AM ☐ PM	**Observers Name:** _____ **Title:** _____ **Signature:** _____	**WERE UNAUTHORIZED NSWDs OBSERVED?** ☐ YES ☐ NO **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** ☐ YES ☐ NO	If **YES** to either question, complete reverse side.
QUARTER: **JAN.-MARCH** **DATE/TIME OF OBSERVATIONS** 3/18/04 9:10 ☒ AM ☐ PM	**Observers Name:** Matt Hillyard **Title:** Environmental Engineer **Signature:** Matt Hillyard	**WERE UNAUTHORIZED NSWDs OBSERVED?** ☐ YES ☒ NO **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** ☐ YES ☒ NO	If **YES** to either question, complete reverse side.
QUARTER: **APRIL-JUNE** **DATE/TIME OF OBSERVATIONS** __/__/__ __:__ ☐ AM ☐ PM	**Observers Name:** _____ **Title:** _____ **Signature:** _____	**WERE UNAUTHORIZED NSWDs OBSERVED?** ☐ YES ☐ NO **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** ☐ YES ☐ NO	If **YES** to either question, complete reverse side.

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OBSERVATION DATE (FROM REVERSE SIDE)	NAME OF UNAUTHORIZED NSWD EXAMPLE: Vehicle Wash Water	SOURCE AND LOCATION OF UNAUTHORIZED NSWD EXAMPLE: NW Corner of Parking Lot	DESCRIBE UNAUTHORIZED NSWD CHARACTERISTICS Indicate whether unauthorized NSWD is clear, cloudy, discolored, causing stains; contains floating objects or an oil sheen, has odors, etc.		DESCRIBE CORRECTIVE ACTIONS TO ELIMINATE UNAUTHORIZED NSWD AND TO CLEAN IMPACTED DRAINAGE AREAS. PROVIDE UNAUTHORIZED NSWD ELIMINATION DATE.
			AT THE UNAUTHORIZED NSWD SOURCE	AT THE UNAUTHORIZED NSWD AREA AND DISCHARGE LOCATION	
__/__/__ __:__ ☐AM ☐PM					
__/__/__ __:__ ☐AM ☐PM					
__/__/__ __:__ ☐AM ☐PM					
__/__/__ __:__ ☐AM ☐PM					

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QUARTER: **JULY-SEPT.** **DATE/TIME OF OBSERVATIONS** __/__/__ __:__ ☐ AM ☐ PM	**Observers Name:** _____ **Title:** _____ **Signature:** _____	**WERE UNAUTHORIZED NSWDs OBSERVED?** ☐ YES ☐ NO **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** ☐ YES ☐ NO	If **YES** to either question, complete reverse side.
QUARTER: **OCT.-DEC.** **DATE/TIME OF OBSERVATIONS** __/__/__ __:__ ☐ AM ☐ PM	**Observers Name:** _____ **Title:** _____ **Signature:** _____	**WERE UNAUTHORIZED NSWDs OBSERVED?** ☐ YES ☐ NO **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** ☐ YES ☐ NO	If **YES** to either question, complete reverse side.
QUARTER: **JAN.-MARCH** **DATE/TIME OF OBSERVATIONS** __/__/__ __:__ ☐ AM ☐ PM	**Observers Name:** _____ **Title:** _____ **Signature:** _____	**WERE UNAUTHORIZED NSWDs OBSERVED?** ☐ YES ☐ NO **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** ☐ YES ☐ NO	If **YES** to either question, complete reverse side.
QUARTER: **APRIL-JUNE** **DATE/TIME OF OBSERVATIONS** 6/10/04 2:35 ☐ AM ☒ PM	**Observers Name:** [illegible] **Title:** Environmental Engineer **Signature:** [illegible]	**WERE UNAUTHORIZED NSWDs OBSERVED?** ☐ YES ☒ NO **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** ☐ YES ☒ NO	If **YES** to either question, complete reverse side.

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SIDE B

FORM 3 QUARTERLY VISUAL OBSERVATIONS OF UNAUTHORIZED NON-STORM WATER DISCHARGES (NSWDs)

OBSERVATION DATE (FROM REVERSE SIDE)	NAME OF UNAUTHORIZED NSWD EXAMPLE: Vehicle Wash Water	SOURCE AND LOCATION OF UNAUTHORIZED NSWD EXAMPLE: NW Corner of Parking Lot	DESCRIBE UNAUTHORIZED NSWD CHARACTERISTICS Indicate whether unauthorized NSWD is clear, cloudy, discolored, causing stains; contains floating objects or an oil sheen, has odors, etc.		DESCRIBE CORRECTIVE ACTIONS TO ELIMINATE UNAUTHORIZED NSWD AND TO CLEAN IMPACTED DRAINAGE AREAS. PROVIDE UNAUTHORIZED NSWD ELIMINATION DATE.
			AT THE UNAUTHORIZED NSWD SOURCE	AT THE UNAUTHORIZED NSWD AREA AND DISCHARGE LOCATION	
/ / : ☐AM ☐PM					
/ / : ☐AM ☐PM					
/ / : ☐AM ☐PM					
/ / : ☐AM ☐PM					

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FORM 4-MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

A

SIDE

- Storm water discharge visual observations are required for at least one storm event per month between October 1 and May 31.
- Visual observations must be conducted during the first hour of discharge at all discharge locations.
- Discharges of temporarily stored or contained storm water must be observed at the time of discharge.
- Indicate "None" in the first column of this form if you did not conduct a monthly visual observation.
- Make additional copies of this form as necessary.
- Until a monthly visual observation is made, record any eligible storm events that do not result in a storm water discharge and note the date, time, name, and title of who observed there was no storm water discharge.

Observation Date: October 8 2003 Observers Name: Matt Hillyard Title: Environmental Engineer Signature: Matt Hillyard	Drainage Location Description	#1 SL-3	#2 SL-2	#3 SL-1	#4 SL-4
	Observation Time	3 :00 ☒P.M. ☐A.M.	3 :30 ☒P.M. ☐A.M.	4 :00 ☒P.M. ☐A.M.	4 :45 ☒P.M. ☐A.M.
	Time Discharge Began	1 :30 ☒P.M. ☐A.M.	1 :30 ☒P.M. ☐A.M.	2 :00 ☒P.M. ☐A.M.	1 :30 ☐P.M. ☐A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☒ NO ☐	YES ☒ NO ☐	YES ☒ NO ☐	YES ☒ NO ☐
Observation Date: ~~November~~ October 8 ___ 2003 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	~~#1~~ #5 SL-6	~~#2~~ #6 ML-1	~~#3~~ #7 SL-5	#4
	Observation Time	4 :05 ☒P.M. ☐A.M.	4 05 ☒P.M. ☐A.M.	4 :10 ☒P.M. ☐A.M.	: ☐P.M. ☐A.M.
	Time Discharge Began	NA : ☐P.M. ☐A.M.	NA : ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☒	YES ☐ NO ☒	YES ☐ NO ☒	YES ☐ NO ☐
Observation Date: December ___ 2003 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	#1	#2	#3	#4
	Observation Time	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.
	Time Discharge Began	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Observation Date: January ___ 2004 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	#1	#2	#3	#4
	Observation Time	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.
	Time Discharge Began	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐

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SIDE B

FORM 4-MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

DATE/TIME OF OBSERVATION (From Reverse Side)	DRAINAGE AREA DESCRIPTION EXAMPLE: Discharge from material storage Area #2	DESCRIBE STORM WATER DISCHARGE CHARACTERISTICS Indicate whether storm water discharge is clear, cloudy, or discolored; causing staining; containing floating objects or an oil sheen, has odors, etc.	IDENTIFY AND DESCRIBE SOURCE(S) OF POLLUTANTS EXAMPLE: Oil sheen caused by oil dripped by trucks in vehicle maintenance area.	DESCRIBE ANY REVISED OR NEW BMPs AND THEIR DATE OF IMPLEMENTATION
10/8/03 SL-3 3:00 ☐ AM ☒ PM	Discharge from side of log Deck.	Brown muddy water odor Similar to H_2S	Bark dust, dirt on pavement	use sweeper/vacuum truck to clean pavement clean/replace straw bales before next storm
10/8/03 SL-2 3:30 ☐ AM ☒ PM	Discharge near Equip. Shop	Blackish tint to water	Sawdust, dirt on pavement	use sweeper/vacuum truck to clean pavement remove debris at separator inlet prior to next storm
10/8/03 SL-1 4:00 ☐ AM ☒ PM	Discharge from Dry Shed	Clear discharge, Some floating wood particles held back in pipe by vegetation. water doesn't make it to Sloughs	Woody material in ditch inside dry shed	clean ditch and ground surface adjacent to dry kilns ASAP and as-needed for condensate discharge
10/8/03 SL-4 4:45 ☐ AM ☒ PM	Discharge from ~~[illegible]~~ Southern log unloading area	dark gray discharge	Woody particles, bark dust + dirt on pavement	use sweeper/vacuum truck to clean pavement remove debris from straw bales/mattes prior to next storm
10/8/03 4:05 4:10 ☐ AM ☒ PM	SL-5 → No flow SL-6 → Infiltrate to ground, no flow ML-1 → No Flow		NA	NA

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FORM 4-MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

A SIDE

- Storm water discharge visual observations are required for at least one storm event per month between October 1 and May 31.
- Visual observations must be conducted during the first hour of discharge at all discharge locations.
- Discharges of temporarily stored or contained storm water must be observed at the time of discharge.
- Indicate "None" in the first column of this form if you did not conduct a monthly visual observation.
- Make additional copies of this form as necessary.
- Until a monthly visual observation is made, record any eligible storm events that do not result in a storm water discharge and note the date, time, name, and title of who observed there was no storm water discharge.

Observation Date: October ____ 2003 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	#1 SL-1	#2 SL-2	#3 SL-3	#4 SL-4
	Observation Time	11 :15 ☐P.M. ☒A.M.	3 :05 ☒P.M. ☐A.M.	3 :10 ☐P.M. ☐A.M.	3 :15 ☐P.M. ☐A.M.
	Time Discharge Began	10 :45 ☐P.M. ☒A.M.	2 :45 ☐P.M. ☐A.M.	2 :45 ☐P.M. ☐A.M.	2 :45 ☐P.M. ☐A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☒ NO ☐	YES ☒ NO ☐	YES ☒ NO ☐	YES ☒ NO ☐
Observation Date: November 25 2003 Observers Name: Matt Hillyard Title: Env. Eng. Signature: Matt Hillyard	Drainage Location Description	#1 ↓	#2 ↓	#3 ↓	#4 ↓
	Observation Time	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.
	Time Discharge Began	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Observation Date: ~~December~~ November 25 2003 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	~~#1~~ ~~#5~~ SL-5	~~#2~~ ~~#6~~ SL-6	~~#3~~ ~~#7~~ ML-1	#4
	Observation Time	11 :40 ☐P.M. ☒A.M.	11 :55 ☐P.M. ☒A.M.	12 :05 ☒P.M. ☐A.M.	: ☐P.M. ☐A.M.
	Time Discharge Began	NA : ☐P.M. ☐A.M.	NA : ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☒	YES ☐ NO ☒	YES ☐ NO ☒	YES ☐ NO ☐
Observation Date: January ____ 2004 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	#1	#2	#3	#4
	Observation Time	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.
	Time Discharge Began	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐

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SIDE B

FORM 4-MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

DATE/TIME OF OBSERVATION (From Reverse Side)	DRAINAGE AREA DESCRIPTION EXAMPLE: Discharge from material storage Area #2	DESCRIBE STORM WATER DISCHARGE CHARACTERISTICS Indicate whether storm water discharge is clear, cloudy, or discolored; causing staining; containing floating objects or an oil sheen, has odors, etc.	IDENTIFY AND DESCRIBE SOURCE(S) OF POLLUTANTS EXAMPLE: Oil sheen caused by oil dripped by trucks in vehicle maintenance area.	DESCRIBE ANY REVISED OR NEW BMPs AND THEIR DATE OF IMPLEMENTATION
11,25,03 11:15 ☒ AM ☐ PM	SL-1 Discharge from Dry Sted	Slightly brown, some woody particles, small pieces of silver sheen floating on surface	sheen does not appear to be petroleum based woody particles from in between dry kiln & ditch and from areas draining into dry sted	Clean ditch and ground surface near dry kilns AS-needed
11,25,03 3:05 ☐ AM ☒ PM	SL-2 Discharge from South edge Sawmill & Shop	dark brown, small v. fine woody particles	Wood Particles from chip truck loading area and Sawdust from sawmill	Clean pavement w/ vacuum/sweeper truck as-needed
11,25,03 3:10 ☐ AM ☒ PM	SL-3 from under sawmill & East side log Deck	dark brown small v. fine woody particles	bark Particles from log deck and debarker Loading area	Clean pavement w/ vacuum/sweeper truck as-needed clean straw bales of debris
11,25,03 3:15 ☐ AM ☒ PM	SL-4 from Sorter, N. side of Sawmill, lumber storage area and South end log deck	dark brown v fine wood-y particles, small pieces of silver sheen	bark particles from Southern log deck	Clean pavement w/ vacuum/sweeper truck as needed clean straw wattles of accumulated debris
11,25,03 : ☐ AM ☐ PM	SL-5 → Not Flowing SL-6 → Infiltrating into Ground ML-1 → Not Flowing		NA	N.A

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FORM 4-MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

A

SIDE

- Storm water discharge visual observations are required for at least one storm event per month between October 1 and May 31.
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Observation Date: October ____ 2003 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	#1 SL-6	#2	#3	#4
	Observation Time	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Time Discharge Began	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Observation Date: November____ 2003 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	#1	#2	#3	#4
	Observation Time	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Time Discharge Began	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Observation Date: December 1 2003 Observers Name: Matt Hillyard Title: Env. Engineer Signature: Matt Hillyard	Drainage Location Description	#1 SL-6	#2 ML-1	#3 SL-5	#4
	Observation Time	11 :15 ☐ P.M. ☒ A.M.	11 :30 ☐ P.M. ☒ A.M.	11 :40 ☐ P.M. ☒ A.M.	: ☐ P.M. ☐ A.M.
	Time Discharge Began	? : ☐ P.M. ☐ A.M.	NA : ☐ P.M. ☐ A.M.	NA : ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☒	YES ☐ NO ☒	YES ☐ NO ☒	YES ☐ NO ☐
Observation Date: January____ 2004 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	#1	#2	#3	#4
	Observation Time	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Time Discharge Began	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐

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SIDE B

FORM 4-MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

DATE/TIME OF OBSERVATION (From Reverse Side)	DRAINAGE AREA DESCRIPTION EXAMPLE: Discharge from material storage Area #2	DESCRIBE STORM WATER DISCHARGE CHARACTERISTICS Indicate whether storm water discharge is clear, cloudy, or discolored; causing staining; containing floating objects or an oil sheen, has odors, etc.	IDENTIFY AND DESCRIBE SOURCE(S) OF POLLUTANTS EXAMPLE: Oil sheen caused by oil dripped by trucks in vehicle maintenance area.	DESCRIBE ANY REVISED OR NEW BMPs AND THEIR DATE OF IMPLEMENTATION
12/1/03 11:15 ☒ AM ☐ PM	SL-6 Discharge from lumber storage area and fueling area	Clear water ponded in grass and vegetation drains to ditch & and Humboldt Bay	None	Not Necessary at this time
12/1/03 11:30 ☒ AM ☐ PM	ML-1 Discharge from north of truck/hyster shops	Not Flowing	NA	NA
12/1/03 11:40 ☒ AM ☐ PM	SL-5 discharge from log deck settling basin	Not Flowing	NA	NA
/ / : ☐ AM ☐ PM				
/ / : ☐ AM ☐ PM				

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FORM 4-MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

A

SIDE

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Observation Date: October ____ 2003 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	#1	#2	#3	#4
	Observation Time	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Time Discharge Began	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Observation Date: November____ 2003 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	#1	#2	#3	#4
	Observation Time	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Time Discharge Began	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Observation Date: December 19 2003 Observers Name: Matt Hillyard Title: Environmental Engineer Signature: Matt Hillyard	Drainage Location Description	#1 SL-1	#2 SL-2	#3 SL-3	#4 SL-4
	Observation Time	11 :20 ☐ P.M. ☒ A.M.	11 :35 ☐ P.M. ☒ A.M.	11 :40 ☐ P.M. ☐ A.M.	11 :45 ☐ P.M. ☐ A.M.
	Time Discharge Began	8 :30 ☒ P.M. ☐ A.M.	10 :00 ☐ P.M. ☒ A.M.	10 :00 ☐ P.M. ☐ A.M.	10 :30 ☐ P.M. ☐ A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☒	YES ☒ NO ☐	YES ☒ NO ☐	YES ☒ NO ☐
Observation Date: ~~January~~ December 19 ~~2004~~ 2003 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	~~#1~~ ~~#5~~ SL-5	~~#2~~ #6 SL-6	~~#3~~ #7 SL-1	#4
	Observation Time	12 :00 ☒ P.M. ☐ A.M.	12 :05 ☒ P.M. ☐ A.M.	12 :10 ☒ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Time Discharge Began	NA : ☐ P.M. ☐ A.M.	NA : ☐ P.M. ☐ A.M.	NA : ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☒	YES ☐ NO ☒	YES ☐ NO ☒	YES ☐ NO ☐

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SIDE B

FORM 4-MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

DATE/TIME OF OBSERVATION (From Reverse Side)	DRAINAGE AREA DESCRIPTION EXAMPLE: Discharge from material storage Area #2	DESCRIBE STORM WATER DISCHARGE CHARACTERISTICS Indicate whether storm water discharge is clear, cloudy, or discolored; causing staining; containing floating objects or an oil sheen, has odors, etc.	IDENTIFY AND DESCRIBE SOURCE(S) OF POLLUTANTS EXAMPLE: Oil sheen caused by oil dripped by trucks in vehicle maintenance area.	DESCRIBE ANY REVISED OR NEW BMPs AND THEIR DATE OF IMPLEMENTATION
12/19/03 11:35 ☒ AM ☐ PM	SL-2 Discharge from south edge of sawmill & mechanics shop	Dark gray discharge fine woody particles broken down	Sawdust + woody particles from sawmill	clean pavement w/ vacuum/sweeper truck as-needed
12/19/03 11:40 ☐ AM ☐ PM	SL-3 discharge from under sawmill & eastern log deck	Dark reddish-brown discharge fine woody particles	bark dust from log deck & debarker	clean pavement w/ vacuum/sweeper truck clean debris from straw bales as-needed
12/19/03 11:45 ☒ AM ☐ PM	SL-4 discharge from Sorter, N. side of sawmill, lumber storage area and southern log deck	Dark gray-brown discharge fine woody particles	broken down bark dust from log yard & sawdust from sawmill	clean pavement w/ vacuum/sweeper truck clean debris from straw wattles as-needed
12/19/03 11:20 ☒ AM ☐ PM	SL-1 Discharge from Dry shed	Clear	NA	NA
12/19/03 : ☐ AM ☐ PM	SL-5 → Not Flowing SL-6 → Infiltrating into ground ML-1 → Not Flowing		NA	NA

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FORM 4-MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

A SIDE

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- Indicate "None" in the first column of this form if you did not conduct a monthly visual observation.
- Make additional copies of this form as necessary.
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Observation Date: October ____ 2003 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	#1	#2	#3	#4
	Observation Time	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Time Discharge Began	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Observation Date: November____ 2003 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	#1	#2	#3	#4
	Observation Time	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Time Discharge Began	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Observation Date: ~~December~~ January 8 2004 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	~~#1~~ ~~#5~~ SL-5	~~#2~~ ~~#6~~ SL-6	~~#3~~ ~~#7~~ ML-1	#4
	Observation Time	4 :15 ☒ P.M. ☐ A.M.	3 :15 ☒ P.M. ☐ A.M.	3 :25 ☒ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Time Discharge Began	NA : ☐ P.M. ☐ A.M.	NA : ☐ P.M. ☐ A.M.	NA : ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☒	YES ☐ NO ☒	YES ☐ NO ☒	YES ☐ NO ☐
Observation Date: January 8 2004 Observers Name: Matt Hilyard Title: Environmental Engineer Signature: Matt Hilyard	Drainage Location Description	#1 SL-1	#2 SL-2	#3 SL-3	#4 SL-4
	Observation Time	3 :35 ☒ P.M. ☐ A.M.	3 :45 ☒ P.M. ☐ A.M.	3 :55 ☒ P.M. ☐ A.M.	4 :05 ☐ P.M. ☐ A.M.
	Time Discharge Began	2 :45 ☒ P.M. ☐ A.M.	2 :45 ☒ P.M. ☐ A.M.	2 :45 ☒ P.M. ☐ A.M.	3 :00 ☐ P.M. ☐ A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☒ NO ☐	YES ☒ NO ☐	YES ☒ NO ☐	YES ☒ NO ☐

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SIDE B

FORM 4-MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

DATE/TIME OF OBSERVATION (From Reverse Side)	DRAINAGE AREA DESCRIPTION EXAMPLE: Discharge from material storage Area #2	DESCRIBE STORM WATER DISCHARGE CHARACTERISTICS Indicate whether storm water discharge is clear, cloudy, or discolored; causing staining; containing floating objects or an oil sheen, has odors, etc.	IDENTIFY AND DESCRIBE SOURCE(S) OF POLLUTANTS EXAMPLE: Oil sheen caused by oil dripped by trucks in vehicle maintenance area.	DESCRIBE ANY REVISED OR NEW BMPs AND THEIR DATE OF IMPLEMENTATION
1/18/04 3:35 ☐ AM ☒ PM	SL-1 Discharge from dry sted + dry kilns	Slightly cloudy w/ dirt and/or small woody particles	Woody material in ditch inside dry sted in front of dry kilns + dirt on paved floor	Clean ditch and surface between dry kilns and ditch as needed
1/18/04 3:45 ☐ AM ☐ PM	SL-2 Discharge near equipment shop	dark gray w/ small broken down woody particles	Sawdust/dirt on pavement	Clean pavement as needed
1/8/04 3:55 ☐ AM ☒ PM	SL-3 Discharge from debarker area + East side of log deck	reddish brown w/ small broken down woody particles	Bark dust, dirt on pavement	Clean pavement and straw bales as needed
1/6/04 4:05 ☐ AM ☒ PM	SL-4 Discharge from Southern log scaling area and sorter/lumber storage areas	light gray w/ small broken down woody particles	Woody particles, bark dust + dirt on pavement	Clean pavement and straw bales/ wattles as needed
1/8/04 : ☐ AM ☐ PM	SL-5 → Not Flowing/Infiltrating SL-6 → Infiltrating into ground ML-1 → Not Flowing		NA	NA

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FORM 4-MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

A

SIDE

- Storm water discharge visual observations are required for at least one storm event per month between October 1 and May 31.
- Visual observations must be conducted during the first hour of discharge at all discharge locations.
- Discharges of temporarily stored or contained storm water must be observed at the time of discharge.
- Indicate "None" in the first column of this form if you did not conduct a monthly visual observation.
- Make additional copies of this form as necessary.
- Until a monthly visual observation is made, record any eligible storm events that do not result in a storm water discharge and note the date, time, name, and title of who observed there was no storm water discharge.

Observation Date: ~~October~~ ~~2003~~ February 6 2004 Observers Name: Matt Hillyard Title: Env. Engineer Signature: Matt Hillyard	Drainage Location Description	#1 SL-6	#2 SL-2	#3 SL-3	#4 SL-4
	Observation Time	2 :20 ☒P.M. ☐A.M.	2 :50 ☒P.M. ☐A.M.	3 :00 ☒P.M. ☐A.M.	3 :25 ☒P.M. ☐A.M.
	Time Discharge Began	1 :00 ☒P.M. ☐A.M.	2 :00 ☒P.M. ☐A.M.	2 :00 ☒P.M. ☐A.M.	2 :00 ☒P.M. ☐A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☒ NO ☐	YES ☒ NO ☐	YES ☒ NO ☐	YES ☒ NO ☐
Observation Date: ~~November~~ ~~2003~~ Feb 6 2004 Observers Name: Title: Signature:	Drainage Location Description	~~#1~~ #5 SL-1	~~#2~~ #6 SL-5	~~#3~~ #7 ML-1	#4
	Observation Time	3 :40 ☒P.M. ☐A.M.	3 :15 ☒P.M. ☐A.M.	2 :40 ☒P.M. ☐A.M.	: ☐P.M. ☐A.M.
	Time Discharge Began	2 :00 ☐P.M. ☐A.M.	NA : ☐P.M. ☐A.M.	NA : ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☒ NO ☐	YES ☐ NO ☒	YES ☐ NO ☒	YES ☐ NO ☐
Observation Date: December____ 2003 Observers Name: Title: Signature:	Drainage Location Description	#1	#2	#3	#4
	Observation Time	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.
	Time Discharge Began	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Observation Date: January____ 2004 Observers Name: Title: Signature:	Drainage Location Description	#1	#2	#3	#4
	Observation Time	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.
	Time Discharge Began	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.	: ☐P.M. ☐A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐

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SIDE B

FORM 4-MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

DATE/TIME OF OBSERVATION (From Reverse Side)	DRAINAGE AREA DESCRIPTION EXAMPLE: Discharge from material storage Area #2	DESCRIBE STORM WATER DISCHARGE CHARACTERISTICS Indicate whether storm water discharge is clear, cloudy, or discolored; causing staining; containing floating objects or an oil sheen, has odors, etc.	IDENTIFY AND DESCRIBE SOURCE(S) OF POLLUTANTS EXAMPLE: Oil sheen caused by oil dripped by trucks in vehicle maintenance area.	DESCRIBE ANY REVISED OR NEW BMPs AND THEIR DATE OF IMPLEMENTATION
2/6/04 2:20 ☐ AM ☒ PM	Discharge from lumber storage area SL-6 including entrance and truck scale	Storm water discharge is Cloudy	Dirt and other small particles from paved areas	Clean pavement w/ vacuum/sweeper truck as needed
2/6/04 2:50 ☐ AM ☒ PM	SL-2 Discharge near Equipment shop	dark grey small broken down woody particles	Sawdust/dirt on pavement	Clean pavement w/ vacuum/sweeper truck as needed
2/6/04 3:00 ☐ AM ☒ PM	SL-3 Discharge from debarker area & East side of Log Deck	Reddish Brown Small broken down woody particles	Bark dust, dirt on pavement	Clean pavement w/ vacuum/sweeper truck and straw bales as needed
2/6/04 3:25 ☐ AM ☒ PM	SL-4 Discharge from southern log unloading area & North side of Sorter & lumber area	light gray small broken down wood particles	Woody particles, bark dust & dirt on pavement	Clean pavement w/ vacuum/sweeper truck and straw bales/wattles as-needed
2/6/04 3:40 ☐ AM ☒ PM	SL-1 Discharge from dry shed ditch and floor near outlet flowing to SL-1	Slightly cloudy w/ dirt and/or small woody particles. Discharge point under water.	Woody material in ditch outside dry shed, dirt on paved floor	Clean ditch and ground surface in dry shed near dry kilns as needed

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SIDE B

FORM 4-MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

DATE/TIME OF OBSERVATION (From Reverse Side)	DRAINAGE AREA DESCRIPTION EXAMPLE: Discharge from material storage Area #2	DESCRIBE STORM WATER DISCHARGE CHARACTERISTICS Indicate whether storm water discharge is clear, cloudy, or discolored; causing staining; containing floating objects or an oil sheen, has odors, etc.	IDENTIFY AND DESCRIBE SOURCE(S) OF POLLUTANTS EXAMPLE: Oil sheen caused by oil dripped by trucks in vehicle maintenance area.	DESCRIBE ANY REVISED OR NEW BMPs AND THEIR DATE OF IMPLEMENTATION
2/6/04 : ☐ AM ☒ PM	SL-5 → Not Flowing/Infiltrating ML-1 → Not Flowing		NA	NA
/ / : ☐ AM ☐ PM				
/ / : ☐ AM ☐ PM				
/ / : ☐ AM ☐ PM				
/ / : ☐ AM ☐ PM				

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FORM 4 (Continued)-MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

SIDE A

- Storm water discharge visual observations are required for at least one storm event per month between October 1 and May 31.
- Visual observations must be conducted during the first hour of discharge at all discharge locations.
- Discharges of temporarily stored or contained storm water must be observed at the time of discharge.
- Indicate "None" in the first column of this form if you did not conduct a monthly visual observation.
- Make additional copies of this form as necessary.
- Until a monthly visual observation is made, record any eligible storm events that do not result in a storm water discharge and note the date, time, name, and title of who observed there was no storm water discharge.

Observation Date: February ____ 2004 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	#1	#2	#3	#4
	Observation Time	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Time Discharge Began	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Observation Date: March 25 2004 Observers Name: Matt Hillyard Title: Environmental Engineer Signature: Matt Hillyard	Drainage Location Description	#1 SL-1	#2 SL-2	#3 SL-3	#4 SL-4
	Observation Time	11 :15 ☐ P.M. ☐ A.M.	11 :10 ☐ P.M. ☒ A.M.	11 :00 ☐ P.M. ☒ A.M.	11 :15 ☐ P.M. ☒ A.M.
	Time Discharge Began	10 :45 ☐ P.M. ☒ A.M.	10 :50 ☐ P.M. ☒ A.M.	10 :00 ☐ P.M. ☒ A.M.	10 :30 ☐ P.M. ☒ A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☒	YES ☐ NO ☒	YES ☒ NO ☐	YES ☒ NO ☐
Observation Date: ~~April~~ March 25 2004 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	~~#4~~ #5 SL-5	~~#2~~ #6 SL-6	~~#3~~ #7 ML-1	#4
	Observation Time	11 :30 ☐ P.M. ☒ A.M.	11 :22 ☐ P.M. ☐ A.M.	11 :25 ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Time Discharge Began	NA: ☐ P.M. ☐ A.M.	NA: ☐ P.M. ☐ A.M.	NA: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☒	YES ☐ NO ☒	YES ☐ NO ☒	YES ☐ NO ☐
Observation Date: May ____ 2004 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	#1	#2	#3	#4
	Observation Time	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Time Discharge Began	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐

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SIDE B

FORM 4 (Continued)-MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

DATE/TIME OF OBSERVATION (From Reverse Side)	DRAINAGE AREA DESCRIPTION EXAMPLE: Discharge from material storage Area #2	DESCRIBE STORM WATER DISCHARGE CHARACTERISTICS Indicate whether storm water discharge is clear, cloudy, or discolored; causing staining; containing floating objects or an oil sheen, has odors, etc.	IDENTIFY AND DESCRIBE SOURCE(S) OF POLLUTANTS EXAMPLE: Oil sheen caused by oil dripped by trucks in vehicle maintenance area.	DESCRIBE ANY REVISED OR NEW BMPs AND THEIR DATE OF IMPLEMENTATION
3/25/04 11:00 ☒ AM ☐ PM	SL-3 Drainage from Log Deck (SE) + Debarker/sawmill	Reddish brown w/ small woody particles	bark dust & broken down woody particles from asphalt	Clean out separater 3/31/04
3/25/04 11:15 ☒ AM ☐ PM	SL-4 Drainage from Southern portion of log deck staging area	dark gray w/ broken down woody particles	bark dust/woody debris from asphalt	clean out separater 3/31/04
3/25/04 11:10 ☒ AM ☐ PM	SL-2 drainage from sawmill + mechanic shop areas	Clear	NA	NA
3/25/04 11:15 ☒ AM ☐ PM	SL-1 drainage from dry shed	Clear	NA	NA
3/25/04 : ☐ AM ☐ PM	SL-5 → Not flowing SL-6 → infiltrating into ground SL-1 → Not Flowing		NA	NA

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FORM 4 (Continued)-MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

SIDE A

- Storm water discharge visual observations are required for at least one storm event per month between October 1 and May 31.
- Visual observations must be conducted during the first hour of discharge at all discharge locations.
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- Indicate "None" in the first column of this form if you did not conduct a monthly visual observation.
- Make additional copies of this form as necessary.
- Until a monthly visual observation is made, record any eligible storm events that do not result in a storm water discharge and note the date, time, name, and title of who observed there was no storm water discharge.

Observation Date: February ____ 2004 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	#1	#2	#3	#4
	Observation Time	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Time Discharge Began	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Observation Date: March ____ 2004 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	#1	#2	#3	#4
	Observation Time	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Time Discharge Began	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Observation Date: April 20 2004 Observers Name: Matt Hillyard Title: Environmental Engineer Signature: Matt Hillyard	Drainage Location Description	#1 SL-1	#2 SL-2	#3 SL-3	#4 SL-4
	Observation Time	1:40 ☒ P.M. ☐ A.M.	1:20 ☒ P.M. ☐ A.M.	1:30 ☒ P.M. ☐ A.M.	1:35 ☒ P.M. ☐ A.M.
	Time Discharge Began	1:30 ☒ P.M. ☐ A.M.	1:30 ☒ P.M. ☐ A.M.	1:30 ☒ P.M. ☐ A.M.	1:30 ☒ P.M. ☐ A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☒ NO ☐	YES ☒ NO ☐	YES ☒ NO ☐	YES ☒ NO ☐
Observation Date: ~~May~~ April 20 2004 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	~~#5~~ SL-5	~~#6~~ SL-6	~~#7~~ ML-1	#4
	Observation Time	1:55 ☐ P.M. ☐ A.M.	1:45 ☒ P.M. ☐ A.M.	1:50 ☒ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Time Discharge Began	NA : ☐ P.M. ☐ A.M.	NA : ☐ P.M. ☐ A.M.	NA : ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☒	YES ☐ NO ☒	YES ☐ NO ☒	YES ☐ NO ☐

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SIDE B

FORM 4 (Continued)-MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

DATE/TIME OF OBSERVATION (From Reverse Side)	DRAINAGE AREA DESCRIPTION EXAMPLE: Discharge from material storage Area #2	DESCRIBE STORM WATER DISCHARGE CHARACTERISTICS Indicate whether storm water discharge is clear, cloudy, or discolored; causing staining; containing floating objects or an oil sheen, has odors, etc.	IDENTIFY AND DESCRIBE SOURCE(S) OF POLLUTANTS EXAMPLE: Oil sheen caused by oil dripped by trucks in vehicle maintenance area.	DESCRIBE ANY REVISED OR NEW BMPs AND THEIR DATE OF IMPLEMENTATION
4/20/04 1:40 ☐ AM ☒ PM	SL-1 Discharge from Dry sted + dry kilns	Slightly cloudy light + brown	Dirt + small woody particles Near dry sted + dry kilns	Clean ditch and ground surface near dry kilns as-needed
4/20/04 1:20 ☐ AM ☒ PM	SL-2 Discharge from Sawmill + mechanic shop area	dark gray w/ broken down woody particles	Sawdust + broken down woody particles on pavement	Clean pavement w/ vacuum/sweeper truck as-needed
4/20/04 1:30 ☐ AM ☒ PM	SL-3 Discharge from Sawmill, debarker and egstein log deck	Dark brown w/ broken down woody particles	Sawdust, bark + broken down woody particles on pavement	clean pavement w/ vacuum/sweeper truck and straw bales as-needed
4/20/04 1:35 ☐ AM ☒ PM	SL-4 Discharge from lumber storage, Sorter + southern log deck	Dark brown w/ broken down woody particles	Sawdust, bark + broken down woody particles on pavement	Clean pavement w/ vacuum/sweeper truck and straw bales/wattles as-needed
4/20/04 : ☐ AM ☐ PM	SL-5 → Not Flowing SL-6 → Infiltrating into ground ML-1 → Not Flowing		NA	NA

2003 - 2004

ANNUAL REPORT

FORM 4 (Continued)-MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

SIDE A

- Storm water discharge visual observations are required for at least one storm event per month between October 1 and May 31.
- Visual observations must be conducted during the first hour of discharge at all discharge locations.
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- Indicate "None" in the first column of this form if you did not conduct a monthly visual observation.
- Make additional copies of this form as necessary.
- Until a monthly visual observation is made, record any eligible storm events that do not result in a storm water discharge and note the date, time, name, and title of who observed there was no storm water discharge.

Observation Date: February ____ 2004 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	#1 SL-1	#2 SL-2	#3 SL-3	#4 SL-4
	Observation Time	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Time Discharge Began	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Observation Date: March ____ 2004 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	#1	#2	#3	#4
	Observation Time	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Time Discharge Began	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Observation Date: ~~April~~ May 27 2004 Observers Name: _____ Title: _____ Signature: _____	Drainage Location Description	~~#5~~ #5 SL-5	~~#6~~ #6 SL-6	~~#7~~ #7 ML-1	#4
	Observation Time	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Time Discharge Began	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.	: ☐ P.M. ☐ A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐	YES ☐ NO ☐
Observation Date: May 27 2004 Observers Name: Matt Hillyard Title: Environmental Engineer Signature: Matt Hillyard	Drainage Location Description	#1 SL-1	#2 SL-2	#3 SL-3	#4 SL-4
	Observation Time	1 :00 ☑ P.M. ☐ A.M.	12 :50 ☑ P.M. ☐ A.M.	12 :30 ☒ P.M. ☐ A.M.	12 :55 ☑ P.M. ☐ A.M.
	Time Discharge Began	12 :00 ☐ P.M. ☒ A.M.	12 :10 ☒ P.M. ☐ A.M.	11 :50 ☐ P.M. ☒ A.M.	11 :50 ☐ P.M. ☒ A.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES ☐ NO ☒	YES ☒ NO ☐	YES ☒ NO ☐	YES ☒ NO ☐

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SIDE B

FORM 4 (Continued)-MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

DATE/TIME OF OBSERVATION (From Reverse Side)	DRAINAGE AREA DESCRIPTION EXAMPLE: Discharge from material storage Area #2	DESCRIBE STORM WATER DISCHARGE CHARACTERISTICS Indicate whether storm water discharge is clear, cloudy, or discolored; causing staining; containing floating objects or an oil sheen, has odors, etc.	IDENTIFY AND DESCRIBE SOURCE(S) OF POLLUTANTS EXAMPLE: Oil sheen caused by oil dripped by trucks in vehicle maintenance area.	DESCRIBE ANY REVISED OR NEW BMPs AND THEIR DATE OF IMPLEMENTATION
5,27,04 12:30 ☐ AM ☒ PM	SL-3 Discharge from Sawmill, debarker and eastern log deck	Dark reddish brown w/ broken down woody particles	Sawdust, bark & broken down woody particles on pavement	Clean pavement w/ vacuum/sweeper truck as-needed
5,27,04 12:50 ☐ AM ☒ PM	SL-2 Discharge from Sawmill & mechanic shop area	dark gray w/ broken down woody particles	sawdust & broken down woody particles on pavement	Clean pavement w/ vacuum/sweeper truck as-needed
5,27,04 12:55 ☐ AM ☒ PM	SL-4 Discharge from lumber storage, sorter and Southern log deck	dark reddish brown w/ broken down woody particles	sawdust, bark & broken down woody particles on pavement	Clean pavement w/ vacuum/sweeper truck as-needed
5,27,04 1 pm ☐ AM ☒ PM	SL-1 discharge from dry shed	Clear	NA	NA
5,27,04 : ☐ AM ☐ PM	SL-5 → Not Flowing SL-6 → Infiltrating into ground ML-1 → Not Flowing		NA	NA

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SIDE A

FORM 5-ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION
POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY BMP STATUS

EVALUATION DATE: 4/7/04 INSPECTOR NAME: Tim Simpson TITLE: Engineer - Geomatrix SIGNATURE: Tim S

POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)			Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
Boneyard	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐YES ☒NO	If yes, to either question, complete the next two columns of this form	—	Consolidate scrap in one area, rather than several areas throughout site
	ARE ADDITIONAL/REVISED BMPs NECESSARY? ☒YES ☐NO			
Sawmill Area	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐YES ☒NO	If yes, to either question, complete the next two columns of this form	—	Clean out seperator more frequently
	ARE ADDITIONAL/REVISED BMPs NECESSARY? ☒YES ☐NO			
Dry Kiln Area	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐YES ☒NO	If yes, to either question, complete the next two columns of this form	—	—
	ARE ADDITIONAL/REVISED BMPs NECESSARY? ☐YES ☒NO			
Planer Area	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐YES ☒NO	If yes, to either question, complete the next two columns of this form	—	—
	ARE ADDITIONAL/REVISED BMPs NECESSARY? ☐YES ☒NO			

2003-2004

ANNUAL REPORT

SIDE B

FORM 5 (Continued)-ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION
POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY BMP STATUS

EVALUATION DATE: 4/7/04 INSPECTOR NAME: Timothy Simpson TITLE: Engineer - Geomatrix SIGNATURE: [signature]

POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)			Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
Equip Maint. Area	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐YES ☒NO ARE ADDITIONAL/REVISED BMPs NECESSARY? ☐YES ☒NO	If yes, to either question, complete the next two columns of this form	note: area drains to sewer	—
Fueling Area	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐YES ☒NO ARE ADDITIONAL/REVISED BMPs NECESSARY? ☐YES ☒NO	If yes, to either question, complete the next two columns of this form	—	—
Log Storage Area	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐YES ☒NO ARE ADDITIONAL/REVISED BMPs NECESSARY? ☒YES ☐NO	If yes, to either question, complete the next two columns of this form	—	Clean out seperator more frequently
Lumber Storage Area	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐YES ☒NO ARE ADDITIONAL/REVISED BMPs NECESSARY? ☐YES ☒NO	If yes, to either question, complete the next two columns of this form	—	—

APPENDIX B

Chain-of-Custody Records and Laboratory Analytical Reports

Laboratory reports in order of appearance:

Friedman & Bruya Project 309102 (Log Deck Sprinkle Ditch, Ditch #2, Vegetated Pond)
Alpha Analytical Work Order A310236
Frontier Analytical Project ID 2285
Frontier Analytical Project ID 2285 (Addendum)
Alpha Analytical Work Order A312034
Alpha Analytical Work Order A402242
Alpha Analytical Work Order A402244
North Coast Analytical Work Order No. 0404125
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)

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

TASK 6
SURFACE WATER SAMPLE

LOG DECK SPRINKLE DITCH
9/10/03

October 6, 2003

Ed Conti, Project Manager
MFG, Inc.
180 Howard St. Ste. 200
San Francisco, CA 94105

Dear Mr. Conti:

Included are the results from the testing of material submitted on September 12, 2003 from the SPI Arcata, 030229.19, F&BI 309102 project.

The water sample Log Deck Sprinkle Ditch was extracted and analyzed for Gasoline, Diesel, and Heavy Oil range organic compounds using GC/FID. Diesel range organic compounds and Motor Oil range organic compounds were analyzed and quantitated using Method 8015 Mod. The sample Log Deck Sprinkle Ditch was also analyzed for semivolatile organic compounds (SVOCs) using a GC fitted with a mass spectrometer (MS) after passing the extract through a silica gel column.

The results of the GC/FID analysis indicate the presence of Diesel and Motor Oil range organic compounds in the sample Log Deck Sprinkle Ditch. The results of the GC/MS analysis indicate the absence of organic compounds within this range after silica gel clean up. Therefore, the material present in the sample Log Deck Sprinkle Ditch is not likely a petroleum based material.

Please contact us if additional consultation is needed by our firm in the interpretation of the analytical results provided. We appreciate this opportunity to be of service to you and hope you will call if you should have any questions. We will hold your samples for 30 days before disposal unless directed otherwise.

Sincerely,

FRIEDMAN & BRUYA, INC.

Yelena Aravkina
Chemist

Enclosures
NAA1006R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/03
Date Received: 09/12/03
Project: SPI Arcata, 030229.19, F&BI 309102
Date Extracted: 09/17/03
Date Analyzed: 09/18/03

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR GASOLINE, DIESEL AND HEAVY OIL BY NWTPH-HCID
Results Reported as Not Detected (ND) or Detected (D)

THE DATA PROVIDED BELOW WAS PERFORMED PER THE GUIDELINES ESTABLISHED BY THE WASHINGTON DEPARTMENT OF ECOLOGY AND WERE NOT DESIGNED TO PROVIDE INFORMATION WITH REGARDS TO THE ACTUAL IDENTIFICATION OF ANY MATERIAL PRESENT

Sample ID Laboratory ID	Gasoline	Diesel	Heavy Oil	Surrogate (% Recovery)
Log Deck Sprinkle Ditch 309102-01	ND	D	D	88
Method Blank	ND	ND	ND	100

ND - Material not detected at or above 0.2 mg/L gas, 0.3 mg/L diesel and 0.5 mg/L heavy oil.

Date of Report: 10/06/03
Date Received: 09/12/03
Project: SPI Arcata, 030229.19, F&BI 309102
Date Extracted: 09/17/03
Date Analyzed: 09/18/03

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 51-151)
Log Deck Sprinkle Ditch 309102-01	1,300	76
Method Blank	<50	104

Date of Report: 10/06/03
Date Received: 09/12/03
Project: SPI Arcata, 030229.19, F&BI 309102
Date Extracted: 09/17/03
Date Analyzed: 09/18/03

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 51-151)
Log Deck Sprinkle Ditch 309102-01	1,100	76
Method Blank	<250	104

Analysis For Semivolatile Compounds By EPA Method 8270C

Client Sample ID:	Log Deck Sprinkle Ditch	Client:	MFG
Date Received:	09/12/03	Project:	SPI Arcata, 030229.19, F&BI 309102
Date Extracted:	09/15/03	Lab ID:	309102-01
Date Analyzed:	09/22/03	Data File:	092205.D
Matrix:	Water	Instrument:	GCMS3
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery	Lower Limit	Upper Limit
2-Fluorophenol	7 ip	23	74
Phenol-d6	0 ip	12	51
Nitrobenzene-d5	60 vo	62	108
2-Fluorobiphenyl	61	49	116
2,4,6-Tribromophenol	63	33	134
Terphenyl-d14	69	53	119

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<1
Bis(2-Chloroethyl) ether	<1	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<10
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<1	Diethyl phthalate	<1
Bis(2-chloroisopropyl) ether	<1	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl phenyl ether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<1	4-Nitroaniline	<1
4-Methylphenol	<10	4,6-Dinitro-2-methylphenol	<10
Nitrobenzene	<1	4-Bromophenyl phenyl ether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<100	Anthracene	<1
Bis(2-Chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butyl phthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Benzyl butyl phthalate	<1
4-Chloroaniline	<1	3,3'-Dichlorobenzidine	<1
4-Chloro-3-methylphenol	<10	Benz(a)anthracene	<1
2-Methylnaphthalene	<1	Chrysene	<1
Hexachlorocyclopentadiene	<1	Bis(2-Ethylhexyl) phthalate	<1
2,4,6-Trichlorophenol	<10	Di-n-octyl phthalate	<1
2,4,5-Trichlorophenol	<10	Benzo(a)pyrene	<1
2-Chloronaphthalene	<1	Benzo(b)fluoranthene	<1
2-Nitroaniline	<1	Benzo(k)fluoranthene	<1
Dimethyl phthalate	<1	Indeno(1,2,3-cd)pyrene	<1
Acenaphthylene	<1	Dibenzo(a,h)anthracene	<1
2,6-Dinitrotoluene	<1	Benzo(g,h,i)perylene	<1

ip - Recovery fell outside of normal control limits due to silica gel clean up.
vo - The value reported fell outside the control limits established for this analyte.

Analysis For Semivolatile Compounds By EPA Method 8270C

Client Sample ID:	Method Blank	Client:	MFG
Date Received:	Not Applicable	Project:	SPI Arcata, 030229.19, F&BI 309102
Date Extracted:	09/15/03	Lab ID:	03-1004 mb
Date Analyzed:	09/22/03	Data File:	092204.D
Matrix:	Water	Instrument:	GCMS3
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery	Lower Limit	Upper Limit
2-Fluorophenol	11 ip	23	74
Phenol-d6	0 ip	12	51
Nitrobenzene-d5	85	62	108
2-Fluorobiphenyl	89	49	116
2,4,6-Tribromophenol	93	33	134
Terphenyl-d14	92	53	119

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<1
Bis(2-Chloroethyl) ether	<1	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<10
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<1	Diethyl phthalate	<1
Bis(2-chloroisopropyl) ether	<1	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl phenyl ether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<1	4-Nitroaniline	<1
4-Methylphenol	<10	4,6-Dinitro-2-methylphenol	<10
Nitrobenzene	<1	4-Bromophenyl phenyl ether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<100	Anthracene	<1
Bis(2-Chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butyl phthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Benzyl butyl phthalate	<1
4-Chloroaniline	<1	3,3'-Dichlorobenzidine	<1
4-Chloro-3-methylphenol	<10	Benz(a)anthracene	<1
2-Methylnaphthalene	<1	Chrysene	<1
Hexachlorocyclopentadiene	<1	Bis(2-Ethylhexyl) phthalate	<1
2,4,6-Trichlorophenol	<10	Di-n-octyl phthalate	<1
2,4,5-Trichlorophenol	<10	Benzo(a)pyrene	<1
2-Chloronaphthalene	<1	Benzo(b)fluoranthene	<1
2-Nitroaniline	<1	Benzo(k)fluoranthene	<1
Dimethyl phthalate	<1	Indeno(1,2,3-cd)pyrene	<1
Acenaphthylene	<1	Dibenzo(a,h)anthracene	<1
2,6-Dinitrotoluene	<1	Benzo(g,h,i)perylene	<1

ip - Recovery fell outside of normal control limits due to silica gel clean up.

Date of Report: 10/06/03
Date Received: 09/12/03
Project: SPI Arcata, 030229.19, F&BI 309102

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel	µg/L (ppb)	2,500	117	119	71-128	2

Date of Report: 10/06/03
Date Received: 09/12/03
Project: SPI Arcata, 030229.19, F&BI 309102

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Motor Oil	µg/L (ppb)	5,000	88	102	71-128	15

309102 KJ 09/12/03 #05

MFG, INC.

CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS

COC No 46156

Arcata Office
875 Crescent Way
Arcata, CA 95521-6741
Phone (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

X 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

PROJECT NO: 030229.19 PROJECT NAME: SPI Arcata PAGE: 1 OF: 1

SAMPLER (Signature): Matt Hillyard PROJECT MANAGER: Ed Conti DATE: 9/10/03

METHOD OF SHIPMENT: FedEx Priority Overnight CARRIER/WAYBILL NO: DESTINATION: Friedman + Bruya

Lab ID	Field Sample Identification	DATE	TIME	Matrix*	HCl	HNO3	H2SO4	COLD		FILTRATION	VOLUME (ml/oz)	TYPE*	NO.	HCID	Silica Gel	GCMS ID	Temp	TPH-D/MO per Ed Conti (JM 9/10/03)	HOLD	RUSH	STANDARD	Remarks: * please provide 3 separate reports (one for each sample)
01 A-B	Log Deck Sprinkle Ditch	9/10	1400	AQ				X		U	Liter	G	2	X	X	X		X			X	Fax results to
02 A-B	Vegetated Pond	9/10	1430	AQ				X		U	Liter	G	2	X	X	X		X			X	Ed Conti
03 A-B	#2 Small	9/10	1445	AQ				X		U	Liter	G	2	X	X	X		X			X	call with any
																						questions
	Temp Blank	9/10	1530	AQ				X		U	40mL	G	1				X				X	

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	Matt Hillyard	MFG	9/11/03	9:30	Julie Mills	Julie Mills	MFG
Julie Mills	Julie Mills	MFG	9/11/03	1:00	Nhan Phan	Nhan Phan	F+BI 09/12/03 9:30 AM

LABORATORY

DISTRIBUTION

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

TASK 6
SURFACE WATER SAMPLE
DITCH #2 (small separate)
9/10/03

October 6, 2003

Ed Conti, Project Manager
MFG, Inc.
180 Howard St. Ste. 200
San Francisco, CA 94105

Dear Mr. Conti:

Included are the results from the testing of material submitted on September 12, 2003 from the SPI Arcata, 030229.19, F&BI 309102 project.

The water sample #2 Small was extracted and analyzed for Gasoline, Diesel, and Heavy Oil range organic compounds using GC/FID. Diesel range organic compounds and Motor Oil range organic compounds were analyzed and quantitated using Method 8015 Mod. The sample Log Deck Sprinkle Ditch was also analyzed for semivolatile organic compounds (SVOCs) using a GC fitted with a mass spectrometer (MS) after passing the extract through a silica gel column.

The results of the GC/FID analysis indicate the presence of Diesel and Motor Oil range organic compounds in the sample #2 Small. The results of the GC/MS analysis indicate the presence of a low amount of organic compounds within this range. The apparent absence of polycyclic aromatic hydrocarbons (PAHs) and typical biomarkers such as isoprenoids, terpanes, and steranes indicates that the material present in the sample #2 Small is not likely a petroleum based material.

Please contact us if additional consultation is needed by our firm in the interpretation of the analytical results provided. We appreciate this opportunity to be of service to you and hope you will call if you should have any questions. We will hold your samples for 30 days before disposal unless directed otherwise.

Sincerely,

FRIEDMAN & BRUYA, INC.

Yelena Aravkina
Chemist

Enclosures
NAA1006R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/03
Date Received: 09/12/03
Project: SPI Arcata, 030229.19, F&BI 309102
Date Extracted: 09/17/03
Date Analyzed: 09/18/03

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR GASOLINE, DIESEL AND HEAVY OIL BY NWTPH-HCID
Results Reported as Not Detected (ND) or Detected (D)

THE DATA PROVIDED BELOW WAS PERFORMED PER THE GUIDELINES ESTABLISHED BY THE WASHINGTON DEPARTMENT OF ECOLOGY AND WERE NOT DESIGNED TO PROVIDE INFORMATION WITH REGARDS TO THE ACTUAL IDENTIFICATION OF ANY MATERIAL PRESENT

Sample ID Laboratory ID	Gasoline	Diesel	Heavy Oil	Surrogate (% Recovery)
#2 Small 309102-03	D	D	D	ip
Method Blank	ND	ND	ND	100

ND - Material not detected at or above 0.2 mg/L gas, 0.3 mg/L diesel and 0.5 mg/L heavy oil.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

Date of Report: 10/06/03
Date Received: 09/12/03
Project: SPI Arcata, 030229.19, F&BI 309102
Date Extracted: 09/17/03
Date Analyzed: 09/18/03

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 51-151)
#2 Small 309102-03	29,000	ip
Method Blank	<50	104

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

Date of Report: 10/06/03
Date Received: 09/12/03
Project: SPI Arcata, 030229.19, F&BI 309102
Date Extracted: 09/17/03
Date Analyzed: 09/18/03

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 51-151)
#2 Small 309102-03	4,500	ip
Method Blank	<250	104

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

Analysis For Semivolatile Compounds By EPA Method 8270C

Client Sample ID:	#2 Small	Client:	MFG
Date Received:	09/12/03	Project:	SPI Arcata, 030229.19, F&BI 309102
Date Extracted:	09/15/03	Lab ID:	309102-03
Date Analyzed:	09/22/03	Data File:	092207.D
Matrix:	Water	Instrument:	GCMS3
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery	Lower Limit	Upper Limit
2-Fluorophenol	18 ip	23	74
Phenol-d6	1 ip	12	51
Nitrobenzene-d5	61 vo	62	108
2-Fluorobiphenyl	62	49	116
2,4,6-Tribromophenol	67	33	134
Terphenyl-d14	68	53	119

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<1
Bis(2-Chloroethyl) ether	<1	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<10
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<1	Diethyl phthalate	<1
Bis(2-chloroisopropyl) ether	<1	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl phenyl ether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<1	4-Nitroaniline	<1
4-Methylphenol	<10	4,6-Dinitro-2-methylphenol	<10
Nitrobenzene	<1	4-Bromophenyl phenyl ether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<100	Anthracene	<1
Bis(2-Chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butyl phthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Benzyl butyl phthalate	<1
4-Chloroaniline	<1	3,3'-Dichlorobenzidine	<1
4-Chloro-3-methylphenol	<10	Benz(a)anthracene	<1
2-Methylnaphthalene	<1	Chrysene	<1
Hexachlorocyclopentadiene	<1	Bis(2-Ethylhexyl) phthalate	1
2,4,6-Trichlorophenol	<10	Di-n-octyl phthalate	<1
2,4,5-Trichlorophenol	<10	Benzo(a)pyrene	<1
2-Chloronaphthalene	<1	Benzo(b)fluoranthene	<1
2-Nitroaniline	<1	Benzo(k)fluoranthene	<1
Dimethyl phthalate	<1	Indeno(1,2,3-cd)pyrene	<1
Acenaphthylene	<1	Dibenzo(a,h)anthracene	<1
2,6-Dinitrotoluene	<1	Benzo(g,h,i)perylene	<1

ip - Recovery fell outside of normal control limits due to silica gel clean up.
vo - The value reported fell outside the control limits established for this analyte.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270C

Client Sample ID:	Method Blank	Client:	MFG
Date Received:	Not Applicable	Project:	SPI Arcata, 030229.19, F&BI 309102
Date Extracted:	09/15/03	Lab ID:	03-1004 mb
Date Analyzed:	09/22/03	Data File:	092204.D
Matrix:	Water	Instrument:	GCMS3
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery	Lower Limit	Upper Limit
2-Fluorophenol	11 ip	23	74
Phenol-d6	0 ip	12	51
Nitrobenzene-d5	85	62	108
2-Fluorobiphenyl	89	49	116
2,4,6-Tribromophenol	93	33	134
Terphenyl-d14	92	53	119

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<1
Bis(2-Chloroethyl) ether	<1	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<10
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<1	Diethyl phthalate	<1
Bis(2-chloroisopropyl) ether	<1	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl phenyl ether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<1	4-Nitroaniline	<1
4-Methylphenol	<10	4,6-Dinitro-2-methylphenol	<10
Nitrobenzene	<1	4-Bromophenyl phenyl ether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<100	Anthracene	<1
Bis(2-Chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butyl phthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Benzyl butyl phthalate	<1
4-Chloroaniline	<1	3,3'-Dichlorobenzidine	<1
4-Chloro-3-methylphenol	<10	Benz(a)anthracene	<1
2-Methylnaphthalene	<1	Chrysene	<1
Hexachlorocyclopentadiene	<1	Bis(2-Ethylhexyl) phthalate	<1
2,4,6-Trichlorophenol	<10	Di-n-octyl phthalate	<1
2,4,5-Trichlorophenol	<10	Benzo(a)pyrene	<1
2-Chloronaphthalene	<1	Benzo(b)fluoranthene	<1
2-Nitroaniline	<1	Benzo(k)fluoranthene	<1
Dimethyl phthalate	<1	Indeno(1,2,3-cd)pyrene	<1
Acenaphthylene	<1	Dibenzo(a,h)anthracene	<1
2,6-Dinitrotoluene	<1	Benzo(g,h,i)perylene	<1

ip - Recovery fell outside of normal control limits due to silica gel clean up.

Date of Report: 10/06/03
Date Received: 09/12/03
Project: SPI Arcata, 030229.19, F&BI 309102

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel	µg/L (ppb)	2,500	117	119	71-128	2

Date of Report: 10/06/03
Date Received: 09/12/03
Project: SPI Arcata, 030229.19, F&BI 309102

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Motor Oil	µg/L (ppb)	5,000	88	102	71-128	15

309102 KJ 09/12/03 A05

MFG, INC.

CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS

COC No 46156

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Lynnwood, WA 98036
Tel (425) 921-4000
Fax (425) 921-4040

PROJECT NO: 030229.19 PROJECT NAME: SPI Arcata PAGE: 1 OF: 1

SAMPLER (Signature): Matt Hilyard PROJECT MANAGER: Ed Conti DATE: 9/10/03

METHOD OF SHIPMENT: FedEx Priority Overnight CARRIER/WAYBILL NO: _____ DESTINATION: Friedman + Bruya

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: HCID	Silica Gel	GCMS ID	Temp	TPH-D/MO per Ed Conti 6/16/03	Handling: HOLD	RUSH	STANDARD	Remarks
01 A-B	Log Deck Sprinkle Ditch	9/10	1400	AQ				X		U	Liter	G	2	X	X	X		X			X	* please provide 3 separate reports (one for each sample)
02 A-B	Vegetated Pond	9/10	1430	AQ				X		U	Liter	G	2	X	X	X		X			X	Fax results to Ed Conti
03 A-B	#2 Small	9/10	1445	AQ				X		U	Liter	G	2	X	X	X		X			X	Call with any questions
	Temp Blank	9/10	1530	AQ				X		U	40mL	G	1				X				X	

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 Hilyard	Matt Hilyard	MFG	9/11/03	9:30	Julie Mills	Julie Mills	MFG
Julie Mills	Julie Mills	MFG	9/11/03	1:60	Nhan Phan	Nhan Phan	FTBI 09/12/03 9:30

DISTRIBUTION

FILE 9329

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
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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

October 6, 2003

TASK 19
SURFACE WATER SAMPLE
VEGETATED POND 9/10/03

Ed Conti, Project Manager
MFG, Inc.
180 Howard St. Ste. 200
San Francisco, CA 94105

Dear Mr. Conti:

Included are the results from the testing of material submitted on September 12, 2003 from the SPI Arcata, 030229.19, F&BI 309102 project.

The water sample Vegetated Pond was extracted and analyzed for Gasoline, Diesel, and Heavy Oil range organic compounds using GC/FID. Diesel range organic compounds and Motor Oil range organic compounds were analyzed and quantitated using Method 8015 Mod. The sample Vegetated Pond was also analyzed for semivolatile organic compounds (SVOCs) using a GC fitted with a mass spectrometer (MS) after passing the extract through a silica gel column.

The results of the GC/FID analysis indicate the presence of Diesel and Motor Oil range organic compounds in the sample Vegetated Pond. The results of the GC/MS analysis indicate the absence of organic compounds within this range after silica gel clean up. Therefore, the material present in the sample Vegetated Pond is not likely a petroleum based material.

Please contact us if additional consultation is needed by our firm in the interpretation of the analytical results provided. We appreciate this opportunity to be of service to you and hope you will call if you should have any questions. We will hold your samples for 30 days before disposal unless directed otherwise.

Sincerely,

FRIEDMAN & BRUYA, INC.

Yelena Aravkina
Chemist

Enclosures
NAA1006R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/03
Date Received: 09/12/03
Project: SPI Arcata, 030229.19, F&BI 309102
Date Extracted: 09/17/03
Date Analyzed: 09/18/03

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR GASOLINE, DIESEL AND HEAVY OIL BY NWTPH-HCID
Results Reported as Not Detected (ND) or Detected (D)

THE DATA PROVIDED BELOW WAS PERFORMED PER THE GUIDELINES ESTABLISHED BY THE WASHINGTON DEPARTMENT OF ECOLOGY AND WERE NOT DESIGNED TO PROVIDE INFORMATION WITH REGARDS TO THE ACTUAL IDENTIFICATION OF ANY MATERIAL PRESENT

Sample ID Laboratory ID	Gasoline	Diesel	Heavy Oil	Surrogate (% Recovery)
Vegetated Pond 309102-02	ND	D	D	117
Method Blank	ND	ND	ND	100

ND - Material not detected at or above 0.2 mg/L gas, 0.3 mg/L diesel and 0.5 mg/L heavy oil.

Date of Report: 10/06/03
Date Received: 09/12/03
Project: SPI Arcata, 030229.19, F&BI 309102
Date Extracted: 09/17/03
Date Analyzed: 09/18/03

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 51-151)
Vegetated Pond 309102-02	930	106
Method Blank	<50	104

quantitation of the analyte.

Date of Report: 10/06/03
Date Received: 09/12/03
Project: SPI Arcata, 030229.19, F&BI 309102
Date Extracted: 09/17/03
Date Analyzed: 09/18/03

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 51-151)
Vegetated Pond 309102-02	1,100	106
Method Blank	<250	104

Analysis For Semivolatile Compounds By EPA Method 8270C

Client Sample ID:	Vegetated Pond	Client:	MFG
Date Received:	09/12/03	Project:	SPI Arcata, 030229.19, F&BI 309102
Date Extracted:	09/15/03	Lab ID:	309102-02
Date Analyzed:	09/22/03	Data File:	092206.D
Matrix:	Water	Instrument:	GCMS3
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery	Lower Limit	Upper Limit
2-Fluorophenol	11 ip	23	74
Phenol-d6	1 ip	12	51
Nitrobenzene-d5	78	62	108
2-Fluorobiphenyl	81	49	116
2,4,6-Tribromophenol	84	33	134
Terphenyl-d14	90	53	119

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<10	3-Nitroaniline	<1
Bis(2-Chloroethyl) ether	<1	Acenaphthene	<1
2-Chlorophenol	<10	2,4-Dinitrophenol	<10
1,3-Dichlorobenzene	<1	Dibenzofuran	<1
1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<1	Diethyl phthalate	<1
Bis(2-chloroisopropyl) ether	<1	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl phenyl ether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<1	4-Nitroaniline	<1
4-Methylphenol	<10	4,6-Dinitro-2-methylphenol	<10
Nitrobenzene	<1	4-Bromophenyl phenyl ether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<100	Anthracene	<1
Bis(2-Chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butyl phthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Benzyl butyl phthalate	<1
4-Chloroaniline	<1	3,3'-Dichlorobenzidine	<1
4-Chloro-3-methylphenol	<10	Benz(a)anthracene	<1
2-Methylnaphthalene	<1	Chrysene	<1
Hexachlorocyclopentadiene	<1	Bis(2-Ethylhexyl) phthalate	<1
2,4,6-Trichlorophenol	<10	Di-n-octyl phthalate	<1
2,4,5-Trichlorophenol	<10	Benzo(a)pyrene	<1
2-Chloronaphthalene	<1	Benzo(b)fluoranthene	<1
2-Nitroaniline	<1	Benzo(k)fluoranthene	<1
Dimethyl phthalate	<1	Indeno(1,2,3-cd)pyrene	<1
Acenaphthylene	<1	Dibenzo(a,h)anthracene	<1
2,6-Dinitrotoluene	<1	Benzo(g,h,i)perylene	<1

ip - Recovery fell outside of normal control limits due to silica gel clean up.

Analysis For Semivolatile Compounds By EPA Method 8270C

Client Sample ID:	Method Blank	Client:	MFG
Date Received:	Not Applicable	Project:	SPI Arcata, 030229.19, F&BI 309102
Date Extracted:	09/15/03	Lab ID:	03-1004 mb
Date Analyzed:	09/22/03	Data File:	092204.D
Matrix:	Water	Instrument:	GCMS3
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery	Lower Limit	Upper Limit
2-Fluorophenol	11 ip	23	74
Phenol-d6	0 ip	12	51
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2,4,6-Tribromophenol	93	33	134
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Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
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1,4-Dichlorobenzene	<1	2,4-Dinitrotoluene	<1
1,2-Dichlorobenzene	<1	4-Nitrophenol	<10
Benzyl alcohol	<1	Diethyl phthalate	<1
Bis(2-chloroisopropyl) ether	<1	Fluorene	<1
2-Methylphenol	<10	4-Chlorophenyl phenyl ether	<1
Hexachloroethane	<1	N-Nitrosodiphenylamine	<1
N-Nitroso-di-n-propylamine	<1	4-Nitroaniline	<1
4-Methylphenol	<10	4,6-Dinitro-2-methylphenol	<10
Nitrobenzene	<1	4-Bromophenyl phenyl ether	<1
Isophorone	<1	Hexachlorobenzene	<1
2-Nitrophenol	<10	Pentachlorophenol	<10
2,4-Dimethylphenol	<10	Phenanthrene	<1
Benzoic acid	<100	Anthracene	<1
Bis(2-Chloroethoxy)methane	<1	Carbazole	<1
2,4-Dichlorophenol	<10	Di-n-butyl phthalate	<1
1,2,4-Trichlorobenzene	<1	Fluoranthene	<1
Naphthalene	<1	Pyrene	<1
Hexachlorobutadiene	<1	Benzyl butyl phthalate	<1
4-Chloroaniline	<1	3,3'-Dichlorobenzidine	<1
4-Chloro-3-methylphenol	<10	Benz(a)anthracene	<1
2-Methylnaphthalene	<1	Chrysene	<1
Hexachlorocyclopentadiene	<1	Bis(2-Ethylhexyl) phthalate	<1
2,4,6-Trichlorophenol	<10	Di-n-octyl phthalate	<1
2,4,5-Trichlorophenol	<10	Benzo(a)pyrene	<1
2-Chloronaphthalene	<1	Benzo(b)fluoranthene	<1
2-Nitroaniline	<1	Benzo(k)fluoranthene	<1
Dimethyl phthalate	<1	Indeno(1,2,3-cd)pyrene	<1
Acenaphthylene	<1	Dibenzo(a,h)anthracene	<1
2,6-Dinitrotoluene	<1	Benzo(g,h,i)perylene	<1

ip - Recovery fell outside of normal control limits due to silica gel clean up.

Date of Report: 10/06/03
Date Received: 09/12/03
Project: SPI Arcata, 030229.19, F&BI 309102

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel	µg/L (ppb)	2,500	117	119	71-128	2

Date of Report: 10/06/03
Date Received: 09/12/03
Project: SPI Arcata, 030229.19, F&BI 309102

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Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Motor Oil	µg/L (ppb)	5,000	88	102	71-128	15

309102 KJ 09/12/03 A05

MFG, INC.

CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS

COC No: 46156

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Ste. 100
Lynnwood, WA 98036
Tel (425) 921-4000
Fax (425) 921-4040

PROJECT NO: 030229.19 PROJECT NAME: SPI Arcata PAGE: 1 OF: 1

SAMPLER (Signature): Matt Hillyard PROJECT MANAGER: Ed Conti DATE: 9/10/03

METHOD OF SHIPMENT: FedEx Priority Overnight CARRIER/WAYBILL NO: _____ DESTINATION: Friedman + Bruya

abID	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: HCFD	Silica Gel	GC/MS ID	Temp	TPH-D/MD per Ed Conti 1/21/03	Handling: HOLD	RUSH	STANDARD	Remarks
01 A-B	Log Deck Sprinkle Ditch	9/10	1400	AQ				X		U	Liter	G	2	X	X	X		X			X	* please provide 3 separate reports (one for each sample)
02 A-B	Vegetated Pond	9/10	1430	AQ				X		U	Liter	G	2	X	X	X		X			X	Fax results to Ed Conti
03 A-B	#2 Small	9/10	1445	AQ				X		U	Liter	G	2	X	X	X		X			X	Call with any questions
	Temp Blank	9/10	1530	AQ				X		U	40mL	G	1				X				X	

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	Matt Hillyard	MFG	9/11/03	9:30	Julie Mills	Julie Mills	MFG
Julie Mills	Julie Mills	MFG	9/11/03	1:00	Nhan Phan	Nhan Phan	F+BI 09/12/03 9:30 AM

DISTRIBUTION

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

TASK 6 - STORM WATER SAMPLES
OCTOBER 8, 2003
SL-1 → SL-4

24 October 2003

MFG, Inc - Arcata
Attn: Mike Tretze
875 Crescent Way
Arcata, CA 95521
RE: SPI Arcata 2
Work Order: A310236

Enclosed are the results of analyses for samples received by the laboratory on 10/09/03 16:10. 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

MFG, Inc - Arcata
875 Crescent Way
Arcata, CA 95521
Attn: Mike Tretze

Report Date: 10/24/03 08:30
Project No: 030229.6
Project ID: SPI Arcata 2

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A310236	10/09/2003 16:10	MFGARC	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SL-1	A310236-01	Water	10/08/03 15:45	10/09/03 16:10
SL-2	A310236-02	Water	10/08/03 15:15	10/09/03 16:10
SL-3	A310236-03	Water	10/08/03 14:45	10/09/03 16:10
SL-4	A310236-04	Water	10/08/03 16:30	10/09/03 16:10

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 For Sheri L. Speaks
Project Manager

10/24/2003

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

MFG, Inc - Arcata
875 Crescent Way
Arcata, CA 95521
Attn: Mike Tretze

Report Date: 10/24/03 08:30
Project No: 030229.6
Project ID: SPI Arcata 2

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A310236	10/09/2003 16:10	MFGARC	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		PQL	NOTE
SL-1 (A310236-01)			**Sample Type: Water**			**Sampled: 10/08/03 15:45**			
Metals by EPA 200 Series Methods									
Arsenic	EPA 200.9	AJ31601	10/16/03	10/23/03	1	**0.0025 mg/l**		**0.0020**	
Copper	EPA 200.7	"	"	10/21/03	"	**0.030 "**		**0.020**	
Zinc	"	"	"	"	"	**0.88 "**		**0.020**	
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AJ31709	10/15/03	10/16/03	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	"	"	"	"		*81.1 %*	*79-119*		
Conventional Chemistry Parameters by APHA/EPA Methods									
Chemical Oxygen Demand	SM5220D	AJ31312	10/17/03	10/20/03	1	**210 mg/l**		**10**	
Specific Conductance (EC)	EPA 120.1	AJ31005	10/10/03	10/10/03	"	**1600 umhos/cm**		**20**	
Oil & Grease (HEM-SG)	EPA 1664	AJ31517	10/15/03	10/17/03	"	ND mg/l		5.0	
Total Suspended Solids	EPA 160.2	AJ31316	10/13/03	10/15/03	"	**25 "**		**1.0**	
Tannins & Lignins	SM 5550B	AJ32215	10/21/03	10/21/03	2	**12 "**		**0.20**	
TPH as Diesel and Motor Oil by EPA Method 8015 Modified									
TPH as Diesel	8015DRO	AJ31515	10/15/03	10/15/03	1	ND ug/l		50	
TPH as Motor Oil	"	"	"	"	1.0204	**220 "**		**100**	
Surrogate: 1,4-Bromofluorobenzene	"	"	"	"		*52.5 %*	*38-120*		

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Melanie B. Neece For Sheri L. Speaks
Project Manager

10/24/2003

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MFG, Inc - Arcata
875 Crescent Way
Arcata, CA 95521
Attn: Mike Tretze

Report Date: 10/24/03 08:30
Project No: 030229.6
Project ID: SPI Arcata 2

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A310236	10/09/2003 16:10	MFGARC	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		PQL	NOTE
SL-1 (A310236-01)			**Sample Type: Water**			**Sampled: 10/08/03 15:45**			
TPH as Gasoline by GCFID/5030									
TPH as Gasoline	8015GRO	AJ31612	10/14/03	10/14/03	1	ND ug/l		50	
Surrogate: 1,4-Bromofluorobenzene	"	"	"	"		*117 %*	*63-150*		
SL-2 (A310236-02)			**Sample Type: Water**			**Sampled: 10/08/03 15:15**			
Metals by EPA 200 Series Methods									
Arsenic	EPA 200.9	AJ31601	10/16/03	10/23/03	1	**0.0041 mg/l**		**0.0020**	
Cadmium	EPA 200.7	"	"	10/21/03	"	ND "		0.010	
Chromium	"	"	"	"	"	ND "		0.010	
Copper	"	"	"	"	"	ND "		0.020	
Nickel	"	"	"	"	"	**0.013 "**		**0.010**	
Lead	EPA 200.9	"	"	10/21/03	"	**0.0067 "**		**0.0050**	
Zinc	EPA 200.7	"	"	10/21/03	"	**1.6 "**		**0.020**	
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AJ31709	10/15/03	10/16/03	1	ND ug/l		1.0	
2,3,5,6-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
2,3,4,6-Tetrachlorophenol	"	"	"	"	"	**1.8 "**		**1.0**	
2,3,4,5-Tetrachlorophenol	"	"	"	"	"	ND "		1.0	
Pentachlorophenol	"	"	"	"	"	**2.6 "**		**1.0**	
Surrogate: Tribromophenol	"	"	"	"		*105 %*	*79-119*		
Conventional Chemistry Parameters by APHA/EPA Methods									
Chemical Oxygen Demand	SM5220D	AJ31312	10/17/03	10/20/03	1	**620 mg/l**		**10**	
Specific Conductance (EC)	EPA 120.1	AJ31005	10/10/03	10/10/03	"	**4100 umhos/cm**		**20**	
Oil & Grease (HEM-SG)	EPA 1664	AJ31517	10/15/03	10/17/03	"	**24 mg/l**		**5.0**	
Total Suspended Solids	EPA 160.2	AJ31316	10/13/03	10/15/03	"	**130 "**		**1.0**	
Tannins & Lignins	SM 5550B	AJ32215	10/21/03	10/21/03	25	**66 "**		**25**	

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Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A310236	10/09/2003 16:10	MFGARC	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		PQL	NOTE
SL-2 (A310236-02)			**Sample Type: Water**			**Sampled: 10/08/03 15:15**			
TPH as Diesel and Motor Oil by EPA Method 8015 Modified									
TPH as Diesel	8015DRO	AJ31515	10/15/03	10/15/03	1.087	**940 ug/l**		**54**	
TPH as Motor Oil	"	"	"	"	"	**970 "**		**110**	
Surrogate: 1,4-Bromofluorobenzene	"	"	"	"		*45.3 %*	*38-120*		
TPH as Gasoline by GCFID/5030									
TPH as Gasoline	8015GRO	AJ31612	10/14/03	10/14/03	1	**93 ug/l**		**50**	
Surrogate: 1,4-Bromofluorobenzene	"	"	"	"		*113 %*	*63-150*		
SL-3 (A310236-03)			**Sample Type: Water**			**Sampled: 10/08/03 14:45**			
Metals by EPA 200 Series Methods									
Arsenic	EPA 200.9	AJ31601	10/16/03	10/23/03	10	**0.094 mg/l**		**0.020**	
Copper	EPA 200.7	"	"	10/21/03	4	**0.32 "**		**0.080**	
Zinc	"	"	"	"	"	**1.4 "**		**0.080**	
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AJ31709	10/15/03	10/16/03	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	"	"	"	"		*92.0 %*	*79-119*		

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Melanie B. Neece For Sheri L. Speaks 10/24/2003
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Attn: Mike Tretze

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Project No: 030229.6
Project ID: SPI Arcata 2

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A310236	10/09/2003 16:10	MFGARC	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		PQL	NOTE
SL-3 (A310236-03)			**Sample Type: Water**			**Sampled: 10/08/03 14:45**			
Conventional Chemistry Parameters by APHA/EPA Methods									
Chemical Oxygen Demand	SM5220D	AJ31312	10/17/03	10/20/03	10	**8500 mg/l**		**100**	
Specific Conductance (EC)	EPA 120.1	AJ31005	10/10/03	10/10/03	1	**1100 umhos/cm**		**20**	
Oil & Grease (HEM-SG)	EPA 1664	AJ31517	10/15/03	10/17/03	"	ND mg/l		5.0	
Total Suspended Solids	EPA 160.2	AJ31316	10/13/03	10/15/03	"	**4500 "**		**1.0**	
Tannins & Lignins	SM 5550B	AJ32215	10/21/03	10/21/03	50	**290 "**		**5.0**	
TPH as Diesel and Motor Oil by EPA Method 8015 Modified									
TPH as Diesel	8015DRO	AJ31515	10/15/03	10/15/03	13.33	**2000 ug/l**		**670**	
TPH as Motor Oil	"	"	"	"	"	**17000 "**		**1300**	
Surrogate: 1,4-Bromofluorobenzene	"	"	"	"		*21.6 %*	*38-120*		*S-06*
TPH as Gasoline by GCFID/5030									
TPH as Gasoline	8015GRO	AJ31612	10/14/03	10/14/03	1	**93 ug/l**		**50**	
Surrogate: 1,4-Bromofluorobenzene	"	"	"	"		*116 %*	*63-150*		
SL-4 (A310236-04)			**Sample Type: Water**			**Sampled: 10/08/03 16:30**			
Metals by EPA 200 Series Methods									
Arsenic	EPA 200.9	AJ31601	10/16/03	10/23/03	1	**0.042 mg/l**		**0.0020**	
Copper	EPA 200.7	"	"	10/21/03	"	**0.040 "**		**0.020**	
Zinc	"	"	"	"	"	**0.62 "**		**0.020**	
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AJ31709	10/15/03	10/16/03	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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Melanie B. Neece

Tetra Tech/MFG, Inc.

Melanie B. Neece For Sheri L. Speaks
Project Manager

10/24/2003

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875 Crescent Way
Arcata, CA 95521
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Report Date: 10/24/03 08:30
Project No: 030229.6
Project ID: SPI Arcata 2

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A310236	10/09/2003 16:10	MFGARC	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		PQL	NOTE
SL-4 (A310236-04)			**Sample Type: Water**			**Sampled: 10/08/03 16:30**			
Conventional Chemistry Parameters by APHA/EPA Methods									
Chemical Oxygen Demand	SM5220D	AJ31312	10/17/03	10/20/03	1	**650 mg/l**		**10**	
Specific Conductance (EC)	EPA 120.1	AJ31005	10/10/03	10/10/03	"	**530 umhos/cm**		**20**	
Oil & Grease (HEM-SG)	EPA 1664	AJ31517	10/15/03	10/17/03	"	ND mg/l		5.0	
Total Suspended Solids	EPA 160.2	AJ31316	10/13/03	10/15/03	"	**750 "**		**1.0**	
Tannins & Lignins	SM 5550B	AJ32215	10/21/03	10/21/03	25	**33 "**		**2.5**	
TPH as Diesel and Motor Oil by EPA Method 8015 Modified									
TPH as Diesel	8015DRO	AJ31515	10/15/03	10/15/03	1.0526	**61 ug/l**		**53**	
TPH as Motor Oil	"	"	"	"	"	**740 "**		**110**	
Surrogate: 1,4-Bromofluorobenzene	"	"	"	"		*40.9 %*	*38-120*		
TPH as Gasoline by GCFID/5030									
TPH as Gasoline	8015GRO	AJ31612	10/14/03	10/14/03	1	**50 ug/l**		**50**	
Surrogate: 1,4-Bromofluorobenzene	"	"	"	"		*103 %*	*63-150*		

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SourceResult

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 AJ31601 - EPA 3005A SoftDigest										
Blank (AJ31601-BLK1)				Prepared: 10/16/03 Analyzed: 10/23/03						
Arsenic	ND	0.0020	mg/l							
Cadmium	ND	0.010	"							
Chromium	ND	0.010	"							
Copper	ND	0.020	"							
Lead	ND	0.050	"							
Nickel	ND	0.010	"							
Zinc	ND	0.020	"							
LCS (AJ31601-BS1)				Prepared: 10/16/03 Analyzed: 10/23/03						
Arsenic	0.0209	0.0020	mg/l	0.0200		104	85-115			
Cadmium	0.203	0.010	"	0.200		102	85-115			
Chromium	0.197	0.010	"	0.200		98.5	85-115			
Copper	0.199	0.020	"	0.200		99.5	85-115			
Lead	0.212	0.050	"	0.200		106	85-115			
Nickel	0.205	0.010	"	0.200		102	85-115			
Zinc	0.210	0.020	"	0.200		105	93.4-127			
LCS Dup (AJ31601-BSD1)				Prepared: 10/16/03 Analyzed: 10/23/03						
Arsenic	0.0214	0.0020	mg/l	0.0200		107	85-115	2.36	20	
Cadmium	0.206	0.010	"	0.200		103	85-115	1.47	20	
Chromium	0.202	0.010	"	0.200		101	85-115	2.51	20	
Copper	0.208	0.020	"	0.200		104	85-115	4.42	20	
Lead	0.205	0.050	"	0.200		102	85-115	3.36	20	
Nickel	0.205	0.010	"	0.200		102	85-115	0.00	20	
Zinc	0.205	0.020	"	0.200		102	93.4-127	2.41	20	
Duplicate (AJ31601-DUP1)	**Source: A310345-01**			Prepared: 10/16/03 Analyzed: 10/23/03						

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A310236	10/09/2003 16:10	MFGARC	

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 AJ31601 - EPA 3005A SoftDigest										
Duplicate (AJ31601-DUP1)		**Source: A310345-01**		Prepared: 10/16/03		Analyzed: 10/23/03				
Arsenic	ND	0.0020	mg/l		ND				20	
Cadmium	ND	0.010	"		ND				20	
Chromium	ND	0.010	"		ND				20	
Copper	ND	0.020	"		ND				20	
Lead	ND	0.0050	"		ND				20	
Nickel	ND	0.010	"		ND				20	
Zinc	ND	0.020	"		ND				20	
Matrix Spike (AJ31601-MS1)		**Source: A310345-01**		Prepared: 10/16/03		Analyzed: 10/23/03				
Arsenic	0.0231	0.0020	mg/l	0.0200	ND	108	70-130			
Cadmium	0.209	0.010	"	0.200	ND	104	70-130			
Chromium	0.205	0.010	"	0.200	ND	102	70-130			
Copper	0.213	0.020	"	0.200	ND	106	70-130			
Lead	0.212	0.050	"	0.200	ND	105	70-130			
Nickel	0.211	0.010	"	0.200	ND	106	70-130			
Zinc	0.224	0.020	"	0.200	ND	105	70-130			
Matrix Spike Dup (AJ31601-MSD1)		**Source: A310345-01**		Prepared: 10/16/03		Analyzed: 10/23/03				
Arsenic	0.0236	0.0020	mg/l	0.0200	ND	110	70-130	2.14	20	
Cadmium	0.207	0.010	"	0.200	ND	104	70-130	0.962	20	
Chromium	0.203	0.010	"	0.200	ND	102	70-130	0.980	20	
Copper	0.208	0.020	"	0.200	ND	104	70-130	2.38	20	
Lead	0.190	0.050	"	0.200	ND	94.0	70-130	10.9	20	
Nickel	0.210	0.010	"	0.200	ND	105	70-130	0.475	20	
Zinc	0.229	0.020	"	0.200	ND	108	70-130	2.21	20	

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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 AJ31709 - Solvent Extraction										
Blank (AJ31709-BLK1)				Prepared & Analyzed: 10/15/03						
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	*24.9*		"	*24.9*		*100*	*79-119*			
LCS (AJ31709-BS1)				Prepared & Analyzed: 10/15/03						
2,4,6-Trichlorophenol	4.46	1.0	ug/l	5.00		89.2	81-120			
2,3,5,6-Tetrachlorophenol	5.09	1.0	"	5.00		102	78-108			
2,3,4,6-Tetrachlorophenol	4.66	1.0	"	5.00		93.2	76-108			
2,3,4,5-Tetrachlorophenol	4.79	1.0	"	5.00		95.8	80-116			
Pentachlorophenol	4.90	1.0	"	5.00		98.0	86-109			
Surrogate: Tribromophenol	*26.3*		"	*24.9*		*106*	*79-119*			
Matrix Spike (AJ31709-MS1)	**Source: A310236-01**			Prepared & Analyzed: 10/15/03						
2,4,6-Trichlorophenol	4.27	1.0	ug/l	5.00	ND	85.4	75-125			
2,3,5,6-Tetrachlorophenol	4.72	1.0	"	5.00	ND	94.4	69-115			
2,3,4,6-Tetrachlorophenol	4.51	1.0	"	5.00	ND	90.2	66-117			
2,3,4,5-Tetrachlorophenol	4.13	1.0	"	5.00	ND	82.6	70-115			
Pentachlorophenol	5.46	1.0	"	5.00	ND	96.4	55-124			
Surrogate: Tribromophenol	*23.0*		"	*24.9*		*92.4*	*79-119*			
Matrix Spike Dup (AJ31709-MSD1)	**Source: A310236-01**			Prepared & Analyzed: 10/15/03						
2,4,6-Trichlorophenol	4.40	1.0	ug/l	5.00	ND	88.0	75-125	3.00	20	
2,3,5,6-Tetrachlorophenol	4.95	1.0	"	5.00	ND	99.0	69-115	4.76	20	
2,3,4,6-Tetrachlorophenol	4.67	1.0	"	5.00	ND	93.4	66-117	3.49	20	

Melanie B. Neece

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875 Crescent Way
Arcata, CA 95521
Attn: Mike Tretze

Report Date: 10/24/03 08:30
Project No: 030229.6
Project ID: SPI Arcata 2

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A310236	10/09/2003 16:10	MFGARC	

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 AJ31709 - Solvent Extraction										
Matrix Spike Dup (AJ31709-MSD1)	**Source: A310236-01**			Prepared & Analyzed: 10/15/03						
2,3,4,5-Tetrachlorophenol	4.24	1.0	"	5.00	ND	84.8	70-115	2.63	20	
Pentachlorophenol	5.59	1.0	"	5.00	ND	99.0	55-124	2.35	20	
Surrogate: Tribromophenol	*24.1*		"	*24.9*		*96.8*	*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.

Tetra Tech/MFG, Inc.

Melanie B. Neece For Sheri L. Speaks
Project Manager

10/24/2003

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

MFG, Inc - Arcata
875 Crescent Way
Arcata, CA 95521
Attn: Mike Tretze

Report Date: 10/24/03 08:30
Project No: 030229.6
Project ID: SPI Arcata 2

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A310236	10/09/2003 16:10	MFGARC	

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 AJ31312 - General Preparation										
Blank (AJ31312-BLK1)				Prepared: 10/17/03 Analyzed: 10/20/03						
Chemical Oxygen Demand	ND	10	mg/l							
LCS (AJ31312-BS1)				Prepared: 10/17/03 Analyzed: 10/20/03						
Chemical Oxygen Demand	603	10	mg/l	600		100	85-115			
LCS Dup (AJ31312-BSD1)				Prepared: 10/17/03 Analyzed: 10/20/03						
Chemical Oxygen Demand	600	10	mg/l	600		100	85-115	0.499	10	
Matrix Spike (AJ31312-MS1)		Source: A310236-01		Prepared: 10/17/03 Analyzed: 10/20/03						
Chemical Oxygen Demand	478	10	mg/l	250	210	107	85-115			
Matrix Spike Dup (AJ31312-MSD1)		Source: A310236-01		Prepared: 10/17/03 Analyzed: 10/20/03						
Chemical Oxygen Demand	485	10	mg/l	250	210	110	85-115	1.45	10	
Batch AJ31316 - General Preparation										
Blank (AJ31316-BLK1)				Prepared: 10/13/03 Analyzed: 10/15/03						
Total Suspended Solids	ND	1.0	mg/l							
Duplicate (AJ31316-DUP1)		Source: A310219-02		Prepared: 10/13/03 Analyzed: 10/15/03						
Total Suspended Solids	3580	1.0	mg/l		3700			3.30	30	
Batch AJ31517 - General Preparation										
Blank (AJ31517-BLK1)				Prepared: 10/15/03 Analyzed: 10/17/03						
Oil & Grease (HEM-SG)	ND	5.0	mg/l							

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Report Date: 10/24/03 08:30
Project No: 030229.6
Project ID: SPI Arcata 2

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A310236	10/09/2003 16:10	MFGARC	

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 AJ31517 - General Preparation										
LCS (AJ31517-BS1)				Prepared: 10/15/03 Analyzed: 10/17/03						
Oil & Grease (HEM-SG)	9.10	5.0	mg/l	10.0		91.0	83-116			
LCS Dup (AJ31517-BSD1)				Prepared: 10/15/03 Analyzed: 10/17/03						
Oil & Grease (HEM-SG)	8.80	5.0	mg/l	10.0		88.0	83-116	3.35	28	
Batch AJ32215 - General Preparation										
Blank (AJ32215-BLK1)				Prepared & Analyzed: 10/21/03						
Tannins & Lignins	ND	0.10	mg/l							
LCS (AJ32215-BS1)				Prepared & Analyzed: 10/21/03						
Tannins & Lignins	4.03	0.10	mg/l	4.00		101	80-120			
LCS Dup (AJ32215-BSD1)				Prepared & Analyzed: 10/21/03						
Tannins & Lignins	4.00	0.10	mg/l	4.00		100	80-120	0.747	20	

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Report Date: 10/24/03 08:30
Project No: 030229.6
Project ID: SPI Arcata 2

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A310236	10/09/2003 16:10	MFGARC	

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 AJ31515 - EPA 8150B										
Blank (AJ31515-BLK1)				Prepared & Analyzed: 10/15/03						
TPH as Diesel	ND	50	ug/l							
TPH as Motor Oil	ND	100	"							
Surrogate: 1,4-Bromofluorobenzene	*404*		"	*499*		*81.0*	*38-120*			
LCS (AJ31515-BS1)				Prepared & Analyzed: 10/15/03						
TPH as Diesel	814	50	ug/l	1020		79.8	57-136			
TPH as Motor Oil	958	100	"	1020		93.9	58-138			
Surrogate: 1,4-Bromofluorobenzene	*429*		"	*499*		*86.0*	*38-120*			
LCS Dup (AJ31515-BSD1)				Prepared & Analyzed: 10/15/03						
TPH as Diesel	882	50	ug/l	1020		86.5	57-136	8.02	25	
TPH as Motor Oil	1010	100	"	1020		99.0	58-138	5.28	25	
Surrogate: 1,4-Bromofluorobenzene	*460*		"	*499*		*92.2*	*38-120*			

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Report Date: 10/24/03 08:30
Project No: 030229.6
Project ID: SPI Arcata 2

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A310236	10/09/2003 16:10	MFGARC	

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 AJ31612 - EPA 5030 Water GC										
Blank (AJ31612-BLK1)				Prepared & Analyzed: 10/14/03						
TPH as Gasoline	ND	50	ug/l							
Surrogate: 1,4-Bromofluorobenzene	*23.1*		"	*23.1*		*100*	*63-150*			
LCS (AJ31612-BS2)				Prepared & Analyzed: 10/14/03						
TPH as Gasoline	46.9	50	ug/l	50.0		93.8	79-123			
Surrogate: 1,4-Bromofluorobenzene	*22.1*		"	*20.0*		*110*	*63-150*			
LCS Dup (AJ31612-BSD2)				Prepared & Analyzed: 10/14/03						
TPH as Gasoline	45.0	50	ug/l	50.0		90.0	79-123	4.13	15	
Surrogate: 1,4-Bromofluorobenzene	*21.9*		"	*20.0*		*110*	*63-150*			

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10/24/2003

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Report Date: 10/24/03 08:30
Project No: 030229.6
Project ID: SPI Arcata 2

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A310236	10/09/2003 16:10	MFGARC	

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interferences.
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

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Tetra Tech EM Inc.

PROJECT NO: 030229.6 PROJECT NAME: SPI Arcata PAGE: 1 OF: 5

SAMPLER (Signature): Matt Hillyard PROJECT MANAGER: Mike Tietze DATE: 10/9/03

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: TSS, EC	Tannin & Lignins	COD	PCP/TCP		Handling: HOLD	RUSH	STANDARD	Remarks
SL-1	10/8	1545	AQ				X		½ Gal	P	1	X	X						X	A310236-1
SL-2		1515							½ Gal	P	1	X	X							-2
SL-3		1445							½ Gal	P	1	X	X							-3
SL-4		1630							½ Gal	P	1	X	X							-4
SL-1		1545				X			1 pt	P	1			X						A310236-1
SL-2		1515				X			1 pt	P	1			X						2
SL-3		1445				X			1 pt	P	1			X						please record both coolers -3

TOTAL NUMBER OF CONTAINERS 7

LABORATORY COMMENTS/CONDITION OF SAMPLES Cooler Temp: -1.4° -1.6°

RELINQUISHED BY: SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	RECEIVED BY: SIGNATURE	PRINTED NAME	COMPANY
Matt Hillyard	Matt Hillyard	MFG	10/9/03	0930	Julie Mills	Julie Mills	MFG
Julie Mills	Julie Mills	MFG	10/9/03	1130	John Taylor	John Taylor	Alpha
John Taylor	John Taylor	Alpha	10/9/03	1610	Leslie Quinn	Leslie Quinn	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

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TetraTech/MFG, Inc.

PROJECT NO: 030229.6 PROJECT NAME: SPI Arcata PAGE: 2 OF: 5

SAMPLER (Signature): Matt Hillyard PROJECT MANAGER: Mike Tietze DATE: 10/9/03

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	COD		Handling: HOLD	RUSH	STANDARD	Remarks
SL-4	10/8	1630	AQ			X	X		1pt	P	1	X							X	A310236-4
SL-1		1545			X				1pt	P	1		X							A310236-1
SL-2		1515			X				1pt	P	1		X	X						-2
SL-3		1445			X								X							-3
SL-4		1630			X								X							-4
SL-1		1545				X									X	5oz				A310236-1
SL-2		1515				X									X	8oz				-2

TOTAL NUMBER OF CONTAINERS 7

LABORATORY COMMENTS/CONDITION OF SAMPLES Cooler Temp: -1.4°

RELINQUISHED BY: SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	RECEIVED BY: SIGNATURE	PRINTED NAME	COMPANY
Matt Hillyard	Matt Hillyard	MFG	10/9/03	0930	Julie Mills	Julie Mills	MFG
Julie Mills	Julie Mills	MFG	10/9/03	1130	John Taylor	John Taylor	Alpha
John Taylor	John Taylor	Alpha	10/9/03	1610	Leslie Gibson	Leslie Gibson	Alpha LABORATORY

-1.6°

*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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MFG, INC.

CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS

COC No. 46188

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OCT 10 2003
Tetra Tech/MFG, Inc.

PROJECT NO: 030229.6 PROJECT NAME: SPI Arcata PAGE: 3 OF: 5

SAMPLER (Signature): Matt Hillyard PROJECT MANAGER: Mike Tietze DATE: 10/9/03

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

Field Sample Identification	SAMPLES: Sample DATE	Sample TIME	Sample Matrix*	Preservation HCl	Preservation HNO_3	Preservation H_2SO_4	Preservation COLD	FILTRATION*	Containers VOLUME (ml/oz)	Containers TYPE*	Containers NO.	ANALYSIS REQUEST: Constituent/Method COD	TPH 8015	TPH Diesel	TPH MO	Handling HOLD	Handling RUSH	Handling STANDARD	Remarks
SL-3	10/8	1445	AQ			X	X		1pt	P	1	(X)	See Pg 1					X	A310236-3
SL-4	↓	1630	↓			X	↓		1pt	P	1	(X)	See Pg 2					↓	4
SL-1		1545				X			1L	G	1		X						A310236-1
SL-2		1515				X			1L	G	1		X						2
SL-3		1445				X			1L	G	1		X						3
SL-4		1630				X			1L	G	1		X						4
SL-1	↓	1545	↓				↓		1L	G	1			X	X			↓	A310236-1

TOTAL NUMBER OF CONTAINERS 7

LABORATORY COMMENTS/CONDITION OF SAMPLES Cooler Temp: -1.4°

RELINQUISHED BY: SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	RECEIVED BY: SIGNATURE	PRINTED NAME	COMPANY
Matt Hillyard	Matt Hillyard	MFG	10/9/03	0930	Julie Mills	Julie Mills	MFG
Julie Mills	Julie Mills	MFG	10/9/03	1130	John Taylor	John Taylor	Alpha
John Taylor	John Taylor	Alpha	10/9/03	1610	Leslie Quinn	Leslie Quinn	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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MFG, INC.

CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS

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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

☐ _____

RE[illegible]

Tetra Tech[illegible], Inc.

PROJECT NO: 030229.6 PROJECT NAME: SPI Arcata PAGE: 4 OF: 5

SAMPLER (Signature): Matt Hillyard PROJECT MANAGER: Mike Tietze DATE: 10/9/03

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-Diesel	TPH-MO	TPH-Gas	Handling: HOLD	RUSH	STANDARD	Remarks
SL-2	10/8	1515	AQ				X		1L	G	1	X	X				X	A310236 - 2
SL-3		1445							1L	G	1	X	X					3
SL-4		1630							1L	G	1	X	X					4
SL-1		1545		X					40mL	G	3			X				A310236- 1
SL-2		1515		X					40mL	G	3			X				2
SL-3		1445		X					40mL	G	3			X				3
SL-4		1630		X					40mL	G	3			X				4

TOTAL NUMBER OF CONTAINERS 15

LABORATORY COMMENTS/CONDITION OF SAMPLES Cooler Temp: 1.4° -1.6°

RELINQUISHED BY: SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	RECEIVED BY: SIGNATURE	PRINTED NAME	COMPANY
Matt Hillyard	Matt Hillyard	MFG	10/9/03	0930	Julie Mills	Julie Mills	MFG
Julie Mills	Julie Mills	MFG	10/9/03	1130	John Taylor	John Taylor	Alpha
John Taylor	John Taylor	Alpha	10/9/03	1610	Leslie Glenn	Leslie Glenn	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. 46178

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

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San Francisco, CA 94105
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Boulder, CO 80301
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Wallace, ID 83873
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Missoula, MT 59807
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1090 King Georges Post Rd.
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Edison, NJ 08837
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1020 SW Taylor St.
Ste. 530
Portland, OR 97205
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Fax (503) 228-8631

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

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4807 Spicewood Springs Rd.
Bldg. IV, 1st Floor
Austin, TX 78759
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12337 Jones Rd.
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Houston, TX 77070
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Fax (903) 794-0626

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

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OCT 3 0 2003
Tetra Tech/MFG, Inc.

PROJECT NO: 030229.6 PROJECT NAME: SPI Arcata PAGE: 5 OF: 5

SAMPLER (Signature): Matt Hilyard PROJECT MANAGER: Mike Tietze DATE: 10/9/03

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	Dioxin/Furan				Handling: HOLD	RUSH	STANDARD	Remarks
SL-1	10/8	1545	AQ				X		125mL	G	2	X							X	A310236-1
SL-2	↑	1515	↓				↓		↓	G	2	X							↓	2
SL-3		1445								G	2	X								3
SL-4		1630							↓	G	2	X								4
SL-2		1515							1L	G	2		X							A310236-2*
SL-3		1445							1L	G	2		X							3*
SL-4	↓	1630	↓				↓		1L	G	2		X						↓	4*

TOTAL NUMBER OF CONTAINERS 14

LABORATORY COMMENTS/CONDITION OF SAMPLES Cooler Temp: -1.4° -1.6°

RELINQUISHED BY: SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	RECEIVED BY: SIGNATURE	PRINTED NAME	COMPANY
Matt Hilyard	Matt Hilyard	MFG	10/9/03	0930	Julie Mills	Julie Mills	MFG
Julie Mills	Julie Mills	MFG	10/9/03	1130	John Taylor	John Taylor	Alpha
John Taylor	John Taylor	Alpha	10/9/03	1610	Leslie Quinn	Leslie Quinn	LABORATORY Alpha

*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

A310236 - 2, 3, 4 * WERE SENT TO OUTLAB - BILL AND RESULTS GO TO SPI.

FILE 9329

FRONTIER
ANALYTICAL LABORATORY

October 29, 2003

FAL Project ID: 2285

10/8/2003 STORM WATER SAMPLES

Mr. Orrin Plocher
MFG, Inc.
875 Crescent Way
Arcata, CA 95521

Dear Mr. Plocher,

Enclosed are the results for Frontier Analytical Laboratory project **2285**. This corresponds to Alpha Analytical Laboratories, Inc. subcontract order # A310236. The one solid sample and two aqueous samples received on 10/14/03 were extracted and analyzed by EPA Method 1613 for tetra through octa chlorinated dibenzo dioxins and furans. Originally sample 2285-002-SA was marked as an aqueous sample. The percent solids for this sample were 1.00 % that then classified it as a solid sample, per the method. Alpha Analytical Laboratories, Inc. requested a turnaround time of 10 business days for project **2285**. 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, qualifier reference guide, ML/MDL form and the analytical results. The Sample Receipt section contains the chain of custody, sample login form and sample photo.

If you have any questions regarding project **2285**, 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

Analytical Data

Frontier Analytical Laboratory

Sample Tracking Log

FAL Project ID: **2285**

Received on: **10/14/2003** Project Due: **10/29/2003** Storage: **R2**

FAL Sample ID	Dup	Client Project ID	Client Sample ID	Requested Method	Matrix	Sampling Date	Sampling Time	Hold Time Due Date
2285-001-SA	1	A310236 - SPI	A310236-02	EPA 1613 D/F	Aqueous	10/08/2003	03:15 pm	10/07/2004
2285-002-SA	1	A310236 - SPI	A310236-03	EPA 1613 D/F	Solid	10/08/2003	02:45 pm	10/07/2004
2285-003-SA	1	A310236 - SPI	A310236-04	EPA 1613 D/F	Aqueous	10/08/2003	04:30 pm	10/07/2004

FRONTIER ANALYTICAL LABORATORY

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 qualified) for California Toxics Rule (CTR)/National Pollutant Discharge Elimination System (NPDES) samples

EPA Method 1613/8290 Aqueous MDL
(SPE Extraction)

FRONTIER ANALYTICAL LABORATORY

Analyte	ML	MDL
2,3,7,8-TCDD	5.00	1.36
1,2,3,7,8-PeCDD	25.0	2.08
1,2,3,4,7,8-HxCDD	25.0	2.97
1,2,3,6,7,8-HxCDD	25.0	3.23
1,2,3,7,8,9-HxCDD	25.0	2.90
1,2,3,4,6,7,8-HpCDD	25.0	1.74
OCDD	50.0	6.49
2,3,7,8-TCDF	5.00	1.23
1,2,3,7,8-PeCDF	25.0	1.79
2,3,4,7,8-PeCDF	25.0	1.72
1,2,3,4,7,8-HxCDF	25.0	1.04
1,2,3,6,7,8-HxCDF	25.0	1.26
1,2,3,7,8,9-HxCDF	25.0	1.34
2,3,4,6,7,8-HxCDF	25.0	1.51
1,2,3,4,6,7,8-HpCDF	25.0	1.18
1,2,3,4,7,8,9-HpCDF	25.0	1.34
OCDF	50.0	3.98

Project **1475**, extracted 1/6/03; analyzed 1/14/03. Based on a 1.0 Liter sample, pg/L.

EPA Method 1613/8290 Solid MDL
(Sox/SDS Extraction)

FRONTIER ANALYTICAL LABORATORY

Analyte	ML	MDL
2,3,7,8-TCDD	0.500	0.132
1,2,3,7,8-PeCDD	2.50	0.223
1,2,3,4,7,8-HxCDD	2.50	0.346
1,2,3,6,7,8-HxCDD	2.50	0.381
1,2,3,7,8,9-HxCDD	2.50	0.343
1,2,3,4,6,7,8-HpCDD	2.50	0.318
OCDD	5.00	1.20
2,3,7,8-TCDF	0.500	0.100
1,2,3,7,8-PeCDF	2.50	0.232
2,3,4,7,8-PeCDF	2.50	0.217
1,2,3,4,7,8-HxCDF	2.50	0.114
1,2,3,6,7,8-HxCDF	2.50	0.106
1,2,3,7,8,9-HxCDF	2.50	0.117
2,3,4,6,7,8-HxCDF	2.50	0.147
1,2,3,4,6,7,8-HpCDF	2.50	0.140
1,2,3,4,7,8,9-HpCDF	2.50	0.155
OCDF	5.00	0.498

Project **1370**, Extracted 11/04/02; analyzed 11/08/02. Based on 10g sample, pg/g.

EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 2285-001-MB
Client ID: Method Blank
Matrix: Aqueous
Extraction Batch No.: X0115

Date Extracted: 10/22/03
Date Received: NA
Amount: 1.000 L

ICal: pcddfal2-9-07-03 Acquired: 24-OCT-03
GC Column: db5
Units: pg/L WHO TEQ: 0.00
MS/MSD Batch No.: X0077

Compound	Conc	DL	Qual	WHO Tox	Compound	Conc	DL	Qual	#Hom
2,3,7,8-TCDD	-	1.79		-					
1,2,3,7,8-PeCDD	-	3.12		-					
1,2,3,4,7,8-HxCDD	-	2.96		-					
1,2,3,6,7,8-HxCDD	-	3.24		-	Total Tetra-Dioxins	-	1.79		0
1,2,3,7,8,9-HxCDD	-	2.77		-	Total Penta-Dioxins	-	3.12		0
1,2,3,4,6,7,8-HpCDD	-	5.10		-	Total Hexa-Dioxins	-	3.24		0
OCDD	-	12.6		-	Total Hepta-Dioxins	-	5.10		0
2,3,7,8-TCDF	-	1.53		-					
1,2,3,7,8-PeCDF	-	3.99		-					
2,3,4,7,8-PeCDF	-	3.68		-					
1,2,3,4,7,8-HxCDF	-	1.01		-					
1,2,3,6,7,8-HxCDF	-	1.22		-					
2,3,4,6,7,8-HxCDF	-	1.25		-					
1,2,3,7,8,9-HxCDF	-	1.49		-	Total Tetra-Furans	-	1.53		0
1,2,3,4,6,7,8-HpCDF	-	1.43		-	Total Penta-Furans	-	3.99		0
1,2,3,4,7,8,9-HpCDF	-	1.63		-	Total Hexa-Furans	-	1.49		0
OCDF	-	5.21		-	Total Hepta-Furans	-	1.63		0

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	112	25.0 - 164	
13C-1,2,3,7,8-PeCDD	111	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	111	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	111	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	102	23.0 - 140	
13C-OCDD	118	17.0 - 157	
13C-2,3,7,8-TCDF	118	24.0 - 169	
13C-1,2,3,7,8-PeCDF	125	24.0 - 185	
13C-2,3,4,7,8-PeCDF	125	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	109	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	109	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	102	29.0 - 147	
13C-1,2,3,7,8,9-HxCDF	93.7	28.0 - 136	
13C-1,2,3,4,6,7,8-HpCDF	96.2	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	98.8	26.0 - 138	
13C-OCDF	112	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	107	35.0 - 197	

Analyst: _____
Date: 10/29/03

Reviewed by: _____
Date: 10/29/2003

EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 2285-001-OPR
Client ID: OPR
Matrix: Aqueous
Extraction Batch No.: X0115

Date Extracted: 10/22/03
Date Received: NA
Amount: 1.000 L

ICal: pcddfal2-9-07-03
GC Column: db5
Units: ng/mL
MS/MSD Batch No.: X0077

Acquired: 24-OCT-03
WHO TEQ: NA

Compound	Conc	QC Limits
2,3,7,8-TCDD	9.16	6.70 - 15.8
1,2,3,7,8-PeCDD	49.3	35.0 - 71.0
1,2,3,4,7,8-HxCDD	46.5	35.0 - 82.0
1,2,3,6,7,8-HxCDD	47.1	38.0 - 67.0
1,2,3,7,8,9-HxCDD	45.6	32.0 - 81.0
1,2,3,4,6,7,8-HpCDD	49.2	35.0 - 70.0
OCDD	93.1	78.0 - 144
2,3,7,8-TCDF	9.55	7.50 - 15.8
1,2,3,7,8-PeCDF	48.4	40.0 - 67.0
2,3,4,7,8-PeCDF	48.6	34.0 - 80.0
1,2,3,4,7,8-HxCDF	48.8	36.0 - 67.0
1,2,3,6,7,8-HxCDF	49.0	42.0 - 65.0
2,3,4,6,7,8-HxCDF	48.1	39.0 - 65.0
1,2,3,7,8,9-HxCDF	47.3	35.0 - 78.0
1,2,3,4,6,7,8-HpCDF	49.2	41.0 - 61.0
1,2,3,4,7,8,9-HpCDF	50.2	39.0 - 69.0
OCDF	97.5	63.0 - 170

Internal Standards	% Rec	QC Limits
13C-2,3,7,8-TCDD	99.9	20.0 - 175
13C-1,2,3,7,8-PeCDD	103	21.0 - 227
13C-1,2,3,4,7,8-HxCDD	96.9	21.0 - 193
13C-1,2,3,6,7,8-HxCDD	100	25.0 - 163
13C-1,2,3,4,6,7,8-HpCDD	88.5	26.0 - 166
13C-OCDD	108	13.0 - 198
13C-2,3,7,8-TCDF	98.0	22.0 - 152
13C-1,2,3,7,8-PeCDF	105	21.0 - 192
13C-2,3,4,7,8-PeCDF	106	13.0 - 328
13C-1,2,3,4,7,8-HxCDF	95.3	19.0 - 202
13C-1,2,3,6,7,8-HxCDF	95.7	21.0 - 159
13C-2,3,4,6,7,8-HxCDF	90.1	17.0 - 205
13C-1,2,3,7,8,9-HxCDF	84.5	22.0 - 176
13C-1,2,3,4,6,7,8-HpCDF	82.8	21.0 - 158
13C-1,2,3,4,7,8,9-HpCDF	82.3	20.0 - 186
13C-OCDF	97.8	13.0 - 198

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	99.7	31.0 - 191

RECEIVED
OCT 30 2003
Tetra Tech/MFG, Inc.

Analyst: [signature]
Date: 10/29/03

Reviewed by: DPN
Date: 10/29/2003

EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 2190-001-MS/MSD
Client ID: E002 Wastewater
Matrix: Aqueous
Extraction Batch No.: X0077

Date Extracted: 8/21/03
Date Received: 8/15/03
Sample Amount: 1.962 L
MS Amount: 0.489 L
MSD Amount: 0.501 L

ICal: pcddfal1-6-13
GC Column: db5
Units: pg/L
MS/MSD Batch No.: X0077

MS Acquired: 24-AUG-03
MSD Acquired: 24-AUG-03
WHO TEQ: NA

Compound	Amount Spiked	Sample Amount	MS Amount	MSD Amount	% RSD	Qual
2,3,7,8-TCDD	200	-	176	174	1.14	
1,2,3,7,8-PeCDD	1000	-	963	919	4.68	
1,2,3,4,7,8-HxCDD	1000	-	962	972	1.03	
1,2,3,6,7,8-HxCDD	1000	-	990	987	0.300	
1,2,3,7,8,9-HxCDD	1000	-	993	1010	1.70	
1,2,3,4,6,7,8-HpCDD	1000	-	1000	982	1.82	
OCDD	2000	-	1980	1970	0.510	
2,3,7,8-TCDF	200	-	184	181	1.64	
1,2,3,7,8-PeCDF	1000	-	1020	1020	0.00	
2,3,4,7,8-PeCDF	1000	-	991	1030	3.86	
1,2,3,4,7,8-HxCDF	1000	-	1040	1010	2.93	
1,2,3,6,7,8-HxCDF	1000	-	1070	1050	1.89	
2,3,4,6,7,8-HxCDF	1000	-	1050	1060	0.950	
1,2,3,7,8,9-HxCDF	1000	-	1040	1060	1.90	
1,2,3,4,6,7,8-HpCDF	1000	-	1050	1040	0.960	
1,2,3,4,7,8,9-HpCDF	1000	-	1060	1050	0.950	
OCDF	2000	-	2090	2030	2.91	
Internal Standards		**% Rec**	**% Rec**	**% Rec**	**QC Limits**	
13C-2,3,7,8-TCDD	2000	87.4	96.6	97.2	25.0 - 150	
13C-1,2,3,7,8-PeCDD	2000	94.5	101	112	25.0 - 150	
13C-1,2,3,4,7,8-HxCDD	2000	87.3	87.6	84.6	25.0 - 150	
13C-1,2,3,6,7,8-HxCDD	2000	87.4	86.7	85.7	25.0 - 150	
13C-1,2,3,4,6,7,8-HpCDD	2000	100	105	112	25.0 - 150	
13C-OCDD	4000	108	110	114	25.0 - 150	
13C-2,3,7,8-TCDF	2000	109	102	98.4	25.0 - 150	
13C-1,2,3,7,8-PeCDF	2000	110	106	103	25.0 - 150	
13C-2,3,4,7,8-PeCDF	2000	111	104	100	25.0 - 150	
13C-1,2,3,4,7,8-HxCDF	2000	80.3	80.3	83.6	25.0 - 150	
13C-1,2,3,6,7,8-HxCDF	2000	80.2	84.0	85.3	25.0 - 150	
13C-2,3,4,6,7,8-HxCDF	2000	84.9	84.0	82.2	25.0 - 150	
13C-1,2,3,7,8,9-HxCDF	2000	100	95.3	93.7	25.0 - 150	
13C-1,2,3,4,6,7,8-HpCDF	2000	93.2	98.9	103	25.0 - 150	
13C-1,2,3,4,7,8,9-HpCDF	2000	103	109	111	25.0 - 150	
13C-OCDF	4000	106	107	117	25.0 - 150	
Cleanup Surrogate						
37Cl-2,3,7,8-TCDD	800	93.0	103	102	25.0 - 150	

Analyst: _____
Date: 10/29/03

RECEIVED
OCT 3 0 2003
Tetra Tech/MFG, Inc.

Reviewed by: DPV
Date: 10/29/2003

EPA Method 1613
PCDD/F

ANALYTICAL LABORATORY

FAL ID: 2285-001-SA SL-2 | Date Extracted: 10/22/03 | ICal: pcddfal2-9-07-03 | Acquired: 24-OCT-03
Client ID: A310236-02 | Date Received: 10/14/03 | GC Column: db5
Matrix: Aqueous | Amount: 0.963 L | Units: pg/L | WHO TEQ: 4.46
Extraction Batch No.: X0115 | MS/MSD Batch No.: X0077

Compound	Conc	DL	Qual	WHO Tox	Compound	Conc	DL	Qual	#Hom
2,3,7,8-TCDD	-	2.80		-					
1,2,3,7,8-PeCDD	-	4.95		-					
1,2,3,4,7,8-HxCDD	-	3.27		-					
1,2,3,6,7,8-HxCDD	13.0	-	J	1.30	Total Tetra-Dioxins	-	2.80		0
1,2,3,7,8,9-HxCDD	5.74	-	J	0.574	Total Penta-Dioxins	-	4.95		0
1,2,3,4,6,7,8-HpCDD	189	-		1.89	Total Hexa-Dioxins	75.0	-		5
OCDD	1050	-		0.105	Total Hepta-Dioxins	348	-		2
2,3,7,8-TCDF	-	2.82		-					
1,2,3,7,8-PeCDF	-	5.27		-					
2,3,4,7,8-PeCDF	-	4.91		-					
1,2,3,4,7,8-HxCDF	-	3.23		-					
1,2,3,6,7,8-HxCDF	-	4.09		-					
2,3,4,6,7,8-HxCDF	-	4.08		-					
1,2,3,7,8,9-HxCDF	-	4.51		-	Total Tetra-Furans	-	2.82		0
1,2,3,4,6,7,8-HpCDF	57.6	-		0.576	Total Penta-Furans	8.57	-	J	1
1,2,3,4,7,8,9-HpCDF	-	2.96		-	Total Hexa-Furans	51.1	-		3
OCDF	87.7	-		0.00877	Total Hepta-Furans	119	-		2

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	98.8	25.0 - 164	
13C-1,2,3,7,8-PeCDD	101	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	100	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	105	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	83.8	23.0 - 140	
13C-OCDD	71.3	17.0 - 157	
13C-2,3,7,8-TCDF	99.2	24.0 - 169	
13C-1,2,3,7,8-PeCDF	99.9	24.0 - 185	
13C-2,3,4,7,8-PeCDF	99.0	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	91.1	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	92.3	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	86.6	29.0 - 147	
13C-1,2,3,7,8,9-HxCDF	87.8	28.0 - 136	
13C-1,2,3,4,6,7,8-HpCDF	80.8	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	81.1	26.0 - 138	
13C-OCDF	63.0	17.0 - 157	

Cleanup Surrogate			
37Cl-2,3,7,8-TCDD	98.0	35.0 - 197	

Analyst: _____
Date: 10/29/03

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EPA Method 1613
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FRONTIER ANALYTICAL LABORATORY

FAL ID: 2285-003-SA
Client ID: A310236-04 SL-4
Matrix: Aqueous
Extraction Batch No.: X0115

Date Extracted: 10/22/03
Date Received: 10/14/03
Amount: 0.957 L

ICal: pcddfal2-9-07-03 Acquired: 24-OCT-03
GC Column: db5
Units: pg/L WHO TEQ: 1.13
MS/MSD Batch No.: X0077

Compound	Conc	DL	Qual	WHO Tox	Compound	Conc	DL	Qual	#Hom
2,3,7,8-TCDD	-	2.36		-					
1,2,3,7,8-PeCDD	-	4.83		-					
1,2,3,4,7,8-HxCDD	-	4.12		-					
1,2,3,6,7,8-HxCDD	-	9.28		-	Total Tetra-Dioxins	-	2.36		0
1,2,3,7,8,9-HxCDD	-	2.65		-	Total Penta-Dioxins	-	4.83		0
1,2,3,4,6,7,8-HpCDD	81.1	-		0.811	Total Hexa-Dioxins	19.3	-	J	1
OCDD	370	-		0.0370	Total Hepta-Dioxins	155	-		2
2,3,7,8-TCDF	-	2.36		-					
1,2,3,7,8-PeCDF	-	5.57		-					
2,3,4,7,8-PeCDF	-	5.64		-					
1,2,3,4,7,8-HxCDF	-	1.39		-					
1,2,3,6,7,8-HxCDF	-	1.62		-					
2,3,4,6,7,8-HxCDF	-	3.46		-					
1,2,3,7,8,9-HxCDF	-	1.63		-	Total Tetra-Furans	-	2.36		0
1,2,3,4,6,7,8-HpCDF	27.8	-		0.278	Total Penta-Furans	16.2	-	J	1
1,2,3,4,7,8,9-HpCDF	-	1.90		-	Total Hexa-Furans	32.1	-		3
OCDF	50.4	-		0.00504	Total Hepta-Furans	74.7	-		2

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	89.0	25.0 - 164	
13C-1,2,3,7,8-PeCDD	86.1	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	96.0	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	97.6	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	78.9	23.0 - 140	
13C-OCDD	68.3	17.0 - 157	
13C-2,3,7,8-TCDF	93.7	24.0 - 169	
13C-1,2,3,7,8-PeCDF	94.1	24.0 - 185	
13C-2,3,4,7,8-PeCDF	87.8	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	88.3	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	88.5	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	84.6	29.0 - 147	
13C-1,2,3,7,8,9-HxCDF	82.3	28.0 - 136	
13C-1,2,3,4,6,7,8-HpCDF	77.6	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	71.6	26.0 - 138	
13C-OCDF	60.5	17.0 - 157	

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	97.4	35.0 - 197

Analyst: _____
Date: 10/29/03

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EPA Method 1613
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FRONTIER ANALYTICAL LABORATORY

FAL ID: 2285-002-MB | Date Extracted: 10/23/03 | ICal: pcddfal2-9-07-03 | Acquired: 27-OCT-03
Client ID: Method Blank | Date Received: NA | GC Column: DB5
Matrix: Solid | Amount: 10.00 g | Units: pg/g | WHO TEQ: 0.00
Extraction Batch No.: X0117 | % Solids: NA | MS/MSD Batch No.: X0079

Compound	Conc	DL	Qual	WHO Tox	Compound	Conc	DL	Qual	#Hom
2,3,7,8-TCDD	-	0.249		-					
1,2,3,7,8-PeCDD	-	0.520		-					
1,2,3,4,7,8-HxCDD	-	0.580		-					
1,2,3,6,7,8-HxCDD	-	0.673		-	Total Tetra-Dioxins	-	0.249		0
1,2,3,7,8,9-HxCDD	-	0.560		-	Total Penta-Dioxins	-	0.520		0
1,2,3,4,6,7,8-HpCDD	-	0.640		-	Total Hexa-Dioxins	-	0.673		0
OCDD	-	1.17		-	Total Hepta-Dioxins	-	0.640		0
2,3,7,8-TCDF	-	0.237		-					
1,2,3,7,8-PeCDF	-	0.537		-					
2,3,4,7,8-PeCDF	-	0.518		-					
1,2,3,4,7,8-HxCDF	-	0.207		-					
1,2,3,6,7,8-HxCDF	-	0.259		-					
2,3,4,6,7,8-HxCDF	-	0.282		-					
1,2,3,7,8,9-HxCDF	-	0.304		-	Total Tetra-Furans	-	0.237		0
1,2,3,4,6,7,8-HpCDF	-	0.280		-	Total Penta-Furans	-	0.537		0
1,2,3,4,7,8,9-HpCDF	-	0.350		-	Total Hexa-Furans	-	0.304		0
OCDF	-	0.990		-	Total Hepta-Furans	-	0.350		0

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	106	25.0 - 164	
13C-1,2,3,7,8-PeCDD	94.2	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	119	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	116	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	97.6	23.0 - 140	
13C-OCDD	71.7	17.0 - 157	
13C-2,3,7,8-TCDF	106	24.0 - 169	
13C-1,2,3,7,8-PeCDF	99.4	24.0 - 185	
13C-2,3,4,7,8-PeCDF	96.6	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	122	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	121	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	108	29.0 - 147	
13C-1,2,3,7,8,9-HxCDF	96.9	28.0 - 136	
13C-1,2,3,4,6,7,8-HpCDF	100	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	101	26.0 - 138	
13C-OCDF	72.9	17.0 - 157	

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	98.2	35.0 - 197

Analyst: [signature]
Date: 10/29/03

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Date: 10/29/2003

EPA Method 1613
PCDD/F

FRONTIER ANALYTICAL LABORATORY

FAL ID: 2285-002-OPR | Date Extracted: 10/23/03 | ICal: pcddfal2-9-07-03 | Acquired: 27-OCT-03
Client ID: OPR | Date Received: NA | GC Column: DB5
Matrix: Solid | Amount: 10.00 g | Units: ng/mL | WHO TEQ: NA
Extraction Batch No.: X0117 | % Solids: NA | MS/MSD Batch No.: X0079

Compound	Conc	QC Limits
2,3,7,8-TCDD	9.35	6.70 - 15.8
1,2,3,7,8-PeCDD	50.5	35.0 - 71.0
1,2,3,4,7,8-HxCDD	48.1	35.0 - 82.0
1,2,3,6,7,8-HxCDD	46.6	38.0 - 67.0
1,2,3,7,8,9-HxCDD	40.8	32.0 - 81.0
1,2,3,4,6,7,8-HpCDD	51.2	35.0 - 70.0
OCDD	98.4	78.0 - 144
2,3,7,8-TCDF	8.96	7.50 - 15.8
1,2,3,7,8-PeCDF	53.0	40.0 - 67.0
2,3,4,7,8-PeCDF	52.7	34.0 - 80.0
1,2,3,4,7,8-HxCDF	52.9	36.0 - 67.0
1,2,3,6,7,8-HxCDF	50.6	42.0 - 65.0
2,3,4,6,7,8-HxCDF	51.9	39.0 - 65.0
1,2,3,7,8,9-HxCDF	48.2	35.0 - 78.0
1,2,3,4,6,7,8-HpCDF	48.9	41.0 - 61.0
1,2,3,4,7,8,9-HpCDF	51.0	39.0 - 69.0
OCDF	97.9	63.0 - 170

Internal Standards	% Rec	QC Limits
13C-2,3,7,8-TCDD	107	20.0 - 175
13C-1,2,3,7,8-PeCDD	86.5	21.0 - 227
13C-1,2,3,4,7,8-HxCDD	116	21.0 - 193
13C-1,2,3,6,7,8-HxCDD	118	25.0 - 163
13C-1,2,3,4,6,7,8-HpCDD	90.2	26.0 - 166
13C-OCDD	74.4	13.0 - 198
13C-2,3,7,8-TCDF	102	22.0 - 152
13C-1,2,3,7,8-PeCDF	89.9	21.0 - 192
13C-2,3,4,7,8-PeCDF	87.8	13.0 - 328
13C-1,2,3,4,7,8-HxCDF	120	19.0 - 202
13C-1,2,3,6,7,8-HxCDF	123	21.0 - 159
13C-2,3,4,6,7,8-HxCDF	105	17.0 - 205
13C-1,2,3,7,8,9-HxCDF	93.8	22.0 - 176
13C-1,2,3,4,6,7,8-HpCDF	97.3	21.0 - 158
13C-1,2,3,4,7,8,9-HpCDF	97.6	20.0 - 186
13C-OCDF	77.0	13.0 - 198

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	95.6	31.0 - 191

Analyst: [signature]
Date: 10/29/03

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EPA Method 1613
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FRONTIER ANALYTICAL LABORATORY

FAL ID: 2199-001-MS/MSD
Client ID: C4-SNS03
Matrix: Solid
Extraction Batch No.: X0079

Date Extracted: 8/25/03
Date Received: 8/20/03
Sample Amount: 10.07 g
MS Amount: 10.03 g
MSD Amount: 10.11 g

ICal: PCDDFAL1-6-13
GC Column: db5
Units: pg/g
MS/MSD Batch No.: X0079

MS Acquired: 2-SEP-03
MSD Acquired: 2-SEP-03
WHO TEQ: NA
% Solids: 99.2

Compound	Amount Spiked	Sample Amount	MS Amount	MSD Amount	% RSD	Qual
2,3,7,8-TCDD	200	-	170	170	0.00	
1,2,3,7,8-PeCDD	1000	-	848	889	4.72	
1,2,3,4,7,8-HxCDD	1000	-	889	903	1.56	
1,2,3,6,7,8-HxCDD	1000	-	866	879	1.49	
1,2,3,7,8,9-HxCDD	1000	-	923	898	6.90	
1,2,3,4,6,7,8-HpCDD	1000	97.8	965	1030	7.22	
OCDD	2000	827	2470	2660	10.9	
2,3,7,8-TCDF	200	-	159	168	5.50	
1,2,3,7,8-PeCDF	1000	-	910	937	2.92	
2,3,4,7,8-PeCDF	1000	-	929	926	0.320	
1,2,3,4,7,8-HxCDF	1000	-	890	914	2.66	
1,2,3,6,7,8-HxCDF	1000	-	932	958	2.75	
2,3,4,6,7,8-HxCDF	1000	-	941	962	2.21	
1,2,3,7,8,9-HxCDF	1000	-	900	953	5.72	
1,2,3,4,6,7,8-HpCDF	1000	38.3	996	1040	4.49	
1,2,3,4,7,8,9-HpCDF	1000	-	959	973	1.45	
OCDF	2000	110	2000	2070	3.64	
Internal Standards		% Rec	% Rec	% Rec	QC Limits	
13C-2,3,7,8-TCDD	2000	116	112	119	25.0 - 150	
13C-1,2,3,7,8-PeCDD	2000	121	123	124	25.0 - 150	
13C-1,2,3,4,7,8-HxCDD	2000	101	93.7	90.0	25.0 - 150	
13C-1,2,3,6,7,8-HxCDD	2000	104	100	93.6	25.0 - 150	
13C-1,2,3,4,6,7,8-HpCDD	2000	111	105	96.7	25.0 - 150	
13C-OCDD	4000	97.5	92.8	88.9	25.0 - 150	
13C-2,3,7,8-TCDF	2000	112	122	111	25.0 - 150	
13C-1,2,3,7,8-PeCDF	2000	116	118	112	25.0 - 150	
13C-2,3,4,7,8-PeCDF	2000	111	115	113	25.0 - 150	
13C-1,2,3,4,7,8-HxCDF	2000	102	97.2	91.9	25.0 - 150	
13C-1,2,3,6,7,8-HxCDF	2000	100	99.9	92.8	25.0 - 150	
13C-2,3,4,6,7,8-HxCDF	2000	103	97.6	91.4	25.0 - 150	
13C-1,2,3,7,8,9-HxCDF	2000	107	110	101	25.0 - 150	
13C-1,2,3,4,6,7,8-HpCDF	2000	103	99.9	92.1	25.0 - 150	
13C-1,2,3,4,7,8,9-HpCDF	2000	133	129	117	25.0 - 150	
13C-OCDF	4000	100	96.0	88.6	25.0 - 150	
Cleanup Surrogate						
37Cl-2,3,7,8-TCDD	800	107	105	105	25.0 - 150	

Analyst: _____
Date: 10/29/03

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FRONTIER ANALYTICAL LABORATORY

FAL ID: 2285-002-SA
Client ID: A310236-03 SL-3
Matrix: Solid
Extraction Batch No.: X0117

Date Extracted: 10/23/03
Date Received: 10/14/03
Amount: 1.68 g
% Solids: 1.00

ICal: pcddfal2-9-07-03 Acquired: 28-OCT-03
GC Column: DB5
Units: pg/g WHO TEQ: 0.406
MS/MSD Batch No.: X0079

Compound	Conc	DL	Qual	WHO Tox	Compound	Conc	DL	Qual	#Hom
2,3,7,8-TCDD	-	1.00		-					
1,2,3,7,8-PeCDD	-	1.01		-					
1,2,3,4,7,8-HxCDD	-	2.18		-					
1,2,3,6,7,8-HxCDD	-	3.58		-	Total Tetra-Dioxins	-	1.00		0
1,2,3,7,8,9-HxCDD	-	2.11		-	Total Penta-Dioxins	-	2.85		0
1,2,3,4,6,7,8-HpCDD	32.9	-		0.329	Total Hexa-Dioxins	13.8	-	J	2
OCDD	155	-		0.0155	Total Hepta-Dioxins	60.0	-		2
2,3,7,8-TCDF	-	0.664		-					
1,2,3,7,8-PeCDF	-	1.93		-					
2,3,4,7,8-PeCDF	-	1.67		-					
1,2,3,4,7,8-HxCDF	-	0.588		-					
1,2,3,6,7,8-HxCDF	-	0.676		-					
2,3,4,6,7,8-HxCDF	-	0.809		-					
1,2,3,7,8,9-HxCDF	-	0.849		-	Total Tetra-Furans	-	1.27		0
1,2,3,4,6,7,8-HpCDF	5.97	-	J	0.0597	Total Penta-Furans	-	2.84		0
1,2,3,4,7,8,9-HpCDF	-	0.950		-	Total Hexa-Furans	6.85	-	J	2
OCDF	11.2	-	J	0.00112	Total Hepta-Furans	16.3	-		2

Internal Standards	% Rec	QC Limits	Qual
13C-2,3,7,8-TCDD	104	25.0 - 164	
13C-1,2,3,7,8-PeCDD	102	25.0 - 181	
13C-1,2,3,4,7,8-HxCDD	112	32.0 - 141	
13C-1,2,3,6,7,8-HxCDD	111	28.0 - 130	
13C-1,2,3,4,6,7,8-HpCDD	92.7	23.0 - 140	
13C-OCDD	76.8	17.0 - 157	
13C-2,3,7,8-TCDF	103	24.0 - 169	
13C-1,2,3,7,8-PeCDF	100	24.0 - 185	
13C-2,3,4,7,8-PeCDF	104	21.0 - 178	
13C-1,2,3,4,7,8-HxCDF	115	26.0 - 152	
13C-1,2,3,6,7,8-HxCDF	114	26.0 - 123	
13C-2,3,4,6,7,8-HxCDF	100	29.0 - 147	
13C-1,2,3,7,8,9-HxCDF	93.5	28.0 - 136	
13C-1,2,3,4,6,7,8-HpCDF	92.4	28.0 - 143	
13C-1,2,3,4,7,8,9-HpCDF	95.5	26.0 - 138	
13C-OCDF	75.5	17.0 - 157	

Cleanup Surrogate		
37Cl-2,3,7,8-TCDD	83.8	35.0 - 197

Analyst: _____
Date: 10/29/03

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Date: 10/29/2003

Sample Receipt

SUBCONTRACT ORDER

Alpha Analytical Laboratories, Inc.

A310236

2285/0

SENDING LABORATORY:	**RECEIVING LABORATORY:**
Alpha Analytical Laboratories, Inc.	Frontier Analytical Laboratory
P.O. Box 1508 (208 Mason St.)	5172 Hillsdale Circle
Ukiah, CA 95482	El Dorado, CA 95762
Phone: (707)468-0401	Phone :916-934-0900
Fax: (707)468-5267	Fax: 916-934-0999
Project Manager: Sheri L. Speaks	**Terms: Net 30**

Analysis	Due	Expires	Comments
A310236-02 SL-2 [Water] Sampled 10/08/03 15:15 Pacific			
Dioxins Full List	10/23/03 12:00	10/07/04 15:15	
Containers Supplied:			
1L Amber- Unpres. (K)	1L Amber- Unpres. (L)		
A310236-03 SL-3 [Water] Sampled 10/08/03 14:45 Pacific			
Dioxins Full List	10/23/03 12:00	10/07/04 14:45	
Containers Supplied:			
1L Amber- Unpres. (K)	1L Amber- Unpres. (L)		
A310236-04 SL-4 [Water] Sampled 10/08/03 16:30 Pacific			
Dioxins Full List	10/23/03 12:00	10/07/04 16:30	
Containers Supplied:			
1L Amber- Unpres. (K)	1L Amber- Unpres. (L)		

☐ ***Report to State***

System Name: _____ **Employed by:** _____

User ID: _____ **Sampler:** _____

System Number: _____

Bill a results direct to SPI./MFG

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Tetra Tech/MFG, Inc.

10/14/03 Confirmed with Sherry to use EPA method 1613. KZ. 9:10

Released By	Date	Received By	Date
[signature]	10/13/03	[signature]	10/14/03 @ 0730
Released By	Date	Received By	Date

FRONTIER ANALYTICAL LABORATORY

Frontier Analytical Laboratory

Sample Login Form

FAL Project ID: **2285**

Client:	MFG
Client Project ID:	A310236 - SPI
Date Received:	10/14/2003
Time Received:	07:30 am
Received By:	NM
Logged In By:	KZ
# of Samples Received:	3
Duplicates:	3
Storage Location:	R2

Method of Delivery:	Other
Tracking Number:	CA Overnight
Shipping Container Received Intact	Yes
Custody seals(s) present?	No
Custody seals(s) intact?	No
Sample Arrival Temperature (C)	0
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	10/07/2004
Adequate Sample Volume	Yes

Anomalies or additional comments:

RECEIVED
OCT 3 0 2003

FRONTIER
ANALYTICAL LABORATORY

FILE 938

FRONTIER
ANALYTICAL LABORATORY

June 18, 2004

FAL Project ID: 2285 (Addendum)

Mr. Jim Honniball
Geomatrix Consultants, Inc.
2101 Webster Street, 12th Floor
Oakland, CA 94612

RECEIVED 6/21/04

TASK 6 STORM WATER
10/8/2003 STORM WATER SAMPLES

Dear Mr. Honnibal,

Please include this addendum cover letter with Frontier Analytical Laboratory (FAL) project **2285**. This FAL project corresponds to Alpha Analytical Laboratories, Inc. subcontract order # A310236. This addendum is being issued to include details on method procedures used to extract the one solid sample and two aqueous samples received on 10/14/03. These samples were extracted and analyzed by EPA Method 1613 for tetra through octa chlorinated dibenzo dioxins and furans. Originally sample 2285-002-SA was classified as an aqueous sample. Since the percent solids for sample 2285-002-SA was over 1.00 %, this sample was re-classified as a solid sample, as per EPA Method 1613 criteria.

Prior to extraction, sample 2285-002-SA was homogenized to insure all particulate was uniformly suspended in the aqueous portion of the sample. Immediately after homogenization, one hundred and sixty-two grams of sample was poured into a clean beaker. The sample aliquot was spiked with C13 labeled dioxin/furan standard and then poured into a Whatman brand glass fiber extraction thimble. The manufacturer listed pore size of the extraction thimble is .8 micron. Any liquid that passed through the extraction thimble was discarded prior to extraction. The thimble was then soxhlet extracted with toluene for at least sixteen hours. A Dean Stark SDS apparatus was used in conjunction with the soxhlet apparatus to remove any residual water from the sample and thimble. After extraction, the sample extract underwent a silica gel and a charcoal cleanup to isolate the dioxin/furans from any possible chemical matrix interferences.

Since samples 2285-001-SA and 2285-003-SA contained 0.76% solids and 0.67% solids respectively, both 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, both 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. Both 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 **2285**, 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

TASK 6 - STORM WATER SAMPLES
DECEMBER 1, 2003
SL-6

16 December 2003

Geomatrix Consultants
Attn: Ross Steenson
2101 Webster Street, 12th Floor
Oakland, CA 94612
RE: SPI - Arcata Stormwater
Work Order: A312034

Enclosed are the results of analyses for samples received by the laboratory on 12/01/03 17:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Cheryl Watson 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: 12/15/03 15:42
Project No: 030275.6
Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A312034	12/01/2003 17:40	GEOMAT	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SL-6	A312034-01	Water	12/01/03 11:15	12/01/03 17:40

Cheryl Watson For Sheri L. Speaks
Project Manager

12/16/03

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: 12/15/03 15:42
Project No: 030275.6
Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A312034	12/01/2003 17:40	GEOMAT	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		PQL	NOTE
SL-6 (A312034-01)			**Sample Type: Water**			**Sampled: 12/01/03 11:15**			
Metals by EPA 200 Series Methods									
Arsenic	EPA 200.9	AL30801	12/08/03	12/10/03	1	**0.0022 mg/l**		**0.0020**	
Copper	EPA 200.7	"	"	12/11/03	"	**0.032 "**		**0.020**	
Zinc	"	"	"	"	"	**0.34 "**		**0.020**	
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AL30418	12/02/03	12/02/03	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	"	"	"	"		*114 %*	*79-119*		
Conventional Chemistry Parameters by APHA/EPA Methods									
Chemical Oxygen Demand	SM5220D	AL30318	12/03/03	12/04/03	1	**180 mg/l**		**10**	
Specific Conductance (EC)	EPA 120.1	AL30201	12/02/03	12/02/03	"	**40 umhos/cm**		**20**	
Oil & Grease (HEM-SG)	EPA 1664	AL31009	12/10/03	12/12/03	"	ND mg/l		5.0	
Total Suspended Solids	EPA 160.2	AL30209	12/02/03	12/05/03	"	**190 "**		**1.0**	
Tannins & Lignins	SM 5550B	AL31110	12/11/03	12/11/03	"	**3.3 "**		**0.10**	
TPH as Diesel and Motor Oil by EPA Method 8015 Modified									
TPH as Diesel	8015DRO	AL31203	12/11/03	12/12/03	1.0101	**300 ug/l**		**51**	D-09
TPH as Motor Oil	"	"	"	"	"	**5500 "**		**100**	
Surrogate: 1,4-Bromofluorobenzene	"	"	"	"		*63.2 %*	*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.

Cheryl Watson For Sheri L. Speaks
Project Manager

12/16/03

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: 12/15/03 15:42
Project No: 030275.6
Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A312034	12/01/2003 17:40	GEOMAT	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		PQL	NOTE
SL-6 (A312034-01)			**Sample Type: Water**			**Sampled: 12/01/03 11:15**			
TPH as Gasoline by GCFID/5030									
TPH as Gasoline	8015GRO	AL30813	12/04/03	12/04/03	1	ND ug/l		50	
Surrogate: 1,4-Bromofluorobenzene	"	"	"	"		*89.2 %*	*63-150*		

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Project Manager

12/16/03

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Project No: 030275.6
Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A312034	12/01/2003 17:40	GEOMAT	

SpDupResult SourceResult

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 AL30801 - EPA 3005A SoftDigest										
Blank (AL30801-BLK1)				Prepared: 12/08/03 Analyzed: 12/10/03						
Arsenic	ND	0.0020	mg/l							
Copper	ND	0.020	"							
Zinc	ND	0.020	"							
LCS (AL30801-BS1)				Prepared: 12/08/03 Analyzed: 12/10/03						
Arsenic	0.0220	0.0020	mg/l	0.0200		110	85-115			
Copper	0.180	0.020	"	0.200		90.0	85-115			
Zinc	0.188	0.020	"	0.200		94.0	93.4-127			
LCS Dup (AL30801-BSD1)				Prepared: 12/08/03 Analyzed: 12/10/03						
Arsenic	0.0212	0.0020	mg/l	0.0200		106	85-115	3.70	20	
Copper	0.175	0.020	"	0.200		87.5	85-115	2.82	20	
Zinc	0.190	0.020	"	0.200		95.0	93.4-127	1.06	20	
Duplicate (AL30801-DUP1)		**Source: A312224-01**		Prepared: 12/08/03 Analyzed: 12/10/03						
Arsenic	0.00557	0.0020	mg/l		0.0048			14.9	20	
Copper	ND	0.020	"		ND				20	
Zinc	ND	0.020	"		ND				20	
Matrix Spike (AL30801-MS1)		**Source: A312224-01**		Prepared: 12/08/03 Analyzed: 12/10/03						
Arsenic	0.0258	0.0020	mg/l	0.0200	0.0048	105	70-130			
Copper	0.188	0.020	"	0.200	ND	94.0	70-130			
Zinc	0.195	0.020	"	0.200	ND	95.6	70-130			
Matrix Spike Dup (AL30801-MSD1)		**Source: A312224-01**		Prepared: 12/08/03 Analyzed: 12/10/03						
Arsenic	0.0270	0.0020	mg/l	0.0200	0.0048	111	70-130	4.55	20	
Copper	0.180	0.020	"	0.200	ND	90.0	70-130	4.35	20	
Zinc	0.186	0.020	"	0.200	ND	91.2	70-130	4.72	20	

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Cheryl Watson For Sheri L. Speaks
Project Manager

12/16/03

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CHEMICAL EXAMINATION REPORT

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

Report Date: 12/15/03 15:42
Project No: 030275.6
Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A312034	12/01/2003 17:40	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 AL30418 - Solvent Extraction										
Blank (AL30418-BLK1)				Prepared & Analyzed: 12/02/03						
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	*26.0*		"	*24.9*		*104*	*79-119*			
LCS (AL30418-BS1)				Prepared & Analyzed: 12/02/03						
2,4,6-Trichlorophenol	4.48	1.0	ug/l	5.00		89.6	81-120			
2,3,5,6-Tetrachlorophenol	4.90	1.0	"	5.00		98.0	78-108			
2,3,4,6-Tetrachlorophenol	4.42	1.0	"	5.00		88.4	76-108			
2,3,4,5-Tetrachlorophenol	4.22	1.0	"	5.00		84.4	80-116			
Pentachlorophenol	4.38	1.0	"	5.00		87.6	86-109			
Surrogate: Tribromophenol	*26.5*		"	*24.9*		*106*	*79-119*			
Matrix Spike (AL30418-MS1)		**Source: A312030-01**		Prepared & Analyzed: 12/02/03						
2,4,6-Trichlorophenol	4.65	1.0	ug/l	5.00	ND	93.0	75-125			
2,3,5,6-Tetrachlorophenol	5.06	1.0	"	5.00	ND	101	69-115			
2,3,4,6-Tetrachlorophenol	4.56	1.0	"	5.00	ND	91.2	66-117			
2,3,4,5-Tetrachlorophenol	4.37	1.0	"	5.00	ND	87.4	70-115			
Pentachlorophenol	4.38	1.0	"	5.00	ND	87.6	55-124			
Surrogate: Tribromophenol	*26.5*		"	*24.9*		*106*	*79-119*			
Matrix Spike Dup (AL30418-MSD1)		**Source: A312030-01**		Prepared & Analyzed: 12/02/03						
2,4,6-Trichlorophenol	4.56	1.0	ug/l	5.00	ND	91.2	75-125	1.95	20	
2,3,5,6-Tetrachlorophenol	4.90	1.0	"	5.00	ND	98.0	69-115	3.21	20	
2,3,4,6-Tetrachlorophenol	4.42	1.0	"	5.00	ND	88.4	66-117	3.12	20	

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Cheryl Watson For Sheri L. Speaks
Project Manager

12/16/03

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Report Date: 12/15/03 15:42
Project No: 030275.6
Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A312034	12/01/2003 17:40	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 AL30418 - Solvent Extraction										
Matrix Spike Dup (AL30418-MSD1)		**Source: A312030-01**		Prepared & Analyzed: 12/02/03						
2,3,4,5-Tetrachlorophenol	4.21	1.0	"	5.00	ND	84.2	70-115	3.73	20	
Pentachlorophenol	4.22	1.0	"	5.00	ND	84.4	55-124	3.72	20	
Surrogate: Tribromophenol	*25.9*		"	*24.9*		*104*	*79-119*			

Cheryl Watson For Sheri L. Speaks
Project Manager

12/16/03

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CHEMICAL EXAMINATION REPORT

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

Report Date: 12/15/03 15:42
Project No: 030275.6
Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A312034	12/01/2003 17:40	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 AL30209 - General Preparation										
Blank (AL30209-BLK1)				Prepared: 12/02/03 Analyzed: 12/05/03						
Total Suspended Solids	ND	1.0	mg/l							
Duplicate (AL30209-DUP1)	**Source: A312029-01**			Prepared: 12/02/03 Analyzed: 12/05/03						
Total Suspended Solids	7800	1.0	mg/l		9400			18.6	30	
Batch AL30318 - General Preparation										
Blank (AL30318-BLK1)				Prepared: 12/03/03 Analyzed: 12/04/03						
Chemical Oxygen Demand	ND	10	mg/l							
LCS (AL30318-BS1)				Prepared: 12/03/03 Analyzed: 12/04/03						
Chemical Oxygen Demand	237	10	mg/l	250		94.8	85-115			
LCS Dup (AL30318-BSD1)				Prepared: 12/03/03 Analyzed: 12/04/03						
Chemical Oxygen Demand	235	10	mg/l	250		94.0	85-115	0.847	10	
Matrix Spike (AL30318-MS1)	**Source: A312068-04**			Prepared: 12/03/03 Analyzed: 12/04/03						
Chemical Oxygen Demand	70.5	10	mg/l	50.0	19	103	85-115			
Matrix Spike Dup (AL30318-MSD1)	**Source: A312068-04**			Prepared: 12/03/03 Analyzed: 12/04/03						
Chemical Oxygen Demand	70.5	10	mg/l	50.0	19	103	85-115	0.00	10	
Batch AL31009 - General Preparation										
Blank (AL31009-BLK1)				Prepared: 12/09/03 Analyzed: 12/12/03						
Oil & Grease (HEM-SG)	ND	5.0	mg/l							

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Project Manager

12/16/03

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Project No: 030275.6
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Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A312034	12/01/2003 17:40	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 AL31009 - General Preparation										
LCS (AL31009-BS1)				Prepared: 12/09/03 Analyzed: 12/12/03						
Oil & Grease (HEM-SG)	9.80	5.0	mg/l	10.0		98.0	83-116			
LCS Dup (AL31009-BSD1)				Prepared: 12/09/03 Analyzed: 12/12/03						
Oil & Grease (HEM-SG)	9.60	5.0	mg/l	10.0		96.0	83-116	2.06	28	
Batch AL31110 - General Preparation										
Blank (AL31110-BLK1)				Prepared & Analyzed: 12/11/03						
Tannins & Lignins	ND	0.10	mg/l							
LCS (AL31110-BS1)				Prepared & Analyzed: 12/11/03						
Tannins & Lignins	4.15	0.10	mg/l	4.00		104	80-120			
LCS Dup (AL31110-BSD1)				Prepared & Analyzed: 12/11/03						
Tannins & Lignins	4.09	0.10	mg/l	4.00		102	80-120	1.46	20	
Matrix Spike (AL31110-MS1)		**Source: A311572-02**		Prepared & Analyzed: 12/11/03						
Tannins & Lignins	2.67	0.10	mg/l	2.00	0.65	101	80-120			
Matrix Spike Dup (AL31110-MSD1)		**Source: A311572-02**		Prepared & Analyzed: 12/11/03						
Tannins & Lignins	2.68	0.10	mg/l	2.00	0.65	102	80-120	0.374	20	

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Project Manager

12/16/03

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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: 12/15/03 15:42
Project No: 030275.6
Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A312034	12/01/2003 17:40	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 AL31203 - EPA 3510B Water										
Blank (AL31203-BLK1)				Prepared: 12/11/03 Analyzed: 12/12/03						
TPH as Diesel	ND	50	ug/l							
TPH as Motor Oil	ND	100	"							
Surrogate: 1,4-Bromofluorobenzene	*395*		"	*500*		*79.0*	*38-120*			
LCS (AL31203-BS1)				Prepared: 12/11/03 Analyzed: 12/12/03						
TPH as Diesel	1670	50	ug/l	2040		81.9	57-136			
TPH as Motor Oil	2010	100	"	2040		98.5	58-138			
Surrogate: 1,4-Bromofluorobenzene	*423*		"	*500*		*84.6*	*38-120*			
LCS Dup (AL31203-BSD1)				Prepared: 12/11/03 Analyzed: 12/12/03						
TPH as Diesel	1610	50	ug/l	2040		78.9	57-136	3.66	25	
TPH as Motor Oil	1940	100	"	2040		95.1	58-138	3.54	25	
Surrogate: 1,4-Bromofluorobenzene	*419*		"	*500*		*83.8*	*38-120*			

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Cheryl Watson For Sheri L. Speaks
Project Manager

12/16/03

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CHEMICAL EXAMINATION REPORT

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

Report Date: 12/15/03 15:42
Project No: 030275.6
Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A312034	12/01/2003 17:40	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 AL30813 - EPA 5030 Water GC										
Blank (AL30813-BLK1)				Prepared & Analyzed: 12/04/03						
TPH as Gasoline	ND	50	ug/l							
Surrogate: 1,4-Bromofluorobenzene	*20.0*		"	*23.1*		*86.6*	*63-150*			
LCS (AL30813-BS2)				Prepared & Analyzed: 12/04/03						
TPH as Gasoline	53.0	50	ug/l	50.0		106	79-123			
Surrogate: 1,4-Bromofluorobenzene	*19.0*		"	*20.0*		*95.0*	*63-150*			
LCS Dup (AL30813-BSD2)				Prepared & Analyzed: 12/04/03						
TPH as Gasoline	53.9	50	ug/l	50.0		108	79-123	1.68	15	
Surrogate: 1,4-Bromofluorobenzene	*18.8*		"	*20.0*		*94.0*	*63-150*			

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

12/16/03

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: 12/15/03 15:42
Project No: 030275.6
Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A312034	12/01/2003 17:40	GEOMAT	

Notes and Definitions

D-09	Results in the diesel organics range are primarily due to overlap from a heavy oil range product.
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. 46208

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

☐ CA - Irvine
17770 Cartwright Rd.
Ste. 500
Irvine, CA 92614
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☐ CA - San Francisco
180 Howard St., Ste. 200
San Francisco, CA 94105
Tel (415) 495-7110
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☐ CO - Boulder
4900 Pearl East Cir.
Ste. 300W
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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 Consultants
2101 Webster St 12th floor
Oakland, CA 94612

PROJECT NO: 030275.6 PROJECT NAME: SPI-Arcata Storm Water PAGE: 1 OF: 2

SAMPLER (Signature): Matt Hillyard PROJECT MANAGER: Ross Steenson DATE: 12/1/03

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

SAMPLES													ANALYSIS REQUEST								
A312034-1	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.		TSS, EC	Tannin + Lignens	COD	TPH 0+G	Zn, As, Cu	HOLD	RUSH	STANDARD	
SL-6	12/1	1115	AQ				X		½bal	P	1		X	X						X	TSS: EPA 160.2
SL-6	12/1	1115	AQ			X	X		1pt	P	1				X						EC: EPA 120.1
SL-6	12/1	1115	AQ			X	X		1L	G	1					X					Tannin+Lignen: SM 425.1
SL-6	12/1	1115	AQ		X		X		1pt	P	1						X				COD: SM410.2
																					TPH-O+G: SM5520
																					Zn/Cu: EPA 200.7
																					As/ EPA 200.9
																					email to: Matt.Hillyard
																					@mfgenv.com
				TOTAL NUMBER OF CONTAINERS							4		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	12/1/03	11:00	J. Matthews	Jack Matthews	Alpha
J. Matthews	J. Matthews	Alpha	12/1/03	12:40	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

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

MFG, INC.

CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS

COC No. 46158

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☒ Geomatrix Consultants
2101 Webster St, 12th flr
Oakland, CA 94612

PROJECT NO: 030275.6 PROJECT NAME: SPI-Arcata Storm Water PAGE: 2 OF: 2

SAMPLER (Signature): Matt Hilyard PROJECT MANAGER: Ross Steenson DATE: 12/1/03

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

Field Sample Identification	SAMPLES: Sample TIME (DATE)	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	PCP/TCP	TPH-Gas			Handling: HOLD	RUSH	STANDARD	Remarks
A312034-1																					
SL-6	1115	12/1	AQ				X			1L	G	1	X							X	TPH-D: EPA 3510 GCFID
SL-6	1115	12/1	AQ				X			125mL	G	2		X						X	TPH-MO: EPA 8015M
SL-6	1115	12/1	AQ	X			X			40mL	G	3			X					X	PCP/TCP: Canadian Pulp
																					TPH-Gas: EPA 5030 GCFID

TOTAL NUMBER OF CONTAINERS 6

LABORATORY COMMENTS/CONDITION OF SAMPLES Cooler Temp: 3.2

RELINQUISHED BY: SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	RECEIVED BY: SIGNATURE	PRINTED NAME	COMPANY
Matt Hilyard	Matt Hilyard	MFG	12/1/03	14:00	Jacl Matthews	Jacl Matthews	MFG
J. Matthews	J. Matthews	Alpha	12/1/03	17:40	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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FILE 9329

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TASK 6 STORM WATER

2/6/04 ~~OUTFALL~~ SAMPLING
STORM WATER
SL-1 → SL-4

20 February 2004

Geomatrix Consultants
Attn: Ross Steenson
2101 Webster Street, 12th Floor
Oakland, CA 94612
RE: SPI - Arcata Stormwater
Work Order: A402242

Enclosed are the results of analyses for samples received by the laboratory on 02/09/04 13:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Melanie B. Neece

Melanie B. Neece For Karen A. Daly
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: 02/20/04 14:05
Project No: 030275.6
Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A402242	02/09/2004 13:30	GEOMAT	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SL-1	A402242-01	Water	02/06/04 15:40	02/09/04 13:30
SL-2	A402242-02	Water	02/06/04 14:50	02/09/04 13:30
SL-3	A402242-03	Water	02/06/04 15:00	02/09/04 13:30
SL-4	A402242-04	Water	02/06/04 15:25	02/09/04 13:30

Melanie B. Neece For Karen A. Daly
Project Manager

2/20/2004

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CHEMICAL EXAMINATION REPORT

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

Report Date: 02/20/04 14:05
Project No: 030275.6
Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A402242	02/09/2004 13:30	GEOMAT	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		PQL	NOTE
SL-1 (A402242-01)			**Sample Type: Water**			**Sampled: 02/06/04 15:40**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AB41815	02/12/04	02/19/04	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	"	"	"	"	"	ND "		1.0	
Surrogate: Tribromophenol	"	"	"	"		*97.2 %*	*79-119*		
Conventional Chemistry Parameters by APHA/EPA Methods									
Total Dissolved Solids	EPA 160.1	AB41319	02/13/04	02/19/04	1	**140 mg/l**		**10**	
SL-2 (A402242-02)			**Sample Type: Water**			**Sampled: 02/06/04 14:50**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AB41815	02/12/04	02/19/04	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	"	"	"	"	"	**1.6 "**		**1.0**	
Surrogate: Tribromophenol	"	"	"	"		*108 %*	*79-119*		
Conventional Chemistry Parameters by APHA/EPA Methods									
Total Dissolved Solids	EPA 160.1	AB41319	02/13/04	02/19/04	1	**150 mg/l**		**10**	
SL-3 (A402242-03)			**Sample Type: Water**			**Sampled: 02/06/04 15:00**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AB41815	02/12/04	02/19/04	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	"	"	"	"	"	ND "		1.0	
Surrogate: Tribromophenol	"	"	"	"		*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.

Melanie B. Neece For Karen A. Daly
Project Manager

2/20/2004

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CHEMICAL EXAMINATION REPORT

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

Report Date: 02/20/04 14:05
Project No: 030275.6
Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A402242	02/09/2004 13:30	GEOMAT	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		PQL	NOTE
SL-3 (A402242-03)			**Sample Type: Water**			**Sampled: 02/06/04 15:00**			
Conventional Chemistry Parameters by APHA/EPA Methods									
Total Dissolved Solids	EPA 160.1	AB41319	02/13/04	02/19/04	1	**270 mg/l**		**10**	
SL-4 (A402242-04)			**Sample Type: Water**			**Sampled: 02/06/04 15:25**			
Chlorinated Phenols by Canadian Pulp Method									
2,4,6-Trichlorophenol	EnvCan	AB41815	02/12/04	02/19/04	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	"	"	"	"	"	ND "		1.0	
Surrogate: Tribromophenol	"	"	"	"		*109 %*	*79-119*		
Conventional Chemistry Parameters by APHA/EPA Methods									
Total Dissolved Solids	EPA 160.1	AB41319	02/13/04	02/19/04	1	**96 mg/l**		**10**	

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Melanie B. Neece For Karen A. Daly
Project Manager

2/20/2004

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CHEMICAL EXAMINATION REPORT

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Oakland, CA 94612
Attn: Ross Steenson

Report Date: 02/20/04 14:05
Project No: 030275.6
Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A402242	02/09/2004 13:30	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 AB41815 - Solvent Extraction										
Blank (AB41815-BLK1)				Prepared: 02/12/04 Analyzed: 02/18/04						
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	*26.4*		"	*25.0*		*106*	*79-119*			
LCS (AB41815-BS1)				Prepared: 02/12/04 Analyzed: 02/18/04						
2,4,6-Trichlorophenol	4.88	1.0	ug/l	5.00		97.6	81-120			
2,3,5,6-Tetrachlorophenol	5.12	1.0	"	5.00		102	78-108			
2,3,4,6-Tetrachlorophenol	5.05	1.0	"	5.00		101	76-108			
2,3,4,5-Tetrachlorophenol	5.25	1.0	"	5.00		105	80-116			
Pentachlorophenol	5.48	1.0	"	5.00		110	86-109			QL-03
Surrogate: Tribromophenol	*29.3*		"	*25.0*		*117*	*79-119*			
Matrix Spike (AB41815-MS1)		**Source: A402225-01**		Prepared: 02/12/04 Analyzed: 02/18/04						
2,4,6-Trichlorophenol	4.78	1.0	ug/l	5.00	ND	95.6	75-125			
2,3,5,6-Tetrachlorophenol	4.97	1.0	"	5.00	ND	99.4	69-115			
2,3,4,6-Tetrachlorophenol	4.93	1.0	"	5.00	ND	98.6	66-117			
2,3,4,5-Tetrachlorophenol	5.03	1.0	"	5.00	ND	101	70-115			
Pentachlorophenol	5.36	1.0	"	5.00	ND	107	55-124			
Surrogate: Tribromophenol	*27.8*		"	*25.0*		*111*	*79-119*			
Matrix Spike Dup (AB41815-MSD1)		**Source: A402225-01**		Prepared: 02/12/04 Analyzed: 02/18/04						
2,4,6-Trichlorophenol	4.96	1.0	ug/l	5.00	ND	99.2	75-125	3.70	20	
2,3,5,6-Tetrachlorophenol	5.10	1.0	"	5.00	ND	102	69-115	2.58	20	

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Melanie B. Neece For Karen A. Daly
Project Manager

2/20/2004

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Project No: 030275.6
Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A402242	02/09/2004 13:30	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 AB41815 - Solvent Extraction										
Matrix Spike Dup (AB41815-MSD1)	**Source: A402225-01**			Prepared: 02/12/04		Analyzed: 02/18/04				
2,3,4,6-Tetrachlorophenol	5.04	1.0	"	5.00	ND	101	66-117	2.21	20	
2,3,4,5-Tetrachlorophenol	5.06	1.0	"	5.00	ND	101	70-115	0.595	20	
Pentachlorophenol	5.47	1.0	"	5.00	ND	109	55-124	2.03	20	
Surrogate: Tribromophenol	*28.8*		"	*25.0*		*115*	*79-119*			

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Melanie B. Neece For Karen A. Daly
Project Manager

2/20/2004

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CHEMICAL EXAMINATION REPORT

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

Report Date: 02/20/04 14:05
Project No: 030275.6
Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A402242	02/09/2004 13:30	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 AB41319 - General Preparation										
Blank (AB41319-BLK1)				Prepared: 02/13/04 Analyzed: 02/19/04						
Total Dissolved Solids	ND	10	mg/l							
Duplicate (AB41319-DUP1)		**Source: A402244-01**		Prepared: 02/13/04 Analyzed: 02/19/04						
Total Dissolved Solids	18600	10	mg/l		19000			2.13	30	

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Melanie B. Neece For Karen A. Daly
Project Manager

2/20/2004

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Oakland, CA 94612
Attn: Ross Steenson

Report Date: 02/20/04 14:05
Project No: 030275.6
Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A402242	02/09/2004 13:30	GEOMAT	

Notes and Definitions

QL-03	Although the LCS/LCSD recovery for this analyte is outside of in-house developed control limits, it is within the EPA recommended range of 70-130%.
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. 46211

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

☐ CA - Irvine
17770 Cartwright Rd.
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Fax (949) 253-2954

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180 Howard St., Ste. 200
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Fax (303) 447-1836

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

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Fax (503) 228-8631

☐ PA - Pittsburgh
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Pittsburgh, PA 15212
Tel (412) 321-2278
Fax (412) 321-2283

☐ TX - Austin
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Fax (281) 890-5044

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Fax (361) 553-6115

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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

PROJECT NO: 030275-6 PROJECT NAME: SPI Arcata Storm Water PAGE: 1 OF: 2

SAMPLER (Signature): Matt Hillyard PROJECT MANAGER: DATE: 2/9/04

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

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
																					Chlorophenols
SL-1	2/6	1540	AQ				X		U	125mL	G	2	X	A40224201						X	by cadoxan pulp method
SL-2		1450										2	X					-02			
SL-3		1500										2	X					-03			
SL-4		1525										2	X					-04			

TOTAL NUMBER OF CONTAINERS 8

LABORATORY COMMENTS/CONDITION OF SAMPLES Cooler Temp: 1.0°C

RELINQUISHED BY: SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	RECEIVED BY: SIGNATURE	PRINTED NAME	COMPANY
Matt Hillyard	Matt Hillyard	MFG	2/9/04	9:30	John Taylor	John Taylor	Alpha
John Taylor	John Taylor	Alpha	2/9/04	13:30	K. Daly	K. Daly	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. 46210

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Ste. 100
Lynnwood, WA 98036
Tel (425) 921-4000
Fax (425) 921-4040

☒ Geomatrix
Oakland

PROJECT NO: 030275.6 PROJECT NAME: SPI Arcata Storm Water PAGE: 2 OF: 2

SAMPLER (Signature): Matt Hillyard PROJECT MANAGER: Ross Steenson DATE: 2/9/04

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: TDS	Handling: HOLD	RUSH	STANDARD	Remarks
SL-1	2/6	1540	AQ				X		1 Qt	P	1	X			X	A402242.01
SL-2	↓	1450	↓				↓		↓	↓	1	X			↓	-02
SL-3		1500									1	X				-03
SL-4		1525									1	X				-04

TOTAL NUMBER OF CONTAINERS 4

LABORATORY COMMENTS/CONDITION OF SAMPLES Cooler Temp: 1.0E

RELINQUISHED BY: SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	RECEIVED BY: SIGNATURE	PRINTED NAME	COMPANY
	Matt Hillyard	MFG	2/9/04	9:30		John Taylor	Alpha
	John Taylor	Alpha	2/9/04	13:30		K. Daly	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

TASK 6 STORM WATER
2/6/04 SLOUGH SAMPLING
SL-1 → SL-4

20 February 2004

Geomatrix Consultants
Attn: Ross Steenson
2101 Webster Street, 12th Floor
Oakland, CA 94612
RE: SPI - Arcata Stormwater
Work Order: A402244

Enclosed are the results of analyses for samples received by the laboratory on 02/09/04 13:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Melanie B. Neece

Melanie B. Neece For Karen A. Daly
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: 02/20/04 14:10
Project No: 030275.6
Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A402244	02/09/2004 13:30	GEOMAT	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SL-1 Slough	A402244-01	Water	02/06/04 15:40	02/09/04 13:30
SL-2 Slough	A402244-02	Water	02/06/04 14:50	02/09/04 13:30
SL-3 Slough	A402244-03	Water	02/06/04 15:00	02/09/04 13:30
SL-4 Slough	A402244-04	Water	02/06/04 15:25	02/09/04 13:30

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.

Melanie B. Neece For Karen A. Daly
Project Manager

2/20/2004

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: 02/20/04 14:10
Project No: 030275.6
Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A402244	02/09/2004 13:30	GEOMAT	

Alpha Analytical Laboratories, Inc.

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
SL-1 Slough (A402244-01)			**Sample Type: Water**			**Sampled: 02/06/04 15:40**		
Conventional Chemistry Parameters by APHA/EPA Methods								
Total Dissolved Solids	EPA 160.1	AB41319	02/13/04	02/19/04	1	**19000 mg/l**	**10**	
SL-2 Slough (A402244-02)			**Sample Type: Water**			**Sampled: 02/06/04 14:50**		
Conventional Chemistry Parameters by APHA/EPA Methods								
Total Dissolved Solids	EPA 160.1	AB41319	02/13/04	02/19/04	1	**18000 mg/l**	**10**	
SL-3 Slough (A402244-03)			**Sample Type: Water**			**Sampled: 02/06/04 15:00**		
Conventional Chemistry Parameters by APHA/EPA Methods								
Total Dissolved Solids	EPA 160.1	AB41319	02/13/04	02/19/04	1	**21000 mg/l**	**10**	
SL-4 Slough (A402244-04)			**Sample Type: Water**			**Sampled: 02/06/04 15:25**		
Conventional Chemistry Parameters by APHA/EPA Methods								
Total Dissolved Solids	EPA 160.1	AB41319	02/13/04	02/19/04	1	**23000 mg/l**	**10**	

Melanie B. Neece For Karen A. Daly
Project Manager

2/20/2004

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CHEMICAL EXAMINATION REPORT

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

Report Date: 02/20/04 14:10
Project No: 030275.6
Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A402244	02/09/2004 13:30	GEOMAT	

SourceResult

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 AB41319 - General Preparation										
Blank (AB41319-BLK1)				Prepared: 02/13/04 Analyzed: 02/19/04						
Total Dissolved Solids	ND	10	mg/l							
Duplicate (AB41319-DUP1)	**Source: A402244-01**			Prepared: 02/13/04 Analyzed: 02/19/04						
Total Dissolved Solids	18600	10	mg/l		19000			2.13	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.

Melanie B. Neece For Karen A. Daly
Project Manager

2/20/2004

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CHEMICAL EXAMINATION REPORT

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

Report Date: 02/20/04 14:10
Project No: 030275.6
Project ID: SPI - Arcata Stormwater

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A402244	02/09/2004 13:30	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. 46209

☐ **Arcata Office**
875 Crescent Way
Arcata, CA 95521-6741
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* Geomatrix
2101 Webster St, 12th Floor
Oakland, CA 94612

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

SAMPLER (Signature): Matt Hillyard PROJECT MANAGER: Ross Steenson DATE: 2/9/04

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: TDS					Handling: HOLD	RUSH	STANDARD	Remarks
SL-1 Slough	2/6	1540	AQ				X		N	1QT	P	1	X							X	A402244-01
SL-2 Slough	2/6	1450	↓				↓		↓	↓	↓	1	↓							↓	-02
SL-3 Slough	2/6	1500	↓				↓		↓	↓	↓	1	↓							↓	-03
SL-4 Slough	2/6	1525	↓				↓		↓	↓	↓	1	↓							↓	-04

TOTAL NUMBER OF CONTAINERS 4

LABORATORY COMMENTS/CONDITION OF SAMPLES Cooler Temp: 1.0°C

RELINQUISHED BY: SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	RECEIVED BY: SIGNATURE	PRINTED NAME	COMPANY
	Matt Hillyard	MFG	2/9/04	9:30		John Taylor	Alpha
	John Taylor	Alpha	2/9/04	13:30		R. Daly	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

NORTH COAST LABORATORIES LTD.

RECEIVED 6/18/2004

April 13, 2004

Water Quality Control Bd-MC
5550 Skylane Boulevard
Suite A
Santa Rosa, CA 95403-1074
Attn: Dean Prat

RE: Sierra Pacific

Order No.: 0404125
Invoice No.: 41443
PO No.: #01-253-110-0
ELAP No. 1247-Expires July 2004

SAMPLE IDENTIFICATION

Fraction	Client Sample Description
01A	SL-1-RB
02A	Separator Big D2-RB
03A	Separator D4-RB

ND = Not Detected at the Reporting Limit
Limit = Reporting Limit
All solid results are expressed on a wet-weight basis unless otherwise noted.

RWQCB Sampling 4/6/04

RWQCB
REGION 1
APR 15 2004

☐ CK ☐ FCR ☑ TBO
☑ RLT ☑ LGR ☐ KAD
☐ NPO ☐ RSC ☐ EJL

REPORT CERTIFIED BY

Laboratory Supervisor(s)

QA Unit

Jesse G. Chaney, Jr.
Laboratory Director

5680 West End Road • Arcata California 95521-9202 • 707-822-4649 • FAX 707-822-6831

Date: 13-Apr-04
WorkOrder: 0404125

ANALYTICAL REPORT

Client Sample ID: SL-1-RB
Lab ID: 0404125-01A
Received: 4/6/04 **Collected:** 4/6/04 14:30

Test Name: Penta- and Tetrachlorophenol
Analyst: MDM
Reference: Canadian Pulp Report
Holding Time (days): 7

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Tetrachlorophenol	ND	1.0	µg/L	1.0	4/8/04	4/9/04
Pentachlorophenol	0.42	0.30	µg/L	1.0	4/8/04	4/9/04
Surrogate: Dibromophenol	96.7	69.7-119	% Rec	1.0	4/8/04	4/9/04

Client Sample ID: Separator Big D2-RB
Lab ID: 0404125-02A
Received: 4/6/04 **Collected:** 4/6/04 14:45

Test Name: Penta- and Tetrachlorophenol
Analyst: MDM
Reference: Canadian Pulp Report
Holding Time (days): 7

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Tetrachlorophenol	ND	1.0	µg/L	1.0	4/8/04	4/9/04
Pentachlorophenol	ND	0.30	µg/L	1.0	4/8/04	4/9/04
Surrogate: Dibromophenol	103	69.7-119	% Rec	1.0	4/8/04	4/9/04

Client Sample ID: Separator D4-RB
Lab ID: 0404125-03A
Received: 4/6/04 **Collected:** 4/6/04 15:00

Test Name: Penta- and Tetrachlorophenol
Analyst: MDM
Reference: Canadian Pulp Report
Holding Time (days): 7

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Tetrachlorophenol	ND	1.0	µg/L	1.0	4/8/04	4/9/04
Pentachlorophenol	ND	0.30	µg/L	1.0	4/8/04	4/9/04
Surrogate: Dibromophenol	97.5	69.7-119	% Rec	1.0	4/8/04	4/9/04

NORTH COAST LABORATORIES
5680 West End Road • Arcata, California 95521-9202 • 707-822-4649 • FAX 707-822-6831

North Coast Laboratories, Ltd.

CLIENT: Water Quality Control Bd-MC
Work Order: 0404125
Project: Sierra Pacific

Date: 13-Apr-04

QC SUMMARY REPORT

Laboratory Control Spike

Sample ID **LCS-11171** Batch ID: **11171** Test Code: **PCPTW** Units: **µg/L** Analysis Date **4/9/04 5:31:03 PM** Prep Date **4/8/04**
Client ID: Run ID: **ORGC4_040409A** SeqNo: **415763**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tetrachlorophenol	4.988	1.0	5.00	0	99.8%	78	111	0			
Pentachlorophenol	1.706	0.30	1.50	0	114%	85	132	0			
Dibromophenol	5.24	0.10	5.00	0	105%	70	119	0			

Sample ID **LCSD-11171** Batch ID: **11171** Test Code: **PCPTW** Units: **µg/L** Analysis Date **4/9/04 5:52:10 PM** Prep Date **4/8/04**
Client ID: Run ID: **ORGC4_040409A** SeqNo: **415764**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tetrachlorophenol	4.875	1.0	5.00	0	97.5%	78	111	4.99	2.28%	15	
Pentachlorophenol	1.617	0.30	1.50	0	108%	85	132	1.71	5.40%	15	
Dibromophenol	5.01	0.10	5.00	0	100%	70	119	5.24	4.53%	15	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

North Coast Laboratories, Ltd.

Date: 13-Apr-04

CLIENT: Water Quality Control Bd-MC
Work Order: 0404125
Project: Sierra Pacific

QC SUMMARY REPORT

Method Blank

Sample ID **MB-11171** Batch ID: **11171** Test Code: **PCPTW** Units: **µg/L** Analysis Date **4/9/04 5:09:59 PM** Prep Date **4/8/04**

Client ID: Run ID: **ORGC4_040409A** SeqNo: **415762**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tetrachlorophenol	ND	1.0									
Pentachlorophenol	0.1211	0.30									
Dibromophenol	5.07	0.10	5.00	0	101%	70	119	0			J

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

North Coast Laboratories, Ltd.

Date: *13-Apr-04*

CLIENT: Water Quality Control Bd-MC
Project: Sierra Pacific
Lab Order: 0404125

CASE NARRATIVE

PCP/TCP:
The positive result for sample SL-1-RB was confirmed on second column. Suggest GC-MS.

NORTH COAST LABORATORIES
5680 West End Road • Arcata, California 95521-9202 • 707-822-4649 • FAX 707-822-6831

NORTH COAST LABORATORIES LTD.
5680 West End Road • Arcata • CA 95521-9202
707-822-4649 Fax 707-822-6831

Chain of Custody

LABORATORY NUMBER: 0404125

Attention: Dean Prat
Results & Invoice to: North Coast Regional Water Board
Address: 5550 Skylane Blvd., Ste. A
Santa Rosa, CA 95403
Phone: (707) 576-2801
Copies of Report to:
Sampler (Sign & Print): Dean Prat Dean Prat

TAT: ☐ 24 Hr ☐ 48 Hr ☐ 5 Day ☐ 5–7 Day
☒ STD (2–3 Wk) ☐ Other:
PRIOR AUTHORIZATION IS REQUIRED FOR RUSHES

REPORTING REQUIREMENTS: State Forms ☐
Preliminary: FAX ☐ Verbal ☐ By:__/__/__
Final Report: FAX ☐ Verbal ☐ By:__/__/__

PROJECT INFORMATION
Project Number:
Project Name: Sierra Pacific (per Dean Pratt 4/6/04 - PAH)
Purchase Order Number:

LAB ID	SAMPLE ID	DATE	TIME	MATRIX*	CONTAINER	PRESERVATIVE	ANALYSIS
	SL-1-RB	4-6-04	1430	SW	7	ice	PCP/TCP Can Alp
	Separator Big D2-RB	↓	1445	SW			X
	Separator D4-RB	↓	1500	SW			X

CONTAINER CODES: 1—½ gal. pl; 2—250 ml pl; 3—500 ml pl; 4—1 L Nalgene; 5—250 ml BG; 6—500 ml BG; 7—1 L BG; 8—1 L cg; 9—40 ml VOA; 10—125 ml VOA; 11—4 oz glass jar; 12—8 oz glass jar; 13—brass tube; 14—other

PRESERVATIVE CODES: a—HNO_3; b—HCl; c—H_2SO_4; d—$Na_2S_2O_3$; e—NaOH; f—$C_2H_3O_2Cl$; g—other

SAMPLE CONDITION/SPECIAL INSTRUCTIONS

Evidence of cooling—
1. Sample temp = 5.5°

RELINQUISHED BY (Sign & Print)	DATE/TIME	RECEIVED BY (Sign)	DATE/TIME
Dean Prat Dean Prat	4/6/04 1645	Amanda Booth	4/6/04 16:45

SAMPLE DISPOSAL
☒ NCL Disposal of Non-Contaminated
☐ Return ☐ Pickup

CHAIN OF CUSTODY SEALS Y/N/NA
SHIPPED VIA: UPS Air-Ex Fed-Ex Bus Hand

***MATRIX:** DW=Drinking Water; Eff=Effluent; Inf=Influent; SW=Surface Water; GW=Ground Water; S=Soil; O=Other.

ALL CONTAMINATED NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT

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

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*	

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
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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
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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

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: 04/22/04 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
875 Crescent Way
Arcata, CA 95521-6741
Phone (707) 826-8430- FAX (707) 826-8437

☐ CA - Irvine
17770 Cartwright Rd.
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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
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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: 030275.6 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

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
SL-1	4/14	1045	AQ				X		4	125 mL	G	2	X							X	Chlorinated phenols by Canadian Pulp

TOTAL NUMBER OF CONTAINERS 2

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	4/14/04	1315	Lisa Jansen 4/15/04	Lisa Jansen	Alpha Labs
						0930	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.
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	

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 10:01
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

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

□ CA - Irvine
17770 Cartwright Rd.
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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
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Missoula, MT 59807
Tel (406) 728-4600
Fax (406) 728-4698

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□ 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

COC No. 46246

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

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
Ditch 2 Comp 1	4/20	1320					X		N	125mL	G	1	X	A4104473-01						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: SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	RECEIVED BY: SIGNATURE	PRINTED NAME	COMPANY
	Matt Hillyard	MFG	4/21/04	1220 PM		John Taylor	Alpha
	John Taylor	Alpha	4/21/04	1650		Nicole 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

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

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

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	

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 10:06
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.
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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	

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. 46245

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875 Crescent Way
Arcata, CA 95521-6741
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San Francisco, CA 94105
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Fax (415) 495-7107

☐ CO - Boulder
4900 Pearl East Cir.
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Wallace, ID 83873
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Fax (208) 556-7271

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Missoula, MT 59807
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Fax (406) 728-4698

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Edison, NJ 08837
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Fax (732) 738-5711

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Fax (512) 338-1331

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

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

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Texarkana, TX 75503
Tel (903) 794-0625
Fax (903) 794-0626

☐ WA - Seattle
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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: 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					Handling: HOLD	RUSH	STANDARD	Remarks
Ditch2-20040420	4/20	1320	AQ				X		N	125ml	G	2	A404474-01							X	Chlorophenols by Canadian pulp

TOTAL NUMBER OF CONTAINERS 2

LABORATORY COMMENTS/CONDITION OF SAMPLES Cooler Temp: 2.3

RELINQUISHED BY: SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	RECEIVED BY: SIGNATURE	PRINTED NAME	COMPANY
	Matt Hillyard	MFG	4/21/04	1220		John Taylor	Alpha
	John Taylor	Alpha	4/21/04	1650		Nena 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.

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

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)

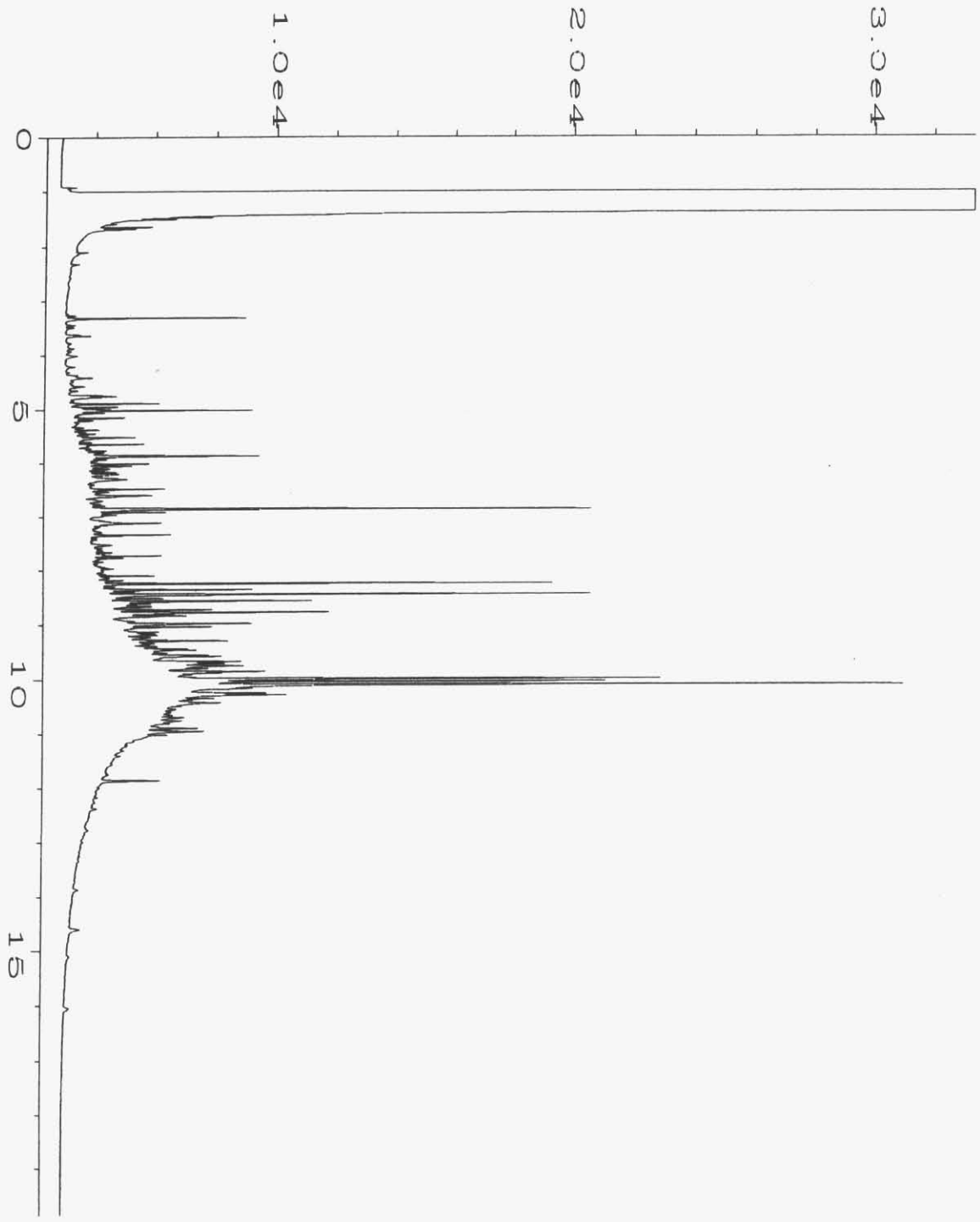
Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Motor Oil	µg/L (ppb)	22,000	25,000	13	0-20

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

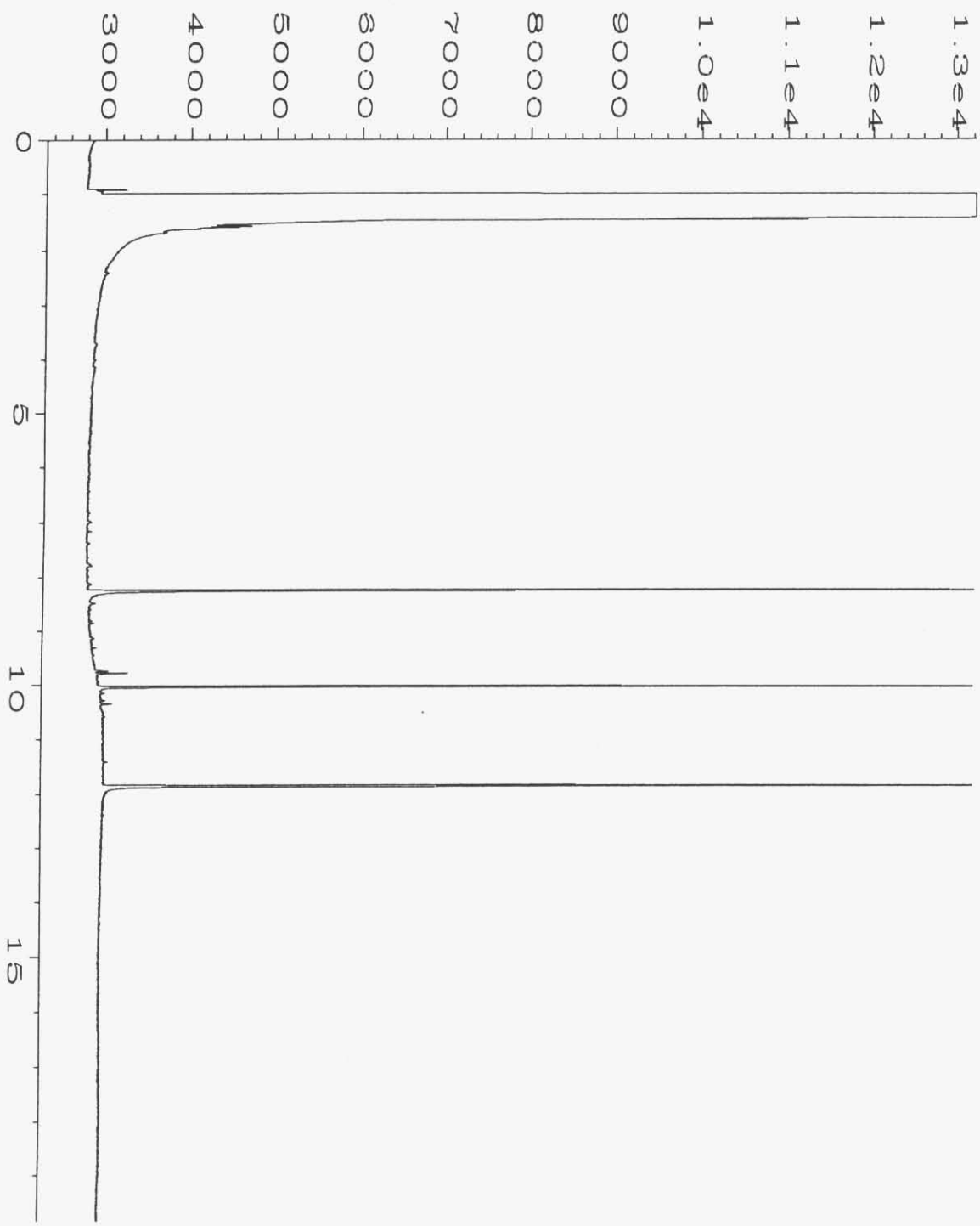
Laboratory Code: Laboratory Control Sample

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



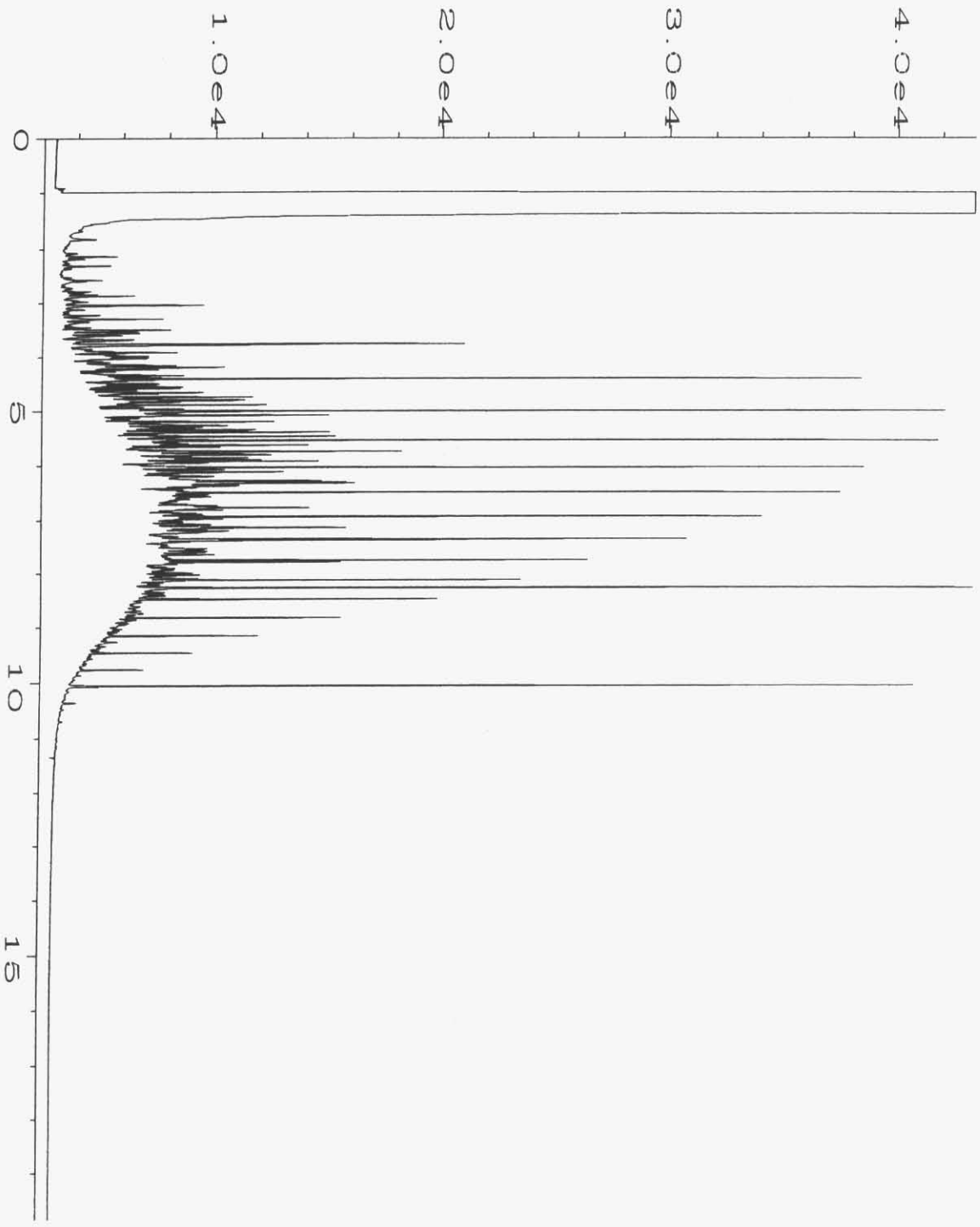
Data File Name : D:\GC6\04-29-04\014F0601.D
Operator : ME
Instrument : GC #6
Sample Name : 404199-COMP 1:10
Run Time Bar Code:
Acquired on : 29 Apr 04 02:09 PM
Report Created on: 30 Apr 04 10:41 AM

Page Number : 1
Vial Number : 14
Injection Number : 1
Sequence Line : 6
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.MTH

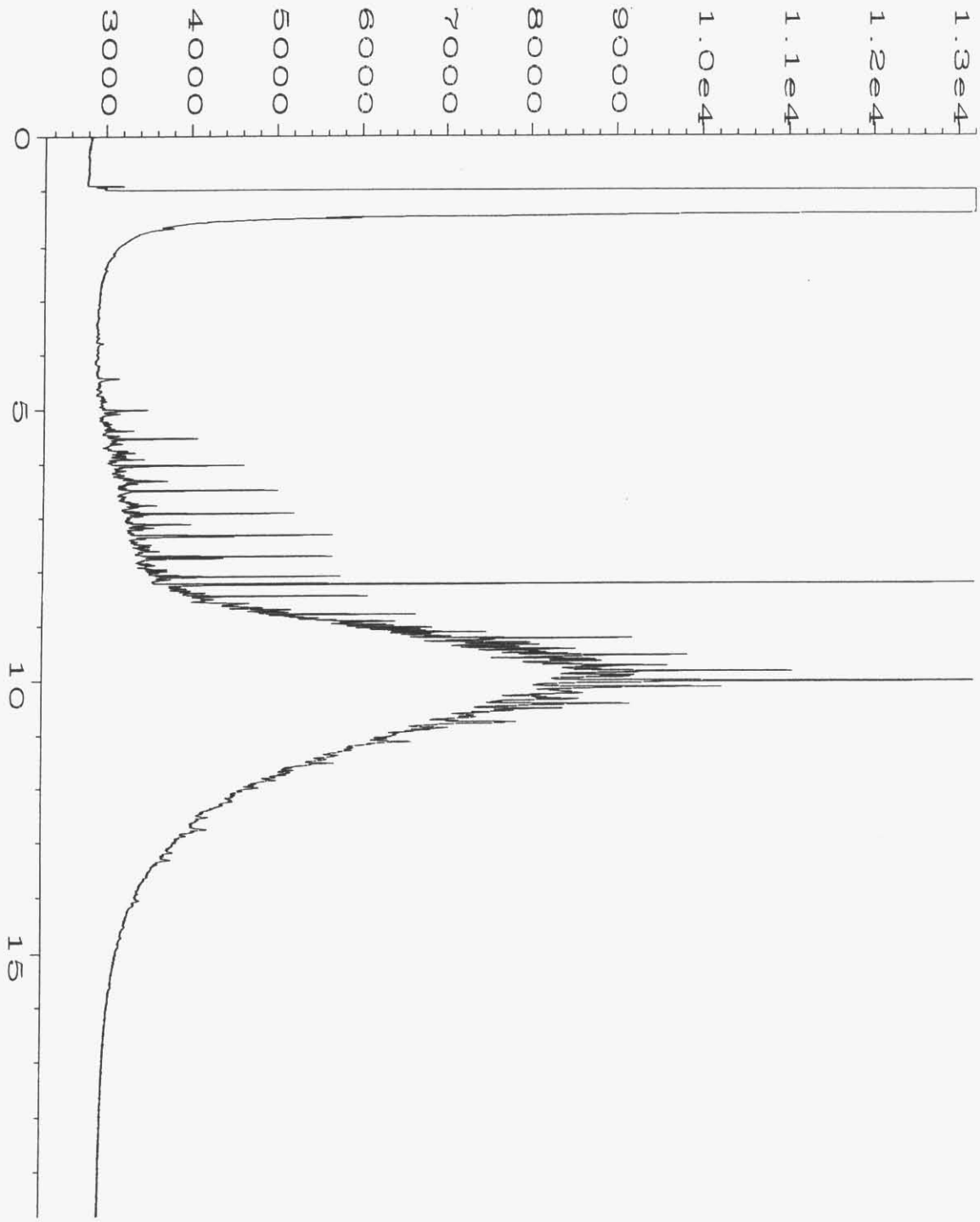


Data File Name : D:\GC6\04-29-04\011F0701.D
Operator : ME
Instrument : GC #6
Sample Name : 04-399 MB
Run Time Bar Code:
Acquired on : 29 Apr 04 04:18 PM
Report Created on: 30 Apr 04 10:40 AM

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\04-29-04\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 10:41 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

404199

CM 04/22/04

D04

MFG, INC.

CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS

COC No. 46248

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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	Sample 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	1 liter	G	1	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															X	"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

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

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

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

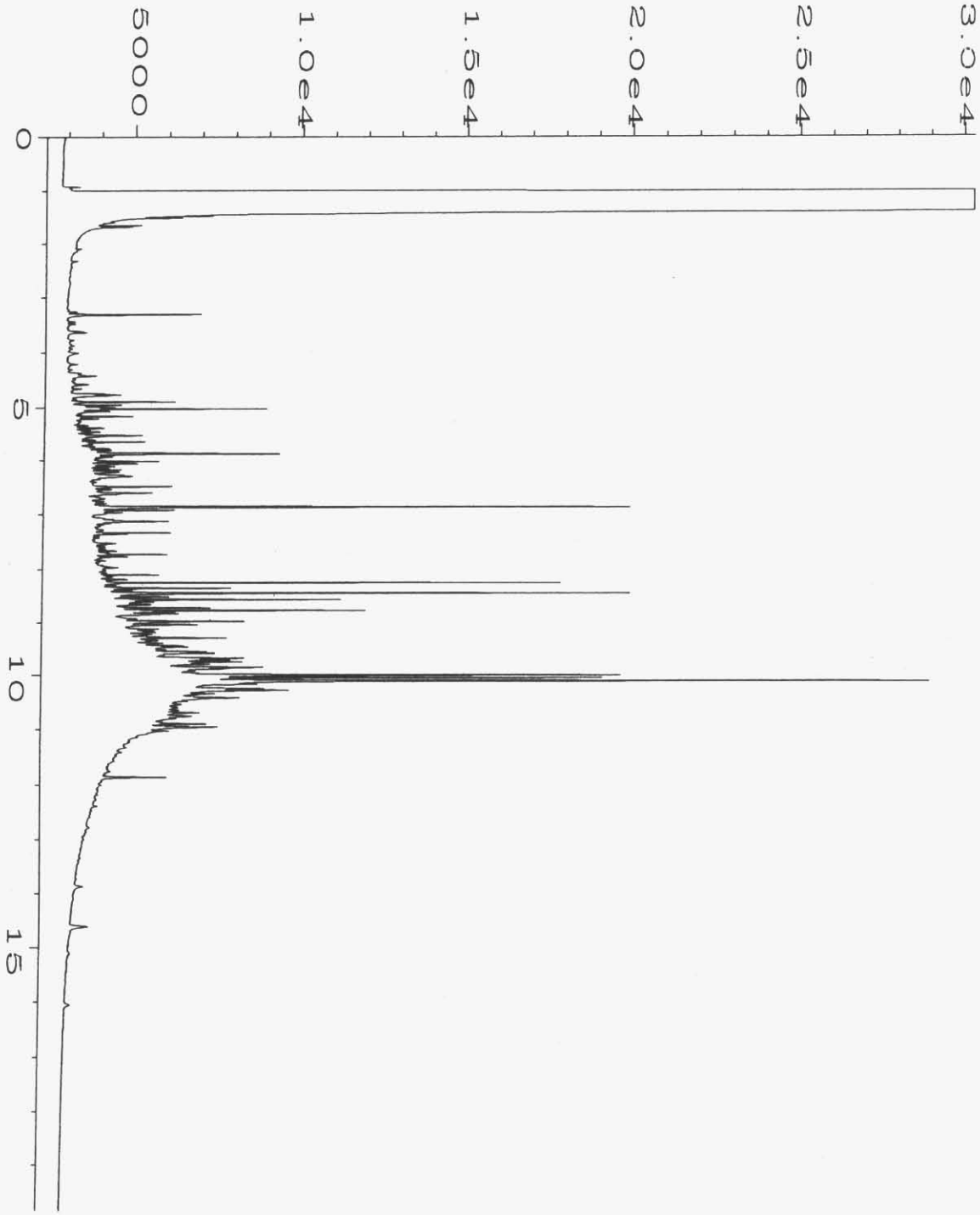
Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Motor Oil	µg/L (ppb)	7,900	7,300	8	0-20

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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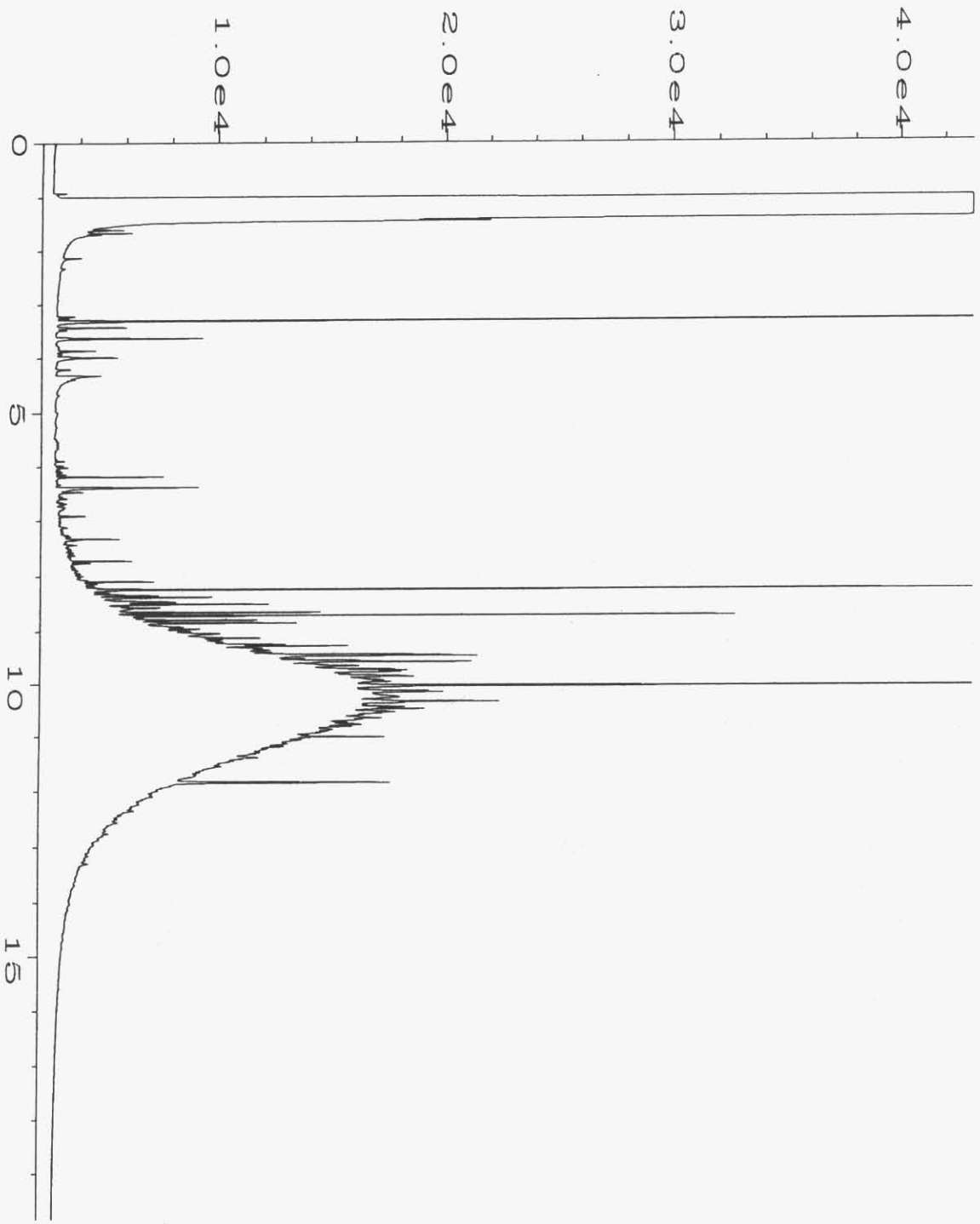
Operator	: ME	Page Number	: 1
Instrument	: GC #6	Vial Number	: 15
Sample Name	: 404200-01 1:10	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 6
Acquired on	: 29 Apr 04 02:35 PM	Instrument Method	: TPHDAK.MTH
Report Created on	: 30 Apr 04 10:41 AM	Analysis Method	: DEFAULT.MTH



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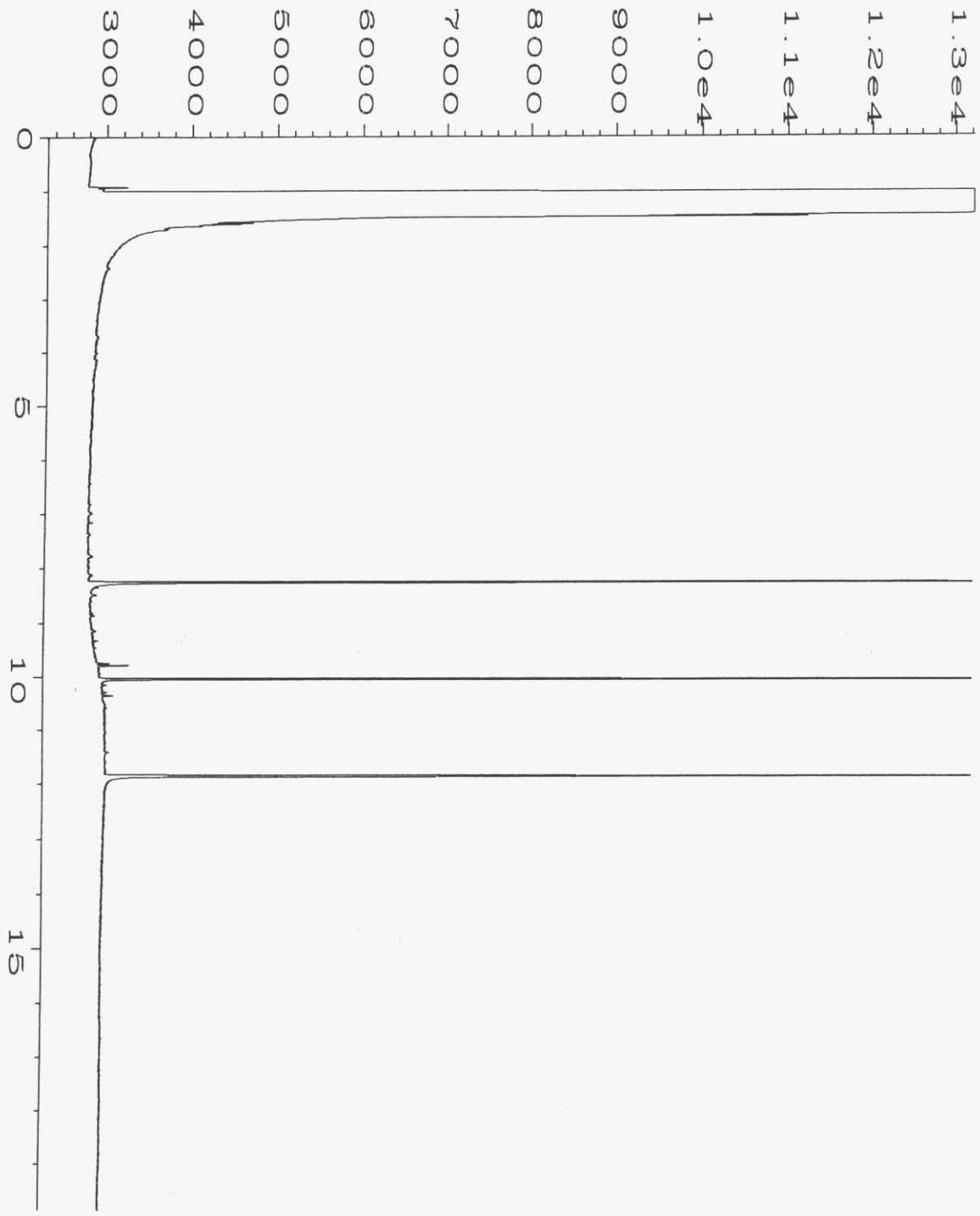
Operator : ME
Instrument : GC #6
Sample Name : 404200-01 sg
Run Time Bar Code:
Acquired on : 30 Apr 04 12:42 PM
Report Created on: 03 May 04 09:02 AM

Page Number : 1
Vial Number : 9
Injection Number : 1
Sequence Line : 4
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.MTH



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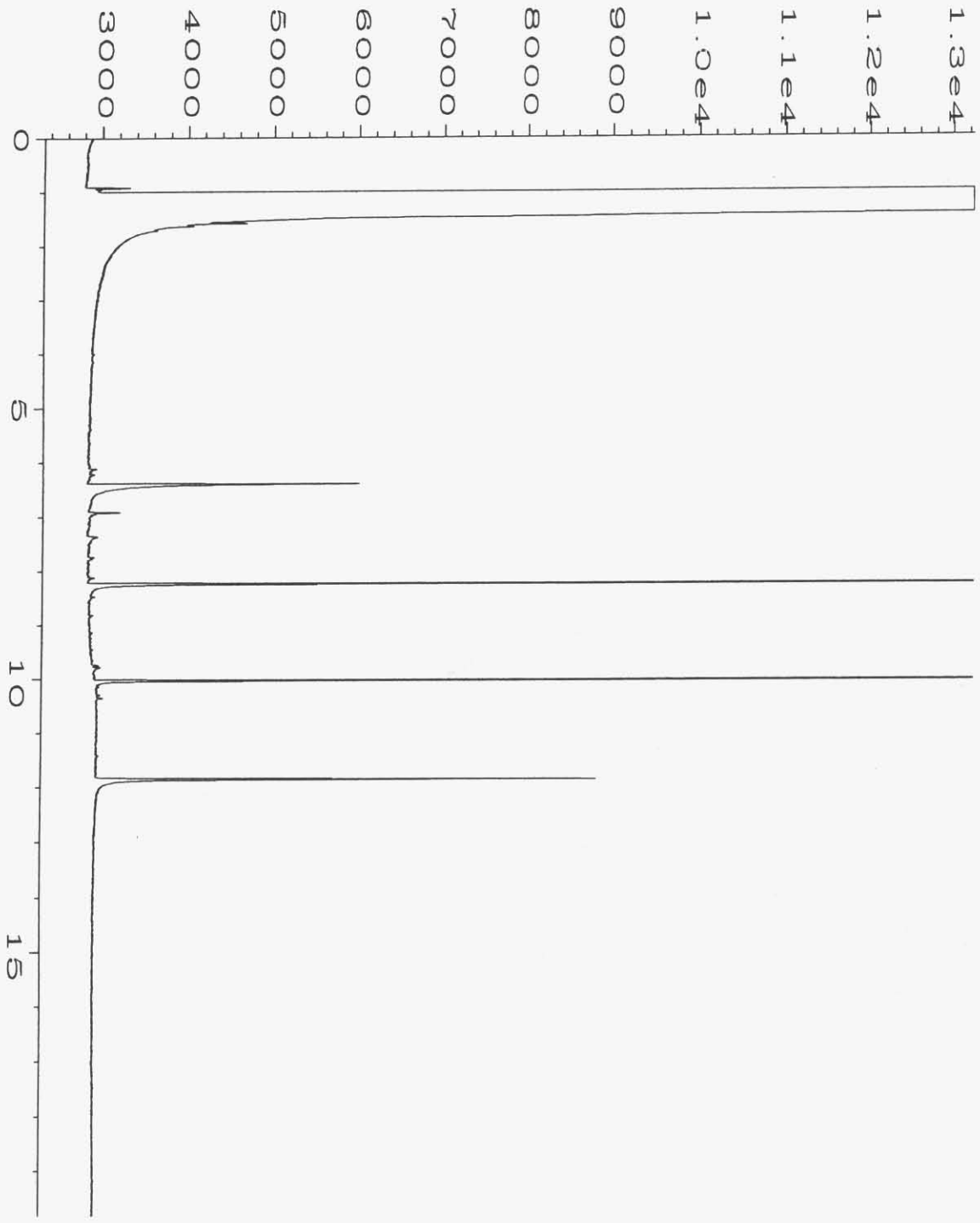
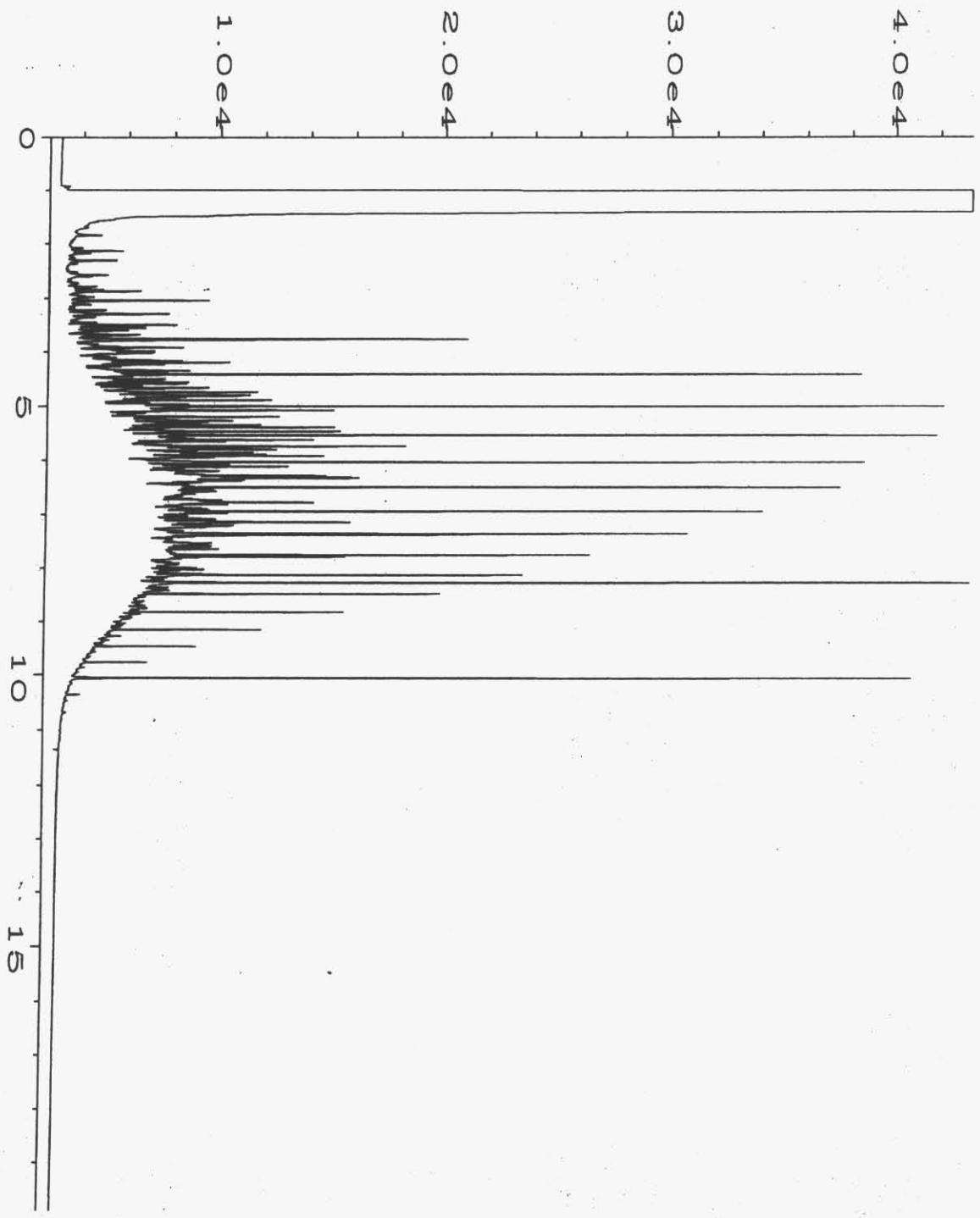
Operator : ME
Instrument : GC #6
Sample Name : 04-399 MB
Run Time Bar Code:
Acquired on : 29 Apr 04 04:18 PM
Report Created on: 30 Apr 04 10:40 AM

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



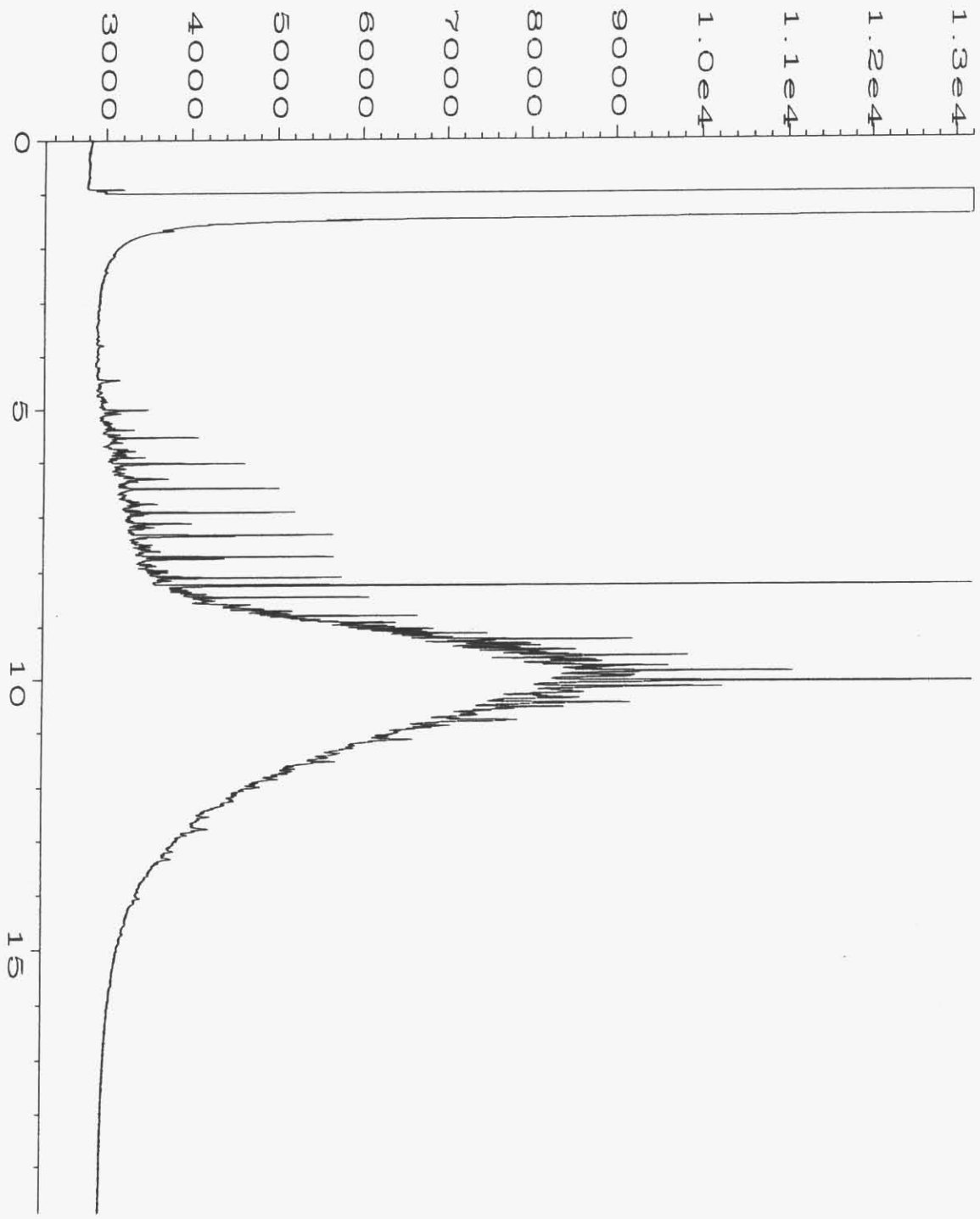
Data File Name : D:\GC6\04-30-04\006F0401.D
Operator : ME
Instrument : GC #6
Sample Name : 04-399 mb sg
Run Time Bar Code:
Acquired on : 30 Apr 04 11:25 AM
Report Created on: 03 May 04 09:02 AM

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
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 10:42 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

404200

CM 04/22/04

D04

MFG, INC.

CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS

☐ Arcata Office
875 Crescent Way
Arcata, CA 95521-6741
Phone (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

COC No. 46247

✱ 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 7901 2472 2961 DESTINATION: Friedman + Bruya

Lab ID	Field Sample Identification	SAMPLES: Sample DATE	TIME	Matrix*	Preservation: HCl	HNO$_3$	H$_2$SO$_4$	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		U	1 Liter	G	4	X							X	Bill Geomatrix
02	Ditch3-20040420-SG	4/20	1330	AQ				X		U	1 Liter	G	4		X						X	

E#1 4/22/04

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	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.
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	

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 For Sheri L. Speaks
Project Manager

6/14/2004

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	

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**	

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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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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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 Method 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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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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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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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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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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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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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							

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 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	

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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Melanie B. Neece For Sheri L. Speaks
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	

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*			

Melanie B. Neece For Sheri L. Speaks
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	

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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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.

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(510) 663-4107

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

	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.	TSS, EC	Tannin + Lignins	COD			HOLD	RUSH	STANDARD	USE 200 SERIES ON
SL-1 A405657-1	5/27	1315	AQ				X		U	½ gal	P	1	X	X						X	ALL METALS, SM -
SL-2 -2		1400								½ gal	P	1	X	X							5550B ON T&L,
SL-3 -3		1235								½ gal	P	1	X	X							1664 ON O&G
SL-4 -4		1345								½ gal	P	1	X	X							PER JIM HANIBAL
SL-1		1315				X				1 pt	P	1			X						DW 5.28.04
SL-2		1400				X				1 pt	P	1			X						14:20
SL-3		1235				X				1 pt	P	1			X						
										TOTAL NUMBER OF CONTAINERS		7	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	John Mills	Julie Mills	MFG
John Mills	Julie Mills	MFG	5/28/04	900	John Taylor	John TAYLOR	Alpha
John Taylor	John TAYLOR	Alpha	5/28/04	900 AM	Sharon Speaks	Sheri Speaks	LABORATORY 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 OT - other Filtration: F - filtered U - unfiltered

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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 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: COD	Zn, As, Cu	Cd, Cr, Ni, Pb	Handling: HOLD	RUSH	STANDARD	Remarks
SL-4	5/27	1345	AQ			X	X	S	1pt	P	1	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	0900	5/28/04	John Taylor	John Taylor	Alpha
John Taylor	John Taylor	Alpha	~~5-28-04~~ 1300	900	Shon Speaks	Shon Speaks	Alpha

*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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LABORATORY 5-28-04 13:00

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* Geomatrix
Oakland

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 0+6	TPH-Diesel	TPH-MD			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		1345				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	Julie Mills	MFG
Julie Mills	Julie Mills	MFG	5/28/04	900 AM	John Taylor	John Taylor	Alpha LABORATORY
John Taylor	John Taylor	Alpha	5/28/04	1300	Shari Speaks	Shari Speaks	Alpha

*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: 030275-10 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

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-Diesel	TPH-MO	TPH-Gas	PCP/TCP	Handling: HOLD	RUSH	STANDARD	Remarks
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: SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME	RECEIVED BY: 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	0900 AM	John Taylor	John Taylor	Alpha LABORATORY
John Taylor	John Taylor	Alpha	5/28/04	1300	Shari Speeks	Shari 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 OT - other Filtration: F - filtered U - unfiltered

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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
Oakland

PROJECT NO: 030275.6 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/TCP	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	John Mills	Julie Mills	MFG
Julie Mills	Julie Mills	MFG	5/28/04	900	John Taylor	John Taylor	Alpha
John Taylor	John Taylor	Alpha	5/28/04	1300	Sharon Speeks	Sharon Speeks	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

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
Client ID: OPR
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: ng/mL WHO TEQ: NA
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

FRONTIER ANALYTICAL LABORATORY

FAL ID: 2633-001-SA
Client ID: A405657-02
Matrix: Aqueous
Extraction Batch No.: X0277

Date Extracted: 6/10/04
Date Received: 6/2/04
Amount: 0.967 L

ICal: PCDDFAL1-2-26-04 Acquired: 11-JUN-04
GC Column: db5
Units: pg/L WHO TEQ: 25.5
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
Client ID: A405657-04
Matrix: Aqueous
Extraction Batch No.: X0277

Date Extracted: 6/10/04
Date Received: 6/2/04
Amount: 0.967 L

ICal: PCDDFAL1-2-26-04 Acquired: 12-JUN-04
GC Column: db5
Units: pg/L WHO TEQ: 45.9
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

FRONTIER 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:	**RECEIVING LABORATORY:**
Alpha Analytical Laboratories, Inc.	Frontier Analytical Laboratory
208 Mason St.	5172 Hillsdale Circle
Ukiah, CA 95482	El Dorado, CA 95762
Phone: (707)468-0401	Phone :916-934-0900
Fax: (707)468-5267	Fax: 916-934-0999
Project Manager: Sheri L. Speaks	**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. KR 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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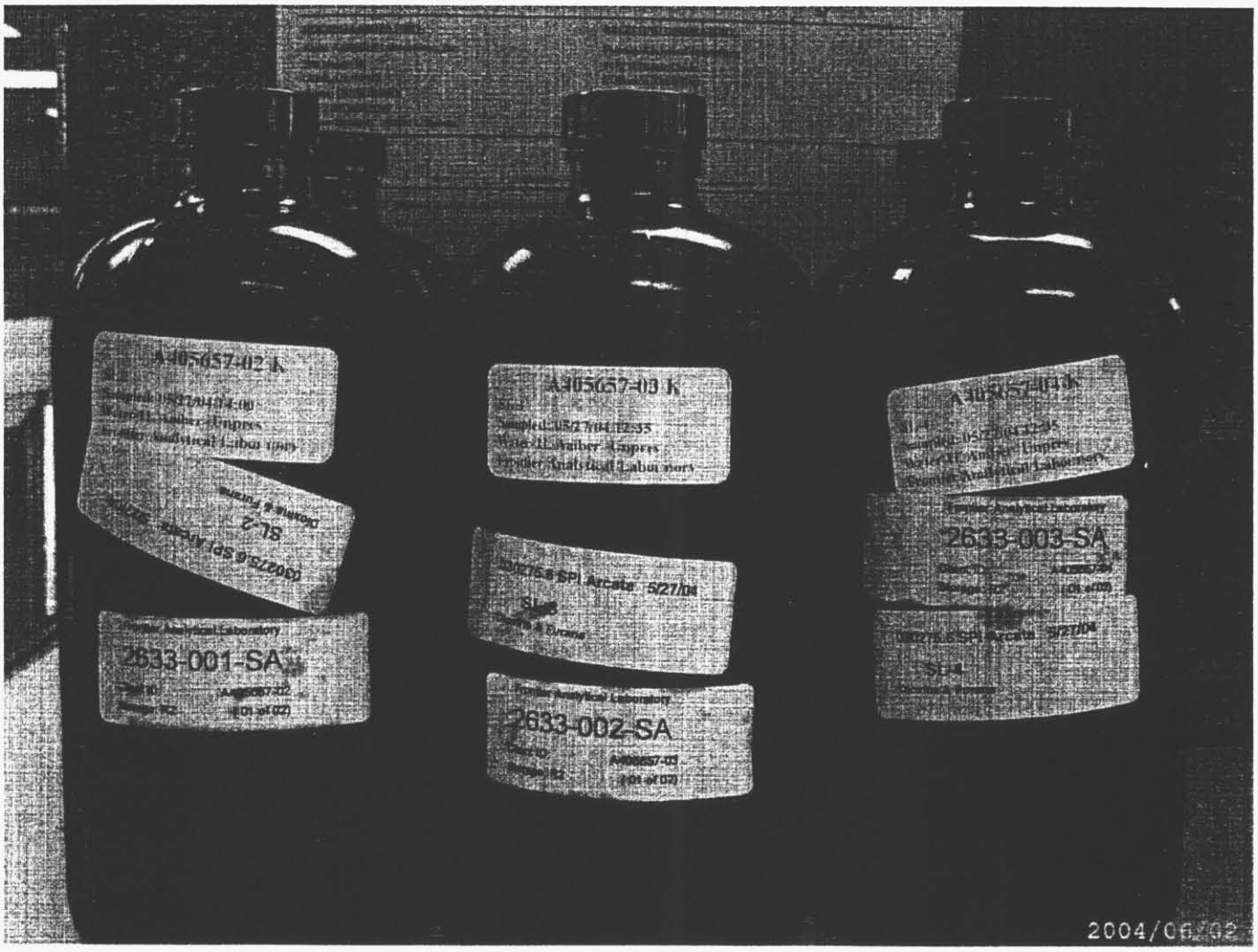
ANALYTICAL LABORATORY



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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
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dioxin@frontieranalytical.com