

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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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

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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)



2003-2004 Annual Report for Storm Water Discharges Associated With Industrial Activities

Sierra Pacific Industries Arcata Division Sawmill Arcata, California

Prepared for:

Sierra Pacific Industries

Prepared by:

Geomatrix Consultants, Inc. 2101 Webster Street, 12th Floor Oakland, California 94612 (510) 663-4100

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

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 (μ g/L) and 4,500 μ g/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 μ g/L TPHd and 1,100 μ g/L TPHmo) and from the vegetated pond (930 μ g/L TPHd and 1,100 μ g/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 μ g/L (SL-2), 93 μ g/L (SL-3), and 50 μ g/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 μ g/L (SL-2), 2000 μ g/L (SL-3), and 61 μ g/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 μ g/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 μ g/L and 5,500 μ g/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 μ g/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 oilwater 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 $0.42 \, \mu g/L$ (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 $8,700 \,\mu\text{g/L}$ and the TPHd with silica gel result was $1,300 \,\mu\text{g/L}$. 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 μ g/L and the TPHmo with silica gel result was 7,300 μ g/L. These results indicate that polar (non-petroleum) constituents significantly contributed to the quantitation of TPHmo.

The results for the time-weighted composite were $9,500 \,\mu g/L$ TPHd and $24,000 \,\mu g/L$ 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 μ g/L (SL-2), 190 μ g/L (SL-3), and 85 μ g/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 μ g/L (SL-1), 280 μ g/L (SL-2), 2,300 μ g/L (SL-3), and 720 μ g/L (SL-4). TPHmo was detected in four samples at concentrations of 550 μ g/L (SL-1), 1,100 μ g/L (SL-2), 6,000 μ g/L (SL-3), and 3,200 μ g/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.
- Geomatrix, 2004a, *Addendum to Report on Interim Remedial Measures: Source Area Removal,* Arcata Division Sawmill, prepared for Sierra Pacific Industries, Arcata, California, April 29.
- 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.
- U.S. Environmental Protection Agency, 2002b, *National Functional Guidelines for Chlorinated Dioxin/Furan Data Review*, Analytical Operations/Data Quality Center (AOC), August.



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.
- 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	рН ЕРА 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





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					Chlor	inated Phe	nols (Canac	dian Pulp M	lethod)			Water Qualit	y Parameters			Hydrocarbon Constituents					
Monitoring		Sample	Arsenic	Copper	Zinc	Cadmium	Chromium	Lead	Nickel	РСР	2,3,4,5- TeCP	2,3,4,6- TeCP	2,3,5,6- TeCP	2,4,6-TCP		Specific Electrical Conductance	Chemical Oxygen Demand	Total Dissolved Solids ²	Total Suspended Solids	Tannins and Lignins	TPH as Gasoline	TPH as Diesel	TPH as Motor Oil	Oil and Grease
Location	Date	Type	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(µg/L)	$(\mu g/L)$	(µg/L)	(µg/L)	(µg/L)	pН	(µmhos/cm)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(µg/L)	$(\mu g/L)$	(µg/L)	(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	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	12/1/20038	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 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

 μ g/L = micrograms per liter; parts per billior mg/L = milligrams per liter; parts per millior μ mhos/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 shows



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 Sampl	$torm~Water~Samples~(pg/L)^5$																					
SL-2	10/8/20036	<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 calculation.
- 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, analyzed 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</p>



TABLE 5

LABORATORY ANALYTICAL RESULTS FOR TPH AND SVOCS IN SURFACE WATER¹

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:

- 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).

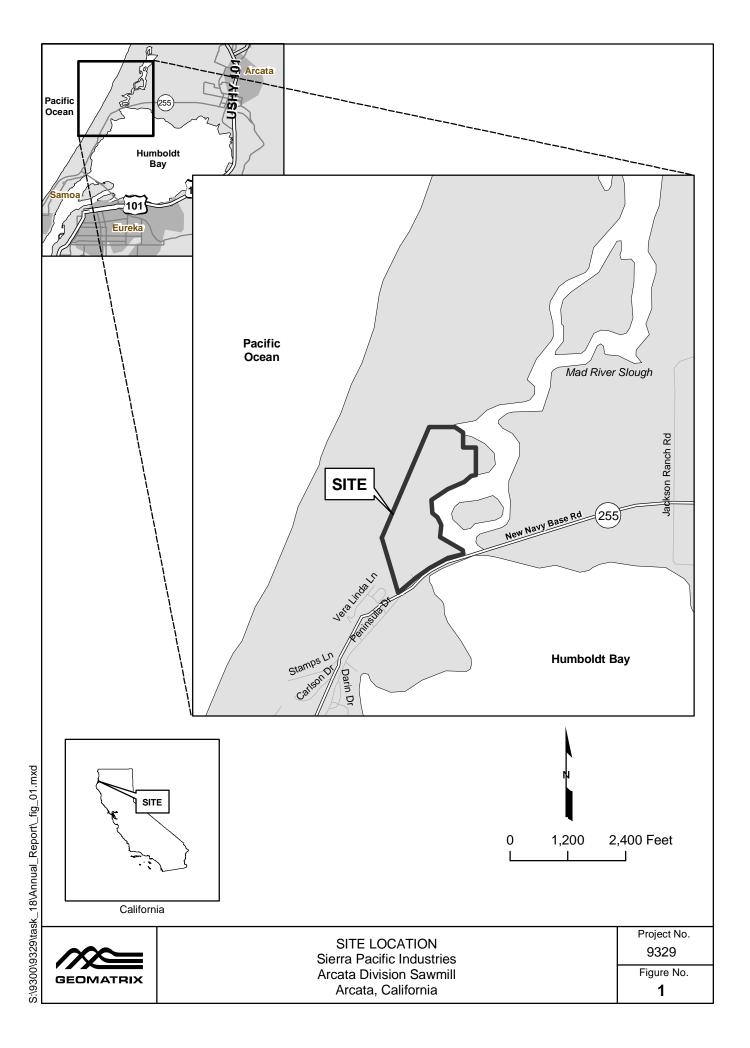
Location	Date	Total Dissolved Solids ²
SL-1 Slough ³	2/6/20044	19,000
SL-2 Slough ³	2/6/20044	18,000
SL-3 Slough ³	2/6/2004	21,000
SL-4 Slough ³	2/6/20044	23,000

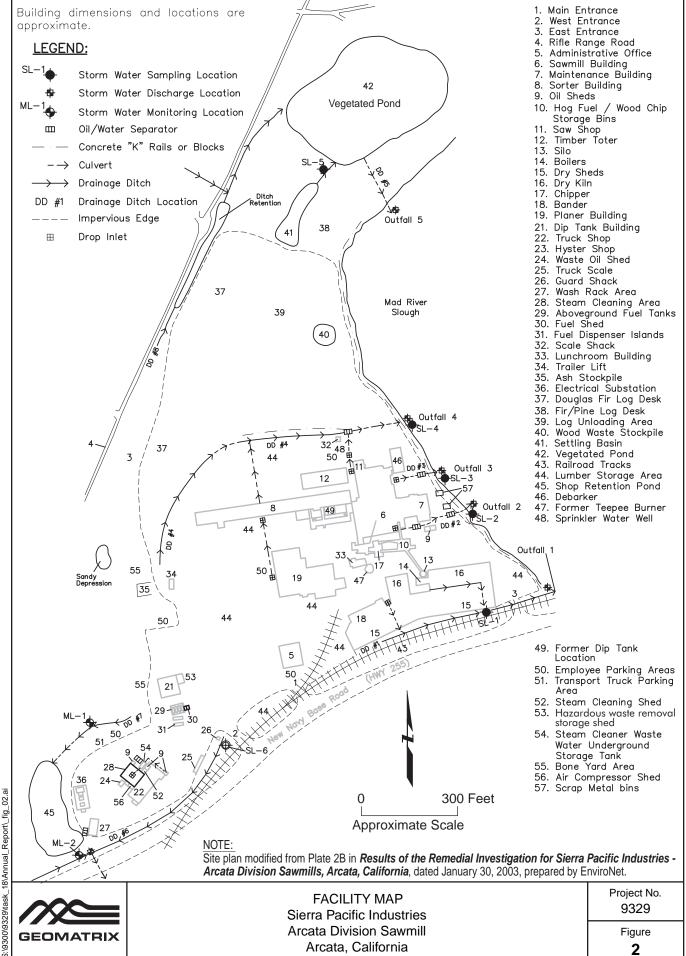
Notes:

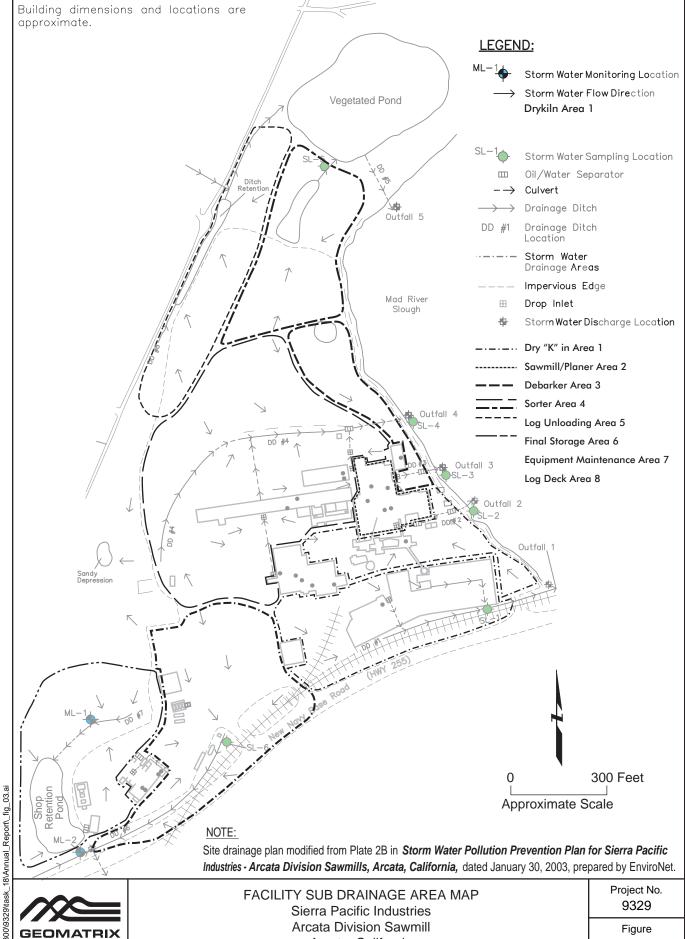
- 1. Samples collected by MFG, Inc., of Arcata, California and analyzed by Alpha Analytical Laboratories, Inc., in Ukiah, California.
- 2. Environmental Protection Agency Method 160.1.
- 3. Samples of Mad River slough water were collected just beyond the discharge point to assess the total dissolved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



FIGURES







Arcata, California

3



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:

4.	Facility Information:	Facility WDID No: <u>1B12S000440</u>
	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	<u>CA</u> Zip: <u>95518</u> Phone: <u>707-443-3111</u>
	Standard Industrial Classification (SIC) Code(s): 4214, 2411, 2421	
В.	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: <u>CA</u> Zip: <u>95518</u> Phone: <u>707-443-3111</u>
C.	Facility Billing Information:	
	Operator Name: Sierra Pacific Industries – Arcata Division	Contact Person: Gordie Amos
	Mailing Address: P.O. Box 1189	e-mail: <u>gamos@spi-ind.com</u>
	City: Arcata	State: <u>CA</u> Zip: <u>95518</u> Phone: <u>707-443-111</u>

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? NO Go to Section E YES Go to Item D.2 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. Participating in an Approved Group Monitoring Plan Group Name: Date Submitted: / / Submitted No Exposure Certification (NEC) Re-evaluation Date: ___/__/ NO YES Does facility continue to satisfy NEC conditions? Date Submitted: ____/ Submitted Sampling Reduction Certification (SRC) Re-evaluation Date: / / Does facility continue to satisfy SRC conditions? Received Regional Board Certification Certification Date: / / Received Local Agency Certification Certification Date: / If you checked boxes i or iii above, were you scheduled to sample one storm event during the reporting year? NO Go to Section F YES Go to Section E If you checked boxes ii, iv, or v, go to Section F. E. SAMPLING AND ANALYSIS RESULTS 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"). 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 attach explanation (Please note that if NO you do not sample the first storm event, you

3. How many storm water discharge locations are at your facility? ___7

are still required to sample 2 storm events)

4.		each storm event sampled, did you collect and analyze a nple from each of the facility's' storm water discharge locations?		YES,	go to II	tem E.6 NO
5.		s sample collection or analysis reduced in accordance n Section B.7.d of the General Permit?		YES	\boxtimes	NO, attach explanation
	If "Y	YES", attach documentation supporting your determination to two or more drainage areas are substantially identical.				
	Dat	te facility's drainage areas were last evaluated 1/30/03				
6.	We	ere all samples collected during the first hour of discharge?		YES	\boxtimes	NO, attach explanation
7.	Wa	s all storm water sampling preceded by three (3)	5-7		(insert	
	wor	rking days without a storm water discharge?	\boxtimes	YES	ш	NO, attach explanation
8.	We	ere there any discharges of storm water that had been	_			
	terr	porarily stored or contained? (such as from a pond)		YES	\bowtie	NO, go to Item E.10
9.	Did	you collect and analyze samples of temporarily stored or				
	cor	ntained 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.	(TS	ction B.5. of the General Permit requires you to analyze storm wass), Specific Conductance (SC), Total Organic Carbon (TOC) or opresent in storm water discharges in significant quantities, and a neral Permit.	Oil and	Greas	e (0&	G), other pollutants likely to
	a.	Does Table D contain any additional parameters related to your facility's SIC code(s)?	\boxtimes	YES		NO, Go to Item E.11
	b.	Did you analyze all storm water samples for the applicable parameters listed in Table D?		YES	\boxtimes	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 be consecutive sampling events. Attach explanation	en de	tected i	n signi	ficant quantities from two
		The parameter(s) is not likely to be present in storm v discharges in significant quantities based upon the fa	vater o	discharç perator	jes an 's eva	d authorized non-storm wate luation. Attach explanation
		X Other. Attach explanation				
11.		r each storm event sampled, attach a copy of the laboratory analy alysis results using Form 1 or its equivalent. The following must				
		Date and time of sample collection		esting r		
		Name and title of sampler		est met		
	•	Parameters tested		est dete		imits
	•	Traine at analytical teating inner in		ate of te		ka shi da asan walio a sa
		Discharge location identification	• C	opies o	the la	aboratory analytical results

F. QUARTERLY VISUAL OBSERVATIONS

1.	Au	Authorized Non-Storm Water Discharges															
100	Se	Section B.3.b of the General Permit requires quarterly visual observations of all authorized non-storm water discharges and their sources.															
	a.	Do a	uthorized no	n-storm wat	er dischar	ges o	ccur at y	your facility?									
		\boxtimes	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	X YES	☐ NO		N/A	October-December	⊠ YES	☐ NO	□ N/A						
		Janu	ary-March	XES	☐ NO		N/A	April-June	X YES	☐ NO	□ N/A						
	C.		Form 2 to re ving informa		ly visual o	bserv	ations of	f authorized non-storm w	ater discha	rges or pr	ovide the						
		i. ii. iii. iv. v. vi,	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														
2.	Se	authorized Non-Storm Water Discharges ction B.3.a of the General Permit requires quarterly visual observations of all drainage areas to detect the sence of unauthorized non-storm water discharges and their sources. 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	X YES	∐ NO							
		Janu	ary-March	X YES	☐ NO			April-June	X YES	☐ NO							
	b.	Based upon the quarterly visual observations, were any unauthorized non-storm water discharges detected?															
			YES		\boxtimes	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

areas impacted by run-on

storm water discharges locations

H.

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.

4.	Attach an occurred of	elow whether monthl explanation for an furing scheduled fac , name and title of th	y "NO" answers. In	clude in this exp that did not resu	lanation whethe	r any eligible st er discharge, ar	orm events
	October	YES	NO	Februa	yes 🖂	NC]
	November			March		E]
	December			April	\boxtimes		
	January	\boxtimes		May]
H. <u>A</u>	a. date, b. name c. chara d. any n Provid JAL COMPI CSCE CHEC Section A.9 or lune 30). Evide revised and steps necessi	time, and location of and title of observer cteristics of the disclew or revised BMPs de new or revised BMPs. REHENSIVE SITE KLIST f the General Permit aluations must be cod implemented, as neary to complete a AC for any "NO" answered."	observation narge (i.e., odor, colonecessary to reduce MP implementation de COMPLIANCE EV requires the facility of inducted within 8-16 ecessary, within 90 of SCE. Indicate whet	or, etc.) and sour or prevent pollu ate. /ALUATION (A	ce of any polluta stants in storm w ACSCE) uct one ACSCE other. The SWF pation. The chec	ants observed ater discharges in each reportion PPP and monito eklist below incl	ng period (July 1- oring program shall udes the minimum
1.	Have you	inspected all potentioning areas should be	al pollutant sources a	and industrial ac	tivities areas?	X YES	□ NO
	during outdo proce loadin waste dust/p	where spills and lead g the last year or wash and rinse are ss/manufacturing are ng, unloading, and tra e storage/disposal are particulate generating on areas	eas eas ansfer areas eas	:	building repair, material storage vehicle/equipme truck parking ar rooftop equipme vehicle fueling/r non-storm water	e areas ent storage area ent access areas ent areas naintenance ar	as 3 eas
2.	the state of the s	reviewed your SWPI collutant sources and			existing	X YES	□ NO
3.	is up-to-da facility	inspected the entire ate? The following si boundaries	te map items should	be verified: • storm w	ater collection a	And the second of the second o	NO system

containment areas, oil/water separators, etc.

4.	Have you reviewed all General Permit compliance records generated						
	since the last annual evaluation?		X 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 	 visual observation Sampling an 	d Analysis records maintenance inspection and				
5.	Have you reviewed the major elements of the SWPPP to assure						
	compliance with the General Permit?		X YES	☐ NO			
	The following SWPPP items should be reviewed:						
	 pollution prevention team list of significant materials description of potential pollutant sources 	 identification 	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 		ng/storage	ing and storage practices g/storage			
7.	Has all material handling equipment and equipment needed to						
	implement the SWPPP been inspected?		X YES	□ NO			
AC	SCE EVALUATION REPORT						
	e facility operator is required to provide an evaluation repor	t that includes:					
			T. Poston and				
	identification of personnel performing the evaluation the date(s) of the evaluation		implementing SW of non-compliance				
•	necessary SWPPP revisions	corrective ac		o dire illo			
Use	e Form 5 to report the results of your evaluation or develop	an equivalent form.					
AC	SCE CERTIFICATION						
The	e facility operator is required to certify compliance with the npliance, both the SWPPP and Monitoring Program must b	Industrial Activities Stor be up to date and be full	m Water General ly implemented.	Permit. To certify			
Bas	sed upon your ACSCE, do you certify compliance with the	Industrial					
	ivities Storm Water General Permit?		X YES	☐ NO			
If yo	ou answered "NO" attach an explanation to the ACSCE E ustrial Activities Storm Water General Permit.	valuation Report why ye	ou are not in comp	liance with the			

J.

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 (M	YES (Mandatory)		
2.	If you conducted sampling and analysis, have you attached the laboratory analytical reports?		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	
AN	INUAL REPORT CERTIFICATION				
PE we per wh sub sig	m duly authorized to sign reports required by the INDUSTRIAL RMIT (see Standard Provision C.9) and I certify under penalty are prepared under my direction or supervision in accordance we resonnel properly gather and evaluate the information submitted to manage the system, or those person directly responsible for bmitted is, to the best of my knowledge and belief, true, accuratificant penalties for submitting false information, including the elations.	of law that this of with a system des . Based on my gathering the interest te and complete	document and a signed to ensure inquiry of the pe formation, the ir . I am aware th	Il attachments e that qualified erson or persons iformation at there are	
Pri	nted Name: Gordie V Amos				
Sig	gnature: South O Amou		Date: 6/30	104	
Ti+l	Plant Man	-			

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

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: Jun / Alas 600 mothic, Comulton by ANALYTICAL RESULTS For First Storm Event DESCRIBE OTHER PARAMETERS TIME DATE/TIME DISCHARGE DISCHARGE OF SAMPLE LOCATION STARTED COLLECTION **BASIC PARAMETERS** Example: NW Out Fall OTHER PARAMETERS Tannins PH TSS SC O&G COD **TPHq TPHd TPHmo** Arsenic Lianins SL-1 10/8/03 MA 7.26 25 1,600 <5.0 210 <50 <50 220 12 0.0025 MA 2:00 **XPM** 3:45 XIPM SL-2 10/8/03 AM 6.63 130 4.100 24 620 93 940 970 X PM 66 0.0041 MA 1:30 3:15 PXPM SL-3 10/8/03 MA 5.21 4,500 1.100 <5.0 8,500 93 2,000 17,000 290 0.094 MACT 1:30 XPM 2:45 KPM SL- 4 10/8/03 MA 6.81 750 530 <5.0 650 50 61 740 33 0.042 MAC 1:30 **IXPM** 4:30 KPM pH Units mg/l umho/cm TEST REPORTING UNITS: mg/l ma/l $\mu g/L$ µg/L µg/L mg/l mg/l 0.002 two 1.0 TEST METHOD DETECTION LIMIT: 20 5.0 10 50 50 100 0.2 **EPA** EPA EPA SM EPA EPA EPA SM EPA TEST METHOD USED: Field 160.2 120.1 1664 5220D 8015M 8015M 8015M 5550B 200.9 Field Alpha Alpha Alpha Alpha Alpha Alpha Alpha Alpha Alpha ANALYZED BY (SELF/LAB): Analytical Analytical Analytical Analytical Analytical Analytical Analytical Analytical Analytical

TSS - Total Suspended Solids

SC - Specific Conductance

O&G - Oil & Grease

TOC - Total Organic Carbon

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)</p>
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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 GEOMAPHIA CONSULTANTS IN

				ANALYTICAL RESULTS For First Storm Event									
ESCRIBE DISCHARGE LOCATION	OF SAMPLE COLLECTION	TIME DISCHARGE STARTED	Other Parameters										
Example: NW Out Fall	SELECTION		Copper	Zinc	Cadmium	Chromium	Lead	Nickel	Dioxins & Furans	PCP	TeCP	TCP	
SL-1	10/8/03 ☐AM 3:45 ★PM	2:00 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 AM 3:15 PM	1:30 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 AM _2:45 PM	1:30 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 (A)M 4:30x (P)M	1:30 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 DET	TECTION LIMIT		0.020	0.02	0.010	0.010	0.005	0.010	See Table 4	1.0	1.0	1.0	
TEST METHOD USE			EPA200.7	EPA200.7	EPA200.7	EPA200.7	EPA200.9	EPA200.7	EPA 1613	Canadian Pulp	Canadian Pulp	Canadia Pulp	
ANALYZED BY (SEL			Alpha Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytical	Frontier Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytica	

Geommin Consultants Inc.

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 of MFG Inc., Arcata, California

SIGNATURE

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

TSS - Total Suspended Solids

SC - Specific Conductance

O&G - Oil & Grease

TOC - Total Organic Carbon

Page 4 of Form 1

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

GRATURE Bromatix Consultants Inc

DESCRIBE DISCHARGE	DATE/TIME OF SAMPLE	TIME DISCHARGE STARTED		ANALYTICAL RESULTS For First Storm Event Other Parameters									
LOCATION Example: NW Out Fall	COLLECTION												
			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												
SL-6	12/1/03 IX AM 11:15 PM	_? <u>:</u> 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:	ii (mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	Not applicable	μg/L	μg/L	μg/L	
TEST METHOD DE	TECTION LIMIT		0.020	0.020	Not applicable	1.0	1.0	1.0					
			EPA 200.7	EPA 200.7	Not applicable	Canadian Pulp	Canadian Pulp	Canadian Pulp					
TEST METHOD USED: ANALYZED BY (SELF/LAB):			Alpha Analytical	Alpha Analytical	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Alpha Analytical	Alpha Analytical	Alpha Analytical	

Page 5 of Form 1

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)

When analysis is done using portable analysis (such as portable pH meters, SC meters, etc.), indicate "PA" in the appropriate test method used box.

If you did not analyze for a required parameter, do not report "0". Instead, leave the appropriate box blank

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

			ANALYTICAL RESULTS For Second Storm Event									
DESCRIBE DISCHARGE	DATE/TIME OF SAMPLE	TIME DISCHARGE	BASIC PARAMETERS					OTHER PARAMETERS				
LOCATION Example: NW Out Fall	COLLECTION	STARTED	PH	TSS	sc	O&G	COD	TPHg	TPHd	TPHmo	Tannins Lignins	Arsenic
SL-1	_5/27/04 AM _1:15 \ PM	□AM 12:00 ဩPM	6.19	100	180	<5.0	230	<50	92	550	6.6	0.0034
SL-2	_5/27/04 AM _2:00 _ X PM	AM _12:10 [X] PM	6.19	150	1,200	<5.0	630	340	280	1,100	100	0,0046
SL-3	<u>5/27/04</u> ☐ AM 12:35 🕱 PM	⊠ AM <u>11:50</u> □ PM	5.61	1,900	1,300	<5.0	2,100	190	2,300	6,000	240	0.037
SL-4	<u>5/27/04</u> ☐ AM 1:45 X 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 (SEL			Field	Alpha Analytical								

TSS - Total Suspended Solids

SC - Specific Conductance

O&G - Oil & Grease

TOC - Total Organic Carbon

ANNUAL REPORT

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.

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

			ANALYTICAL RESULTS For Second Storm Event Other Parameters									
DESCRIBE DISCHARGE	DATE/TIME OF SAMPLE	TIME DISCHARGE										
LOCATION Example: NW Out Fall	COLLECTION	STARTED	Copper	Zinc	Cadmium	Chromium	Lead	Nickel	Dioxins & Furans	PCP	TeCP	TCP
SL-1	_ <u>5/27/04</u> □ AM <u>1:15</u> ∑ PM	□AM 12:00 ဩ 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 X PM	☐AM _12:10 ဩPM	<0.020	0.46	<0.010	<0.010	<0.050	<0.010	25.5	<1.0	<1.0	<1.0
SL-3	<u>5/27/04</u> ☐ 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	<u>X</u> 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	pgL	μg/L	μg/L_	μg/L
TEST METHOD DE		el d	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	Canadiar Pulp	
ANALYZED BY (SE			Alpha Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytical	Frontier Analytical	Alpha Analytical	Alpha Analytical	Alpha Analytica

TSS - Total Suspended Solids

SC - Specific Conductance

O&G - Oil & Grease

TOC - Total Organic Carbon

- 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: 1,30,03	Observers Name: Matt Hillyand Title: Environmental Engineer Signature: Matt Hillyand	WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?	If YES, complete reverse side of this form.
QUARTER: OCTDEC. DATE: //	Observers Name:	WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?	If YES, complete reverse side of this form.
QUARTER: JANMARCH DATE:	Observers Name: Title: Signature:	WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?	If YES, complete reverse side of this form.
QUARTER: APRIL-JUNE DATE: //	Observers Name:	WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?	If YES, complete reverse side of this form.

DATE /TIME OF OBSERVATION	SOURCE AND LOCATION OF AUTHORIZED NSWD	NAME OF AUTHORIZED NSWD	CHARA Indicate whether author discolored, causing stai	UTHORIZED NSWD CTERISTICS ized NSWD is clear, cloudy, or ining, contains floating objects en, has odors, etc.	DESCRIBE ANY REVISED OR NEW BMPs AND PROVIDE THEIR IMPLEMENTATION DATE
	EXAMPLE: Air conditioner Units on Building C	EXAMPLE: Air conditioner condensate	At the NSWD Source	At the NSWD Drainage Area and Discharge Location	
9,30,03 1:15 □AM □PM	Well in Ditch #4 Duerfilling Water truck	Potable Water	Clear	clear, no discharge observed	None
9 130103 1:15 □AM □ PM	Ditch #4 Spring water	Spring Water	Clear w/ flooting arange bactering	clear w/ some floating orange bacterial. Discharge location not observed due to high tide	None
9 30,03 1:15 □AM ⊠PM	Humbold + Bay in Ditches #1,#2,#3,#4, #5	Sen water	condy in	in ditches and at discharge points	None
1,30,03 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
1 30,05 1 15 □ AM	Air conditioner in Computer room in Sommill	potable water	Clear	clear de discharge not observed, univer high tide	None
17.15	Fire system water main near symmil	Flushing	Not observed. system only should on Fridays	Not observed during site U.S. t., would have drained to Dirch ##	None

- 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:	Observers Name: Title: Signature:	WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?	If YES, complete reverse side of this form.
QUARTER: OCTDEC. DATE: 2,22,03	Observers Name: Matt Hillyard Title: Environmental Engineer Signature: Matt Allyard	WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?	If YES, complete reverse side of this form.
QUARTER: JANMARCH DATE: //	Observers Name: Title: Signature:	WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?	If YES, complete reverse side of this form.
QUARTER: APRIL-JUNE DATE: //	Observers Name: Title: Signature:	YES WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?	If YES, complete reverse side of this form.

DATE /TIME OF OBSERVATION	SOURCE AND LOCATION OF AUTHORIZED NSWD	NAME OF AUTHORIZED NSWD	CHARA Indicate whether authorizediscolored, causing stain	THORIZED NSWD CTERISTICS zed NSWD is clear, cloudy, or ning, contains floating objects en, has odors, etc.	DESCRIBE ANY REVISED OR NEW BMPs AND PROVIDE THEIR IMPLEMENTATION DATE
	EXAMPLE: Air conditioner Units on Building C	EXAMPLE: Air conditioner condensate	At the NSWD Source	At the NSWD Drainage Area and Discharge Location	
172703 9 30 AM	Hunbold + Bay Ditches 1-5	Sea water	Clear green/sh +,n+	clear greensy fint	None
12,12,03 2.30 MAM □PM	Dry Frin Sonthside	Condensate	clear	clear w/ gray torungs bacterial films small fleating woody	None
12 2207	Fire System Water man 11 moor saumill and dry ghed	fire hydrent flushing	Not observed during site visit Only flustedon Fridays,	would have drack ord 1	None
12,2303 10:90 MAM	Di+ch 4+5	Spring water	clear	clear	None
//					

- 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: / /	Observers Name: Title: Signature:	WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER? NO	If YES, complete reverse side of this form.
QUARTER: OCTDEC. DATE:	Observers Name: Title: Signature:	WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?	If YES, complete reverse side of this form.
QUARTER: JANMARCH DATE: 2 1/4 104	Observers Name: Mart Hillyard Title: Environmental Engineer Signature: Mat Allyn	WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?	If YES, complete reverse side of this form.
QUARTER: APRIL-JUNE DATE:	Observers Name: Title: Signature:	WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?	If YES, complete reverse side of this form.

DATE /TIME OF OBSERVATION	BSERVATION LOCATION OF AUTHORIZED NSWD NSWD		CHARA(Indicate whether authoriz discolored, causing stain	THORIZED NSWD CTERISTICS ted NSWD is clear, cloudy, or ning, contains floating objects en, has odors, etc.	DESCRIBE ANY REVISED OR NEW BMPs AND PROVIDE THEIR IMPLEMENTATION DATE
	EXAMPLE: Air conditioner Units on Building C	EXAMPLE: Air conditioner condensate	At the NSWD Source	At the NSWD Drainage Area and Discharge Location	
3,18,64 9:40 ⊠AM	OryFilm Condensate Gouth side	condensare	Some sludge in direct and fine woody particles near dry kith direct	clear at discharge location	clean ditch adjacent to dry kila, clean concrete surface and rails between dry kila and ditch
3,14,04 9:40 €AM	Humbold+ Bay 0. +ches 1-5	Sea water	Clear, greenish tint	clear, greens tont	None
7,16,04 10:00 MAM	driff and drains to artch 4	Potable nater	Clear From Linck	fonds at stran wattle before seeping into ground afficient to ditch 4	clean wood of debis Riom asphalt parking area near water track
3/8/04 DPM	Hear Sawnill + dry sted Fire system Value	fire hydrat	sate usit, orders	would drain to dittely 4 or 1	None
3 18109	Dirch 4 + Ditch 5	Spring water	Clear	Cleus	None

- 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:	Observers Name: Title: Signature:	WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?	If YES, complete reverse side of this form.
QUARTER: OCTDEC. DATE:/_/	Observera Name:	WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER? NO	If YES , complete reverse side of this form.
QUARTER: JANMARCH DATE:	Observers Name: Title: Signature:	WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?	If YES, complete reverse side of this form.
QUARTER: APRIL-JUNE DATE: (/[/U_]	Observers Name: Matt Hillyard Title: Environmental Engineer Signature: Matt Tillyard	YES WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?	If YES, complete reverse side of this form.

DATE /TIME OF OBSERVATION	SOURCE AND LOCATION OF AUTHORIZED NSWD	NAME OF AUTHORIZED NSWD	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
1	EXAMPLE: Air conditioner Units on Building C	EXAMPLE: Air conditioner condensate	At the NSWD Source	At the NSWD Drainage Area and Discharge Location	
(e, 1,04 Z:45 □ AM □ PM	folible worter from Fre Explan isothery near Ory Eilns	foliple water in fine gystem	Clear	No discharge observed from ditch 1	f; x value by 6/8/04
2:45 DAM	Ditkiln	(ordensate	Clear	delis tolet in discharging	clean distribution and surface by drinking as regular maintenance
2:55 □AM □ □PM	water frackdrips	Potable water	der	Disch H discharge	clean area (dist toward) from water truck parking ang
<u>G,1,04</u> <u>3:00</u> □AM ☑PM	Humbold+ Bay Ditcles 1-5	Sea water	Clear, of repuish	Low tide during s, te visit no discharge of sea water observed	
3:00 □AM	Springs in Ditch 4 + Ditch 5	spring water	Clear	clear	

DATE /TIME OF OBSERVATION	SOURCE AND NAME OF AUTHORIZED NSWD		CHARA Indicate whether authoriz discolored, causing stair	THORIZED NSWD CTERISTICS zed NSWD is clear, cloudy, or ning, contains floating objects en, has odors, etc.	DESCRIBE ANY REVISED OR NEW BMPs AND PROVIDE THEIR IMPLEMENTATION DATE
	EXAMPLE: Air conditioner Units on Building C	EXAMPLE: Air conditioner condensate	At the NSWD Source	At the NSWD Drainage Area and Discharge Location	
6,1,04	Five system. nour sarmill + dry sheel	Fire Hydraut	Not observed during site visit occur on Fridays	added drawn to	
3:0U DAM	+ dry sheel		an Fridays		
:				_4	
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2003 - 2004

- 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 9,7903 (00 AM PM	Observers Name: Matt Hillyard Title: Environmental Engineer Signature: Matt HMggl	WERE UNAUTHORIZED NSWDs OBSERVED? WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?	□YES ⊠NO	If YES to either question, complete reverse side.
QUARTER: OCTDEC. DATE/TIME OF OBSERVATIONS AM PM	Observers Name:	WERE UNAUTHORIZED NSWDs OBSERVED? WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?	□YES □NO	If YES to either question, complete reverse side.
QUARTER: JANMARCH DATE/TIME OF OBSERVATIONS AM PM	Signature: Observers Name: Title: Signature:	WERE UNAUTHORIZED NSWDs OBSERVED? 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? WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?	□YES □NO	If YES to either question, complete reverse side.

OBSERVATION DATE (FROM REVERSE SIDE)	NAME OF UNAUTHORIZED NSWD	SOURCE AND LOCATION OF UNAUTHORIZED NSWD	DESCRIBE UNAU CHARAC Indicate whether unauthor discolored, causing stains; co	DESCRIBE CORRECTIVE ACTIONS TO ELIMINATE UNAUTHORIZED NSWD AND TO CLEAN IMPACTED DRAINAGE AREAS.	
	EXAMPLE: Vehicle Wash Water	EXAMPLE: NW Corner of Parking Lot	AT THE UNAUTHORIZED NSWD SOURCE	AT THE UNAUTHORIZED NSWD AREA AND DISCHARGE LOCATION	PROVIDE UNAUTHORIZED NSWD ELIMINATION DATE.
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2003 - 2004

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DATE/TIME OF OBSERVATIONS	Observers Name: Mat + Hillyand Title: Environmental Enginesi Signature: Mat Hilligal	WERE UNAUTHORIZED NSWDs OBSERVED? WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?	□YES ⊠NO	If YES to either question, complete reverse side.
QUARTER: JANMARCH DATE/TIME OF OBSERVATIONS AM PM	Observers Name: Title: Signature:	WERE UNAUTHORIZED NSWDs OBSERVED? 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 AM PM	Observers Name: Title: Signature:	WERE UNAUTHORIZED NSWDs OBSERVED? WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?	□YES □NO	If YES to either question, complete reverse side.

OBSERVATION DATE (FROM REVERSE SIDE)	NAME OF SOURCE AND LOCATION OF UNAUTHORIZED NSWD OF UNAUTHORIZED NSWD		DESCRIBE UNAU CHARAC* Indicate whether unauthor discolored, causing stains; co	DESCRIBE CORRECTIVE ACTIONS TO ELIMINATE UNAUTHORIZED NSWD AND TO CLEAN IMPACTED DRAINAGE AREAS.	
	EXAMPLE: Vehicle Wash Water	EXAMPLE: NW Corner of Parking Lot	AT THE UNAUTHORIZED NSWD SOURCE	AT THE UNAUTHORIZED NSWD AREA AND DISCHARGE LOCATION	PROVIDE UNAUTHORIZED NSWD ELIMINATION DATE.
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2003 - 2004

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QUARTER: OCTDEC. DATE/TIME OF OBSERVATIONS AM PM	Observers Name: Title: Signature:	WERE UNAUTHORIZED NSWDs OBSERVED? WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?	□YES □NO	If YES to either question, complete reverse side.
DATE/TIME OF OBSERVATIONS 3 /16/04 9:10 AM PM	Observers Name: Matt Hillyard Title: Environment Engineer Signature: Matt Hillyard	WERE UNAUTHORIZED NSWDs OBSERVED? 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? WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?	□YES □NO	If YES to either question, complete reverse side.

OBSERVATION DATE (FROM REVERSE SIDE)	NAME OF SOURCE AND LOCATION OF UNAUTHORIZED		DESCRIBE UNAL CHARAC Indicate whether unauthor discolored, causing stains; co	DESCRIBE CORRECTIVE ACTIONS TO ELIMINATE UNAUTHORIZED NSWD AND TO CLEAN IMPACTED DRAINAGE AREAS.	
	EXAMPLE; Vehicle Wash Water	NSWD EXAMPLE: NW Corner of Parking Lot	AT THE UNAUTHORIZED NSWD SOURCE	AT THE UNAUTHORIZED NSWD AREA AND DISCHARGE LOCATION	PROVIDE UNAUTHORIZED NSWD ELIMINATION DATE.
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2003 - 2004

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- Make additional copies of this form as necessary.

QUARTER: JULY-SEPT. DATE/TIME OF OBSERVATIONS	Observers Name:	NSWDs OBSERVED?	□YES □NO	If YES to either question, complete
//:_ DM	Signature:	WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?	□YES □NO	reverse side.
QUARTER: OCTDEC. DATE/TIME OF OBSERVATIONS	Observers Name:	WERE UNAUTHORIZED NSWDs OBSERVED?	□YES □NO	If YES to either question, complete
//:_ DM	Signature:	WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?	□YES □NO	reverse side.
QUARTER: JANMARCH DATE/TIME OF OBSERVATIONS AM	Observers Name:	WERE UNAUTHORIZED NSWDs OBSERVED? WERE THERE INDICATIONS OF	□YES □NO	If YES to either question, complete reverse
//:_ DM	Signature:	PRIOR UNAUTHORIZED NSWDs?	□YES □NO	side.
QUARTER: APRIL-JUNE DATE/TIME OF OBSERVATIONS	Observers Name: Marinental Engineer	WERE UNAUTHORIZED NSWDs OBSERVED?	□ YES ⊠NO	If YES to either question, complete
6 1 04 2 55 AM	Signature:	WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?	☐YES NO	reverse side.

OBSERVATION DATE (FROM REVERSE SIDE)	NAME OF UNAUTHORIZED NSWD	SOURCE AND LOCATION OF UNAUTHORIZED	DESCRIBE UNAL CHARAC Indicate whether unauthor discolored, causing stains; co	DESCRIBE CORRECTIVE ACTIONS TO ELIMINATE UNAUTHORIZED NSWD AND TO CLEAN IMPACTED DRAINAGE AREAS.	
	EXAMPLE: Vehicle Wash Water	Parking Lot NSWD SOURCE NSWD		AT THE UNAUTHORIZED NSWD AREA AND DISCHARGE LOCATION	PROVIDE UNAUTHORIZED NSWD ELIMINATION DATE.
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ANNUAL REPORT FORM 4-MONTHLY VISUAL OBSERVATIONS OF

4-MONTHET VISUAL OBSERVATIONS

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STORM WATER DISCHARGES

- 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.

SIDE

Observation Date: October 2003 Observers Name: Matt Hillfard	Drainage Location Description	#1 9L-3	#2 5L-2	#3 SL-1	51-4
Title: Environmental Engineer	Observation Time	3 :00 P.M.	3 30 □ P.M.	4 .00 □A.M.	4 : 45 A.M.
Signature: MATHY	Time Discharge Began	1 .30 AP.M.	i 30 ₽.M.	2 :00 \ □ A.M.	(:30 P.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES 🗹 NO 🗆	YES NO	YES 🗗 NO 🗆	YES 🗷 NO 🗆
Observation Date: November 2003	Drainage Location Description	##5 5L-6	#2 #6 ML-1	#3 #7 SL-5	#4
Observers Name:	Average Market	4 :05 P.M.	4 05 18 P.M.		□P.M.
Title:	Observation Time	FIDM		9 : □ _A.M	: □A.M. □P.M.
Signature:	Time Discharge Began	ル≯ :	NA: P.M.	: 🛱 A.M.	: HA.M.
Signature:	Were Pollutants Observed (If yes, complete reverse side)	YES NO	YES NO.	YES NO D	YES NO
			THE RESERVE THE PARTY OF THE PA		
Observation Date: December 2003	Drainage Location Description	#1	#2	#3	#4
Observation Date: December 2003 Observers Name:	Drainage Location Description	#1	#2		
Observers Name:	Drainage Location Description Observation Time	□ P.M. : □ A.M.	P.M.	□ P.M. : □ A.M.	□P.M. : □A.M.
Observers Name:	Observation Time Time Discharge Began	□ P.M.	□ P.M.	□ P.M.	□P.M. : □A.M. □P.M.
Observers Name:	Observation Time	□ P.M. : □ A.M. □ P.M.	□ P.M. : □ A.M. □ P.M.	□ P.M. : □ A.M. □ P.M.	□P.M. : □A.M.
Observers Name:	Observation Time Time Discharge Began Were Pollutants Observed	□ P.M. : □ A.M. □ P.M. : □ A.M.	: P.M. : A.M.	□ P.M. : □ A.M. □ P.M. : □ A.M.	□ P.M. : □ A.M. □ P.M. : □ A.M.
Observers Name: Title: Signature:	Observation Time Time Discharge Began Were Pollutants Observed (If yes, complete reverse side) Drainage Location Description	:	:	:	:
Observers Name: Title: Signature: Observation Date: January 2004 Observers Name:	Observation Time Time Discharge Began Were Pollutants Observed (If yes, complete reverse side)	P.M. A.M. P.M. A.M. P.M. P.M. P.M. P.M. P.M. A.M. P.M. A.M. P.M. P.M. A.M. P.M. A.M. P.M. A.M. P.M. P.M. A.M. P.M. P.M.	:	P.M. :	: □P.M. : □A.M. : □A.M. YES □ NO □ #4 □P.M. : □A.M.
Observers Name: Title: Signature: Observation Date: January 2004	Observation Time Time Discharge Began Were Pollutants Observed (If yes, complete reverse side) Drainage Location Description	:	:	:	: □P.M. : □A.M. : □A.M. YES □ NO □ #4

FORM 4-MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

DATE/TIME OF OBSERVATION (From Reverse Side)	DRAINAGE AREA DESCRIPTION EXAMPLE: Discharge from	DESCRIBE STORM WATER DISCHARGE CHARACTERISTICS Indicate whether storm water discharge is clear, cloudy, or discolored; causing staining; containing	IDENTIFY AND DESCRIBE SOURCE(S) OF POLLUTANTS EXAMPLE: Oil sheen caused by oil dripped by	DESCRIBE ANY REVISED OR NEW BMPs AND THEIR DATE OF IMPLEMENTATION
10, 8,03 56-3 3.00 AM	Discharge from gide of log Dect	Brown muddy water eclor Sinilar to Hzs	Bank dust, dirt on Pavement	use surecter/vacuum truck to clean pavement clean/replace straw bales before next storm
198 03 5L-2 3 30 AM	Medi Equip. Shop	Blackish tint to water	sandust, dirt on pavement	we sweeper/vacuum truck to clean pavement remove debris out separator triet prior to next storm
(0 18 103 St-1	Ory Shack	clear discharge, some flooding would partitles held back in pipe by veg oration. Water doesn't veg oration. Water doesn't veg orate it to Slough	ditch inside drysted	clean differ and ground surface adjacent to dry kilus ASAP and as-needed for condensate discharge
(0,8,83 964 4:45 ☐ AM PM	Procharge from Age of the loss un loading area	dark gray discharge	woody particles bank dust todist on pavement	use smeller (vacuum truck to clean pavenent remove debris from strav bales/mattes prior to next storm
10,8,65 4.05 4.10 AM	SL-6-	> No flow > Infiltrate to ground, no flow > No Flow	NA	NA .

2003 - 2004 ANNUAL REPORT FORM 4-MONTHLY VISUAL OBSERVATIONS OF

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STORM WATER DISCHARGES

- 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:	Drainage Location Description	#1 5L-1	#2 5L-2	#3 Z-3	#4 5L-4
Title:	Observation Time	:/5 □ P.M.	3 :05 DP.M.	3 :/Ø □P.M.	3 :15 □P.M.
	Time Discharge Began	16 :45 □P.M.	2 :47 P.M.	2 :45 P.M.	2 : 45 P.M.
Signature:	Were Pollutants Observed (If yes, complete reverse side)	YES 🗖 NO 🗆	YES NO	YES 🗖 NO 🗆	YES NO
Observation Date: November 25 2003	Drainage Location Description	#1	#2	#3	#4
Observers Name: Matt Hilly and		□ P.M.	□ P.M.	□ P.M.	P.M.
Title: En En	Observation Time	:A.M	: A.M.	:A.M.	:A.M.
Signature: Month Holland	Time Discharge Began Were Pollutants Observed	:A.M.	;	: 🗖 A.M.	:
	(If yes, complete reverse side)	YES NO	YES NO	YES NO	YES NO
Observation Date: December 25 2003	Drainage Location Description	# #5 9L-5	#2 ±6 5L-6	#3-#7 ML-1	#4
Observers Name:	Observation Time	(: 40 □ P.M.	1 : 55 P.M.	12:05 P.M.	□P.M. : □A.M.
Title:	Time Discharge Began	NA: P.M.	NA: DP.M.	: P.M.	□P.M. : □A.M.
Signature:	Were Pollutants Observed (If yes, complete reverse side)	YES NOX	YES NO	YES NO M	YES NO
Observation Date: January2004		#1	#2	#3	#4
,	Drainage Location Description				
Observers Name:		□ P.M.	☐ P.M.	☐ P.M.	
Observers Name:	Drainage Location Description Observation Time	: □ A.M.	: 🗖 A.M.	: A.M.	: □A.M.

FORM 4-MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

DATE/TIME OF OBSERVATION (From Reverse Side)	DRAINAGE AREA DESCRIPTION	DESCRIBE STORM WATER DISCHARGE CHARACTERISTICS	IDENTIFY AND DESCRIBE SOURCE(S) OF POLLUTANTS	DESCRIBE ANY REVISED OR NEW BMPs AND THEIR DATE OF IMPLEMENTATION
	EXAMPLE: Discharge from material storage Area #2	Indicate whether storm water discharge is clear, cloudy, or discolored; causing staining; containing floating objects or an oil sheen, has odors, etc.	EXAMPLE: Oil sheen caused by oil dripped by trucks in vehicle maintenance area.	
1.15 M AM □ PM	SL-1 Dischase From Dry Sted	Slightly brown, some would particles, small pieces of silver sheen floring on surface	sceen does not appear to be petroleum by sed woody particles from in between dry kiln & disch and from areas draining into diry seed	clean ditch and ground surface near dry kilus AS-n-eccled
175/03 -: AM	School of Step	darle boun, small v. fore woody particles	Fruit looding and and Sundus + from soumill	clean parenent w/ vacuum/sureper truck as-neeclech
11,2503 5:10 AM	SL-3 from under sammill + East side log Deck	dark from small. V. file woody porticles	bark Particles from los deck and de barker Londing and	Clean pavenent y vacuum/sweepr truck as - needed clean straw bales ofders
	St-4 from Sorter, N. side of sawmall, lumbor storage near and south End log deck		bore posticlos from southern	Clean paverent w/ vacuum some eper track as needed clean strom wattles of accumulated debris
	SL-5 SL-6 ML-1	> Not Flowing Infiltrating into ground > Not Flowing	NA	NA

ANNUAL REPORT FORM 4-MONTHLY VISUAL OBSERVATIONS OF

SIDE

A

STORM WATER DISCHARGES

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Observation Date: October 2003		#1 S L-6	#2	#3	#4
	Drainage Location Description	3 L-0		_	
Observers Name:		□ P.M.	. P.M.	□ P.M.	□P.M.
Title:	Observation Time	:A.M.	: A.M.	: 🗖 A.M.	: □A.M.
	Time Discharge Began	: P.M.	: P.M.	; □P.M.	: □P.M.
Signature:	Were Pollutants Observed (If yes, complete reverse side)	YES NO	YES NO	YES NO	YES NO
Observation Date: November 2003	Drainage Location Description	#1	#2	#3	#4
Observers Name:		□ P.M.	☐ P.M.	□ P.M.	□P.M.
Title:	Observation Time	:A.M.		:A.M.	: □A.M.
Title.	Time Discharge Began	□ P.M. : □ A.M.	. □ P,M. . □ A,M.	; □ P.M. ; □ A.M.	□P.M. ; □A.M.
Signature:	Were Pollutants Observed (If yes, complete reverse side)	YES NO	YES NO	YES NO	YES NO
Observation Date: December 2003	Drainage Location Description	#1 5L-6	#2 ML-1	#3 96-5	#4
Observers Name: Matt Hillyard Title: Env. Engineer	Observation Time	((:)5 P.M.	11 :30 P.M.	11:40 P.M.	□P.M. : □A.M.
	Time Discharge Began	? : □P.M.	NA : P.M.	NA: P.M.	. □P.M. : □A.M.
Signature: Month Wyal	Were Pollutants Observed (If yes, complete reverse side)	YES NO M	YES NO NO	YES NO D	YES NO
Observation Date: January2004	Drainage Location Description	#1	#2	#3	#4
Observers Name:		□ P.M.	☐ P.M.	□ P.M.	□P.M.
Title:	Observation Time	:A.M.	: A.M.	: DA.M.	:A.M.
, mos	Time Discharge Began	□ P.M. : □ A.M.	: □ P.M.	□ P.M. : □ A.M.	□ P.M. : □ A.M.
Signature:	Were Pollutants Observed (If yes, complete reverse side)	YES NO	YES NO	YES NO	YES NO

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
131,03 11:15 AM PM	SL-6 Discharge from Lumber storage area and Sueling area	clear mater ponded in grass and vegetation drains to ditch & and Hambold+ Bay	Nove	Not Necessary at this time
12/(107) (1:70) AM PM	ML-1 Discharge from north of tr-cb/hyster shops	Not Flowing	NA-	NA
12,1,05 11:40 AM PM	SL-5 discharge from log deck sptting basin	Not Flowing	NA	NA
AM PM				-

ANNUAL REPORT FORM 4-MONTHLY VISUAL OBSERVATIONS OF

SIDE

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Observation Date: October 2003	Drainage Location Description	#1	#2	#3	#4
Observers Name:		□P.M.	☐ P.M.	P.M.	P.M.
Title:	Observation Time	: 🗖 A.M.	: 🗀 A.M.		:
	Time Discharge Began	□ P.M. : □ A.M.	: P,M,	□ P.M. : □ A.M.	□P.M. : □A.M.
Signature:	Were Pollutants Observed (If yes, complete reverse side)	YES NO	YES NO	YES NO	YES NO
Observation Date: November2003	Drainage Location Description	#1	#2	#3	#4
Observers Name:		□P.M.	☐ P.M.	□ P.M.	P.M.
Title:	Observation Time	: □ A.M.	: 🗖 A.M.	: 🗖 A.M.	: □A.M.
	Time Discharge Began	□ P.M. : □ A.M.	: □ P.M.	□ P.M. : □ A.M.	□ P.M. : □ A.M.
Signature:	Were Pollutants Observed (If yes, complete reverse side)	YES NO	YES NO	YES NO	YES NO
Observation Date: December 1 2003 Observers Name: Matt Hillyad	Drainage Location Description	#1 5L-1	#2 SL-2	#35L-3	#4 5 L-4
Title: Fry mental Engineer	Observation Time	11 :20 BP.M.	11 :35 P.M.	11 : 40 P.M.	
Signature: Mart Whyd	Time Discharge Began	8 .30 ₽P.M.	10 :00 P.M.	10 00 P.M.	10 :30 P.M.
	Were Pollutants Observed (If yes, complete reverse side)	YES NO	YES NO	YES NO D	YES 🔼 NO 🗆
Observation Date: January 19 2004 7003	Drainage Location Description	#1 119 5L-5	₩±6	# #7 ML-1	#4
Observers Name:	Observation Time	12 .00 P.M.	12:05 P.M.	12:10 P.M.	□P.M. □ A.M.
Title:		NA: P.M.	NA: P.M.	NA : □ P.M. A.M.	□P.M. : □A.M.
Signature:	Time Discharge Began Were Pollutants Observed (If yes, complete reverse side)	YES NO 2	YES NO.23	YES NO 12	YES NO

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 M AM PM	SL-2 Discharge from South edge of Sammill + mechanics Shup	Dark gray discharge fine purpody particles broken down	Sawdust + woody parties from Sawmill	clam pavement of vacuum/s neeper truck as - needed
12,17,03 11:40 AM	SL-3 discharge from under saw will t Pastern lug deck	Dark reddish- brown disher	log deck & deburker	clear pavement w/ vacuum/smeeper trak clear debris from stran bales as-needa
(2/1903) (1.45 E AM PM	SL-4 discharge from Siter, N. Side of Sawn'll tumber, storage dron and southern log cleck	Park gray-brown discharge	holicen down bark dist from log yard to Sandast from Sandmill	clean pavement up vacuum/queeper trus, clean debris from straw wattles, as-needed
12/9,03 11:20 AM	51-1 Discharge from Dry shed	Clear	NA	NA
-: AM PM	SL-5 SL-6 ML-1	> Not Flowing That I trating into ground That Flowing	NA	NA

ANNUAL REPORT FORM 4-MONTHLY VISUAL OBSERVATIONS OF

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SIDE

STORM WATER DISCHARGES

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Observation Date: October 2003	Drainage Location Description	#1	#2	#3	#4
Observers Name:	Observation Time	□ P.M. : □ A.M.	□ P.M. □ A.M.	□ P.M. : □ A.M.	□P.M. : □A.M.
Title:	Time Discharge Began Were Pollutants Observed	□ P.M. : □ A.M.	: P.M.	: P.M.	ПР.М.
	(If yes, complete reverse side)	YES NO	YES NO	YES NO	YES NO
Observation Date: November 2003	Drainage Location Description	#1	#2	#3	#4
Observers Name:		□ P.M.	☐ P.M.	□ P.M.	ПРМ
Title:	Observation Time	;A.M.	: 🗆 A.M.	: A.M.	□ P.M. : □ A.M.
Signature:	Time Discharge Began Were Pollutants Observed	: □P.M.	: P.M.	: □ P.M. : □ A.M.	□ P.M. : □ A.M.
	(If yes, complete reverse side)	YES NO	YES NO	YES NO	YES NO
Observation Date: December 2003	Drainage Location Description	## # 5 5L-5	#2 #26 5L-6	# ** #7	#4
Observers Name:	Observation Time	4 :15 P.M.	3 : 15 A.M.	3 .25 P.M.	□P.M.
Title:	Time Discharge Began	NA: P.M.	NA: P.M.	MA: P.M.	±
Signature:	Were Pollutants Observed (If yes, complete reverse side)	YES NO.	YES NO 12	YES NO Z	YES NO
Observation Date: January 8 2004 Observers Name: Matt H.11 40-0	Drainage Location Description	#1 5L-1	#2 SL-Z	#3 SL-3	#4 5L-4
Title: Environmental Engineer	Observation Time	3 :35 □A.M.	3:45 □ P.M.	3 :55 P.M.	4:05 DP.M.
Signature: Matt 74th D	Time Discharge Began	Z:45 \\ A.M.	2 45 P.M.	Z:45 □A.M.	3 .00 □P.M. □A.M.
orginators Francisco	Were Pollutants Observed (If yes, complete reverse side)	YES 🗗 NO 🗆	YES NO	YES BY NO [YES 🗗 NO 🗆

FORM 4-MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

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<u>(18 10 4</u> 3:35 □ AM ☑ PM	SL-1 Discharge from dry sted + drykilus	Slightly cloudy w/ dist and/or small woody portiels.	woody naterial in ditch	clean ditch and surface between dry leiths and ditch as needed
118 104 3:45 AM	SL-Z Discharge rear Equipment shop	dark gray w/small broken down werely part-cles	Soundust/dirto-	clear parement as needed
1 8 164 2:55 AM	FL-3 Discharge From debarber area + Eastside of log deck	reddish brown Ysmall broken down woody particles	Bark dust, dirton pavement	clean powerent -nd straw babes as needed
1 6 0 4 4 :05 AM	St-4 Discharge from Southern log scaling and and sorter/Inmber strage areas	Small broken down woody particles	woody particles, bork dust + dilt on facement	Clean pavement and strong boles/ wattles as needed
1 /8 /0 Y	5L-5 9L-6 ML-1	> Not Flowing suto ground > Not Flowing	NA	NA

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FORM 4-MONTHLY VISUAL OBSERVATIONS OF

STORM WATER DISCHARGES

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	Yes and the second	7.7		Annual Control of the	
Observation Date: October 2003 February (2004) Observers Name: Matt H. Ilyand	Drainage Location Description	#1 5L-6	<u> </u>	#35L-3	#4 SU4
Title: Env. Engine	Observation Time	2 :20 ☐ A.M.	2 :50 ☐ P.M.	3 :00 P.M.	3 :2√ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
Signature: Matt Hilland	Time Discharge Began	100 □ A.M.	2 ;a0 □ P.M.	2:00 DP.M.	Z:00 □ A.M.
Signature: 7 - 1 1 Signature:	Were Pollutants Observed (If yes, complete reverse side)	YES 🖾 NO 🗆	YES MO	YES 🏞 NO 🗆	YES NO
Observation Date: November 2803	Designate Legation Design	粉井与	#46	松井了	#4
Observers Name:	Drainage Location Description	SL-1	SL-5	ML-1	h
Title:	Observation Time	3 :40 □ A.M.	3 :15 ☐ A.M.	Z:40 \$P.M.	□P.M. : □A.M.
	Time Discharge Began	2 :00 P.M.	N A : □ P.M. □ A.M.	NA: P.M.	□P.M. : □A.M.
Signature:	Were Pollutants Observed (If yes, complete reverse side)	YES X NO 🗆	YES NO 🗹	YES NO 🗹	YES NO
Observation Date: December 2003	Drainage Location Description	#1	#2	#3	#4
Observers Name:	Observation Time	□ P.M.	□ P.M. : □ A.M.	□ P.M. : □ A.M.	□P.M. : □A.M.
Title:	Time Discharge Began	□ P.M. : □ A.M.	□ P.M. : □ A.M.	P.M.	. □C.IVI. □P.M. : □A.M.
Signature:	Were Pollutants Observed (If yes, complete reverse side)	YES NO	YES NO	YES NO	YES NO
Observation Date: January 2004	Drainage Location Description	#1	#2	#3	#4
Observers Name:	and vota comme	□ P.M.	□ P.M.	☐ P.M.	P.M.
Title:	Observation Time	: A.M.	: A.M.	; □ A.M. □ P.M.	: □A.M. □P.M.
Signature:	Time Discharge Began Were Pollutants Observed (If yes, complete reverse side)	: A.M. YES NO	: A.M.	:	:A.M.

SIDE

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	Discharge from I umber storage a rea SU-6 including entrance and	Storm water discharge	Dirt and other small particles from paved areas	clean forement w/ vacuum/sneeper truck as needed
2,6,04 2.50 AM 8 PM	SL-Z Discharge near Equipment shop	dark grey small broken down woody partieles	Sawdust/dilton Pavement	Cleum powement W/ Vocum sweeper truck as me soled
2,6,04 3:00 □ AM ₽ PM	96-3 Discharge from debowker oven & East 5-de of Los Deck	Reddish Brown Small brokendown Woody particles	Bark dyst, dirton	clean pavener of vacuum squeeper + 1-11 b and straw balls as - needed
2,6,04 3,25 □ AM ⊠ PM	SC-4 Descharge from Southern lug un oad a anu t porch steat sorter thanberaren	gnall broken donn	dust fairt o'n pavement	Clean pavement u/ vacuum/sweeper truck and straw bales/mattles ag-needed
2,6,04		Singhtl-1 cloudy w/dir- and/or small wound, particles. Discharge point under water.	woody material in dien ruside dry sud dort an paved floor	clean ditch and ground surface in dry shed near dry kilas agreeded

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2,6,04	SL-5 -	> Not Flowing fifthering	NA	NA
:				
: AM PM				
			_	
AM				
-11				
: AM PM				
- 1 1				
:				

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

SIDE A

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Observation Date: February 2004	Drainage Location Description	#1	#2	#3	#4
Óbservers Name:	Observation Time	□ P.M. : □ A.M.	□ P.M. : □ A.M.	P.M.	. P.M.
Title:	Observation Time	. □P.M.		. : □ A.M. □ P.M.	: A.M.
Signature	Time Discharge Began	: 🗖 A.M.	<i>i</i>	: 🗎 A.M.	: 🗎 A.M.
Signature:	Were Pollutants Observed (If yes, complete reverse side)	YES NO	YES NO	YES NO	YES NO
Observation Date: March 25 2004 Observers Name: Matt H: 11 your	Drainage Location Description	#1 5L-1	#2 51-2	#3 9L-3	#4 7 L - 4
Title: Environmental Engineer	Observation Time	\(\begin{align*} \(\left\) = 15 \(\begin{align*} \text{P.M.} \\ \A.M. \\ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	1) :10 P.M.	\\ :00 P.M.	\\\ :15 □ P.M.
Signature: Mat Ally	Time Discharge Began	10 :95 P.M.	10 :50 P.M.	(o :00 P.M.	10 :30 P.M.
Signature:	Were Pollutants Observed (If yes, complete reverse side)	YES NO NO	YES NO 🔼	YES 🗹 NO 🗆	YES ☑ NO □
Observation Date: April 25 2004		M #5	種母な	##7	#4
	Drainage Location Description	96-5	52-6	ML-1	
Observers Name:	Observation Time	((:30 ₽.M.	11 :22 P.M.	11 :25 A.M.	P.M.
Title:	Time Discharge Began	NA: DAM.	NA: P.M.	NA: P.M.	P.M.
Signature:	Were Pollutants Observed (If yes, complete reverse side)	YES NO 🔯	YES NO DE	YES NO D	YES NO
Observation Date: May 2004	Drainage Location Description	#1	#2	#3	#4
Observers Name:		□ P.M.	☐ P.M.	□ P.M.	□ P.M.
Title:	Observation Time	:A.M	: A.M.	: A.M.	: A.M.
Signature:	Time Discharge Began	;	:	: A.M.	: A.M.
orginaturo:	Were Pollutants Observed (If yes, complete reverse side)	YES NO	YES NO	YES NO	YES NO

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

DATE/TIME OF OBSERVATION (From Reverse Side)	DRAINAGE AREA DESCRIPTION	DESCRIBE STORM WATER DISCHARGE CHARACTERISTICS	IDENTIFY AND DESCRIBE SOURCE(S) OF POLLUTANTS	DESCRIBE ANY REVISED OR NEW BMPs AND THEIR DATE OF IMPLEMENTATION
	EXAMPLE: Discharge from material storage Area #2	Indicate whether storm water discharge is clear, cloudy, or discolored; causing staining; containing floating objects or an oil sheen, has odors, etc.	EXAMPLE: Oil sheen caused by oil dripped by trucks in vehicle maintenance area.	
1.25,04 (1.25 AM PM	SL-3 Draininge from Log Deck (SE) + Debunker/gama'll	redolph brown w/ Small would particles	book dust broken down wowy particles from asphylt	Clean out separater 3/31/04
3,29,04 (1.15) AM PM	SL-4 Drainage from Souther for two of log deck Stagging area	broken down would particles	bark dust/woody debris from asphalt	cloan out separater 3/31/04
2, 25, 04 11.10 AM □ PM	SL-2 drainage from sommill + mechanic shef areas	Clear	NA	NA.
3,75,04 11:15 AM	gc-1 drainage from dry shed	Clear	NA	MA
3 1504 -:- AM PM	96-6	> Not flowing Thistratey into ground Y Not Flowing	NA	NA

SIDE A

2003 - 2004

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

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A STATE OF THE STA					
Observation Date: February 2004	Drainage Location Description	#1	#2	#3	#4
Observers Name:		□ P.M.	□ P.M.	□ P,M.	□ P.M.
Title:	Observation Time	:A.M.	. : 🗀 A.M.	: 🗆 A.M.	: 🗖 A.M.
	Time Discharge Began	: A.M.	P.M.	: P.M.	P.M.
Signature:	Were Pollutants Observed (If yes, complete reverse side)	YES NO	YES NO	YES NO	YES NO
Observation Date: March 2004	Drainage Location Description	#1	#2	#3	#4
Observers Name:		□ P.M.	□ P.M.	□ P.M.	□ P.M.
Title:	Observation Time	: □ A.M. □ P.M.	: A.M.	;A,M.	: A.M.
Signature:	Time Discharge Began Were Pollutants Observed	;A.M.	: 📑 A.M.	: A.M.	: A.M.
	(If yes, complete reverse side)	YES NO	YES NO	YES NO	YES NO
Observation Date: April 20 2004	Drainage Location Description	#1 SL-1	#2 SL-Z	#3 5L-3	#4 51-4
Observers Name: Matt Hillyard Title: Environmental Engineer	Observation Time	(:40 □A.M.	20 A.M.	.36 ☐ A.M.	/ 35 □ A.M.
Signature: Mat Hellow	Time Discharge Began	[:30 ☐A.M.	1 :30 A.M.	1 :30 P.M.	/ :30 ₽.M.
Signature:	Were Pollutants Observed (If yes, complete reverse side)	YES TO NO	YES NO	YES 📶 NO 🗆	YES 🖾 NO 🗆
Observation Date: May 20 2004		柳井丁	# \$6	数 并7	#4
	Drainage Location Description	5L-5	5L-6	ML-1	
Observers Name:	Observation Time	1 :55 □P.M.	(45 ☐ A.M.	1.50 ₽ P.M.	□ P.M.
Title:		ПР.М.	ПР.М.	☐ P.M.	☐ P.M.
Signature:	Time Discharge Began Were Pollutants Observed (If yes, complete reverse side)	YES NO Z	YES NO NO	NA : A.M. A.M. YES NO. NO. M	; A.M. YES NO

2003 - 2004 ANNUAL REPORT

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 + dr-1 kilns	Slightly Cloudy	Near day steel to	clean ditch and ground surface acarder kilus as-needed
1.20 AM BY PM	SL-Z Discharge from Sawimill + mechanic shop area	dark gray W broken down woods parties	Sandust + broken John woody particles on powement	Clean farement of vacuum/suceper truck as-needed
<u>4</u> 120104 130□ AM 120 PM	56-3 Discharge from Sammil , debarter o-deastern 'tog denk	Dark brown w/ broken down woody partices	Sardust back to broken down woody particles on paremont	clear pavement w/ vacuum/sweeper truct and straw bales as-necolcel
4,20,04 135 ☐ AM PM	SL-4 Discharge From Lumberstrage, Sorter + southern log dock	Dark brown wy broken down woody particles	Soundlyst, bark t broken down woody particles on pavement	clean pavement w/ vacuum/sweeper truck and straw bales/wattles agneeded
AM □ PM	96-6	> Not Flowing Notogram	MA	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.
- 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		#1	#2	#3	#4
Observers Name:	Drainage Location Description	9L-1	SL-2	5L-3	56-4
and the second s	Observation Time	□ P.M. : □ A.M.	□ P.M. : □ A.M.	: P.M.	☐ P.M. : ☐ A.M.
Title:	Time Discharge Began	□ P.M. : □ A.M.	: P.M.	: P.M.	: □ P.M. : □ A.M.
Signature:	Were Pollutants Observed (If yes, complete reverse side)	YES NO	YES NO	YES NO	YES NO
Observation Date: March 2004	Drainage Location Description	#1	#2	#3	#4
Observers Name:		□ P.M.	□ P.M.	□ P.M.	☐ P.M.
Title:	Observation Time	: □ A.M. □ P.M.	: A.M.	: A.M P.M.	: A.M P.M.
Signature:	Time Discharge Began Were Pollutants Observed (If yes, complete reverse side)	:A.M.	: A.M.	: A.M. YES NO	;
Observation Date: 27 2004	Drainage Location Description	# #5 51-5	\$1-6	11-1	#4
Observers Name:	Observation Time	□ P.M. : □ A.M.			
Title:	Time Discharge Began	□ P.M. : □ A.M.	□ P.M. : □ A.M.	: P.M.	□ P.M. : □ A.M.
Signature:	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	Drainage Location Description	#1 5 L-1	#2 5 L-Z	#3 SL-3	#4 SL-4
Title: Environmental Enginer	Observation Time	1 :00 ☐ A.M.		12:30 AM.	
Signature: Mat Hulland	Time Discharge Began Were Pollutants Observed	12:00 P.M.	12:10 P.M.	(1:50 P.M.	11 :5 □ P.M.
Signature:// LM/W / M/W. I/					

2003 - 2004 ANNUAL REPORT

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

DATE/TIME OF OBSERVATION (From Reverse Side)	DRAINAGE AREA DESCRIPTION	DESCRIBE STORM WATER DISCHARGE CHARACTERISTICS Indicate whether storm water discharge is clear,	IDENTIFY AND DESCRIBE SOURCE(S) OF POLLUTANTS	DESCRIBE ANY REVISED OR NEW BMPs AND THEIR DATE OF IMPLEMENTATION
	EXAMPLE: Discharge from material storage Area #2	cloudy, or discolored; causing staining; containing floating objects or an oil sheen, has odors, etc.	EXAMPLE: Oil sheen caused by oil dripped by trucks in vehicle maintenance area.	
G 127,04 12:30□ AM PM	SL-3 Discharge from Sawn: 11, debarter and eastern lag clerk	Dark reddish brown w/ broken down woody portales	Sandat, bark + broken down woody for ticles on powement	clear parement u/ vacuum/sweepertruck as-needed
1250 AM PM	SL-2 Discharge from Sawmill + mediate Shop area	dant gray my broton down woody purticles	Sandust & broken dun woody particles on pavement	clean pavement w/ vacuum/sweeper truck ns-meeded
5 127104 12:55 AM	SL-4 Discharge from Lumber storage, sorter and Southern log deck	dark reddist brown w/	sandust, bark t broken down wordy partreles on parement	clean parement w/ vacuum/quelpro tarek as needed
5,27,6 ↑ 1,01 AM	GL-1 discharge from dr. 1 shed	Clear	NA	NA
5 ,27,6 Y — □ AM □ PM	SL-6	> Not Flowing > Not Flowing	NA	NA

2003-2004 ANNUAL REPORT

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

POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED?	□YES □NO	If yes, to either question, complete the next two columns of this form	Describe deficiencies in BMPs or BMP implementation	Describe additional revised BMPs or corrective actions and their date(s) of implementation
	ARE ADDITIONAL/REVISED BMPs NECESSARY?	YES NO			than several areas throughout sit
POTENTIAL POLLUTANT OURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED?	□YES □NO	If yes, to either question, complete the next two columns of this	Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
Sawmill Alen	ARE ADDITIONAL/REVISED BMPs NECESSARY?	No No	form		More frequently
POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED?	□YES □NO	If yes, to either question, complete the next two columns of this	Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
	ARE ADDITIONAL/REVISED BMPs NECESSARY?	□YES BNO	form		
POTENTIAL POLLUTANT OURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED?	□YES □NO	If yes, to either question, complete the next two columns of this form	Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
1 million in Con	ARE ADDITIONAL/REVISED BMPs NECESSARY?	□YES •••••NO			

2003-2004 ANNUAL REPORT

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

POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED?	□YES ≽NO	next two	Describe deficiencies in BMPs or BMP implementation Note a complete and a comple	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
Alen	ARE ADDITIONAL/REVISED BMPs NECESSARY?	□YES ☑NO	columns of this form		-
POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED?	□YES □NO	If yes, to either question, complete the next two	Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
J	ARE ADDITIONAL/REVISED BMPs NECESSARY?	□YES □NO	columns of this form		
POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP) Log Storage Area (Area	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED?	□YES □YES	If yes, to either question, complete the next two	Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation Clean out seperator more frequently
	ARE ADDITIONAL/REVISED BMPs NECESSARY?	⊵YES □NO	columns of this form		more frequently
POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED?	□YES □NO	If yes, to either question, complete the next two	Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
Lumber Storage Area Area	ARE ADDITIONAL/REVISED BMPs NECESSARY?	□YES □NO	columns of this form	1,	

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)

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

October 6, 2003

TASK 6 SURFACE WATER SAMPLE

LOG DECK SPRINKLE DITCH

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

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	<u>Gasoline</u>	Diesel	<u>Heavy Oi</u>	<u>Surrogate</u> (% Recovery)
Log Deck Sprinkle Ditc	h 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.

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 TOTAL PETROLEUM HYDROCARBONS AS DIESEL USING EPA METHOD 8015M

Results Reported as µg/L (ppb)

Sample ID Laboratory ID	$\frac{\text{Diesel Range}}{\text{(C}_{10}\text{-C}_{25})}$	Surrogate (% Recovery) (Limit 51-151)
Log Deck Sprinkle Ditch 309102-01	1,300	76
Method Blank	<50	104

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 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

ENVIRONMENTAL CHEMISTS

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
			**

	Lower	Upper
% Recovery	Limit	Limit
7 ip	23	74
0 ip	12	51
60 vo	62	108
61	49	116
63	33	134
69	53	119
	7 ip 0 ip 60 vo 61 63	% Recovery Limit 7 ip 23 0 ip 12 60 vo 62 61 49 63 33

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
		WHEN BUSYES WAS	

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.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270C

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	Method Blank Not Applicable 09/15/03 09/22/03 Water ug/L (ppb)		Client: Project: Lab ID: Data File: Instrument: Operator:	MFG SPI Arcata, 030229.19, F&BI 309102 03-1004 mb 092204.D GCMS3 YA
			Lower	Upper
Surrogates:	% Rec	covery	Limit	Limit
2-Fluorophenol	11	ip	23	74
Phenol-d6	0	ip	12	51
Nitrobenzene-d5	8	35	62	108
2-Fluorobiphenyl	8	39	49	116
2,4,6-Tribromopher	nol 9	93	33	134
Terphenyl-d14	8	92	53	119

1 or priority 1 or 1			
	Concentration		Concentration
Compounds:	ug/L (ppb)	Compounds:	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.

ENVIRONMENTAL CHEMISTS

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

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

ENVIRONMENTAL CHEMISTS

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

MFG, INC.

CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS

Arcata Office 75 Crescent Way vrcata, CA 95521-6741 theine (707) 826-8430- FAX (707) 826-8437

17770 Cartweight Fr.: Ste: SARL Irvine, CA 92611 Tel (949) 253 2951 -> Fax (949) 253 2764

San Francesco, CA 94105 Selection treatment Fax (415) 495 / 107

1.0 Booker 4900 Pearl East Co. Str. 300W Boulder, CO 80301 Tel (303) 447-1823 Fax (303) 447-1836

PCI Box 30 Wallacas ID & Qt . 1 Tel (20e) 556 6811 Fax (20e) 566 7271 Mill Messagg 1933 See State Microsofta MT 59807 Del 1990 728 4600 Fib (400) 728 4698

NJ Edison 1000 King Georges, Post Hit Ste: 703 Edison, NJ 08837 Tel (732) 738-5707 Fax (732) 738-5711

COC No. 46156

OR Portland 1020 SW Taylor SI 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, L' Floor Austin 1x 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

1 x - 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 SAMPLER (Signature): Mat HA	bred	PROJE	CT N	IAMI P	E: _S	SP.	I MAN	AGE	R. E	n te	X	ent	7							PAGE:	1_ OF:_	1 3
	METHOD OF SHIPMENT: Fed 67	Prior	PROJECT MANAGER: Ed Cont Priority CARRIER/WAYBILL NO:										DESTINATION: Friedman + Bi-ya										
		SAMPLES									7 22			-	ANA	LYS	IS R	EQUEST					
		S	ample			Prese	ervatio	on		Con	taine	rs	Co	nstitue	ents/	Metho	od \	Ha	ndlir	ng		Remarks	
abI	identification		TIME	Matrix*	HCI	HNO ₃	H25004		FILTRATION:	VOLUME (ml/oz)	TYPE.	NO.	HCFD	Silinbel	GCMS ID	Temp	Ed Cont Con	HOLD 7/10	RUSH	STANDARD	* pl 3 si (one	ease provi eparate re for each sar	per/ls
	Log Deck Sprinkle Ditch)	ζ.	_	L; ter	_	-	X	×	×		X			X	Fax	result.	s to
	Vegetated Pond	0/10	1430	10			1	*		Liter			×	×	X		\times			X	Ed	Co-11	
3 A	B #2 Small	9/10	1445	AQ			/2	<	u	Liter	G	2	×	×	X	-	\times			X	Cull	witho	ny
		~/				_	_		_												que	estions	
	Tenp Blank	9/10	1530	AQ		\perp	-	<u> </u>	U	40 ML	6	1				X				X	L		
						+	+	-															
		2111		1 1000		TOTAL	L NUMI	BER OF C	ONTA	INERS	2	7	LABO	PRATOF	Y CO	MMEN	TS/CO	NDITIO	ON OF	SAME	PLES	Cooler Temp:	
	RELINQUISHED BY																	RE	CEIV	ED E	3Y:		
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	Sweet M. Mo Julie Mills	N	146					1/03		LD		to	11.	ays	7.	av J	- 7			_	tran	F+BI	9:30
	76.1 Mar 1, 10- 0-1		ries al San	i	ip - j	oft agrees	pro	· arraya	1				- vaje 19	7-1			1	199.	<i>f</i> :				

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

October 6, 2003

TASK 6 SURFACE WATER SAMPLE DITCH #2 (Small separata) 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 #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

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.

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 TOTAL PETROLEUM HYDROCARBONS AS DIESEL USING EPA METHOD 8015M

Results Reported as µg/L (ppb)

Sample ID Laboratory ID	$\frac{\text{Diesel Range}}{\text{(C}_{10}\text{-C}_{25})}$	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.

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 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.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270C

Client Sample ID:	#2 Small	Client: Project: Lab ID: Data File: Instrument: Operator:	MFG
Date Received:	09/12/03		SPI Arcata, 030229.19, F&BI 309102
Date Extracted:	09/15/03		309102-03
Date Analyzed:	09/22/03		092207.D
Matrix:	Water		GCMS3
Units:	ug/L (ppb)		YA
C.I.I.O.	0 41,		11

	Lower	Upper
% Recovery	Limit	Limit
18 ip	23	74
1 ip	12	51
61 vo	62	108
62	49	116
67	33	134
68	53	119
	1 ip 61 vo 62 67	% Recovery Limit 18 ip 23 1 ip 12 61 vo 62 62 49 67 33

1 cipitony i ar i			
	Concentration		Concentration
Compounds:	ug/L (ppb)	Compounds:	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.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270C

2 22023 020 - 02 10 10					
Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	Method Bla Not Applica 09/15/03 09/22/03 Water ug/L (ppb)		Client: Project: Lab ID: Data File: Instrument: Operator:	MFG SPI Arcata, 0302: 03-1004 mb 092204.D GCMS3 YA	29.19, F & BI 309102
			Lower	Upper	r.
Surrogates:		% Recovery	Limit	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-Tribromophen	ol	93	33	134	
Terphenyl-d14		92	53	119	
		Concentration			Concentration
Common dos		ug/L (ppb)	Compou	nde.	ug/L (ppb)
Compounds:					. .
Phenol		<10	3-Nitroa		<1
Bis(2-Chloroethyl)	ether	<1	Acenaph		<1
2-Chlorophenol		<10		trophenol	<10
1,3-Dichlorobenzen		<1	Dibenzo		<1
1,4-Dichlorobenzen		<1		trotoluene	<1
1,2-Dichlorobenzen	е	<1	4-Nitrop		<10
Benzyl alcohol		<1		phthalate	<1
Bis(2-chloroisoprop	yl) ether	<1	Fluoren		<1
2-Methylphenol		<10		ophenyl phenyl eth	
Hexachloroethane		<1		sodiphenylamine	<1
N-Nitroso-di-n-prop	ylamine	<1	4-Nitroa		<1
4-Methylphenol		<10		tro-2-methylpheno	
Nitrobenzene		<1		ophenyl phenyl eth	er <1 <1
Isophorone		<1		lorobenzene	<10
2-Nitrophenol	-	<10		lorophenol	<10
2,4-Dimethylphenol	L,	<10	Phenan Anthrac		<1
Benzoic acid		<100	Carbazo		<1
Bis(2-Chloroethoxy)	metnane	<1		tyl phthalate	<1
2,4-Dichlorophenol		<10 <1	Fluoran	•	<1
1,2,4-Trichlorobenz	ene	<1	Pyrene	mene	<1
Naphthalene Hexachlorobutadie		<1		butyl phthalate	<1
4-Chloroaniline	ie	<1		hlorobenzidine	<1
4-Chloro-3-methylp	honol	<10		anthracene	<1
2-Methylnaphthale		<10	Chryser		<1
Hexachlorocycloper		<1		thylhexyl) phthalat	
2,4,6-Trichlorophen		<10		tyl phthalate	<1
2,4,5-Trichlorophen		<10	Benzo(a	-	<1
2-Chloronaphthaler		<10)fluoranthene	<1
2-Nitroaniline	16	<1		fluoranthene	<1
2-Minoalline		-1	In desart	1 0 0 ad\nrman	_1

<1

<1

<1

Dimethyl phthalate Acenaphthylene

2,6-Dinitrotoluene

Indeno(1,2,3-cd)pyrene

Benzo(g,h,i)perylene

Dibenzo(a,h)anthracene

<1

<1

<1

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

ENVIRONMENTAL CHEMISTS

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

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

ENVIRONMENTAL CHEMISTS

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

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

MFG, INC.

CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS

) Arcata Office (75 Crescent Way Arcata, CA 95521-6741 Phone (707) 826-8430- FAX (707) 826-8437 CA Irvine 17770 Cartweight Hd Ste. 500 Irvine, CA 92614 Tel (949) 253-2951 Fax (949) 253-2954 (A *Sanck mage 20 100 Howard St. Ste. 200 Sanck mage 2, CA (6105 Set (415) 495-7107 Fax (415) 495-7107

GO - Boolder 4900 Pool East Cir Ste: 300W Boolder, CO 80301 Tel (303) 447-1823 Fax (303) 447-1836 (1D Crasini PO Roc 30 Wallace 1D 83873 Tel (208) 556 6811 Fox (208) 556 7271 MT Meconic PO Box 2156 Meconic MT 59807 Tel (406) 728 4690 Fax (406) 728 4698 [74J - Edison 1690 King George: Fost (6) Str. 703 Edison, NJ 08837 Tel (732) 738-5707 Fax (732) 738-5711

OR - Portland 1020 SW Taylor St. Sie: 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

FX - Austin 4807 Spicewood Springs Rd Bldg, IV, IV Floor Austin, TX 78759 Tel (512) 338-1667 Fax (512) 338-1331 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 1 X - 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) 921-4040 Fax (425) 921-4040

SAMPL METHO	ER (Signatu DD OF SHIP	ure): Matt PMENT: Fed	74.ll	PROJECT NAME: SPI Arcata PROJECT MANAGER: Ed Conti PROJECT MANAGER: Ed Conti Cricrity CARRIER/WAYBILL NO: DESTINATION: FC								-	PAGE: OF: DATE: 9/10/03 :edman + B: ~ ya										
				SAMPLES											ANALYSIS REQUEST								
				Sa	emple			Pres	erva	ion		Con	taine	rs	Co	nstitue	ents/l	Metho	d m	Hand	ing	113	Remarks
DD	Fie Sam Identifi	nple cation		DATE		Matrix*		HNO ₃	H ₂ SO₄	COLD	FILTRATION:	VOLUME (ml/oz)	TYPE"	NO.	HCFD	Silin bel	GCM5 ID	Tenp	Ed Cont Con	RUSH	STANDARD	* pla 3 si (one	ease provide eparate report for lach sample
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B # 2	2 Smo	all		1/10	1445	AQ				X	u	Liter	G	Z	×	×	\times	-	X		X	Call	with any
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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

October 6, 2003

Ed Conti, Project Manager MFG, Inc. 180 Howard St. Ste. 200 San Francisco, CA 94105 SURFACE WATER SAMPLE
VEGETATED POND 9/10/03

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

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.

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 TOTAL PETROLEUM HYDROCARBONS AS DIESEL USING EPA METHOD 8015M

Results Reported as $\mu g/L$ (ppb)

Sample ID Laboratory ID	$\frac{\text{Diesel Range}}{\text{(C}_{10}\text{-C}_{25})}$	Surrogate (% Recovery) (Limit 51-151)
Vegetated Pond	930	106
Method Blank	<50	104

quantitation of the analyte.

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 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

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270C

Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	Vegetated P 09/12/03 09/15/03 09/22/03 Water ug/L (ppb)	ond	Client: Project: Lab ID: Data File: Instrument: Operator:	MFG SPI Arcata, 030229.19, F&BI 309102-02 092206.D GCMS3 YA	309102
			Lower	Upper	
Surrogates:		% Recovery	Limit	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-Tribromophe	nol	84	33	134	
Terphenyl-d14		90	53	119	
		0		Concor	atration

	Concentration		Concentration
Compounds:	ug/L (ppb)	Compounds:	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.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270C

	Client Sample ID: Date Received: Date Extracted: Date Analyzed: Matrix: Units:	Method Bla Not Applica 09/15/03 09/22/03 Water ug/L (ppb)		Client: Project: Lab ID: Data File: Instrument: Operator:	MFG SPI Arcata, 030229.1 03-1004 mb 092204.D GCMS3 YA	9, F&BI 309102	
				Lower	Upper		
	Surrogates:		% Recovery	Limit	Limit		
	2-Fluorophenol		11 ip	23	74		
	Phenol-d6 Nitrobenzene-d5		0 ip	12	51		
			85	62	108		
	2-Fluorobiphenyl		89	49	116		
	2,4,6-Tribromophenol		93	33	134		
	Terphenyl-d14		92	53 119			
	1 cipitonyi di 1					Concentration	
	~ .		Concentration	0	- da.		
	Compounds:		ug/L (ppb)	Compou	nas:	ug/L (ppb)	
	Phenol		<10	-	3-Nitroaniline		
	Bis(2-Chloroethyl)	ether	<1	Acenaph	Acenaphthene		
	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	<1			
	Bis(2-chloroisopropyl) ether		<1	Fluoren	<1		
2-Methylphenol Hexachloroethane		<10	4-Chlore	<1			
		<1	N-Nitro	<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 Hexachlorobe			<1		
	2-Nitrophenol		<10	Pentachlorophenol		<10	
2,4-Dimethylphenol		<10	Phenanthrene		<1		
	Benzoic acid		<100 Anthracen			<1	
Bis(2-Chloroethoxy)methane		<1			<1		
	2,4-Dichlorophenol		<10	<10 Di-n-butyl		<1	
1,2,4-Trichlorobenzene		<1	<1 Fluoranthene		<1		
	Naphthalene		<1			<1	
Hexachlorobutadiene		<1		outyl phthalate	<1		
4-Chloroaniline		<1		nlorobenzidine	<1 <1		
4-Chloro-3-methylphenol		<10	Benz(a)	Benz(a)anthracene			
2-Methylnaphthalene		<1	Chryser		<1 <1		
Hexachlorocyclopentadiene		<1		Bis(2-Ethylhexyl) phthalate			
	2,4,6-Trichloropher	nol	<10	Di-n-oct	yl phthalate	<1	
	The Control of the Co			D /	Construction of the contract o	-4	

<10

<1

<1

<1

<1

<1

2,4,5-Trichlorophenol

2-Chloronaphthalene

Dimethyl phthalate

2,6-Dinitrotoluene

2-Nitroaniline

Acenaphthylene

Benzo(a)pyrene

Benzo(b)fluoranthene

Benzo(k)fluoranthene Indeno(1,2,3-cd)pyrene

Benzo(g,h,i)perylene

Dibenzo(a,h)anthracene

<1

<1

<1

<1

<1

<1

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

ENVIRONMENTAL CHEMISTS

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)
			117	119	71-128	2
Diesel	μg/L (ppb)	2,500	117	119	11-120	4

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS COC No 46.156

Arcata Office 15 Crescent Way rcata, CA 95521-6741 hone (707) 826-8430- FAX (707) 826-8437 CA Tryini: 17770 Cartweight 14d Ste. 500 Irvine, CA 92614 Tel (949) 253 2951 Fax (949) 253 2954

Xt A Cambridge Co. 200 San Francisco, CA 94105 Fax (415) 495-7107

CO - Boolder 4900 Pearl East Cir Sie BOOW Boulder, CO 80301 Tel (303) 447-1823 Fax (303) 447-1836 must-O Or PO Bux 30 Wallage ID 83873 Tel (208) 556 6811. Fax (20H) 556 7271 641 Christian 19316 - 755H Microsofte MT 59807 1-4 (40m) 728 4600 For (400) 728 4698 " NJ - Edison 1050 King Georges Post Hot Sh: 703 Edison, NJ 08837 Tel (732) 738-5707

Sax (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., Bldq. A Pittsburgh, PA 15212 Tel (412) 321-2278 Fax (412) 321-2283

TX - Auguler 4807 Spicewood Springs Rd Bldg IV, 12 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

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

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

	PROJECT NO: 0 30 SAMPLER (Signatu METHOD OF SHIPI	re): Mat Huy MENT: Fed 67	Priori	ROJEC	T N.	AMI P RR	E: RO. IER/	S P JECT WAY	MAN.	AGE	R: _E	1 TC	<u>C</u>	ent	ī	DE:	STIN	IATIO	ON:	F	_ l	PAGE: DATE: "	1/10/ + Bi	0F: 1 103
-		C.	SAME										\neg									EQUEST		
			Sa	emple			Pres	ervat	ion		Con	taine	rs	Cor	nstitue	ents/N	Netho	d / m	Hai	ndlir			Rema	
	Fiel Sam Identific	d ple eation	DATE	TIME	Matrix*	HCI	HNO3	H ₂ SO ₄	COLD	FILTRATION:	VOLUME (ml/oz)	TYPE'	NO.	HCFD	Silinbel	GCM5 ID	Temp	Ed Control	HOLD	RUSH	STANDARD		12	reports ach sample
-	Log Deck Sp	riable Ditch	9/10	1400	AQ				X		Liter		2	×	×	×		X			X	Fax	res	ilts to
	Vegetated 1	Pond	0/10						X		Liter		2	×	×	×		\times			X	Ed	Co-	ri
	B #Z Smo	cll	9/10						X		Litel		Z	×	×	X	-	\times			X			h any
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-	Temp Blan	K	9/10	1530	AQ				X	U	40,01	G	1				X	-			X	L		
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	Matt Holf L	Matt H.1140	1	MEC	2		·	9/1	1/03	0	1:30	?		Mu	Rui	16					M.		ME	
	Gray M. M.	Julia Mills	V	NFG-				7	11/03		CD		1	ml]	ay	11-	aus		M	a	n	Phan	FTF	BI 9:



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TASK 6 - STORM WATER SAMPLES OCTOBER 8, 2003 SI-1 → SI-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. There

Melanie B. Neece For Sheri L. Speaks

Project Manager

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CHEMICAL EXAMINATION REPORT

Page 1 of 15

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

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

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CHEMICAL EXAMINATION REPORT

Page 2 of 15

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

		Alpha A	Analytical	Laborato	ries, Inc.			
	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOT
L-1 (A310236-01)			Sample Typ	pe: Water		Sampled: 10/08/03 15:4	5	
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	16.	**	. "	. "	"	ND "	1.0	
2,3,4,5-Tetrachlorophenol	*	**	*	*	"	ND "	1.0	
Pentachlorophenol		"	*	H	**	ND "	1.0	
Surrogate: Tribromophenol	"	n	"	"		81.1 %	79-119	
Conventional Chemistry Parameters by	y APHA/EPA M	lethods						
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/cn	n 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 M	odified						
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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Tetra Tech/MFG, Inc.

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. Theres

Melanie B. Neece For Sheri L. Speaks Project Manager



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CHEMICAL EXAMINATION REPORT

Page 3 of 15

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

		Alpha A	nalytical	Laborato	ries, Inc.			
	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOT
SL-1 (A310236-01)			Sample Typ	pe: 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 % 63-15	50	
SL-2 (A310236-02)			Sample Ty	pe: 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	н	**	**	**	**	ND "	1.0	
Pentachlorophenol	н	**	**	"	,	2.6 "	1.0	
Surrogate: Tribromophenol	"	"	"	n:		105 % 79-1	19	
Conventional Chemistry Parameters by	y APHA/EPA N	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	и.	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	" REC	EIVÉ	ED

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Medanie B. Thece



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CHEMICAL EXAMINATION REPORT

Page 4 of 15

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 A310236

2,3,5,6-Tetrachlorophenol

2,3,4,6-Tetrachlorophenol

2,3,4,5-Tetrachlorophenol

Surrogate: Tribromophenol

Pentachlorophenol

Receipt Date/Time 10/09/2003 16:10

Client Code **MFGARC**

Client PO/Reference

		Alpha A	Analytical	l Laborato	ries, Inc.				
	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		PQL	NOTE
SL-2 (A310236-02)			Sample Ty	pe: Water		Sampled: 10/08/03 15	:15		
TPH as Diesel and Motor Oil by EPA	Method 8015 Mo	dified							
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	"	*	"	н		113 %	63-150		
SL-3 (A310236-03)			Sample Ty	pe: 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 Pul	p Method								
2,4,6-Trichlorophenol	EnvCan	AJ31709	10/15/03	10/16/03	1	ND ug/l		1.0	

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79-119

1.0

1.0

1.0

1.0

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Melanie B. Thece

ND"

ND"

ND"

ND"

92.0 %

Melanie B. Neece For Sheri L. Speaks Project Manager



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CHEMICAL EXAMINATION REPORT

Page 5 of 15

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 A310236

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

			Laborato				
METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
		Sample Ty	pe: Water		Sampled: 10/08/03 14:45		
APHA/EPA M	lethods						
SM5220D	AJ31312	10/17/03	10/20/03	10	8500 mg/l	100	
EPA 120.1	AJ31005	10/10/03	10/10/03	1	1100 umhos/cm	20	
EPA 1664	AJ31517	10/15/03	10/17/03	**	ND mg/l	5.0	
EPA 160.2	AJ31316	10/13/03	10/15/03	*	4500 "	1.0	
SM 5550B	AJ32215	10/21/03	10/21/03	50	290 "	5.0	
ethod 8015 Me	odified						
8015DRO	AJ31515	10/15/03	10/15/03	13.33	2000 ug/l	670	
	**	. #		**	17000 "	1300	
"	"	"	"		21.6 % 38-120	Y	S-(
8015GRO	AJ31612	10/14/03	10/14/03	1	93 ug/l	50	
"	"	n	"		116 % 63-150		
		Sample Ty	pe: Water		Sampled: 10/08/03 16:30		
EPA 200.9	AJ31601	10/16/03	10/23/03	1	0.042 mg/l	0.0020	
EPA 200.7		**	10/21/03	"	0.040 "	0.020	
*	**	**	"	"	0.62 "	0.020	
Method							
EnvCan	AJ31709	10/15/03	10/16/03	1	ND ug/l	1.0	
**	**	*	*	**	ND "	1.0	
: 10	"	**	*	**	ND "	1.0	
"	*	"	*	"	ND "	1.0	
**	*	# 1	*	"	ND "	1.0	
	APHA/EPA M SM5220D EPA 120.1 EPA 1664 EPA 160.2 SM 5550B ethod 8015 M 8015DRO " 8015GRO " EPA 200.9 EPA 200.7 " Method EnvCan " "	APHA/EPA Methods SM5220D AJ31312 EPA 120.1 AJ31005 EPA 1664 AJ31517 EPA 160.2 AJ31316 SM 5550B AJ32215 ethod 8015 Modified 8015DRO AJ31515 " " 8015GRO AJ31612 " " EPA 200.9 AJ31601 EPA 200.7 " " " Method EnvCan AJ31709 " " " " " " " " Method EnvCan AJ31709 " " " " " " " " " " " " " " "	Sample Ty APHA/EPA Methods SM5220D AJ31312 10/17/03 EPA 120.1 AJ31005 10/10/03 EPA 1664 AJ31517 10/15/03 EPA 160.2 AJ31316 10/13/03 SM 5550B AJ32215 10/21/03 ethod 8015 Modified 8015DRO AJ31515 10/15/03 " " Sample Ty EPA 200.9 AJ31601 10/16/03 EPA 200.7 " " Method EnvCan AJ31709 10/15/03 " " " Method EnvCan AJ31709 10/15/03 " " " " " " " " " " " " " " " " " " "	Sample Type: Water APHA/EPA Methods SM5220D AJ31312 10/17/03 10/20/03 EPA 120.1 AJ31005 10/10/03 10/17/03 EPA 1664 AJ31517 10/15/03 10/17/03 EPA 160.2 AJ31316 10/13/03 10/15/03 SM 5550B AJ32215 10/21/03 10/21/03 ethod 8015 Modified 8015DRO AJ31515 10/15/03 10/15/03 " " " " " 8015GRO AJ31612 10/14/03 10/14/03 EPA 200.9 AJ31601 10/16/03 10/23/03 EPA 200.7 " " 10/21/03 EPA 200.7 " " 10/21/03 Method EnvCan AJ31709 10/15/03 10/16/03 " " " " " " " " " " " " " " " " " " "	Sample Type: Water APHA/EPA Methods SM5220D AJ31312 10/17/03 10/20/03 10 EPA 120.1 AJ31005 10/10/03 10/10/03 1 EPA 1664 AJ31517 10/15/03 10/17/03 " EPA 160.2 AJ31316 10/13/03 10/15/03 " SM 5550B AJ32215 10/21/03 10/21/03 50 ethod 8015 Modified 8015DRO AJ31515 10/15/03 10/15/03 13.33 " " " " " " " Sample Type: Water EPA 200.9 AJ31601 10/16/03 10/23/03 1 EPA 200.7 " " 10/21/03 " EPA 200.7 " " 10/21/03 " Method EnvCan AJ31709 10/15/03 10/16/03 1 " " " " " " " " " " " " " " " " " "	Sample Type: Water Sampled: 10/08/03 14:45	Sample Type: Water Sampled: 10/08/03 14:45

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The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be properly a continuous to the chain of custody document.

Melanie B. Thece

Melanie B. Neece For Sheri L. Speaks Project Manager



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CHEMICAL EXAMINATION REPORT

Page 6 of 15

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

		Alpha A	Analytical	Laborato	ries, Inc.			
	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTI
L-4 (A310236-04)			Sample Typ	e: Water		Sampled: 10/08/03 16:30		
Conventional Chemistry Parameters by	APHA/EPA M	lethods						
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 M	1ethod 8015 M	odified						
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	"	"	"	\ <i>H</i> ,		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	"	"	н	"		103 % 63-15)	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical the chain of custody document.

Melanie B. Neece For Sheri L. Speaks Project Manager

Melanis B. There

10/24/2003

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CHEMICAL EXAMINATION REPORT

Page 7 of 15

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

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 SoftDig	gest									
Blank (AJ31601-BLK1)				Prepared:	10/16/03	Analyzed:	10/23/03			
Arsenic	ND	0.0020	mg/l							
Cadmium	ND	0.010	.17							
Chromium	ND	0.010	39.7							
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	n	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)	So	urce: A310	345-01	Prepared	: 10/16/03	Analyzed	1: 10/23/03			

The results in this report apply to the appeles analyzed in accordance with the chain of custody document. This analytic tree or my transfer and its entirety.

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Melanie B. Neece For Sheri L. Speaks Project Manager



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CHEMICAL EXAMINATION REPORT

Page 8 of 15

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

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 SoftDig	est									
Duplicate (AJ31601-DUP1)	Sou	rce: A310	345-01	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)	Sou	ırce: A310	345-01	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)	Sou	rce: A310	345-01	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	

The results in this report apply to the complex analyzed in accordance with the chain of custody document. This analytical resorting to the control of the c

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CHEMICAL EXAMINATION REPORT

Page 9 of 15

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: 030229.6
Project ID: SPI Arcata 2

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

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	& Analyze	ed: 10/15/0	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	:m							
Pentachlorophenol	ND	1.0	**							
Surrogate: Tribromophenol	24.9		"	24.9		100	79-119			
LCS (AJ31709-BS1)				Prepared	& Analyze	ed: 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)	Sou	rce: A310	236-01	Prepared	& Analyzo	ed: 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)	Sou	rce: A310	236-01	Prepared	& Analyz	ed: 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	

The results in this report apply to the sample and zet a cordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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Melanie B. Neece For Sheri L. Speaks Project Manager 10/24/2003



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CHEMICAL EXAMINATION REPORT

Page 10 of 15

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

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)	Sour	ce: A3102	236-01	Prepared	& Analyze	ed: 10/15/0	03			
Matrix Spike Dup (AJ31709-MSD1) 2,3,4,5-Tetrachlorophenol	Sour 4.24	rce: A3102	236-01	Prepared 5.00	& Analyze	ed: 10/15/0 84.8	70-115	2.63	20	
								2.63 2.35	20 20	

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CHEMICAL EXAMINATION REPORT

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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 A310236

Receipt Date/Time 10/09/2003 16:10

Client Code **MFGARC**

Client PO/Reference

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)	Sou	rce: A310	236-01	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)	Sou	rce: A3102	236-01	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)	Sou	rce: A310	219-02	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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Tetra Tech/MFG, Inc.

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CHEMICAL EXAMINATION REPORT

Page 12 of 15

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 A310236

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

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	1: 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	1: 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	& Analyz	ed: 10/21/	03			
Tannins & Lignins	ND	0.10	mg/l							
LCS (AJ32215-BS1)				Prepared	& Analyz	ed: 10/21/	03			
Tannins & Lignins	4.03	0.10	mg/l	4.00		101	80-120			
LCS Dup (AJ32215-BSD1)				Prepared	& Analyz	ed: 10/21/	03			
Tannins & Lignins	4.00	0.10	mg/l	4.00		100	80-120	0.747	20	

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CHEMICAL EXAMINATION REPORT

Page 13 of 15

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 A310236

Receipt Date/Time 10/09/2003 16:10 Client Code **MFGARC**

Client PO/Reference

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	& Analyze	ed: 10/15/0	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	& Analyze	ed: 10/15/				
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	& Analyz	ed: 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		п	499		92.2	38-120			

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CHEMICAL EXAMINATION REPORT

Page 14 of 15

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

TPH as Gasoline by GCFID/5030 - Quality Control

Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
C									
			Prepared	& Analyze	ed: 10/14/0	03			
ND	50	ug/l							
23.1		**	23.1		100	63-150			
			Prepared	& Analyz	ed: 10/14/	03			
46.9	50	ug/l	50.0		93.8	79-123			
22.1		"	20.0		110	63-150			
			Prepared	& Analyz	ed: 10/14/	03			
45.0	50	ug/l	50.0		90.0	79-123	4.13	15	
21.9			20.0		110	63-150			
	ND 23.1 46.9 22.1 45.0	C ND 50 23.1 46.9 50 22.1 45.0 50	C ND 50 ug/1 23.1 " 46.9 50 ug/1 22.1 " 45.0 50 ug/1	Result PQL Units Level C Prepared ND 50 ug/l 23.1 " 23.1 Prepared 46.9 50 ug/l 50.0 22.1 " 20.0 Prepared 45.0 50 ug/l 50.0	Result PQL Units Level Result	Result PQL Units Level Result %REC C Prepared & Analyzed: 10/14/6 ND 50 ug/l 23.1 " 23.1 100 Prepared & Analyzed: 10/14/6 46.9 50 ug/l 50.0 93.8 22.1 " 20.0 110 Prepared & Analyzed: 10/14/6 45.0 50 ug/l 50.0 90.0	Result PQL Units Level Result %REC Limits C Prepared & Analyzed: 10/14/03 ND 50 ug/l 23.1 " 23.1 100 63-150 Prepared & Analyzed: 10/14/03 46.9 50 ug/l 50.0 93.8 79-123 22.1 " 20.0 110 63-150 Prepared & Analyzed: 10/14/03 45.0 50 ug/l 50.0 90.0 79-123	Result PQL Units Level Result %REC Limits RPD C Prepared & Analyzed: 10/14/03 ND 50 ug/l 23.1 " 23.1 100 63-150 Prepared & Analyzed: 10/14/03 46.9 50 ug/l 50.0 93.8 79-123 22.1 " 20.0 110 63-150 Prepared & Analyzed: 10/14/03 45.0 50 ug/l 50.0 90.0 79-123 4.13	Result PQL Units Level Result %REC Limits RPD Limit C Prepared & Analyzed: 10/14/03 ND 50 ug/l 23.1 100 63-150 Prepared & Analyzed: 10/14/03 46.9 50 ug/l 50.0 93.8 79-123 22.1 " 20.0 110 63-150 Prepared & Analyzed: 10/14/03 45.0 50 ug/l 50.0 90.0 79-123 4.13 15

The results in this report apply of the camples analyzed in accordance with the chain of custody document. This analyted term is a poduced in its entirety.

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CHEMICAL EXAMINATION REPORT

Page 15 of 15

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

Project No: 030229.6

Report Date: 10/24/03 08:30

Project ID: SPI Arcata 2

Order Number A310236

Receipt Date/Time 10/09/2003 16:10 Client Code MFGARC

Client PO/Reference

Notes and Definitions

The recovery of this surrogate is outside control limits due to sample dilution required from high analyte S-06

concentration and/or matrix interferences.

Analyte DETECTED DET

Analyte NOT DETECTED at or above the reporting limit ND

NR Not Reported

Sample results reported on a dry weight basis dry

Relative Percent Difference RPD

PQL Practical Quantitation Limit

	MFG, INC.				СН	ΑII	N-(OF	-C	UST	OD	Y R	EC	0	RD	Α	NE	RI	EQ	UE	ST			IALYS	
Arcata 75 Crescent creata, CA 95 hone (707) 8	Way	CA - Irvine 17770 Cartwright Rd. Ste. 500 Irvine, CA 92614 Tel (949) 253-2951 Fax (949) 253-2954	CA - San Fra 180 Howard San Francisc Tel (415) 495 Fax (415) 499	St., Ste. to, CA 9 5-7110		CO - B 4900 P Ste. 30 Boulde Tel (30 Fax (30	r CO 8	0301	V	D - Osburn PO Box 30 Vallace, ID Fel (208) 55 Fax (208) 55	83873	N.	T - Mis O Box lissoula el (406 ax (406	MT	59807	St	e. 703 fison. N	on g George IJ 08837 738-570 738-571		Rd.	- -			4618	6
	☐ 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 Spice Bldg. IV, 1st Austin, TX Tel (512) 33 Fax (512) 3	wood S Floor 78759 38-1667			TX - Hi 12337 Ste. 23 Housto Tel (28 Fax (28	Jones 0 n, TX 1) 890-	Rd. 77070 -5068	32 Po Tel	(361) 55	avaca lain a, TX 7797 52-8839 553-6115	9	453 Tex	- Texar 32 Sum (arkana (903) 7 (903)	merhill TX 75	503	192 Ste	A - Seatt 203 36th 100 nnwood, (425) 9 k (425) 9	WA 986 21-4000 921-404	7. 036 0	CGT	Z.VI 8 0 201	23	
	SAMPLER (Sig	03022- gnature): West 7 SHIPMENT: Canal	Lillad		PROJE		F	PRO	JEC	PI T MAN YBILL	NAGE	R: 🖊	1,1	e	T	Te	†z DE	STIN				PAGE	10	OF:	5
				SAM	PLES														AN	IALY	SIS F	REQUE	ST		
				S	ample			Pres	serva	ition		Con	taine	rs	Co	nstitue	ents/f	/lethod	ı	Hand	ling		Ren	narks	
	Ide	Field Sample entification	D	ATE	TIME	Matrix*	HCI	HNO ₃	H ₂ SO₄	COLD	FILTRATION*	VOLUME (ml/oz)	TYPE*	NO.	TSS, EC	Tannin t Lighers	60	PCP/TCP	HOLD	RUSH	STANDARD				
	SL-1		10	9/8		AQ				Ϋ́		1/2641	P	1	X	X					5	A3	102	36-	1
	SL-2				1515	1						1/2601	P	1	×	×								-	2
	54-3				1445	1				Ш		26al	P	1	X	X	\perp	\perp	\perp	1	Ш			-	3
	SL-4		_	_	1630	4			_	#	-	1/2 Gal	P	1	×	×		_	1	_	11				4
	56-1		-	-	1545	H			X	#	+	lpt	P			\dashv	X	\perp	-	+	1	EA.	1023	56-	1
	SL-3			//-	1445	1			X	\forall	+	10+	P	1		-	X	+	+	+	W	00	450 000	and both	2
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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 RECEIVED

OCT 3 0 2003

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

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Qualifier Reference Guide

Isotopic Labeled Standard outside QC range but signal to noise ratio is >10:1

В	Analyte is present in Method Blank
C	Chemical Interference
D	Presence of Diphenyl Ethers
E	Analyte concentration is above calibration range

 J^{\ddagger} Analyte concentration is below calibration range

Analyte confirmation on secondary column

- M Maximum possible concentration
- NP Not Provided

A

F

- S Sample acceptance criteria not met
- X Matrix interferences
- * Result taken from dilution or reinjection
- Analyte Not Detected

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OCT 3 0 2003

Tetra Tech/MFG, Inc.

[‡] "J" values are equivalent to DNQ (detected but not qualified) for California Toxics Rule (CTR)/National Pollutant Discharge Elimination System (NPDES) samples





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.

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OCT 3 0 2003



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

DL
32
223
346
381
343
318
20
100
232
217
114
106
117
147
140
155
498

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

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ICal: pcddfal2-9-07-03 Acquired: 24-0CT-03 Date Extracted: 10/22/03 FAL ID: 2285-001-MB GC Column: db5 Client ID: Method Blank Date Received: NA WHO TEQ: 0.00 Amount: 1.000 L Units: pg/L Matrix: Aqueous Extraction Batch No.: X0115 MS/MSD Batch No.: X0077 #Hom Compound DL Qual WHO Tox Conc Compound Conc DL Qual 2,3,7,8-TCDD 1.79 1,2,3,7,8-PeCDD 3.12 2.96 1,2,3,4,7,8-HxCDD Total Tetra-Dioxins 1.79 0 1,2,3,6,7,8-HxCDD 3.24 Total Penta-Dioxins 3.12 0 1,2,3,7,8,9-HxCDD 2.77 Total Hexa-Dioxins 3.24 0 1,2,3,4,6,7,8-HpCDD 5.10 Total Hepta-Dioxins 5.10 0 12.6 OCDD 1.53 2,3,7,8-TCDF 1,2,3,7,8-PeCDF 3.99 2,3,4,7,8-PeCDF 3.68 1.01 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1.22 1.25 2,3,4,6,7,8-HxCDF Total Tetra-Furans 1.53 0 1,2,3,7,8,9-HxCDF 1.49 3.99 0 1.43 Total Penta-Furans 1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF 0 Total Hexa-Furans 1.49 1.63 0 OCDF 5.21 Total Hepta-Furans 1.63 Internal Standards % Rec QC Limits Qual 13C-2,3,7,8-TCDD 112 25.0 - 164 25.0 - 181 13C-1,2,3,7,8-PeCDD 111 32.0 - 141 13C-1,2,3,4,7,8-HxCDD 111 28.0 - 130 13C-1,2,3,6,7,8-HxCDD 111 13C-1,2,3,4,6,7,8-HpCDD 102 23.0 - 140 17.0 - 157 13C-OCDD 118 13C-2,3,7,8-TCDF 118 24.0 - 169 24.0 - 185 125 13C-1,2,3,7,8-PeCDF 21.0 - 178 13C-2,3,4,7,8-PeCDF 125 13C-1,2,3,4,7,8-HxCDF 109 26.0 - 152 26.0 - 123 13C-1,2,3,6,7,8-HxCDF 109 29.0 - 147 13C-2,3,4,6,7,8-HxCDF 102 28.0 - 136 28.0 - 143 13C-1,2,3,7,8,9-HxCDF 93.7 13C-1,2,3,4,6,7,8-HpCDF 96.2 RECEIVED 26.0 - 138 13C-1,2,3,4,7,8,9-HpCDF 98.8 17.0 - 157 13C-OCDF 112 OCT 3 0 2003 Cleanup Surrogate Tetra Tech/MFG, Inc. 37cl-2,3,7,8-TCDD 107 35.0 - 197

Analyst: 10/29///5

Reviewed by: 0/29 2003



ICal: pcddfal2-9-07-03 Date Extracted: 10/22/03 Acquired: 24-0CT-03 FAL ID: 2285-001-OPR GC Column: db5 Client ID: OPR Date Received: NA Amount: 1.000 L Units: ng/mL WHO TEQ: NA Matrix: Aqueous MS/MSD Batch No.: X0077 Extraction Batch No.: X0115 QC Limits Compound Conc 2,3,7,8-TCDD 9.16 6.70 - 15.8 35.0 - 71.0 49.3 1,2,3,7,8-PeCDD 46.5 35.0 - 82.0 1,2,3,4,7,8-HXCDD 38.0 - 67.0 1,2,3,6,7,8-HXCDD 47.1 32.0 - 81.0 1,2,3,7,8,9-HxCDD 45.6 35.0 - 70.0 1,2,3,4,6,7,8-HpCDD 49.2 78.0 - 144 OCDD 93.1 9.55 7.50 - 15.8 2,3,7,8-TCDF 40.0 - 67.0 1,2,3,7,8-PeCDF 48.4 34.0 - 80.0 2,3,4,7,8-PeCDF 48.6 36.0 - 67.0 48.8 1,2,3,4,7,8-HxCDF 42.0 - 65.0 1,2,3,6,7,8-HxCDF 49.0 2,3,4,6,7,8-HXCDF 48.1 39.0 - 65.0 35.0 - 78.0 47.3 1,2,3,7,8,9-HxCDF 41.0 - 61.0 1,2,3,4,6,7,8-HpCDF 49.2 1,2,3,4,7,8,9-HpCDF 50.2 39.0 - 69.0 63.0 - 170 OCDF 97.5 % Rec QC Limits Internal Standards 13C-2,3,7,8-TCDD 99.9 20.0 - 175 21.0 - 227 13C-1,2,3,7,8-PeCDD 103 21.0 - 193 13C-1,2,3,4,7,8-HxCDD 96.9 13C-1,2,3,6,7,8-HxCDD 100 25.0 - 163 26.0 - 166 13C-1,2,3,4,6,7,8-HpCDD 88.5 13.0 - 198 108 13C-OCDD 22.0 - 152 13C-2,3,7,8-TCDF 98.0 21.0 - 192 13C-1,2,3,7,8-PeCDF 105 13C-2,3,4,7,8-PeCDF 13.0 - 328 106 13C-1,2,3,4,7,8-HxCDF 95.3 19.0 - 202 21.0 - 159 95.7 13C-1,2,3,6,7,8-HxCDF 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 21.0 - 158 13C-1,2,3,4,6,7,8-HpCDF 82.8 20.0 - 186 13C-1,2,3,4,7,8,9-HpCDF 82.3 RECEIVED 13C-OCDF 97.8 13.0 - 198 OCT 3 0 2003 Cleanup Surrogate Tetra Tech/MFG, Inc. 37cl-2,3,7,8-TCDD 99.7 31.0 - 191 Reviewed by: DA 10/29/2003 Date:



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

	Amount	Sample	MS	MSD		
Compound	Spiked	Amount	Amount	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	21	1000	982	1.82	
OCDD	2000	A1	1980	1970	0.510	
					ALC: NAME	
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	
			ALC: MATERIAL			
Internal Standards		% Rec	% Rec	% Rec	QC Limits	
			0/ /	07.2	25.0 - 150	
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		
13C-OCDD	4000	108	110	114	25.0 - 150	
		400	102	98.4	25.0 - 150	
13C-2,3,7,8-TCDF	2000	109	102	103	25.0 - 150	
13C-1,2,3,7,8-PeCDF	2000	110	106	100	25.0 - 150	
13C-2,3,4,7,8-PeCDF	2000	111	104	83.6	25.0 - 150	
13C-1,2,3,4,7,8-HxCDF	2000	80.3	80.3		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		
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 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: 1 Day 103

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Reviewed by: SPV

Date: 10/29/2003



FAL ID: 2285-001-SA SL-2 Date Extracted: 10/22/03 ICal: pcddfal2-9-07-03 Acquired: 24-0CT-03

Client ID: A310236-02 Date Received: 10/14/03 GC Column: db5

Units: pg/L WHO TEQ: 4.46 Matrix: Aqueous Amount: 0.963 L

Matrix: Aqueous		amount: U.S	703 L		units: pg/L	WILL) IEW: 4	.40	
Extraction Batch No.: X01	15				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		21					
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	2	J	1
1,2,3,4,7,8,9-HpCDF	-	2.96		-	Total Hexa-Furans	51.1	71		3
OCDF	87.7	-		0.00877	Total Hepta-Furans	119	-		2
Internal Standards	% Rec	QC Limits	. Qu	al					
13C-2,3,7,8-TCDD	98.8	25.0 - 16	54						
13C-1,2,3,7,8-PeCDD	101	25.0 - 18	31						
13C-1,2,3,4,7,8-HxCDD	100	32.0 - 14	1						
13C-1,2,3,6,7,8-HxCDD	105	28.0 - 13	0						
13C-1,2,3,4,6,7,8-HpCDD	83.8	23.0 - 14	0						
13C-OCDD	71.3	17.0 - 15	7						
13C-2,3,7,8-TCDF	99.2	24.0 - 16	9						
13C-1,2,3,7,8-PeCDF	99.9	24.0 - 18	15						
13C-2,3,4,7,8-PeCDF	99.0	21.0 - 17	78						
13C-1,2,3,4,7,8-HxCDF	91.1	26.0 - 15	2						
13C-1,2,3,6,7,8-HxCDF	92.3	26.0 - 12	23						
13C-2,3,4,6,7,8-HxCDF	86.6	29.0 - 14	7						
13C-1,2,3,7,8,9-HxCDF	87.8	28.0 - 13	6						
13C-1,2,3,4,6,7,8-HpCDF	80.8	28.0 - 14	3						
13C-1,2,3,4,7,8,9-HpCDF	81.1	26.0 - 13	8						
13C-OCDF	63.0	17.0 - 15	7						
Cleanup Surrogate									
		May 20 20	423						
37cl-2,3,7,8-TCDD	98.0	35.0 - 19	7						

37cl-2,3,7,8-TCDD 98.0 35.0 - 197

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ICal: pcddfal2-9-07-03 Acquired: 24-0CT-03 FAL ID: 2285-003-SA Date Extracted: 10/22/03 SL-4 GC Column: db5 Client ID: A310236-04 Date Received: 10/14/03 Amount: 0.957 L Units: pg/L WHO TEQ: 1.13 Matrix: Aqueous MS/MSD Batch No.: X0077 Extraction Batch No.: X0115 Compound Conc DL Qual WHO Tox Compound DL Qual #Hom 2.36 2,3,7,8-TCDD 1,2,3,7,8-PeCDD 4.83 1,2,3,4,7,8-HxCDD 4.12 Total Tetra-Dioxins 2.36 0 1,2,3,6,7,8-HxCDD 9.28 Total Penta-Dioxins 4.83 0 1,2,3,7,8,9-HxCDD 2.65 0.811 Total Hexa-Dioxins 19.3 -1 1,2,3,4,6,7,8-HpCDD 81.1 OCDD 370 0.0370 Total Hepta-Dioxins 155 2 2,3,7,8-TCDF 2.36 1,2,3,7,8-PeCDF 5.57 5.64 2,3,4,7,8-PeCDF 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 2.36 0 1,2,3,7,8,9-HxCDF Total Tetra-Furans 1.63 1,2,3,4,6,7,8-HpCDF Total Penta-Furans 16.2 1 3 1,2,3,4,7,8,9-HpCDF 1.90 Total Hexa-Furans 32.1 0.00504 Total Hepta-Furans 74.7 2 50.4 OCDF Internal Standards QC Limits Qual % Rec 13C-2,3,7,8-TCDD 89.0 25.0 - 164 13C-1,2,3,7,8-PeCDD 86.1 25.0 - 181 32.0 - 141 13C-1,2,3,4,7,8-HxCDD 96.0 28.0 - 130 13C-1,2,3,6,7,8-HxCDD 97.6 23.0 - 140 13C-1,2,3,4,6,7,8-HpCDD 78.9 13C-OCDD 68.3 17.0 - 157 24.0 - 169 13C-2,3,7,8-TCDF 93.7 24.0 - 185 13C-1,2,3,7,8-PeCDF 94.1 13C-2,3,4,7,8-PeCDF 87.8 21.0 - 178 26.0 - 152 13C-1,2,3,4,7,8-HxCDF 88.3 26.0 - 123 13C-1,2,3,6,7,8-HxCDF 88.5 29.0 - 147 13C-2,3,4,6,7,8-HxCDF 84.6 13C-1,2,3,7,8,9-HxCDF 82.3 28.0 - 136 28.0 - 143 13C-1,2,3,4,6,7,8-HpCDF 77.6 13C-1,2,3,4,7,8,9-HpCDF 26.0 - 138 71.6 13C-OCDF 60.5 17.0 - 157 Cleanup Surrogate

37C1-2,3,7,8-TCDD

97.4

35.0 - 197

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Date: 10/29/2003



FAL ID: 2285-002-MB Date Extracted: 10/23/03 ICal: pcddfal2-9-07-03 Acquired: 27-0CT-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

Extraction Batch No.: XUII	17	% Solids:	NA		MS/MSD Batch No.:	X0079			
Compound	Conc	DL	Qual	WHO Tox	Compound	Conc	DL	Qual	#Hom
2,3,7,8-TCDD	y -	0.249		-					
1,2,3,7,8-PeCDD	-	0.520		-					
1,2,3,4,7,8-HxCDD	377	0.580		1,7					
1,2,3,6,7,8-HxCDD	7-	0.673		-	Total Tetra-Dioxins	-	0.249		0
1,2,3,7,8,9-HxCDD	-	0.560		-	Total Penta-Dioxins	3	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	7.5	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		0.00					
1,2,3,7,8,9-HxCDF	-	0.304		-	Total Tetra-Furans	-	0.237		0
1,2,3,4,6,7,8-HpCDF	7.1	0.280		7.7	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	5	0.350		0
Internal Standards	% Rec	QC Limit	s Qua	a!					
13C-2,3,7,8-TCDD	106	25.0 - 1	64						
13C-1,2,3,7,8-PeCDD	94.2	25.0 - 1	81						
13C-1,2,3,4,7,8-HxCDD	119	32.0 - 1	41						
13C-1,2,3,6,7,8-HxCDD	116	28.0 - 13	30						
13C-1,2,3,4,6,7,8-HpCDD	97.6	23.0 - 14							
13C-OCDD	71.7	17.0 - 1	57						
13C-2,3,7,8-TCDF	106	24.0 - 16	69						
13C-1,2,3,7,8-PeCDF	99.4	24.0 - 18	85						
13C-2,3,4,7,8-PeCDF	96.6	21.0 - 17	78						
13C-1,2,3,4,7,8-HxCDF	122	26.0 - 15							
13C-1,2,3,6,7,8-HxCDF	121	26.0 - 12							
13C-2,3,4,6,7,8-HxCDF	108	29.0 - 14							
13C-1,2,3,7,8,9-HxCDF	96.9	28.0 - 13							
13C-1,2,3,4,6,7,8-HpCDF	100	28.0 - 14							
13C-1,2,3,4,7,8,9-HpCDF	101	26.0 - 13							
13C-OCDF	72.9	17.0 - 15	57						
Cleanup Surrogate									
3701-2 3 7 8-1000	08.2	75 O - 10	0.7						

37cl-2,3,7,8-TCDD 98.2 35.0 - 197

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FAL ID: 2285-002-OPR Client ID: OPR		Date Extracted: 10/23/03 Date Received: NA	ICal: pcddfal2-9-07-03 Acquired: 27-0CT-03
Matrix: Solid		Amount: 10.00 g	Units: ng/mL WHO TEQ: NA
Extraction Batch No.: XC	0117	% Solids: NA	MS/MSD Batch No.: X0079
Extraction batch not.		w doctrad. MA	No, No. : Noor
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	
Thee har seared as	/ NCC	ao Emites	
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	
8	**********		
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	
130 0001	71.0	13.0 170	
Cleanup Surrogate			
erealiap our rogute			
37cl-2,3,7,8-TCDD	95.6	31.0 - 191	

Analyst: 8
Date: 10/29/03

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Tetra Tech/MFG, Inc.

Reviewed by: DN Date: 10/21/2003

EPA Method 1613 PCDD/F



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

	Amount	Sample	MS	MSD		
Compound	Spiked	Amount	Amount	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	2	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	100	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:

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Reviewed by: <u>DN</u>

Date: 10/29/2003

Tetra Tech/MFG, Inc.

EPA Method 1613 PCDD/F



FAL ID: 2285-002-SA Client ID: A310236-03	SL-3	Date Extrac	red: 10,		ICal: pcddfal2-9- GC Column: DB5		quired:		-03
Matrix: Solid		Amount: 1.6			Units: pg/g		O TEQ: (0.406	
Extraction Batch No.: X	0117	% Solids: 1	.00		MS/MSD Batch No.:	X0079			
Compound	Conc	DL	Qual	LIND Tox	C				
compound	Conc	DL	wuat	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		J	2
				0.0133	rotat nepta broxins	00.0			_
2,3,7,8-TCDF		0.664		:#:					
1,2,3,7,8-PeCDF	2	1.93							
2,3,4,7,8-PeCDF	-	1.67		i e i.					
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	2	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	Qu	al					
440.00.00.00.00.00	923	22 21 21							
13C-2,3,7,8-TCDD	104	25.0 - 164							
13C-1,2,3,7,8-PeCDD	102	25.0 - 18							
13C-1,2,3,4,7,8-HxCDD	112	32.0 - 14							
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	103	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-0CDF	75.5	17.0 - 157							
,23.36									
Cleanup Surrogate									
37cl-2,3,7,8-TCDD	83.8	35.0 - 197							

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Date: 10/24 2003

Reviewed by: DN

Tetra Tech/MFG, Inc.

Sample Receipt

SUBCONTRACT ORDER

Alpha Analytical Laboratories, Inc. A310236

SENDING LABORATORY:

RECEIVING LABORATORY:



Alpha Analytical Labora	atories, Inc.		Frontier Analytical Laboratory	
P.O. Box 1508 (208 Ma			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	
	L. Speaks		Terms: Net 30	
		-		
Analysis	Due	Expires	Comments	
A310236-02 SL-2 [Wa	nter] Sampled 10/08/0	03 15:15 Pacific		
Dioxins Full List	10/23/03 12:00	10/07/04 15:15	1	<u> </u>
Containers Supplied:	3,20,00 12100	10/07/04 15:15		
1L Amber- Unpres. (K)	1L Amber- Unpre	s (L)		
A310236-03 SL-3 [Wa				
Dioxins Full List	10/23/03 12:00	10/07/04 14:45		
Containers Supplied:				
1L Amber- Unpres. (K)				
A310236-04 SL-4 [Wa	ter] Sampled 10/08/0	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	s. (L)		
☐ Report to State				
System Name:		Employed by:_		
User ID:		Sampler:		
		Sampler		RECEIVED
System Number:		_ '		TILOLIVLD
711	0 (1	1 Com to	OCT 3 0 2003
#311 a	results	s direct	to SPI./MFE	7
0,		- 0.		Tetra Tech/MFG, Inc.
101.11.0				
10/1403 Conf	with benz	Sherry tr	use EPA method 11	al2 KZ.
		3,2,19	ose commende (9:10
Ω				
40-11				
Jestil Woun	0/13/02	_	71-87M 71. 1.	10/14/03@ 0730
Rejeased By	Date		Received By	Date
Released By	Date		Received By	Date



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:	

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Tetra Tech/MFG, Inc.

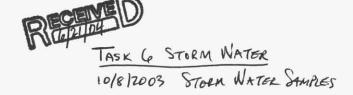


June 18, 2004

FAL Project ID: 2285 (Addendum)

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 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

Director of Air Toxics

Dan vickers



208 Mason St. Ukiah, California 95482

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

16 December 2003

Geomatrix Consultants

Attn: Ross Steenson

2101 Webster Street, 12th Floor

Oakland, CA 94612

RE: SPI - Arcata Stormwater

Work Order: A312034

TASK 6 - STORM WATER SAMPLES DECEMBER 1, 2003

SL-6

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



208 Mason St. Ukiah, California 95482

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

CHEMICAL EXAMINATION REPORT

Page 1 of 11

Geomatrix Consultants

2101 Webster Street, 12th Floor

Oakland, CA 94612 Attn: Ross Steenson

Aun: Ross Steenson

Order Number I

A312034

12/01/2003 17:40

Receipt Date/Time

Client Code GEOMAT Report Date: 12/15/03 15:42 Project No: 030275.6

Project ID: SPI - Arcata Stormwater

Client PO/Reference

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



208 Mason St. Ukiah, California 95482

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CHEMICAL EXAMINATION REPORT

Page 2 of 11

Geomatrix Consultants

2101 Webster Street, 12th Floor

Oakland, CA 94612

Attn: Ross Steenson

Order Number

A312034

Receipt Date/Time

12/01/2003 17:40

Report Date: 12/15/03 15:42 Project No: 030275.6

Project ID: SPI - Arcata Stormwater

Client PO/Reference

			-
Alpha	Analytical	Laboratories.	Inc.

Client Code

GEOMAT

		P						
	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
L-6 (A312034-01)			Sample Typ	pe: Water		Sampled: 12/01/03 11:1	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		**	H	**	"	ND "	1.0	
Pentachlorophenol	**	"	*	"	"	ND "	1.0	
Surrogate: Tribromophenol	"	"	"	"		114 %	79-119	
Conventional Chemistry Parameters by	APHA/EPA M	1ethods						
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/cr	n 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 M	odified						
TPH as Diesel	8015DRO	AL31203	12/11/03	12/12/03	1.0101	300 ug/l	51	D-0
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



208 Mason St. Ukiah, California 95482

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CHEMICAL EXAMINATION REPORT

Page 3 of 11

Geomatrix Consultants

2101 Webster Street, 12th Floor

Oakland, CA 94612

Attn: Ross Steenson

Order Number

A312034

Receipt Date/Time

12/01/2003 17:40

Project No: 030275.6

Project ID: SPI - Arcata Stormwater

Client Code Client PO/Reference

Report Date: 12/15/03 15:42

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
 1 2/04/03
 1 ND ug/l
 50

 Surrogate: 1,4-Bromofluorobenzene
 " " " 89.2 % 63-150



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CHEMICAL EXAMINATION REPORT

Page 4 of 11

Geomatrix Consultants

2101 Webster Street, 12th Floor

Oakland, CA 94612 Attn: Ross Steenson

Order Number A312034

Receipt Date/Time

12/01/2003 17:40

Client Code **GEOMAT**

Report Date: 12/15/03 15:42 Project No: 030275.6

Project ID: SPI - Arcata Stormwater

Client PO/Reference

SpDupResult SourceResult Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Resu	lt 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			-				
Соррег	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	91	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: A312	224-01	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: A312	224-01	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-M	SD1)	Source: A312	224-01	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	

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



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CHEMICAL EXAMINATION REPORT

Page 5 of 11

Geomatrix Consultants

2101 Webster Street, 12th Floor

Oakland, CA 94612 Attn: Ross Steenson

Order Number A312034

Receipt Date/Time

12/01/2003 17:40

Client Code

Project No: 030275.6

Report Date: 12/15/03 15:42

Project ID: SPI - Arcata Stormwater

Client PO/Reference

Chlorinated Phenols by Canadian Pulp Method - Quality Control

GEOMAT

Analyte(s)		Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AL30418 - Solvent E	xtraction										
Blank (AL30418-BLK1)					Prepared	& Analyze	ed: 12/02/0	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	& Analyze	ed: 12/02/0)3			
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))	Sour	ce: A312	030-01	Prepared	& Analyze	ed: 12/02/0)3			
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	·n	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)	Sour	ce: A312	030-01	Prepared	& Analyze	ed: 12/02/0)3			
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	

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



208 Mason St. Ukiah, California 95482

Client PO/Reference

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

CHEMICAL EXAMINATION REPORT

Page 6 of 11

Geomatrix Consultants

2101 Webster Street, 12th Floor

Oakland, CA 94612

Attn: Ross Steenson

Order Number

A312034

Receipt Date/Time

12/01/2003 17:40

Client Code GEOMAT

Project No: 030275.6

Report Date: 12/15/03 15:42

Project ID: SPI - Arcata Stormwater

Chlorinated Phenols by Canadian Pulp Method - Quality Control

		Sailer Communication and AVREC									
Analyte(s)		Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AL30418 - Solvent E	xtraction										
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	н	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



208 Mason St. Ukiah, California 95482

Client PO/Reference

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CHEMICAL EXAMINATION REPORT

Page 7 of 11

Geomatrix Consultants

2101 Webster Street, 12th Floor

Oakland, CA 94612

Attn: Ross Steenson

Order Number

A312034

Receipt Date/Time

12/01/2003 17:40

Report Date: 12/15/03 15:42 Project No: 030275.6

Project ID: SPI - Arcata Stormwater

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Client Code

GEOMAT

Analyte(s)		Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AL30209 - General Pro	eparation										
Blank (AL30209-BLK1)					Prepared:	12/02/03	Analyzed:	12/05/03			
Total Suspended Solids	ND		1.0	mg/l							
Duplicate (AL30209-DUP1)		Source	e: A312	029-01	Prepared:	12/02/03	Analyzed:	12/05/03			
Total Suspended Solids	7800		1.0	mg/l		9400			18.6	30	
Batch AL30318 - General Pro	eparation										
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	e: A3120	068-04	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-M	SD1)	Source	e: A3120	068-04	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 Pro	paration										
Blank (AL31009-BLK1)					Prepared:	12/09/03	Analyzed:	12/12/03			
Oil & Grease (HEM-SG)	ND		5.0	mg/l							

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Cheryl Watson For Sheri L. Speaks Project Manager



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CHEMICAL EXAMINATION REPORT

Page 8 of 11

Geomatrix Consultants

2101 Webster Street, 12th Floor

Oakland, CA 94612

Attn: Ross Steenson

Order Number A312034

Receipt Date/Time

12/01/2003 17:40

Report Date: 12/15/03 15:42

Project No: 030275.6

Project ID: SPI - Arcata Stormwater

Client PO/Reference

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Client Code

GEOMAT

Analyte(s)		Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AL31009 - General Pr	reparation										
LCS (AL31009-BS1)					Prepared:	12/09/03	Analyzed	l: 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	l: 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 Pi	reparation										
Blank (AL31110-BLK1)					Prepared a	& Analyze	ed: 12/11/	03			
Tannins & Lignins	ND		0.10	mg/l							
LCS (AL31110-BS1)					Prepared a	& Analyze	ed: 12/11/	03			
Tannins & Lignins	4.15		0.10	mg/l	4.00		104	80-120			
LCS Dup (AL31110-BSD1)					Prepared a	& Analyze	d: 12/11/	03			
Tannins & Lignins	4.09		0.10	mg/l	4.00		102	80-120	1.46	20	
Matrix Spike (AL31110-MS1)		Source	ce: A311	572-02	Prepared a	& Analyze	ed: 12/11/	03			
Tannins & Lignins	2.67		0.10	mg/l	2.00	0.65	101	80-120			
Matrix Spike Dup (AL31110-N	ASD1)	Source	ce: A311	572-02	Prepared of	& Analyze	ed: 12/11/0	03			
Tannins & Lignins	2.68		0.10	mg/l	2.00	0.65	102	80-120	0.374	20	

Cheryl Watson For Sheri L. Speaks Project Manager



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CHEMICAL EXAMINATION REPORT

Page 9 of 11

Geomatrix Consultants

2101 Webster Street, 12th Floor

Oakland, CA 94612 Attn: Ross Steenson

Order Number A312034 Receipt Date/Time

12/01/2003 17:40

Client Code GEOMAT Project No: 030275.6

Report Date: 12/15/03 15:42

Project ID: SPI - Arcata Stormwater

Client PO/Reference

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 V	Vater										
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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Chang (W) Toon

Cheryl Watson For Sheri L. Speaks Project Manager



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CHEMICAL EXAMINATION REPORT

Page 10 of 11

Geomatrix Consultants

2101 Webster Street, 12th Floor

Oakland, CA 94612

Attn: Ross Steenson

Order Number

A312034

Receipt Date/Time

12/01/2003 17:40

Client Code **GEOMAT**

Report Date: 12/15/03 15:42 Project No: 030275.6

Project ID: SPI - Arcata Stormwater

Client PO/Reference

TPH as Gasoline by GCFID/5030 - Quality Control

Analyte(s)	Resu	ılt P	QL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AL30813 - EPA 5030 Wa	iter GC										
Blank (AL30813-BLK1)					Prepared	& Analyze	ed: 12/04/0	03			
TPH as Gasoline	ND		50	ug/l							
Surrogate: 1,4-Bromofluorobenzene	20.	.0		*	23.1	,	86.6	63-150			
LCS (AL30813-BS2)					Prepared	& Analyze	ed: 12/04/0	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 a	& Analyze	ed: 12/04/0)3			
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			

Cheryl Watson For Sheri L. Speaks Project Manager



208 Mason St. Ukiah, California 95482

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CHEMICAL EXAMINATION REPORT

Page 11 of 11

Geomatrix Consultants

2101 Webster Street, 12th Floor

Oakland, CA 94612

Attn: Ross Steenson

coss Steenson

Receipt Date/Time

Client Code

Project ID: SPI - Arcata Stormwater

Report Date: 12/15/03 15:42

Project No: 030275.6

Order Number A312034

12/01/2003 17:40

GEOMAT

Client PO/Reference

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

☐ 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

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 Geomatrix Consultants
ZIOI Webster St 12th Consultants
Consultant CA 94612

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 (612) 338-1331

□TX - Houston 12337 Jones Rd. Ste. 230 Houston, TX 77070 Tel (281) 890-5068 Tel (281) 890-5068 Fax (361) 552-8639 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

Fax (503) 228-8631 Fax ((512) 338-133	i1	1	Fax (2	281) 890	0-5044		rax (361) 5	553-6115		Fa	ax (903)	794-06	:26	F	řel (42 Fax (4	25) 921 125) 92	-4000 1-4040)				
PROJECT NO: 030275. 6 SAMPLER (Signature): Mat His METHOD OF SHIPMENT: Conce	and _	PROJE		F	PRC	DJEC	CT MA	ANA	AGE	R: 1	C05	5	Ste	cen	500	h				AI	PAGE DATE:	12/	OF: 2	
	SAM	IPLES																AN/	ALYS	SIS	REQUES	ST		
A312034-1	S	Sample			Pres	serva	ation			Con	itaine	ers	Co	nstitu	ents/	Metho			andli				narks	
Field Sample Identification	DATE	TIME	+ +		HNO ₃	H ₂ SO ₄	COLD		FILTRATION*	(ml/oz)	TYPE*	NO.	TSS, EC	-	COD	7P#0+6	Zn. AsCu	НОГР	RUSH	STANDARD		: EP	4-160, 4-120. :5,450,	
SL-6 160 SL-6	12/1		1			_	X			12bal	P	1	×	X		_				×	COD:	·5M41	0.2	
SL-6	12/1	1115	AQ		\vdash		7	_		10+	9	1			X				14.7	1	TPH-	0+6	:5M55	20
51-6	12/1	-	-		~	X	1	-		11	6	H			_	×				1	Zn/C	u: E	PA-ZOO	17
16	12/1	1115	40	\square	X		1	-	-	1p+	ρ	1			_	-	×			V	As/	El	A200.	9
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1.m/outhour J. MATHEWC	1	digh	9		+	13/1	1/03	?	17	340	/_'	2	041	30	Da)	6	Sr	ler	18	pe	als	ALK	hA	
*KEY Matrix AO - acueou	ue MA - nonzau	200 000	21 - 41-4				1921	\perp														-0	ABORATORY	
*KEY Matrix: AQ - aqueou	5 пи - попеция	ous SO - son	SL - sivag DISTRIBL	ution:	etroleum PINK:	A - air Field Cop	OT - other by YELLO	OW: Lab	ontainers. Horatory (: P - plastic Copy WHIT	G - glas E: Return	ts T-to n to Orig	efion B - pinator	brass 01	- other	Filtrat	tion: F	- filtered	U - unt	filtered				

MFG, INC. CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS COC No. 46158 □ Arcata Office CA - Irvine 17770 Cartwright Rd. ☐ CA - San Francisco CO - Boulder D - Osburn PO Box 30 □NJ - Edison 875 Crescent Way 180 Howard St., Ste. 200 San Francisco, CA 94105 Tel (415) 495-7110 Geomotrix Consultants 4900 Pearl East Cir. PO Box 7158 Missoula, MT 59807 1090 King Georges Post Rd. Arcata, CA 95521-6741 Ste. 500 Ste. 300W Wallace, ID 83873 Ste. 703 Edison, NJ 08837 Irvine, CA 92614 Tel (949) 253-2951 Phone (707) 826-8430- FAX (707) 826-8437 Boulder, CO 80301 Tel (208) 556-6811 Fax (208) 556-7271 Tel (406) 728-4600 Fax (415) 495-7107 Tel (303) 447-1823 Fax (406) 728-4698 Fax (949) 253-2954 Fax (303) 447-1836 Fax (732) 738-5711 ☐ OR - Portland PA - Pittsburgh ☐TX - Austin TX - Houston 12337 Jones Rd. ☐ TX - Port Lavaca TX - Texarkana 4532 Summerhill Rd. □WA - Seattle 19203 36th Ave. W. 1020 SW Taylor St. 800 Vinial St., Bldg. A Pittsburgh, PA 15212 Tel (412) 321-2278 4807 Spicewood Springs Rd. Bldg. IV, 1st Floor Austin, TX 78759 320 East Main Port Lavaca, TX 77979 Ste. 530 Ste. 230 Texarkana, TX 75503 Tel (903) 794-0625 Portland, OR 97205 Houston, TX 77070 Tel (281) 890-5068 Tel (361) 552-8839 Lynnwood, WA 98036 Tel (425) 921-4000 Tel (503) 228-8616 Fax (412) 321-2283 Tel (512) 338-1667 Fax (361) 553-6115 Fax (903) 794-0626 Fax (503) 228-8631 Fax (512) 338-1331 Fax (281) 890-5044 PROJECT NO: 030275-6 SPI-Arcata Storm Water PROJECT NAME: SAMPLER (Signature): Mat 2516 PROJECT MANAGER: Poss Steenson DATE: 12/1 METHOD OF SHIPMENT: Courter CARRIER/WAYBILL NO: DESTINATION: SAMPLES **ANALYSIS REQUEST** A312034-1 Preservation Sample Containers Constituents/Method Handling Remarks **FILTRATION** STANDARD TPH-D **VOLUME** Field Matrix* HNO₃ H₂SO₄ (ml/oz) RUSH HOLD 宁 COLD TYPE* DATE TIME TOH Sample 9 DATE Identification TIME 5L-6 AR 13/ × 6 × 462 75mL 6 TPH-MO: EPA 8015M AQ X 6 PCP/TCP: Canadian Pulp TPH-Gas: EPA 5030 GCF1 TOTAL NUMBER OF CONTAINERS LABORATORY COMMENTS/CONDITION OF SAMPLES Cooler Temp: 3.2 RELINQUISHED BY: RECEIVED BY: PRINTED NAME SIGNATURE COMPANY DATE TIME SIGNATURE PRINTED NAME COMPANY

Alpha



208 Mason St. Ukiah, California 95482

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TASK 6 STORM WATER

2/6/04 OUTFAIL 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.

Melanie B. There

Melanie B. Neece For Karen A. Daly

Project Manager



208 Mason St. Ukiah, California 95482

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CHEMICAL EXAMINATION REPORT

Page 1 of 7

Geomatrix Consultants

2101 Webster Street, 12th Floor

Oakland, CA 94612 Attn: Ross Steenson

Order Number A402242

Receipt Date/Time

02/09/2004 13:30

GEOMAT

Client Code

Report Date: 02/20/04 14:05 Project No: 030275.6

Project ID: SPI - Arcata Stormwater

Client PO/Reference

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

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Melanie B. There



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CHEMICAL EXAMINATION REPORT

Page 2 of 7

Geomatrix Consultants

2101 Webster Street, 12th Floor

Oakland, CA 94612 Attn: Ross Steenson

Order Number

A402242

Receipt Date/Time 02/09/2004 13:30

Client Code

GEOMAT

Report Date: 02/20/04 14:05 Project No: 030275.6

Project ID: SPI - Arcata Stormwater

Client PO/Reference

SL-1 (A402242-01) Sample Type: Water Sample C02/06/04 15:40 SL-1 (A402242-01) Sample C02/06/04 15:40 Sample C02/06/04 15:40 SL-1 (A402242-01) Sample C02/06/04 15:40 SL-1 (A402242-01) SL-1 (A402242-02) SL-1 (A402242-03) SL-			Alpha A	nalytical	Laborato	ries, Inc.			
Chorinated 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 2,3,4,5-Tetrachlorophenol " " " " ND" 1.0 2,3,4,5-Tetrachlorophenol " " " " " ND" 1.0 2,3,4,5-Tetrachlorophenol " " " " " " ND" 1.0 2,3,4,5-Tetrachlorophenol " " " " " " " 97.2 % 79-119 1.0		METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOT
2,4,6-Trichlorophenol	SL-1 (A402242-01)			Sample Ty	pe: Water		Sampled: 02/06/04 15:40		
2,3,5,6-Tetrachlorophenol " " " " " ND " 1.0 2,3,4,6-Tetrachlorophenol " " " " " ND " 1.0 2,3,4,5-Tetrachlorophenol " " " " " ND " 1.0 2,3,4,5-Tetrachlorophenol " " " " " ND " 1.0 Pentachlorophenol " " " " " " 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 " " " " " ND " 1.0 2,3,4,6-Tetrachlorophenol " " " " " ND " 1.0 2,3,4,5-Tetrachlorophenol " " " " " ND " 1.0 2,3,4,5-Tetrachlorophenol " " " " " ND " 1.0 2,3,4,5-Tetrachlorophenol " " " " " ND " 1.0 Surrogate: Tribromophenol " " " " " ND " 1.0 Surrogate: Tribromophenol " " " " " ND " 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 Conventional Chemistry Parameters by APHA/EPA Methods Total Dissolved Solids EPA 160.1 AB41319 02/13/04 02/19/04 1 ND ug/l 1.0 2,3,4,6-Tetrachlorophenol " " " " ND " 1.0 2,3,4,5-Tetrachlorophenol " " " " ND " ND " 1.0 2,3,4,5-Tetrachlorophenol " " " " ND " ND " 1.0	Chlorinated Phenols by Canadian	Pulp Method		.7.	-		-		
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 " " " " " ND" 1.0 2,3,5,6-Tetrachlorophenol " " " " ND" 1.0 2,3,4,5-Tetrachlorophenol " " " " ND" 1.0 2,3,4,5-Tetrachlorophenol " " " " ND" 1.0 Surrogate: Tribromophenol " " " " " ND" 1.0 Entachlorophenol " " " " " 1.6 " 1.0 Surrogate: Tribromophenol " " " " " ND" 1.0 Conventional Chemistry Parameters by APHA/EPA Methods Total Dissolved Solids EPA 160.1 AB41319 02/13/04 02/19/04 1 150 mg/l 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 " " " " " ND " 1.0 2,3,4,5-Tetrachlorophenol " " " " " ND " 1.0 2,3,4,5-Tetrachlorophenol " " " " " ND " 1.0 2,3,4,5-Tetrachlorophenol " " " " ND " 1.0 2,3,4,5-Tetrachlorophenol " " " " " ND " 1.0 2,3,4,5-Tetrachlorophenol " " " " " ND " 1.0 2,3,4,5-Tetrachlorophenol " " " " " ND " 1.0 2,3,4,5-Tetrachlorophenol " " " " " ND " 1.0 2,3,4,5-Tetrachlorophenol " " " " " ND " 1.0 2,3,4,5-Tetrachlorophenol " " " " " ND " 1.0 2,3,4,5-Tetrachlorophenol " " " " " ND " 1.0 2,3,4,5-Tetrachlorophenol " " " " " ND " 1.0 2,3,4,5-Tetrachlorophenol " " " " ND " ND " 1.0 2,3,4,5-Tetrachlorophenol " " " " ND " ND " 1.0 2,3,4,5-Tetrachlorophenol " " " " ND " " ND " 1.0 2,3,4,5-Tetrachlorophenol " " " " ND " ND " 1.0	2,4,6-Trichlorophenol	EnvCan	AB41815	02/12/04	02/19/04	1	ND ug/l	1.0	
2,3,4,5-Tetrachlorophenol	2,3,5,6-Tetrachlorophenol	*	*	"	**	"	ND "	1.0	
Pentachlorophenol	2,3,4,6-Tetrachlorophenol		*		**	"	ND "	1.0	
Surrogate: Tribromophenol	2,3,4,5-Tetrachlorophenol	2,#41	**	**	**	**	ND "	1.0	
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	Pentachlorophenol	*	*		*	н	ND "	1.0	
Total Dissolved Solids	Surrogate: Tribromophenol	"	"	"	"		97.2 % 79-11	9	
Sample Type: Water Sampled: 02/06/04 14:50	Conventional Chemistry Paramete	rs by APHA/EPA N	lethods						
Chlorinated Phenols by Canadian Pulp Method 2,4,6-Trichlorophenol EnvCan AB41815 02/12/04 02/19/04 1 ND ug/l 1.0 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 2,3,4,5-Tetrachlorophenol " " " " " " ND " 1.0 1.0 Pentachlorophenol " " " " " " " 1.6 " 1.0 1.0 Pentachlorophenol " " " " " " 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 10 10 10 10 10 10 1	Total Dissolved Solids	EPA 160.1	AB41319	02/13/04	02/19/04	1	140 mg/l	10	
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 2,3,4,5-Tetrachlorophenol " " " " " ND " 1.0 Pentachlorophenol " " " " " " 166" 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 EL-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 2,3,4,5-Tetrachlorophenol " " " " ND " 1.0 Pentachlorophenol " " " " " ND " 1.0 Pentachlorophenol " " " " " ND " 1.0	L-2 (A402242-02)			Sample Ty	pe: Water		Sampled: 02/06/04 14:50		
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 EL-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 Pentachlorophenol " " " " ND " 1.0	Chlorinated Phenols by Canadian	Pulp Method							
2,3,4,6-Tetrachlorophenol " " " " " ND " 1.0 2,3,4,5-Tetrachlorophenol " " " " ND " 1.0 Pentachlorophenol " " " " " ND " 1.0 Surrogate: Tribromophenol " " " " 108% 79-119 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 2,3,4,5-Tetrachlorophenol " " " " ND " 1.0 Pentachlorophenol " " " " ND " 1.0	2,4,6-Trichlorophenol	EnvCan	AB41815	02/12/04	02/19/04	1	ND ug/l	1.0	
2,3,4,5-Tetrachlorophenol " " " " " ND" 1.0 Pentachlorophenol " " " " " 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 L-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 2,3,4,5-Tetrachlorophenol " " " " ND" 1.0 Pentachlorophenol " " " " ND" 1.0	2,3,5,6-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 L-3 (A402242-03) Sample Type: Water Sampled: 02/06/04 15:00 Chlorinade 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	2,3,4,6-Tetrachlorophenol	н.	# 5	**	**	**	ND "	1.0	
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	2,3,4,5-Tetrachlorophenol		*	*	. **	**	ND "	1.0	
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 EL-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	Pentachlorophenol	n	**	*	*	"	1.6 "	1.0	
Total Dissolved Solids EPA 160.1 AB41319 02/13/04 02/19/04 1 150 mg/l 10	Surrogate: Tribromophenol	"	"	"	"		108 % 79-11	9	
SL-3 (A402242-03) 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	Conventional Chemistry Paramete	rs by APHA/EPA N	lethods						
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	Total Dissolved Solids	EPA 160.1	AB41319	02/13/04	02/19/04	1	150 mg/l	10	
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	SL-3 (A402242-03)			Sample Ty	pe: Water		Sampled: 02/06/04 15:00		
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	Chlorinated Phenols by Canadian	Pulp Method							
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	2,4,6-Trichlorophenol	EnvCan	AB41815	02/12/04	02/19/04	1	ND ug/l	1.0	
2,3,4,5-Tetrachlorophenol " " " ND " 1.0 Pentachlorophenol " " " " ND " 1.0	2,3,5,6-Tetrachlorophenol	"	"	**	*	**		1.0	
Pentachlorophenol " " " " ND " 1.0	2,3,4,6-Tetrachlorophenol		"			*	ND "	1.0	
remachiorophenoi ND " 1.0	2,3,4,5-Tetrachlorophenol			"		*	ND "	1.0	
Surrogate: Tribromophenol " " " 102 % 79-119	Pentachlorophenol	"	н	н.	. 17	**	ND "	1.0	
	Surrogate: Tribromophenol	"	"	#	"		102 % 79-11	9	

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.



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CHEMICAL EXAMINATION REPORT

Page 3 of 7

Geomatrix Consultants

2101 Webster Street, 12th Floor

Oakland, CA 94612

Attn: Ross Steenson

Order Number

Total Dissolved Solids

A402242

Receipt Date/Time

02/09/2004 13:30

EPA 160.1

Client Code

GEOMAT

Project No: 030275.6

Report Date: 02/20/04 14:05

Project ID: SPI - Arcata Stormwater

Client PO/Reference

	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
SL-3 (A402242-03)			Sample Ty	pe: Water		Sampled: 02/06/04 15:	00	
Conventional Chemistry Parameter	rs by APHA/EPA M	lethods				•		
Total Dissolved Solids	EPA 160.1	AB41319	02/13/04	02/19/04	1	270 mg/l	10	
5L-4 (A402242-04)			Sample Ty	pe: Water		Sampled: 02/06/04 15:	25	
Chlorinated Phenols by Canadian I	Pulp Method		7			-		
2,4,6-Trichlorophenol	EnvCan	AB41815	02/12/04	02/19/04	1	ND ug/l	1.0	
2,3,5,6-Tetrachlorophenol	**	"			. 11	ND "	1.0	
2,3,4,6-Tetrachlorophenol	"	**	**	**		ND "	1.0	
2,3,4,5-Tetrachlorophenol	*	C##.	*	· w	**	ND "	1.0	
Pentachlorophenol	*	**		*	"	ND "	1.0	
Surrogate: Tribromophenol	"	"	"			109 %	79-119	

02/19/04

AB41319 02/13/04

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Melanie B. There

96 mg/l



208 Mason St. Ukiah, California 95482

Client PO/Reference

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CHEMICAL EXAMINATION REPORT

Page 4 of 7

Geomatrix Consultants

2101 Webster Street, 12th Floor

Oakland, CA 94612 Attn: Ross Steenson

Order Number A402242

Receipt Date/Time

02/09/2004 13:30

Report Date: 02/20/04 14:05 Project No: 030275.6

Project ID: SPI - Arcata Stormwater

SourceResult

Chlorinated Phenols by Canadian Pulp Method - Quality Control

Client Code

GEOMAT

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)	Sou	rce: A402	225-01	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)	Sou	rce: A402	225-01	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	н	5.00	ND	102	69-115	2.58	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.

Melanie B. There

Melanie B. Neece For Karen A. Daly Project Manager

2/20/2004



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CHEMICAL EXAMINATION REPORT

Page 5 of 7

Geomatrix Consultants

2101 Webster Street, 12th Floor

Oakland, CA 94612 Attn: Ross Steenson

Order Number

A402242

Receipt Date/Time

02/09/2004 13:30

Report Date: 02/20/04 14:05

Project No: 030275.6

Project ID: SPI - Arcata Stormwater

Client PO/Reference

Chlorinated Phenols by Canadian Pulp Method - Quality Control

Client Code

GEOMAT

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)	Sour	ce: A402	225-01	Prepared:	02/12/04	Analyzed	1: 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. There

Melanie B. Neece For Karen A. Daly Project Manager

2/20/2004



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CHEMICAL EXAMINATION REPORT

Client Code

GEOMAT

Page 6 of 7

Geomatrix Consultants

2101 Webster Street, 12th Floor

Oakland, CA 94612

Attn: Ross Steenson

Order Number

A402242

Receipt Date/Time

02/09/2004 13:30

Project No: 030275.6

Report Date: 02/20/04 14:05

Project ID: SPI - Arcata Stormwater

Client PO/Reference

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Spike Source %REC RPD Analyte(s) Result PQL Units Result %REC Limits Level RPD Flag Limit **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. Thece



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CHEMICAL EXAMINATION REPORT

GEOMAT

Page 7 of 7

Geomatrix Consultants

2101 Webster Street, 12th Floor

Oakland, CA 94612

Attn: Ross Steenson

Receipt Date/Time

02/09/2004 13:30

Project ID: SPI - Arcata Stormwater

Client Code Client PO/Reference

Report Date: 02/20/04 14:05

Project No: 030275.6

Notes and Definitions

Order Number

A402242

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.			СН	All	N-(OF	-C	US	TO	D	Y R	E	CO	RD	A۱	۱D	RE	QI	JΕ	ST			ALYSI
Crescent Way ata, CA 95521-6741 ne (707) 826-8430- FAX (707) 826-8437 OR - Portland 1020 SW Taylor St. Ste. 530 Portland, OR 97205 Portland, OR 97205	7770 Cartwright Rd. 180 H 16. 500 Vine, CA 92614 San F Tel (4' Fax (44ax (949) 253-2954 Fx. (4t) 253-2954 Fx. (4t) 253-2278 Aust (4t) 2321-2278 Aust (4t) 2321-2283 Fel (4t) 252-283 Fel (4t) 252	an Francisco oward St., Ste rancisco, CA 9 5) 495-7110 15) 495-7107 Austin Spicewood S I.V. 1st Floor II.Y. 78759 12) 338-1667 (512) 338-163	. 200 4105 S	Ste. 300 Boulder Tel (303 Fax (30	earl Ea 0W r, CO 8 3) 447- 3) 447- TX - Ho 12337 Ste. 23 Housto Tel (28	0301 1823 -1836 ouston Jones	Rd. 77070	Tel (208 Fax (20	30 , ID 838) 556-66 8) 556-7 TX - P 320 Ea Port La Tel (36	271 ort Last Mast Mast Mast Mast Mast Mast Mast M	N T F	Missoul el (406 ax (40	Te: Te	59807 1600 4698 - Texark: 32 Summ carkana, (903) 75 x (903) 75	Ste. Edisor Tel (7 Fax (1 Fax	703 on, NJ 732) 73 (732) 7	Ste.	Seattle 3 36th 100 wood V	,	210	eamo	HICK	16211 5+, 12+4. 94612
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	*	SAM	PLES															AN	ALYS	SIS F	REQUES	Т	
		S	ample			Pres	serva	ation			Con	taine	ers	Con	stituen	its/Me	ethod	Н	andli	ing		Rema	arks
Fie San Identif	ple	DATE	TIME	Matrix*	HCI	HNO ₃	H ₂ SO₄	COLD		FILTRATION*	VOLUME (ml/oz)	TYPE*	NO.	PCPTCP				HOLD	RUSH	STANDARD	Ch	loroph	enols
5L-1		2/6	1540	AQ				Y	1	U	125mL	G	2	×	A	40	224	120	31	X	67	cadad	ran pul
SL-2			1450								1		2	X			Τ.	10	b				ran pul
SL-3		11/	1500										2	×				0	3	Π.			
<i>5L-4</i>		V	1525	V				4		V	A	4	2	×				0	¥	V			
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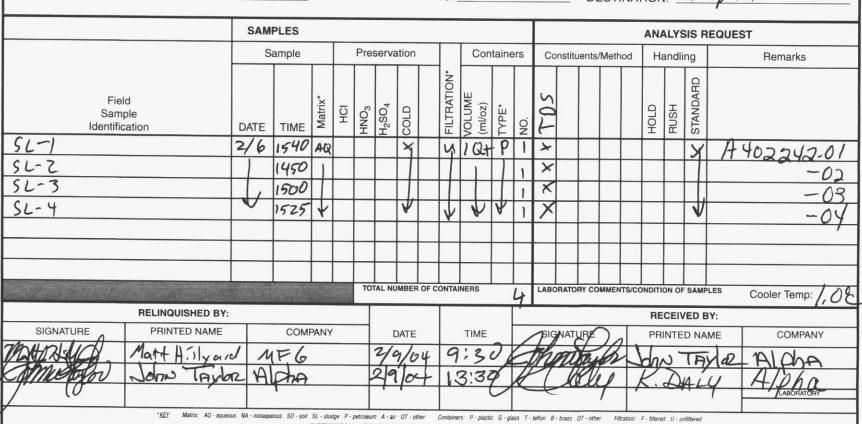
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MFG, INC.		CH	AIN-OF-	CUSTOR	Y RECO	RD AND R	EQUEST	FOR ANALYSIS
□ Arcata Office 875 Crescent Way Arcata, CA 95521-6741 Phone (707) 826-8430-FAX (707) 826-8437 □ OR - Portland 1020 SW Taylor St. Ste. 530	17770 Cartwright Rd. San F Ste. 500 Irvine, CA 92614 Tel (449) 253-2951 Fax (4949) 253-2954 Fax (480) Fax (949) 253-2954 Fax (480) Vinial St. Bldg, A	loward St., Ste. 200 rancisco, CA 94105 15) 495-7100 B 115) 495-7107 Tig.	O - Boulder 900 Pearl East Cir. te. 300W oulder, CO 80301 el (303) 447-1823 ax (303) 447-1836 TX - Houston 12337 Jones Rd		lain 450	1090 King George 59807 Ste. 703 Ste. 703 Edison, NJ 08837 1600 Edison, NJ 08837 161 (732) 738-57 - Texarkana WA	$\frac{1}{2}$	seomatr.x
Portland, OR 97205 Tel (503) 228-8616 Fax (503) 228-8631	Tel (412) 321-2278 Aus Fax (412) 321-2283 Tel (I. IV, 1st Floor tin, TX 78759 512) 338-1667 (512) 338-1331	Ste. 230 Houston, TX 770 Tel (281) 890-50 Fax (281) 890-50	70 Tel (361) 5 68 Fax (361) !	52-8839 Tel	(903) 794-0625 Lyr x (903) 794-0626 Tel	. 100 nwood, WA 98036 (425) 921-4000 (425) 921-4040	
PROJECT NO: SAMPLER (Sig METHOD OF S		PROJECT	PROJI	PT And ECT MANAGE VAYBILL NO:	R: Ross	Stenso DESTIN	5	PAGE: 2 OF: 2 DATE: 2/9/04
		SAMPLES					ANALYSIS F	REQUEST
		Sample	Prese	rvation	Containers	Constituents/Method	Handling	Remarks



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

TASK & 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.

Melani B. There

Melanie B. Neece For Karen A. Daly

Project Manager



208 Mason St. Ukiah, California 95482

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

CHEMICAL EXAMINATION REPORT

Page 1 of 4

Geomatrix Consultants

2101 Webster Street, 12th Floor

Oakland, CA 94612 Attn: Ross Steenson

Order Number

A402244

Receipt Date/Time

02/09/2004 13:30

Report Date: 02/20/04 14:10

Project No: 030275.6

Project ID: SPI - Arcata Stormwater

Client PO/Reference

ANALYTICAL REPORT FOR SAMPLES

Client Code

GEOMAT

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.

Medanie B. Thece



208 Mason St. Ukiah, California 95482

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CHEMICAL EXAMINATION REPORT

Page 2 of 4

Geomatrix Consultants

2101 Webster Street, 12th Floor

Oakland, CA 94612 Attn: Ross Steenson

Order Number

A402244

Receipt Date/Time,

02/09/2004 13:30

Report Date: 02/20/04 14:10 Project No: 030275.6

Project ID: SPI - Arcata Stormwater

Client Code GEOMAT Client PO/Reference

		Alpha A	Analytical	Laborato	ries, 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 Parameter	rs by APHA/EPA M	lethods				-			
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 Parameter	rs by APHA/EPA M	1ethods							
Total Dissolved Solids	EPA 160.1	AB41319	02/13/04	02/19/04	1	18000 mg/l	10		
SL-3 Slough (A402244-03)			Sample Ty	pe: Water		Sampled: 02/06/04 15:00			
Conventional Chemistry Parameter	rs by APHA/EPA M	1ethods							
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 Parameter	rs by APHA/EPA M	1ethods				a proposition of the contract			
Total Dissolved Solids	EPA 160.1	AB41319	02/13/04	02/19/04	1	23000 mg/l	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.

Modanie B. Thece



208 Mason St. Ukiah, California 95482

Client PO/Reference

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CHEMICAL EXAMINATION REPORT

Client Code

GEOMAT

Page 3 of 4

Geomatrix Consultants

2101 Webster Street, 12th Floor

Oakland, CA 94612

Attn: Ross Steenson

Order Number

A402244

Receipt Date/Time

02/09/2004 13:30

Report Date: 02/20/04 14:10 Project No: 030275.6

Project ID: SPI - Arcata Stormwater

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: A40		244-01	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. There



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CHEMICAL EXAMINATION REPORT

Page 4 of 4

Geomatrix Consultants

2101 Webster Street, 12th Floor

Oakland, CA 94612

Attn: Ross Steenson

Client Code

Project No: 030275.6

Project ID: SPI - Arcata Stormwater

Report Date: 02/20/04 14:10

Order Number A402244

Receipt Date/Time 02/09/2004 13:30

GEOMAT

Client PO/Reference

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-OI	F-CUSTO	DY RECO	RD AND REC				
5 Cresco	ent Way 17770 Cartwright Rd. San F A 95521-6741 186 - San F Tel (4 Fax (San Francisco floward St., Ste. 200 rancisco, CA 94105 151, 9495-7107 Austin Austin 7 Spicewood Springs Rd., IV, 1st Floor tin, TX 78759 (512) 338-1867 (512) 338-1331 CO - Boulder 4900 Pearl East C Ste. 300W Ste. 300W 1ei (303) 447-1823 Fax (303) 447-1823 Fa	Wallace, ID 838 1 Tel (208) 556-6i 3 Fax (208) 556-7i 6	811 Tel (406) 728- 7271 Fax (406) 728 Port Lavaca ast Main 45 avaca, TX 77979 Te 51) 552-8839 Te	4600 Edison, NJ 08837 7el (732) 738-5707 Fax (732) 738-5711 K - Texarkana	attle Sth Ave. W.	noctrix		
	PROJECT NO: 030275, 6 SAMPLER (Signature): Mak 72 METHOD OF SHIPMENT: Course	PROJECT NAME: PR CARRIE	OJECT MANA	GER: R 05 5	Storm Water Steenson DESTINATION		=: \ OF: \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		
		SAMPLES			A	NALYSIS REQUE	ALYSIS REQUEST andling Remarks ALYSIS REQUEST ALYSIS REQUEST AND ALIS ALIS ALIS ALIS ALIS ALIS ALIS ALIS		
		Sample Pro	eservation	Containers	Constituents/Method	Handling	Remarks		
	Field Sample Identification	DATE TIME WALL 2/6/1540 AG	+=+-+	FILTRATION VOLUME MINOZ TYPE* NO.	× 70 ×	HOLD HOLD STANDARD	-482244-01		
	SL-3 Slough	2/6 1450	+		H + H + H	++++	-02		
	SL-4 Slongh	2/6 1525		V V V ,		1	- 0 4		
	(1) 为14 x 15 x 15 x 15 x 12 x 12 x 15 x 15 x 15	T	OTAL NUMBER OF CO	NTAINERS 4	LABORATORY COMMENTS/CON	DITION OF SAMPLES	Cooler Temp: / 0°C		
	RELINQUISHED BY	f :		ľ		RECEIVED BY:	7,0		
	SIGNATURE PRINTED NAME	COMPANY	DATE	TIME	SIGNATURE	PRINTED NAME	COMPANY		
	Math Hillyan Math Hillyan	MFG	2/9/04	9:30	madayer \	on TAY a	Alpha		
	- MINING NOTION THAT		19404	10.00	July X	. DATY	H J J O LABORATORY		
9	*KEY Matrix: AO - aqu	neous NA - nonaqueous SO - soil SL - sludge P - petrole DISTRIBUTION: PI	eum A - air OT - other Co INK: Field Copy YELLOW: Labo	ontainers: P - plastic G - glass T - loratory Copy WHITE: Return to Ori	teflon B - brass OT - other Filtration: F - iginator	filtered U - unfiltered			

FILE 9329
NORTH COAST
LABORATORIES LTD.

April 13, 2004

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

Attn: Dean Prat

RE: Sierra Pacific

SAMPLE IDENTIFICATION

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

Order No.: 0404125 Invoice No.: 41443

PO No.: #01-253-110-0

ELAP No. 1247-Expires July 2004

ND = Not Detected at the Reporting Limit

Limit = Reporting Limit

All solid results are expressed on a wetweight basis unless otherwise noted.

RWQCB Sampling 4/6/04

RWQCB REGION 1

APR 1 5 2004

OCK OFCR OTBO

ORLT OLGR OKAD

ORSG OEJL

REPORT CERTIFIED BY

Laboratory Supervisor(s)

QA Unit

Jesse G. Chaney, Jr. Laboratory Director Date:

13-Apr-04

WorkOrder: 0404125

ANALYTICAL REPORT

Client Sample ID: SL-1-RB

MDM

Lab ID: 0404125-01A

Received: 4/6/04

Collected: 4/6/04 14:30

Test Name: Penta- and Tetrachlorophenol

Analyst:

Reference: Canadian Pulp Report Holding Time (days). 7

D			- A Anne (ua	ysj. '		
Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Tetrachlorophenol	ND	1.0			Date wetter	Analyzeu
Pentachlorophenol		1.0	μg/L	1.0	4/8/04	4/9/04
Surrogate: Dibromophenol	0.42	0.30	µg/L	1.0	4/8/04	4/9/04
Currogate. 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

4/9/04

4/8/04

Test Name: Penta- and Tetrachlorophenol

Analyst: MDM Reference: Canadian Pulp Report

Holding Time (days): 7

Danamasta				J - J -		
<u>Parameter</u>	Result	Limit	Units	DF	Tr-to	
Tetrachlorophenol	ND		Cilita	DF	Extracted	Analyzed
Pentachlorophenol	ND	. 1.0	μg/L	1.0	4/8/04	4/9/04
	ND	0.30	μg/L	1.0	4/8/04	
Surrogate: Dibromophenol	103	69.7-119		1000000	4/6/04	4/9/04
	103	09.7-119	% 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

<u>Analyzed</u>
4/9/04
4/9/04
4/9/04
4/9/04
•

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 Client ID:	Batch ID: 11171	Test Code Run ID:	ORGC4_040	Units: µg/L				04 5:31:03 PM	Prep D	ate 4/8/04	
Analyte	Result	Limit	SPK value		% Rec	SeqNo: LowLimit		5.70			
Tetrachlorophenol	4.988	1.0	5.00	0			HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Pentachlorophenol Dibromophenol	1.706	0.30	1.50	0	99.8% 114%	78	111	0			
Distriction	5.24	0.10	5.00	0	105%	85 70	132 119	0			
Sample ID LCSD-11171	Batch ID: 11171	Test Code: PCPTW Units: µg/L					0				
Client ID: Analyte		Run ID:	ORGC4_0404		Analysis Date 4/9/04 5:52:10 PM SeqNo: 415764				Prep Date 4/8/04		
Tetrachlorophenol	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	
Pentachlorophenol	4.875	1.0	5.00	0	97.5%	78	111				Qual
Dibromophenol	1.617	0.30	1.50	0	108%	85	132	4.99 1.71	2.28%	15	
	5.01	0.10	5.00	0	100%	70	119	5.24	5.40% 4.53%	15 15	

North Coast Laboratories, Ltd.

CLIENT:

Water Quality Control Bd-MC

Work Order: Project:

0404125

Sierra Pacific

Date: 13-Apr-04

QC SUMMARY REPORT

Method Blank

Sample ID MB-11171	Batch ID: 11171	Test Code	: PCPTW	Units: µg/L		Analysi	s Date 4/9/	04 5:09:59 PM	Dress D	-1- 110101	
Client ID:		Run ID:	ORGC4_040	409A		SeqNo:			Prep D	ate 4/8/04	
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLImit	Qual
Tetrachlorophenol	ND	1.0							70111 15	TA DEITHE	Qua
Pentachlorophenol	0.1211	0.30									
Dibromophenol	5.07	0.10	5.00	0	101%	70	119	0			J

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.



Chain of Custody

	1			
P.	-/-	of	. /	a.
	-		_	

707-022-4049 Fax 707-622-6831		LABORATORY NUMBER: 0404/25
Attention: Dean Prat Results & Invoice to: North Coast Regional Waker Board Address: 5550 Sky lane Blvd., Skc. A Santa Rosa, CA 95403 Phone: (707) 576-2801 Copies of Report to: Sampler (Sign & Print): Acar Area Wan Prat PROJECT INFORMATION Project Number: Project Name: Strie Pacific (Pri Dice Prat 1/5/5) Purchase Order Number: LABID SAMPLEID DATE TIME MATRIX Sevarator Big D2-RB 1445 3W Separator Big D2-RB 1495 3W Separator D4-RB 1500 5W	ANALYSIS CONTAINER PRESERVATIVE	TAT: 24 Hr 48 Hr 5 Day 5-7 Day STD (2-3 Wk) Other: PRIOR AUTHORIZATION IS REQUIRED FOR RUSHE REPORTING REQUIREMENTS: State Forms Preliminary: FAX Verbal By: // Final Report: FAX Verbal By: // FAX
RELINQUISHED BY (Sign & Print) DATE/TIME Ven Frat Dean Prat 46/04 1445 Au	PARTY INVITATION	SAMPLE DISPOSAL CL Disposal of Non-Contaminated
	manda Boot 46/04 16:45	CHAIN OF CUSTODY SEALS Y/NNA
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



208 Mason St. Ukiah, California 95482

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



22 April 2004

Geomatrix Consultants

Attn: Ross Steenson

2101 Webster Street, 12th Floor

Oakland, CA 94612

RE: SPI Arcata GW Monitoring

Work Order: A404339

TASK 6 STORM WATER

SL-1 SAMPLING 4/14/2004

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



208 Mason St. Ukiah, California 95482

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

CHEMICAL EXAMINATION REPORT

Page 1 of 5

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 A404339 Receipt Date/Time 04/15/2004 09:30

Client Code GEOMAT Client PO/Reference

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

Slung Witten

Cheryl Watson For Sheri L. Speaks Project Manager

4/22/04



208 Mason St. Ukiah, California 95482

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

CHEMICAL EXAMINATION REPORT

Page 2 of 5

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 A404339 Receipt Date/Time 04/15/2004 09:30

Client Code GEOMAT Client PO/Reference

Alpha Analytical Laboratories, Inc.

		Aipha	xualy tical	Laborato	ries, inc.			
	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
SL-1 (A404339-01)			Sample Type: Water			Sampled: 04/14/04 10:4	15	
Chlorinated Phenols by Canadian Pu	lp 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	**	/.00		:#:	"	ND "	1.0	
Pentachlorophenol	*	**		*	**	0.70 "	0.30	
Surrogate: Tribromophenol	. 17	"	"	"		102 %	79-119	

Clung Witten



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CHEMICAL EXAMINATION REPORT

Page 3 of 5

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 A404339

Receipt Date/Time 04/15/2004 09:30 Client Code **GEOMAT**

Client PO/Reference

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	. 11							
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)	Sou	rce: A404	339-01	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)	Sou	rce: A404	339-01	Prepared	: 04/16/04	Analyzed	l: 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



208 Mason St. Ukiah, California 95482

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CHEMICAL EXAMINATION REPORT

Page 4 of 5

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)	Sour	ce: A404	339-01	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			



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CHEMICAL EXAMINATION REPORT

Page 5 of 5

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 A404339 Receipt Date/Time 04/15/2004 09:30

Client Code GEOMAT Client PO/Reference

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.			CH	All	N-(OF	-C	UST	OD	YR	EC	0	RD	AN	D R	EQ	UE	ST	FOR ANALYSIS
17 17 17 17 17 17 17 17	7770 Cartwright Rd. 180 Hov ine, CA 92614 Tel (415 Fax (415 A) 1949) 253-2954 Tel (415 A) 0 Vinial St. Bldg. A lsburgh, PA 15212 (412) 321-2278 Austin. (412) 321-2283 Tel (51	n Francisco vard St., Ste. cisco, CA 9: 495-7110 b) 495-7107 ustin spicewood Si V, 1st Floor TX 78759 2) 338-1331	200 4105 orings Rd.		earl Ea 0W r. CO 8	0301 1823 1836 ouston Jones 0 n, TX 7	Pd.	320 Por Tel	- Port L East M Lavaci (361) 55	avaca	MT - Mi PO Box Missoul Fel (406 Fax (400	a, MT) 728- 6) 728- 5) 728- TX 45 Te. Te	59807 4600 -4698 (- Texas 32 Sum xarkana I (903)	Ste. 7 Edisor Tel (7 Fax (7	King Georg 03 n, NJ 0883 32) 738-57 732) 738-5	17	ttle h Ave. V	v. (COC No. 46243 Decomptrix 101 Webster St 12th 2014-cl, CA 94612 (510) 663-4107
PROJECT NO: O SAMPLER (Signatu METHOD OF SHIP	30275.6 Ire): Not Ho MENT: UPS	Ynd 1	PROJE		F	PRO	JEC	T MAN YBILL I	AGE	R: _ F	205	, <u>5</u>	s 1	een 74	301 DESTIN	NATIC	N:	AI	PAGE: 1 OF: 1 DATE: 4/14/04
		SAMI	PLES													Al	NALY	SIS F	REQUEST
		Sa	ample			Pres	serva	tion	1	Cor	taine	ers	Co	nstituent	s/Metho	d	Hand	ling	Remarks
Fiel Sam Identific	ple	DATE	Matrix* HCI HNO3 H2SO4 COLD COLD TYPE* NO. PCP/TCP RUSH STANDARD																
S L-1		<i>Y/14</i>	1045	AQ				×	ч	125mL	G	2	8					×	Chlorinated phenols
						TOT	AL NÜ	MBER OF C	ONTAI	NERS		2	LABO	RATORY C	OMMENT	S/COND	ITION C	FSAMI	PLES Cooler Temp:
	RELINQUISHED BY:															F	RECEI	VED E	BY:
SIGNATURE Math Holly	Matt Hillyan	d N	COMF 1F6	PANY		4	1/1	4/04	l'	**************************************	9	¥,	SIG	CM 4	M 15/0	LISC	2 1	ans 93	en Alpha Labs
1	*KEY Matrix: AQ - aqueou:	s NA - nonaqueo	ous SO - soil	SL - slud	ge P-p	etroleum PINK:	A - air Field Con	OT - other y YELLOW: L	Container	s: P - plasti Copy Wu	G - gla	ss T - t	effon B -	brass OT - oti	her Filtrat	tion: F-fill	ered U -	unfiltered	LABUHATOHY



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27 April 2004

Geomatrix Consultants

Attn: Ross Steenson

2101 Webster Street, 12th Floor

Oakland, CA 94612

RE: SPI - Arcata Stormwater

Shari Speaks

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 L. Speaks Project Manager



208 Mason St. Ukiah, California 95482

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CHEMICAL EXAMINATION REPORT

Page 1 of 5

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 A404473

Receipt Date/Time 04/21/2004 16:50 Client Code **GEOMAT**

Client PO/Reference

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



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CHEMICAL EXAMINATION REPORT

Page 2 of 5

Geomatrix Consultants

2101 Webster Street, 12th Floor

Oakland, CA 94612 Attn: Ross Steenson Report Date: 04/27/04 10:01

Project ID: SPI Areata Starmusa

Project ID: SPI - Arcata Stormwater

Order Number A404473 Receipt Date/Time 04/21/2004 16:50

Client Code GEOMAT Client PO/Reference

 ${\bf Alpha\ Analytical\ Laboratories,\ Inc.}$

		· will work .						
	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
Oitch 2 Composite 1,2,3,4 (A40447 Chlorinated Phenols by Canadian Pu			Sample Ty	pe: Water		Sampled: 04/20/04 15:2	0	
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		"	**	W.C.	*	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 Speaka

Sheri L. Speaks Project Manager 4/27/04



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CHEMICAL EXAMINATION REPORT

Page 3 of 5

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

Project No: 9329.000/030275.6

Report Date: 04/27/04 10:01

Project ID: SPI - Arcata Stormwater

Attn: Ross Steenson

Receipt Date/Time

Client Code

Client PO/Reference

Order Number 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	& Analyz	ed: 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	& Analyz	ed: 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)	Sou	rce: A404	473-01	Prepared	& Analyz	ed: 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	. 11	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 Pr		Prepared	& Analyz	ed: 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.

Speake



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CHEMICAL EXAMINATION REPORT

Page 4 of 5

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 A404473

Receipt Date/Time 04/21/2004 16:50 Client Code **GEOMAT**

Client PO/Reference

Chlorinated Phenols by Canadian Pulp Method - Quality Control

				Spike	Source	NADEC	%REC		RPD	
Analyte(s)	Result	PQL	Units	Level	Result	%REC	Limits	RPD	Limit	Fla
Batch AD42310 - Solvent Extraction										
Matrix Spike Dup (AD42310-MSD1)	Sour	rce: A404	473-01	Prepared	& Analyze	ed: 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			





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CHEMICAL EXAMINATION REPORT

Page 5 of 5

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 A404473 Receipt Date/Time

04/21/2004 16:50

Client Code

GEOMAT

Client PO/Reference

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

COC No. 46246 COC No		MFG, INC.	ř			СН	ΑI	N-(OF	-C	US	STO	DD	YF	RE(CO	RD) A	N) I	RE	Ql	JE	ST				YSIS
TOTAL NUMBER OF CONTAINERS PROJECT NO. 030 228-961 Fax (212) 328-1031 Fax (212) 328-1032	875 Crescer Arcata, CA	t Way 95521-6741	17770 Cartwright Rd. Ste. 500 Irvine, CA 92614 Tel (949) 253-2951	180 Howard San Francis Tel (415) 49	d St., Ste. sco, CA 94 95-7110	200 4105	4900 F Ste. 30 Boulde	Pearl Ea NOW or, CO 8	0301	1	Wallace	a. ID 83	3873 6811 -7271	!	Missoul Tel (406	la, MT 6) 728-	59807 4600	St St	90 Kir e. 703 dison.	ng Ge NJ 08	837	Post Ro	i. 🚡		eom	atrit	K	
SAMPLER (Signature): Mut Tully PROJECT MANAGER: Ross Steenson DATE: 4/20/04 METHOD OF SHIPMENT: Confie Correct Carrier Carrier Constituents/Method Handling Remarks Sample Preservation Containers Constituents/Method Handling Remarks Sample Identification DATE TIME PROJECT MANAGER: Ross Steenson DATE: 4/20/04 Ditch 2 Comp I Handling Remarks Ditch 2 Comp I Handling Remarks Other Containers Constituents/Method Handling Remarks ANALYSIS REQUEST Chlorophonols by Chlorophonols		1020 SW Taylor St. Ste. 530 Portland, OR 97205 Tel (503) 228-8616	□ PA - Pittsburgh 800 Vinial St., Bldg. A Pittsburgh, PA 15212 Tel (412) 321-2278 Fax (412) 321-2283	4807 Spic Bldg. IV, 1 Austin, TX Tel (512)	ewood Sp 1st Floor (78759 338-1667	***********		12337 Ste. 23 Housto Tel (28	Jones 30 on, TX 1) 890	Rd. 77070 -5068	C	320 E	East Ma	ain TX 779	79	45 Te Te	32 Sum xarkana I (903) 7	merhill , TX 75 '94-062	503 5		19203 Ste. 1	3 36th A 00 vood W	Ave. W.		520) (, c.A.	946	7
Sample Preservation Containers Constituents/Method Handling Remarks Field Sample Identification DATE TIME FIELD NAME Preservation Containers Constituents/Method Handling Remarks Color of henols by Chlorophenols by Canadian pulp Ditch 2 Comp 2 I 1400 Ditch 2 Comp 3 I 1440 Ditch 2 Comp 3 I 1440 Ditch 2 Composite I I X Auto 4 (172-1) & Canadian pulp X Single Sample report as I X Single Sample report as I X Single Sample Received by: Printed Date Time Signature Printed Name Company Date Time Printed Name Company		SAMPLER (Sig	nature):	wrie!	n)	PROJE		. 1	PRO	JEC	ТМ	IANA	AGE	R: _					15	on		ΓΙΟΝ	l: _	_/	PAGE DATE:	4/	_ OF:	4
Field Sample Identification DATE TIME \$\frac{1}{2} \frac{1}{2} \f					SAMI	PLES																ANA	ALYS	SIS R	REQUE	ST		
Ditch 2 Comp 1 4/201320 X N 1252 G 1 X ALDHUT 3-N & Canadian pulp Ditch 2 Comp 2 1400 Ditch 2 Comp 3 1440 Ditch 2 Comp 4, V 1520 Ditch 2 Composite Total number of containers RELINQUISHED BY: SIGNATURE PRINTED NAME COMPANY DATE TIME SIGNATURE PRINTED NAME COMPANY N 1252 G 1 X ALDHUT 3-N & Canadian pulp X Canadian pulp X Canadian pulp X Composite into X Single Sample report as "Ditch 2 Composite" Total number of containers LABORATORY COMMENTS/CONDITION OF SAMPLES Cooler Temp: 2. 3 RECEIVED BY: SIGNATURE PRINTED NAME COMPANY					S	ample			Pres	serva	ation			Cor	ntaine	ers	Co	nstitu	ents/	Meth	nod	На	andli	ng		Re	marks	
Ditch 2 Comp3 1440 Ditch 2 Comp3 1440 Ditch 2 Comp4, 1520 V V V V V X X Single Sample report as "Ditch 2 Composite" Total number of containers RELINQUISHED BY: SIGNATURE PRINTED NAME COMPANY DATE TIME SIGNATURE PRINTED NAME COMPANY DATE TIME SIGNATURE PRINTED NAME COMPANY			Sample				Matrix*	HCI	HNO ₃	H ₂ SO ₄	COLD		FILTRATION*	VOLUME (ml/oz)	TYPE*	NO.	2					НОГР	RUSH	STANDARD	Chlo	roph	enols	6 ₇
Ditch 2 Comp 4, V 1570 V V V V V X Single Sample Ditch 2 Composite Total number of containers Laboratory comments/condition of samples Cooler Temp: 2.3 RELINQUISHED BY: SIGNATURE PRINTED NAME COMPANY DATE TIME SIGNATURE PRINTED NAME COMPANY		Diteh 2	lomp 1	19	1/20	1320					x		u	125~	G	1		A	10	40	17	3-	10	8	Can	adia	n po	10
Ditch 2 Comp 4. V 1570 V V V V V X Single Sample report as "Ditch 2 Composite" Total number of containers Laboratory comments/condition of samples Cooler Temp: 2.3 RELINQUISHED BY: SIGNATURE PRINTED NAME COMPANY DATE TIME SIGNATURE PRINTED NAME COMPANY		D.7ch 2 (orp 2								Ш		Ш	1	4	١	4						,	X				,
Ditch 2 Composite TOTAL NUMBER OF CONTAINERS LABORATORY COMMENTS/CONDITION OF SAMPLES Cooler Temp: 2. 3 RECEIVED BY: SIGNATURE PRINTED NAME COMPANY DATE TIME SIGNATURE PRINTED NAME COMPANY		Ditch 2	onp3		<i> </i>						Ш		Ш	1,		1	X							×	Cou	1905	ite	into
Ditch 2 Composite TOTAL NUMBER OF CONTAINERS LABORATORY COMMENTS/CONDITION OF SAMPLES Cooler Temp: 2. 3 RECLINQUISHED BY: SIGNATURE PRINTED NAME COMPANY DATE TIME SIGNATURE PRINTED NAME COMPANY		Ditch 2 6	omp4,	\	μ	1570					V		V	4	1	1	X							X	Sin	gle	San	ple
TOTAL NUMBER OF CONTAINERS LABORATORY COMMENTS/CONDITION OF SAMPLES Cooler Temp: 2, 3 RECEIVED BY: SIGNATURE PRINTED NAME COMPANY DATE TIME SIGNATURE PRINTED NAME COMPANY		21/	<u> </u>				_						1												rep	ort	as '	
RELINQUISHED BY: SIGNATURE PRINTED NAME COMPANY DATE TIME SIGNATURE PRINTED NAME COMPANY THE SIGNATURE PRINTED NAME COMPANY		Differ Z	Composite	-			-						\Box		-			_	_						"Dith	ch 2	Comp	osite"
RELINQUISHED BY: SIGNATURE PRINTED NAME COMPANY DATE TIME SIGNATURE PRINTED NAME COMPANY THE SIGNATURE PRINTED NAME COMPANY									тот	AL NU	MBER	OF C	ONTAI	NERS			LABO	RATOR	Y CO	MMEN	ITS/C	ONDITI	ON OF	SAME	PLES	Coole	er Temp	23
THINTED NAME SOMEAN			RELINQUISH	ED BY:					T													RE	CEIV	/ED E	3Y:			810
Mart Hillyard MFG 4/21/04 122 Martiner John Tolor Alpha		SIGNATURE	PRINTED	NAME		СОМ	PANY	1			DATE			TIME		7	9JG	NATIO	RE	2 1	Τ.	PR	INTE	D NA	ME		COMPA	NY
		Markey	Mart Hi	Yourd	/	UFC	9		-	4/2	i/o	74	12	230	n		m	12	br	T		Sh	W.	15	Foles	M	loh	4
MININGES ALPHA HIPTO HOSOF LISO DUTO HUGESS ALPHA		SIMMOUSO	2 John 7	WTASHE Alpha HI				12	10	/_	16	sò	_	1	IJ		2	_	1)61		Hur	gess	A	DICA ILABORATO	DRY .		
*KEY Matrix: AQ - aqueous NA - nonaqueous SQ - soil SL - sludge P - petroleum A - air QT - other Containers: P - plastic G - glass T - lefton B - brass QT - other Filtration: F - filtered U - unfiltered DISTRIBUTION: PHIK Field Cook YFI UNW Laboratory Cook WAITE - Return to Opposite the Cook of the Cook	1	/ -	*KEY Matrix	c: AQ - aqueous 1	VA - nonaque	ous SO - soil	SL - slu	dge P-	petroleun	n A-air	OT - ott	her (Container	s: P - plasi	tic G-gi	lass T-	eflon B	brans 0	T - other	Fil	tration:	F - filtere	d U-u	nfiltered				



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27 April 2004

Geomatrix Consultants

Attn: Ross Steenson

2101 Webster Street, 12th Floor

Oakland, CA 94612

RE: SPI - Arcata Stormwater

Sheri Speaks

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 L. Speaks Project Manager



208 Mason St. Ukiah, California 95482

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

CHEMICAL EXAMINATION REPORT

Page 1 of 5

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 **GEOMAT**

Client PO/Reference

A404474

04/21/2004 16:50

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



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CHEMICAL EXAMINATION REPORT

Page 2 of 5

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 A404474

Receipt Date/Time

Client Code 04/21/2004 16:50 **GEOMAT**

Client PO/Reference

Alpha Analytical Laboratories, Inc. NOTE RESULT PQL BATCH PREPARED ANALYZED DILUTION METHOD Sample Type: Water Sampled: 04/20/04 13:20 Ditch 2-20040420 (A404474-01) Chlorinated Phenols by Canadian Pulp Method ND ug/l 1.0 AD42310 04/23/04 04/24/04 EnvCan 2,4,6-Trichlorophenol ND" 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 98.4% 79-119 Surrogate: Tribromophenol

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.

Speake



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CHEMICAL EXAMINATION REPORT

Page 3 of 5

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 A404474

Receipt Date/Time 04/21/2004 16:50

Client Code **GEOMAT**

Client PO/Reference

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	& Analyze	ed: 04/23/0)4			
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	14							
Pentachlorophenol	ND	1.0	*							
Surrogate: Tribromophenol	32.4		"	25.0		130	79-119			S-01
LCS (AD42310-BS1)				Prepared	& Analyze	ed: 04/23/0)4			
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		н	25.0		119	79-119		***************************************	
Matrix Spike (AD42310-MS1)	Sou	rce: A404	473-01	Prepared	& Analyze	ed: 04/23/0)4			
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)	Sou	rce: A404	473-01	Prepared	& Analyze	ed: 04/23/0)4			
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.

Shari

Speaker



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 A404474

Receipt Date/Time 04/21/2004 16:50

Client Code **GEOMAT**

Client PO/Reference

Page 4 of 5

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 Calles Dun (AD42210 MCD4)										
Matrix Spike Dup (AD42310-MSD1)	Sour	ce: A4044	173-01	Prepared	& Analyze	ed: 04/23/0	04			
2,3,4,6-Tetrachlorophenol	5.29	1.0	173-01	Prepared 5.00	& Analyze ND	ed: 04/23/0 104	04 66-117	4.25	20	
					-	Spiritering Street		4.25 5.31	20	
2,3,4,6-Tetrachlorophenol	5.29	1.0	"	5.00	ND	104	66-117			

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.

Shari Speaks

Sheri L. Speaks Project Manager



208 Mason St. Ukiah, California 95482

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CHEMICAL EXAMINATION REPORT

Page 5 of 5

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 A404474 Receipt Date/Time 04/21/2004 16:50

Client Code GEOMAT Client PO/Reference

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

					21/							_				-	_	_	_					
MFG, INC.		СН	All	N-C	F-	-CI	US	TC	D	YR	EC	CO	RD) A	N) F	RE	Ql	JE	ST	FO	R A	NA	LYSIS 6245
Arcata, CA 95521-6741 Ste. 500 Sar Phone (707) 826-8430- FAX (707) 826-8437 Irvine, CA 92614 Tel	- San Francisco Howard St., Ste. Francisco, CA 9 (415) 495-7110 (415) 495-7107	4105	Ste. 300 Boulder Tel (303	oulder earl East)W , CO 803 I) 447-18 3) 447-1	301 823	P W To	D - Osbi PO Box : Vallace, Tel (208) Fax (208	30 ID 83 556-6	6811	N T	MT - M PO Box Missoul Fel (406 Fax (40	a, MT 5) 728-	1600	1 S F	J - Edi 090 Kir ite. 703 dison, el (732 ax (732	ng Geo NJ 08:	837	Post Re	d. 4	210	Comoi	tre		
1020 SW Taylor St. 800 Vinial St., Bidg. A 44 Ste. 530 Portland, OR 97205 Tel (412) 321-2278 A 16 Fax (503) 228-8616 Fax (412) 321-2283 Tel (503) 228-8631	X - Austin 307 Spicewood Sp dg. IV, 1st Floor ustin, TX 78759 sl (512) 338-1637 ux (512) 338-1331		S F	TX - Hou 12337 Jo Ste. 230 Houston, Tel (281) Fax (281	, TX 77) 890-5) 890-	Rd. 7070 5068 -5044		Port L Tel (3 Fax (3	East M Lavaca (61) 55 (361) 5	ain I, TX 7791 i2-8839 53-6115		45 Te Te Fa	karkana (903) x (903)	nmerhill 1, TX 75 794-06 794-06	5503 25 326		Ste. 10 Lynnw Tel (42	36th / 00 00d, V 25) 92	Ave. W VA 980 1-4000 1-4040	30	aklan 570) 6	d, C 63-	+ 9 -41	12th fla 4612 67
PROJECT NO: 030275-6 SAMPLER (Signature): 26 METHOD OF SHIPMENT: Cou.	the of	PROJE		NAME PI ARRI	RO	JEC	TM	ANA	GE	cata R: R	055	5	it e	ы en	50	n	INAT	ΓΙΟΝ	N: _		PAGE: DATE:	4	120	P/04
	SAM	PLES																AN	ALYS	SIS F	REQUES	ST.		
	Si	ample		F	Pres	erva	tion	_		Con	ntaine T	ers	Co	nstitu	ents/	Meth	od	Н	andli	ing		F	Remarl	KS
Field Sample Identification	DATE	TIME	Matrix*	Ю	HNO3	H ₂ SO ₄	COLD		FILTRATION	VOLUME (ml/oz)	TYPE*	NO.	Repres					НОГД	RUSH	STANDARD				
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Matt Hillya	rd /	MFC	9		- 1	4/2	21/0	14	16	220	2	4	m	W.	4/	b)	1	7	py	1 0	vier	P	lph	1A
Samilla John (A)	X> Y-	+ Ph	17		14	12	100		16	250		1	91	7		-	1	<u>Jeno</u>	LK	riva	jess		LABO	RATORY
*KEY Matrix: AO - a	queous NA - nonaque	rous SO - soil	SL - slud	ge P-peti	troleum PINK- I	A - air Field Con	OT - othe	r C	ontainer	s: P - plasti	ic G-gl	ass T-	ofion B	brass	BT - other	r Fil	tration:	F - filtere	ed U - u	nfiltered				

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

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

Oakland, CA 94612

TASK 6 STORM WATER
APRIL 20,2004 DITCH 3

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.

harlens Morrow

Charlene Morrow

Chemist

Enclosures GMC0505R.DOC

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.

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 $\mu g/L$ (ppb)

Sample ID Laboratory ID	<u>Diesel Range</u> (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. '

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 $\mu g/L$ (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.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/05/04 Date Received: 04/22/04

Project: SPI Arcata Storm Water, F&BI 404199

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

Laboratory Code: 404200-01 (Duplicate)

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

Laboratory Code: 404200-01 (Matrix Spike)

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

Laboratory Code: Laboratory Control Sample

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

ENVIRONMENTAL CHEMISTS

Date of Report: 05/05/04 Date Received: 04/22/04

Project: SPI Arcata Storm Water, F&BI 404199

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

Laboratory Code: 404200-01 (Duplicate)

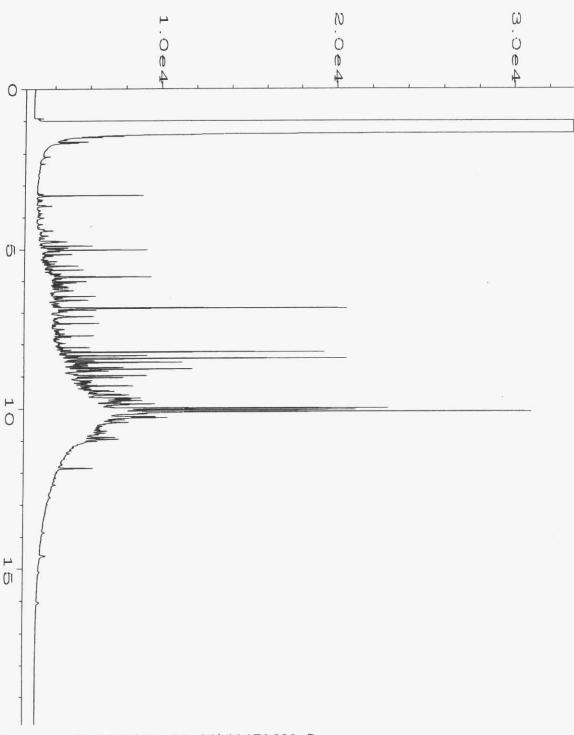
				Relative		
Analyte	Reporting Units	Sample Result	Duplicate Result	Percent Difference	Acceptance Criteria	
Motor Oil	μg/L (ppb)	22,000	25,000	13	0-20	

Laboratory Code: 404200-01 (Matrix Spike)

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

Laboratory Code: Laboratory Control Sample

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

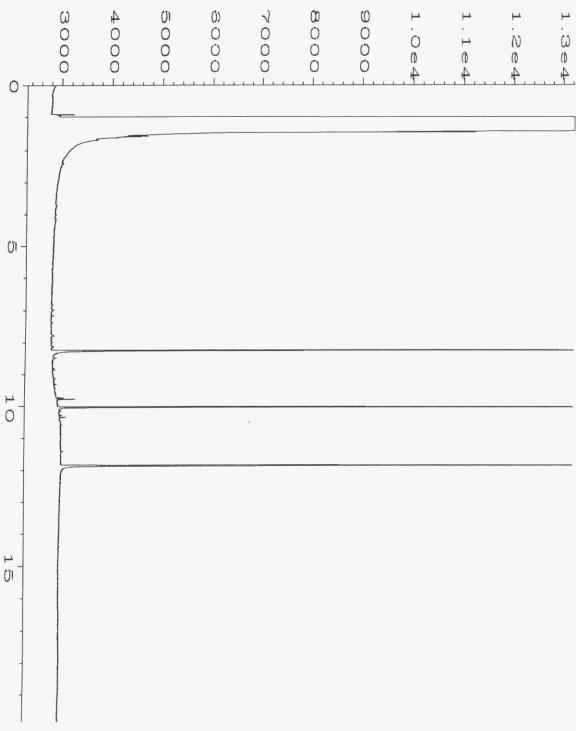


: D:\GC6\04-29-04\014F0601.D Data File Name Page Number Operator : ME Instrument : GC #6 : 404199-COMP 1:10

Sample Name

Run Time Bar Code: Acquired on : 29 Apr 04 02:09 PM Report Created on: 30 Apr 04 10:41 AM 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
```

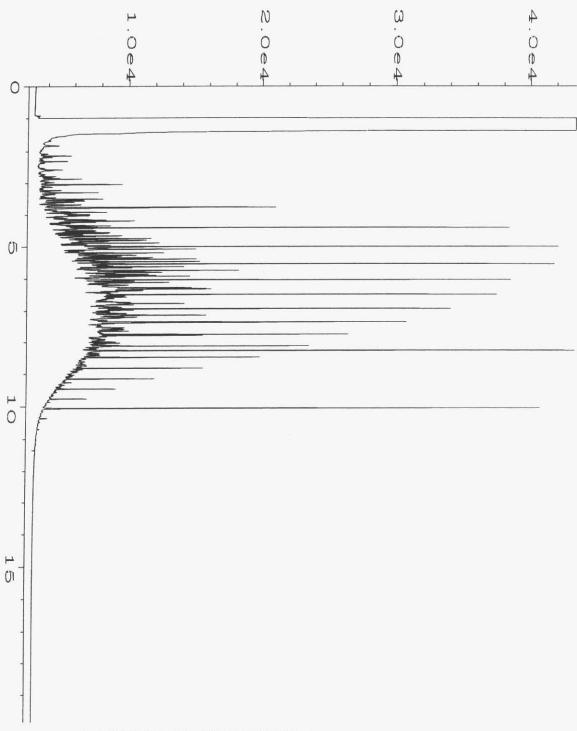
Operator : ME Point Poin

Run Time Bar Code:

Acquired on : 29 Apr 04 04:18 PM Report Created on: 30 Apr 04 10:40 AM

Page Number : 1 Vial Number : 11 Injection Number : 1 Sequence Line : 7

Instrument Method: TPHDAK.MTH Analysis Method: DEFAULT.MTH



Data File Name : D:\GC6\04-29-04\002F0201.D
Operator : ME
Instrument : GC #6

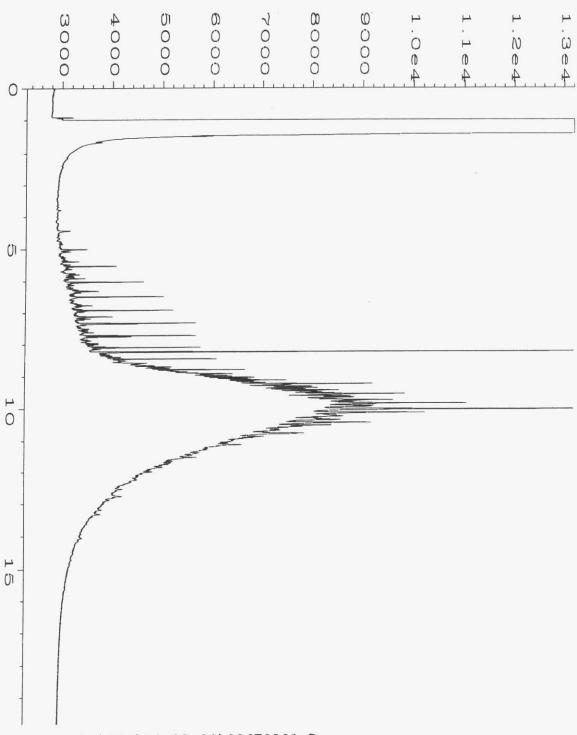
Sample Name : 500 WADF 17-43

Run Time Bar Code:

Acquired on : 29 Apr 04 08:26 AM Report Created on: 30 Apr 04 10:41 AM

Page Number : 1 Vial Number : 2 Injection Number : 1 Sequence Line : 2

Instrument Method: TPHD.MTH
Analysis Method: DEFAULT.MTH



```
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

MFG, INC.

CHAIN-OF-CUSTODY RECORD AND REQUEST FOR ANALYSIS

O Arc	ata Offic	e	
875 Cre	scent Way		
Arcata,	CA 95521-67	741	
Phone (707) 826-843	0- 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 2101 webster St, 12th floor
Oakland, CA 94612

(510) (63-4177

COC No. 46248

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) 890-5088
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

1	PROJECT NO: 030275.6	4	PROJE	CT	NAM	F: 5	SPI	C A	rca	ta	9	the.	Can.	W	ater			_		1	
١	SAMPLER (Signature): Mot His	Jan J																-	PAGE:	U/20/04	
1	METHOD OF SHIPMENT: Fed E	K		С	ARF	RIER	/WA	YBIL	L NO	:	Ь	elo	w		DESTINA	TIOI	v.	Fri	colma.	4/20/04 +Bruxa	
ł									. 7	90	01	24	7:	2 2	2961		• -		C0		
-		SAM	PLES													AN	ALY	SIS F	REQUES	ST .	
1		S	ample			Þres	erva	tion		T	Con	taine	ers	Co	onstituents/Method		andl			Remarks	
	Field			*x					FILTRATION*		AE (OWI				ARD	B;-11	Geomatrix	
00	Sample Identification	DATE	TIME	_		HNO3	H ₂ SO ₄	COLD	FILTR		(ml/oz)	TYPE	NO.	TP# D		HOLD	RUSH	STANDARD			
4	Ditch 3 Compl	4/20	1330	AR				X	U	1	4iter	G	1	+				×	Come	Posite into	
4	Ditch 3 Comp 2	1	1405	1	•			Ш				L	1	K				7		e sample	
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ŀ	RELINQUISHED BY	:														RI	ECEI	VED I	BY:		
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			- 4 						+	-		-			/ .					LABORATORY	
	*KEY Matrix AQ aque	ous NA - nonaqu	Mous SO - soil	SL - slu	dge P+j	petroleum : PINIC:	A - air Field Cop	OT - other	r Conta	iiners:	,	c G - gt	ass T -	teflon 8	- brass OT - other Filtration	F - filter	red U-	unlittered			

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

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

Dear Mr. Steenson:

TASK 6 STORM WATER

APRIL 20, 2004 DITCH 3

SILICA GEL / NON SILICA GEL

SAMPLES

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.

harlens Morrow

Charlene Morrow

Chemist

Enclosures GMC0507R.DOC

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.

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	$\frac{\text{Diesel Range}}{(C_{10}\text{-}C_{25})}$	Surrogate (% Recovery) (Limit 59-126)
Ditch3-20040420 d	8,700	83
Method Blank	<50	90

d - The sample was diluted.

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)
	22,000	88
Method Blank	<50	67

d - The sample was diluted.

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 (C10-C25)	Surrogate (% Recovery) (Limit 59-126)
Ditch3-20040420 404200-01	1,300	88
Method Blank	<50	88

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 $\mu g/L$ (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

ENVIRONMENTAL CHEMISTS

Date of Report: 05/07/04 Date Received: 04/22/04

Project: SPI Arcata Storm Water, F&BI 404200

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

Laboratory Code: 404200-01 (Duplicate)

				Relative	
Analyte	Reporting Units	Sample Result	Duplicate Result	Percent Difference	Acceptance Criteria
Diesel	μg/L (ppb)	8,900	9,400	5	0-20

Laboratory Code: 404200-01 (Matrix Spike)

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

Laboratory Code: Laboratory Control Sample

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

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)

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

Laboratory Code: 404200-01 (Matrix Spike)

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

Laboratory Code: Laboratory Control Sample

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

ENVIRONMENTAL CHEMISTS

Date of Report: 05/07/04 Date Received: 04/22/04

Project: SPI Arcata Storm Water, F&BI 404200

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

Laboratory Code: 404200-01 (Duplicate) Silica Gel

				Relative	
Analyte	Reporting Units	Sample Result	Duplicate Result	Percent Difference	Acceptance Criteria
Diesel	μg/L (ppb)	1,300	1,200	8	0-20

Laboratory Code: 404200-01 (Matrix Spike) Silica Gel

	Reporting	Spike	Sample	% Recovery	Acceptance
Analyte	Units	Level	Result	MS	Criteria
Diesel	μg/L (ppb)	2,500	1,300	100	50-150

Laboratory Code: Laboratory Control Sample Silica Gel

	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Diesel	μg/L (ppb)	2,500	107	79-121

ENVIRONMENTAL CHEMISTS

Date of Report: 05/07/04 Date Received: 04/22/04

Project: SPI Arcata Storm Water, F&BI 404200

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

Laboratory Code: 404200-01 (Duplicate) Silica Gel

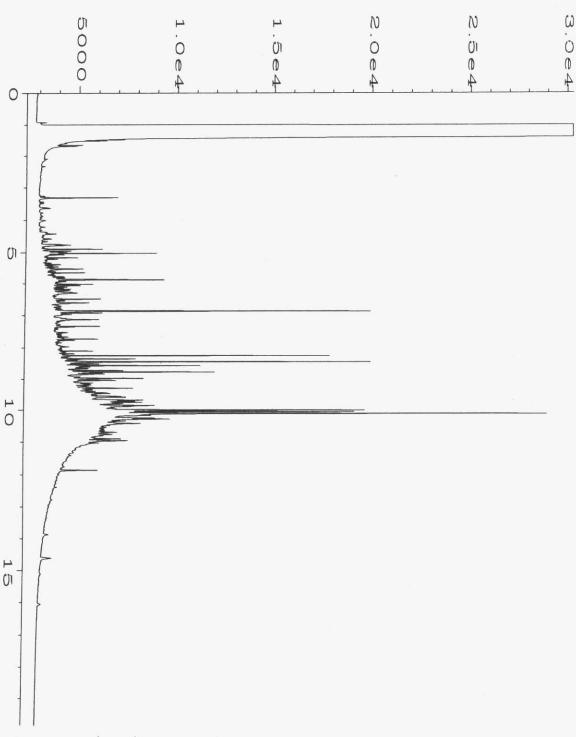
				Relative	
Analyte	Reporting Units	Sample Result	Duplicate Result	Percent Difference	Acceptance Criteria
Motor Oil	ug/L (ppb)	7,900	7,300	8	0-20

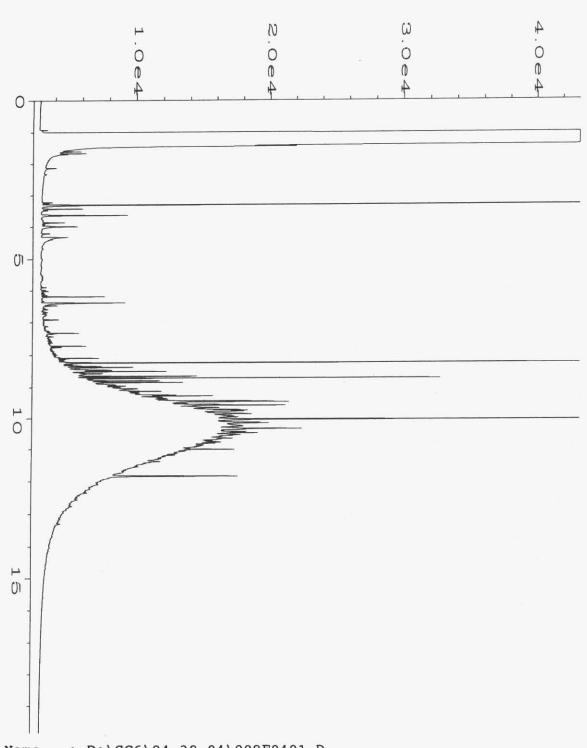
Laboratory Code: 404200-01 (Matrix Spike) Silica Gel

	Reporting	Spike	Sample	% Recovery	Acceptance
Analyte	Units	Level	Result	MS	Criteria
Motor Oil	μg/L (ppb)	10,000	7,900	51	50-150

Laboratory Code: Laboratory Control Sample Silica Gel

			Percent	
Analyte	Reporting Units	Spike Level	Recovery LCS	Acceptance Criteria
Motor Oil	μg/L (ppb)	10,000	87	70-130





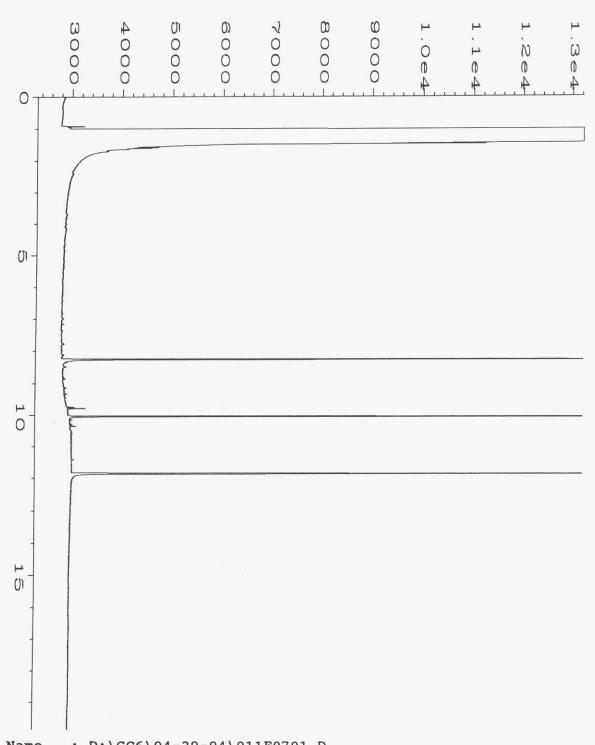
Data File Name : D:\GC6\04-30-04\009F0401.D

Operator : ME Page Number : Instrument : GC #6 Vial Number :

Sample Name : 404200-01 sg Injection Number : 1
Run Time Bar Code: Sequence Line : 4

Run Time Bar Code: Sequence Line : 4
Acquired on : 30 Apr 04 12:42 PM Instrument Method: TH

Acquired on : 30 Apr 04 12:42 PM Instrument Method: TPHDAK.MTH Report Created on: 03 May 04 09:02 AM Analysis Method : DEFAULT.MTH



```
Data File Name : D:\GC6\04-29-04\011F0701.D

Operator : ME Page Number : 1

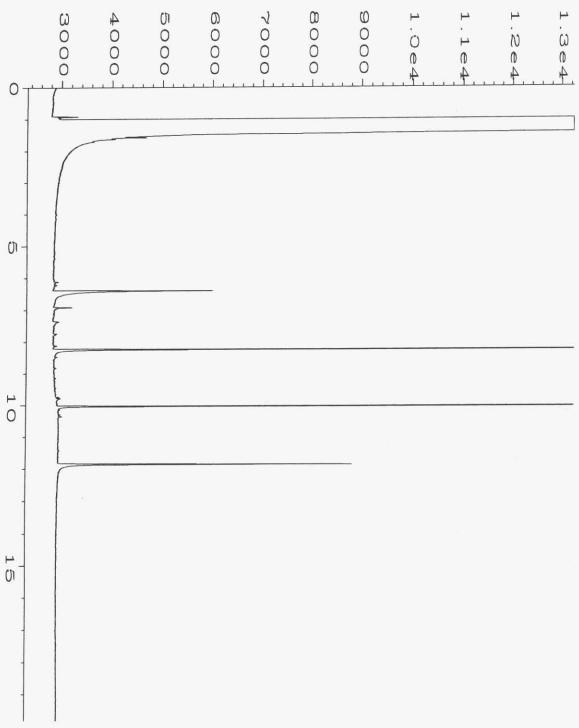
Instrument : GC #6 Vial Number : 11

Sample Name : 04-399 MB Injection Number : 1

Run Time Bar Code: Sequence Line : 7
```

Acquired on : 29 Apr 04 04:18 PM Report Created on: 30 Apr 04 10:40 AM

Instrument Method: TPHDAK.MTH Analysis Method : DEFAULT.MTH



Data File Name : D:\GC6\04-30-04\006F0401.D

Operator : ME Page Number : 1

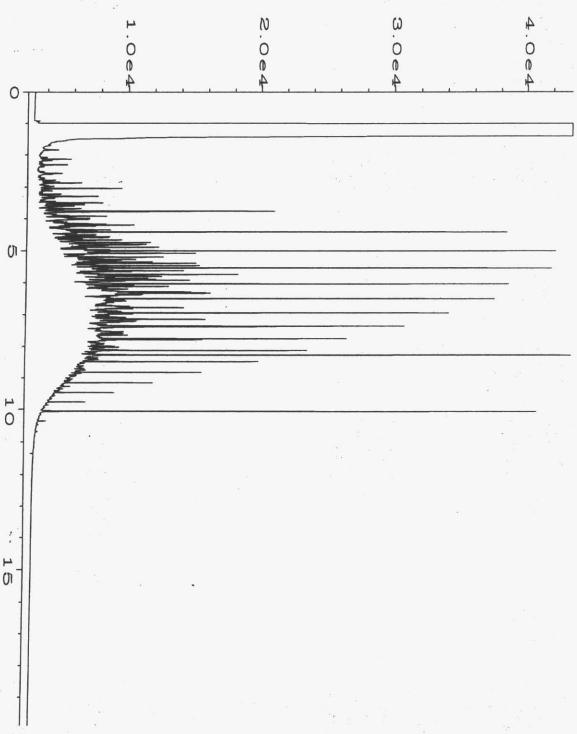
Instrument : GC #6 Vial Number : 6

Sample Name : 04-399 mb sg Injection Number : 1

Run Time Bar Code: Sequence Line : 4

Acquired on : 30 Apr 04 11:25 AM Instrument Method: TPHDA

Acquired on : 30 Apr 04 11:25 AM Instrument Method: TPHDAK.MTH Report Created on: 03 May 04 09:02 AM Analysis Method : DEFAULT.MTH



Data File Name : D:\GC6\04-29-04\002F0201.D

Operator : ME

Instrument : GC #6

Sample Name : 500 WADF 17-43

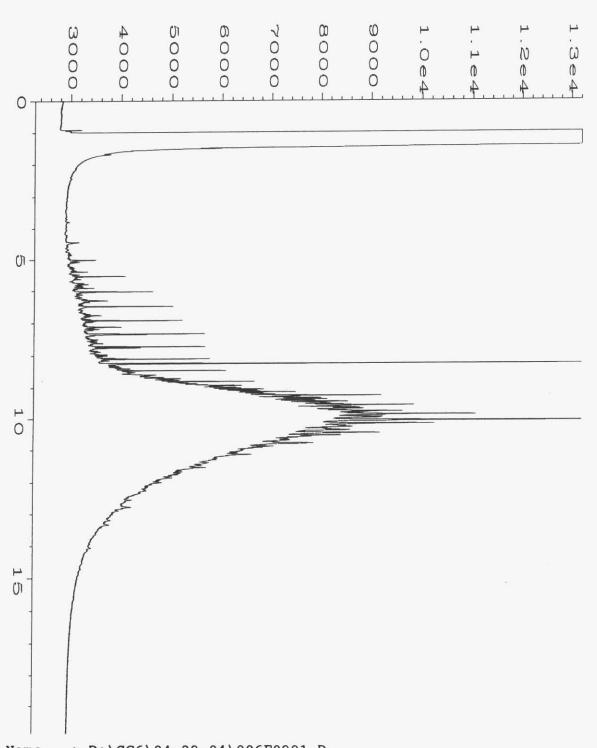
Run Time Bar Code:

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



Data File Name : D:\GC6\04-29-04\006F0901.D

Operator : ME Page Number : 1

Instrument : GC #6 Vial Number : 6

Sample Name : 500 MO 18-16 Injection Number : 1

Run Time Bar Code: Sequence Line : 9

Acquired on : 29 Apr 04 05:35 PM Instrument Method: TPHDAK.MTH Report Created on: 30 Apr 04 10:42 AM Analysis Method : DEFAULT.MTH

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

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☐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 COC No. 46247

Geomotrix

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Dakland, CA 94612

(510)663-4107

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, 1™ Floor Austin, 1™ Floor Fel (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

		SAM	PLES		ARF	RIER	/WA	YBILI	79	21 21	be 17:	lo- 2 2	290	61	DES	TINA			To a	DATE: 4/20/04 colman + Bruya
		S	ample			Pres	erva	ation		Cor	ntaine	rs	Co	onstitu	ents/Me	thod		andli	_	
D;+c	Field Sample Identification	DATE	TIME	Matrix*	HCI	HNO3	H ₂ SO ₄	COLD	FILTRATION*	VOLUME (ml/oz)	TYPE*	NO.	CAN/O-HOL	STrongel			НОГР	RUSH	STANDARD	Bill Geometrix
Dil	h3-20040420	4/20	1330	40				X	u	1470	-	4	X	,		+	-	-	5	
Vinc	547 20010420-36	4/20	(330	AQ				×	4	/L;ter	6	4		X	(4)				×	
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	RELINQUISHED BY	' :	in the same		1	Т		_	T			3				113/00				Cooler Temp:
11H	RIGHATURE PRINTED NAME AUTHORITISM AND HOLLING AND HOL	l M	COM	PANY		9	1/2	ATE	1 11	TIME	-	100	SIGI	NATUI	RE 2.5	 	PRII	NTE	D NAM	



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14 June 2004

Geomatrix Consultants Attn: Ross Steenson

2101 Webster Street, 12th Floor

Oakland, CA 94612

RE: SPI - Arcata Stormwater

Work Order: A405657

TASK 6 STORM WATER
MAY 27, 2004 STORM WATER SAMPLES

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.

Melanie B. Thece

Melanie B. Neece For Sheri L. Speaks

Project Manager



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CHEMICAL EXAMINATION REPORT

Page 1 of 16

Geomatrix Consultants

2101 Webster Street, 12th Floor

Oakland, CA 94612 Attn: Ross Steenson

Order Number A405657 Receipt Date/Time

05/28/2004 13:00

Client Code GEOMAT Report Date: 06/14/04 13:43

Project No: 9329.000/030275

Project ID: SPL Arcete Storm

Project ID: SPI - Arcata Stormwater

Client PO/Reference

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

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. There

Melanie B. Neece For Sheri L. Speaks Project Manager 6/14/2004



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CHEMICAL EXAMINATION REPORT

Page 2 of 16

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 A405657

Receipt Date/Time 05/28/2004 13:00 Client Code **GEOMAT**

Client PO/Reference

		Alpha A	Analytical	Laborato	ries, Inc.			
	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
L-1 (A405657-01)			Sample Ty	pe: 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	*	н	06/04/04		0.030 "	0.020	
Zinc	"	1111	3#3		*	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	*	"	н.:	***	*	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 N	lethods						
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/e	em 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 M	Method 8015 M	odified						
TPH as Diesel	8015DRO	AF40303	06/02/04	06/04/04	1	92 ug/l	50	D-0
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. Thece

Melanie B. Neece For Sheri L. Speaks Project Manager

6/14/2004



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CHEMICAL EXAMINATION REPORT

Page 3 of 16

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 A405657

Receipt Date/Time 05/28/2004 13:00

Client Code **GEOMAT**

Client PO/Reference

		Alpha A	nalytical	l Laborato	ries, Inc.			
	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTI
SL-1 (A405657-01)			Sample Ty	pe: Water		Sampled: 05/27/04 13:1	5	
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	"	n	"	"		108 %	63-150	
SL-2 (A405657-02)			Sample Ty	pe: Water		Sampled: 05/27/04 14:0	0	
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	
Соррег	n	**			"	ND "	0.020	
Nickel		н	,,		*	ND "	0.010	
Lead	*	"	н	*	*	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		*	*		n	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 N	lethods						
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/cn		
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	

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.

Medanis B. Thece



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CHEMICAL EXAMINATION REPORT

Page 4 of 16

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 A405657 Receipt Date/Time 05/28/2004 13:00

Client Code GEOMAT Client PO/Reference

		Alpha A	Analytical	l Laborato	ries, Inc.				
	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		PQL	NOTE
SL-2 (A405657-02)			Sample Ty	pe: Water		Sampled: 05/27/04 14	:00		
TPH as Diesel and Motor Oil by EPA	Method 8015 M	odified				: E			
TPH as Diesel	8015DRO	AF40303	06/02/04	06/04/04	1	280 ug/l		50	D-09
TPH as Motor Oil	11	н	**	*	**	1100 "		100	
Surrogate: 1,4-Bromofluorobenzene	"	"	n	"		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 Ty	pe: 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	"	n	"	"		94.4 %	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.

Melanie B. There



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CHEMICAL EXAMINATION REPORT

Page 5 of 16

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 A405657

Receipt Date/Time 05/28/2004 13:00

Client Code GEOMAT Client PO/Reference

		Alpha A	nalytical	Laborato	ries, Inc.				
	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT		PQL	NOTE
SL-3 (A405657-03)			Sample Ty	pe: Water		Sampled: 05/27/04 1	2:35		
Conventional Chemistry Parameters by	y APHA/EPA N	lethods		•					
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 M	odified							
TPH as Diesel	8015DRO	AF40303	06/02/04	06/04/04	1	2300 ug/l		50	D-09, D-1
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 Ty	pe: Water		Sampled: 05/27/04 1	3:45		
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	i	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		"	н	**	**	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.

Melanis B. Thece



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CHEMICAL EXAMINATION REPORT

Page 6 of 16

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 A405657

Receipt Date/Time 05/28/2004 13:00

Client Code **GEOMAT**

Client PO/Reference

		Alpha A	Analytical	l Laborato	ries, Inc.			
	METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	POL	NOTE
SL-4 (A405657-04)			Sample Ty	pe: Water		Sampled: 05/27/04 13:45	;	
Conventional Chemistry Parameters by	APHA/EPA N	lethods		3:		=		
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	14	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	Aethod 8015 M	odified						
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	n	"	"	#		58.0 % 30	8-120	
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 % 6.	3-150	

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Melanie B. Neece For Sheri L. Speaks Project Manager

6/14/2004



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CHEMICAL EXAMINATION REPORT

Page 7 of 16

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 A405657

Receipt Date/Time 05/28/2004 13:00

Client Code **GEOMAT**

Client PO/Reference

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	1: 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	*							
CS (AF40106-BS1)				Prepared:	06/01/04	Analyzed	1: 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			
lickel	0.203	0.010	**	0.200		102	85-115			
Zinc	0.215	0.020	*	0.200		108	93.4-127			
CS Dup (AF40106-BSD1)				Prepared:	06/01/04	Analyzed	l: 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	
lickel	0.204	0.010	**	0.200		102	85-115	0.491	20	
inc	0.215	0.020	"	0.200		108	93.4-127	0.00	20	
Ouplicate (AF40106-DUP1)	Sou	rce: A405	569-01	Prepared:	06/01/04	Analyzed	1: 06/10/04			
Arsenic	ND	0.0020	mg/l		ND				20	
admium	ND	0.010	**		ND				20	
Copper	ND	0.020	*		ND				20	
lickel	ND	0.010	"		ND				20	
Cinc	ND	0.020	*		ND				20	
Matrix Spike (AF40106-MS1)	Sou	rce: A405	569-01	Prepared:	06/01/04	Analyzed	1: 06/10/04			

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CHEMICAL EXAMINATION REPORT

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Geomatrix Consultants

2101 Webster Street, 12th Floor

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Report Date: 06/14/04 13:43

Project No: 9329.000/030275

Project ID: SPI - Arcata Stormwater

Order Number A405657

Receipt Date/Time 05/28/2004 13:00

Client Code **GEOMAT**

Client PO/Reference

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)	Sou	rce: A405	569-01	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	н	0.200	ND	105	70-130			
Matrix Spike Dup (AF40106-MSD1)	Sou	rce: A405	569-01	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	
Соррег	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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2101 Webster Street, 12th Floor

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Report Date: 06/14/04 13:43

Project No: 9329.000/030275

Project ID: SPI - Arcata Stormwater

Order Number A405657

Receipt Date/Time 05/28/2004 13:00 Client Code GEOMAT

Client PO/Reference

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	& Analyze	ed: 06/01/0	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	н							
Pentachlorophenol	ND	1.0								
Surrogate: Tribromophenol	24.5			25.0		98.0	79-119			
LCS (AF40125-BS1)				Prepared	& Analyze	ed: 06/01/0)4			
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)	Sou	rce: A405	657-01	Prepared	& Analyze	ed: 06/01/0)4			
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)	Sou	rce: A405	657-01	Prepared of	& Analyze	ed: 06/01/0)4			
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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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 A405657

Receipt Date/Time 05/28/2004 13:00

Client Code **GEOMAT**

Client PO/Reference

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)	Sour	ce: A4050	657-01	Prepared	& Analyze	ed: 06/01/	04			
	Sour 4.45	rce: A405 6	657-01 "	Prepared 5.00	& Analyze ND	ed: 06/01/ 89.0	04 70-115	0.450	20	
Matrix Spike Dup (AF40125-MSD1) 2,3,4,5-Tetrachlorophenol Pentachlorophenol					A COLUMN TO SECUL	Service and the service and		0.450 1.75	20 20	

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Melanie B. Neece For Sheri L. Speaks Project Manager

6/14/2004



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CHEMICAL EXAMINATION REPORT

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2101 Webster Street, 12th Floor

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Project No: 9329.000/030275

Project ID: SPI - Arcata Stormwater

Order Number A405657

Receipt Date/Time 05/28/2004 13:00

Client Code **GEOMAT**

Client PO/Reference

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)	Sou	rce: A405	649-01	Prepared	& Analyze	ed: 05/28/0	04			
Specific Conductance (EC)	519	20 u	ımhos/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)	Sou	rce: A405	657-04	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	& Analyze	ed: 06/02/0	04			
Tannins & Lignins	ND	0.10	mg/l							
LCS (AF40210-BS1)				Prepared	& Analyze	ed: 06/02/0	04			
Tannins & Lignins	4.92	0.10	mg/l	5.00		98.4	80-120			
LCS Dup (AF40210-BSD1)				Prepared	& Analyze	ed: 06/02/0	04			
Tannins & Lignins	4.71	0.10	mg/l	5.00		94.2	80-120	4.36	20	
Duplicate (AF40210-DUP1)	Sou	rce: A4056	657-01	Prepared	& Analyze	ed: 06/02/0	04			
Tannins & Lignins	6.90	0.20	mg/l		6.6			4.44	200	
Matrix Spike (AF40210-MS1)	Sou	rce: A4056	657-01	Prepared	& Analyze	ed: 06/02/0	04			
Tannins & Lignins	9.39	0.20	mg/l	3.00	6.6	93.0	80-120			

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CHEMICAL EXAMINATION REPORT

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Project No: 9329.000/030275 Project ID: SPI - Arcata Stormwater

Order Number A405657

Receipt Date/Time 05/28/2004 13:00

Client Code **GEOMAT**

Client PO/Reference

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte(s)	Result	DOI	Y 7:4	Spike	Source Result	%REC	%REC Limits		RPD	ъ.
Allalyte(s)	Result	PQL	Units	Level	Result	70KEC	Lillits	RPD	Limit	Flag
Batch AF40210 - General Preparation										
Matrix Spike Dup (AF40210-MSD1)	Sou	rce: A405	657-01	Prepared a	& Analyz	ed: 06/02/0)4			
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)	Sour	ce: A406	159-03	Prepared:	06/07/04	Analyzed:	06/08/04			
Chemical Oxygen Demand	ND	10	mg/l	•	ND				200	
Matrix Spike (AF40707-MS1)	Sour	ce: A406	159-03	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)	Sour	ce: A406	159-03	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	1		, , , , , , , , , , , , , , , , , , , ,				

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CHEMICAL EXAMINATION REPORT

Page 13 of 16

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 A405657 Receipt Date/Time 05/28/2004 13:00

Client Code GEOMAT Client PO/Reference

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	1									
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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CHEMICAL EXAMINATION REPORT

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Project ID: SPI - Arcata Stormwater

Order Number A405657

Receipt Date/Time 05/28/2004 13:00

Client Code **GEOMAT**

Client PO/Reference

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 a	& Analyze	ed: 06/03/0	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		n	448		84.4	38-120			

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6/14/2004



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CHEMICAL EXAMINATION REPORT

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Project No: 9329.000/030275

Project ID: SPI - Arcata Stormwater

Order Number A405657

Receipt Date/Time 05/28/2004 13:00 Client Code **GEOMAT**

Client PO/Reference

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 G	C									
Blank (AF40308-BLK1)				Prepared	& Analyze	ed: 06/03/0)4			
TPH as Gasoline	ND	50	ug/l							
Surrogate: 1,4-Bromofluorobenzene	26.1		*	23.1		113	63-150			
LCS (AF40308-BS1)				Prepared	& Analyze	ed: 06/03/0)4			
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	& Analyze	ed: 06/03/0)4			
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

Order Number A405657

Receipt Date/Time

Client Code

Client PO/Reference

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.	ΔΙΙ	N-C)F	-C	119	T	חר	VE	E	0	РГ	Λ (MI	7 6)E		IE	CT	FO	D ANIA	LYSIS				
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□ Arcat: 875 Cresce Arcata, CA Phone (707		17770 Cartwright Rd. 11 Ste. 500 S Irvine, CA 92614 Te	A - San Fran 80 Howard S an Francisco el (415) 495- ax (415) 495	t., Ste. , CA 9 7110	200 4105	Ste. 30 Boulde Tel (303	earl Eas	0301	F V	el (208	burn 30 9, ID 83 8) 556- 8) 556-	6811		AT - Mi PO Box Missoul el (406 ax (40	a, MT) 728-	59807 4600	1 S	te. 703 dison	ing Geo	337	Post Rd	i. \$	210	Coma	rix	, 12+4 floor 14617
	OR - Portland 1020 SW Taylor St. Ste. 530 Portland, OR 97205 Tel (503) 228-8616 Fax (503) 228-8631	800 Vinial St., Bldg. A Pittsburgh, PA 15212 Tel (412) 321-2278 Fax (412) 321-2283	TX - Austin 4807 Spicew Bldg. IV, 1st F Austin, TX 7t Tel (512) 338 Fax (512) 33	8759 8-1667			TX - Ho 12337 ste, 23 Ste, 23 Housto Tel (28 Fax (28	Jones 0 n, TX 7 1) 890-	Rd. 77070 -5068		Tel (3	Lavaca 861) 55	avaca ain 1, TX 779 52-8839 53-6115	79	45 Te Te	(- Texai 32 Sum xarkana I (903) x (903)	merhil , TX 7: 794-06	5503 25	1	19203 Ste. 10 Lynnw	Seattle 36th A 00 rood, W 25) 921 25) 92	Ve. W.	36	Klano 510) 6	1, cx =	14612
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June 14, 2004

FAL Project ID: 2633

Ms. Sheri Speaks Alpha Analytical Laboratories, Inc. 208 Mason Street Ukiah, CA 95482 TASK 6 STORM WATER
MAY 27, 2004 STORM WATER SAMPLES

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

Sample Tracking Log

FAL Project ID: 2633

Received on: 06/02/2004

Project Due: 06/17/2004 Storage: R2

FAL Client Client Sample ID Requested Method Sampling Hold Time Sampling Sample ID Project ID Matrix 2633-001-SA A405657 A405657-02 EPA 1613 D/F Aqueous 05/27/2004 02:00 pm 05/27/2005 2633-002-SA A405657 A405657-03 EPA 1613 D/F 05/27/2004 12:35 pm 05/27/2005 2633-003-SA A405657 A405657-04 EPA 1613 D/F Aqueous 05/27/2004 01:45 pm 05/27/2005

FAL Sample ID

Notes

2633-003-SA

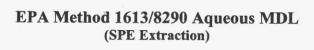
Sample time from bottle label is incorrect. Using time from COC for our purposes.



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





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.



									- (4
FAL ID: 2633-001-MB Client ID: Method Blank		Date Extrac	/ed: NA	10/04	ICal: PCDDFAL1-2-2 GC Column: DB5	26-04 Ac	quired:	11-JUN	-04
Matrix: Aqueous		Amount: 1.0	000 L		Units: pg/L		O TEQ: (.00	
Extraction Batch No.: X02	77				MS/MSD Batch No.:	X0198			
Compound	Conc	DL	Qual	WHO Tox	Compound	Conc	DL	Qual	#Hom
2 7 7 9 7000	-	4 44							
2,3,7,8-TCDD 1,2,3,7,8-PeCDD	-	1.11 2.43		-					
1,2,3,4,7,8-HxCDD	-	3.09		-					
1,2,3,6,7,8-HxCDD	_	3.51			Total Tetra-Dioxins	-			
1,2,3,7,8,9-HxCDD	-	2.92			Total Penta-Dioxins		1.11		0
1,2,3,4,6,7,8-HpCDD	-	3.34		-	Total Hexa-Dioxins	-	2.43		0
OCDD	-	5.02				-	3.51		0
0000		3.02		: : 1	Total Hepta-Dioxins	-	3.34		0
2,3,7,8-TCDF	-	1.01							
1,2,3,7,8-PeCDF	2	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	2	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	Qua	r:					
	% Rec	WC LIMITES	qua						
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	7						
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	3						
13C-1,2,3,4,7,8-HxCDF	97.8	26.0 - 152	2						
13C-1,2,3,6,7,8-HxCDF	104	26.0 - 123	3						
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	3						
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



FAL ID: 2633-001-0PR Client ID: 0PR Matrix: Aqueous Extraction Batch No.: X	0277	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	Notice Batter No. 20176
Compound	CONC	ac 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

Date: 6/14/04



FAL ID: 2633-001-SA Client ID: A405657-02		Date Extrac			ICal: PCDDFAL1-2-	26-04 Acc	quired:	11-JUN-04	4
Matrix: Aqueous		Amount: 0.9			Units: pg/L	UNC	TEQ: 2)5 E	
Extraction Batch No.: X027	7				MS/MSD Batch No.:		/ ILW. 2	.,,	
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	12		
OCDD	3070	-		0.307	Total Hepta-Dioxins	839	-		6 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	2		7
OCDF	247	-		0.0247	Total Hepta-Furans	380	-		3
Internal Standards	% Rec	QC Limits	Qua	ι					
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									
steamp our rogate									
37cl-2,3,7,8-TCDD	89.7	35.0 - 197							

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FAL ID: 2633-002-SA Client ID: A405657-03		Date Extrac				l: PCDDFAL1-2-2 Column: db5	26-04 Acc	quired:	11-JUN	1-04	
Matrix: Aqueous		Amount: 0.9		,		ts: pg/L	NHO	TEQ:	30 5		
Extraction Batch No.: XO2	277					MSD Batch No.:			30.5		
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 1	Tetra-Dioxins	12.1	_		3	
1,2,3,7,8,9-HxCDD	18.7		J	1.87	Total F	Penta-Dioxins	66.4	-	м	7	
1,2,3,4,6,7,8-HpCDD	516	_		5.16	Total	Hexa-Dioxins	260	-		7	
OCDD	3390	-		0.339	Total H	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	23	J	1.32	197						
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	-	М	4	
Internal Standards	% Rec	QC Limits	Qua	ıl							
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/

Date: 6/19/09



FAL ID: 2633-003-SA		Date Extrac		7. 100	ICal: PCDDFAL1-2-	26-04 Acc	uired:	12-JUN	1-04	
Client ID: A405657-04		Date Receiv		04	GC Column: db5					
Matrix: Aqueous		Amount: 0.9	67 L		Units: pg/L	WHO	TEQ:	45.9		
Extraction Batch No.: X02	77				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	-	М	7	
1,2,3,4,6,7,8-HpCDD	891	14		8.91	Total Hexa-Dioxins	419	_	- 11	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	-	М	6	
1,2,3,4,7,8,9-HpCDF	20.6	_	J	0.206	Total Hexa-Furans	387	-	n	6	
OCDF	454	**		0.0454	Total Hepta-Furans	820	- '		4	
Internal Standards	% Rec	QC Limits	Qual	12						
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: (/M/M/

Reviewed by: 6/14/04



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

	Amount	Sample	MS	MSD		
Compound	Spiked	Amount	Amount	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: 6/14/19/

Reviewed by

Date:

000010 of 000013

SUBCONTRACT ORDER

Alpha Analytical Laboratories, Inc. A405657

RECEIVING LABORATORY:

Frontier Analytical Laboratory

SENDING LABORATORY:

208 Mason St.

Released By

Released By

Date

Alpha Analytical Laboratories, Inc.

208 Mason St. Ukiah, CA 95482 Phone: (707)468-0401 Fax: (707)468-5267 Project Manager: Sheri I	L. Speaks		5172 Hillsdale Circle El Dorado, CA 95762 Phone :916-934-0900 Fax: 916-934-0999 Terms: Net 30			
Analysis	Due	V.				
A405657-02 SL-2 [Wat		Expires // 04 14:00 Pacific		Comments	-	
Dioxins Full List	06/14/04 12:00	05/27/05 14:00			-1	
Containers Supplied:					#*	
1L Amber- Unpres. (K)	1L Amber- Unpre	es. (L)				
A405657-03 SL-3 [Wat	er] Sampled 05/27/	04 12:35 Pacific	10			
Dioxins Full List	06/14/04 12:00	05/27/05 12:35				
Containers Supplied:		33,-1132 22,55				
1L Amber- Unpres. (K)	1L Amber- Unpre	e (I)				
Dioxins Full List Containers Supplied: 1L Amber- Unipres. (K)	06/14/04 12:00	05/27/05 13:45				
	1L Amber- Unpre	s. (L)				
Report to State		\				
System Name:		Employed by:_				
User ID:		Sampler;				
System Number:		\				
			,		*:	
6/2/04 Confirme	ed w Sher	istous iso, anal	sample time yze per me	from	COGnot	from both
1	\					

Received By

Date



Frontier Analytical Laboratory

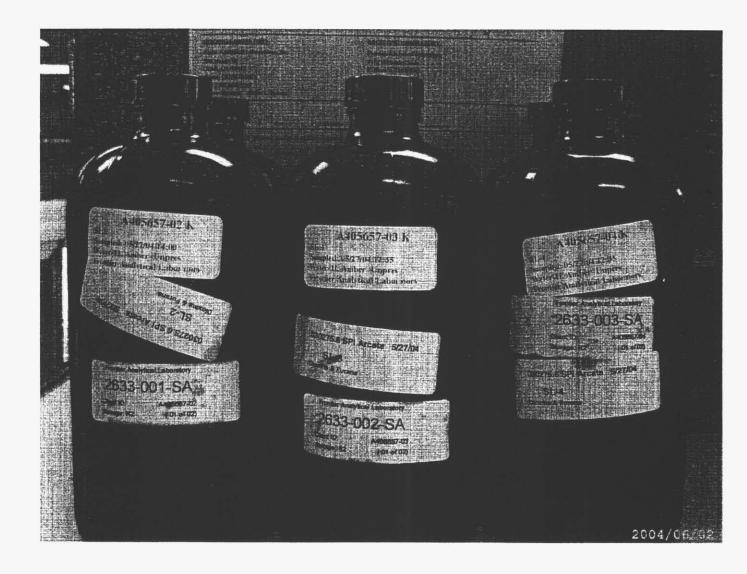
Sample Login Form

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:	
N .	







June 18, 2004

FAL Project ID: 2633 (Addendum)

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

MAY 27,2004 STORM WATER SAMPLES

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

Director of Air Toxics