BENCHMARK
ENVIRONMENTAL
ENGINEERING &
SCIENCE, PLLC

March 18, 2003

Mr. Gregory Sutton, P.E.
New York State Department of Environmental Conservation
270 Michigan Avenue
Buffalo, NY 14202

Re: West Falls Machine –Supplemental Site Investigation

Dear Mr. Sutton:

In accordance with our Supplemental Site Investigation Work Plan (December 2002), Benchmark has completed the investigation activities at the West Falls Machine Company Site. A description of our approach to the work, borehole investigation findings, analytical results and recommendations are presented in the sections below.

BACKGROUND

The Supplemental Site Investigation at West Falls Machine Co. in East Aurora, New York was conducted based on the findings of a Phase II investigation performed in 1998 by Green Environmental. The Phase II investigation was performed in response to an alleged report of metal-bearing wastewater disposal to the site septic system and involved the collection of groundwater samples from 20 temporary monitoring wells located in the vicinity of the septic leach field. Figure 1 shows the locations of the previous groundwater sampling locations. Groundwater samples were analyzed for total chromium. Table 1 summarizes the Phase II groundwater analytical results with a comparison to Groundwater Quality Standards. Chromium was detected in excess of the New York State Groundwater Quality Standard in one groundwater sample from location, SB-12, approximately 13 feet north and 25 feet east of the northwest corner of the rear block garage structure.

This Supplemental Investigation focuses on the characterization of soil and groundwater in the vicinity of the previous sample location SB-12 and the adjacent leach field. This report presents the findings of the Supplemental Site Investigation. Additional details regarding methodology and quality assurance/quality control can be found in the approved December 2002 Work Plan.

BOREHOLE INVESTIGATION APPROACH

Prior to initiating the borehole investigation, an assessment of the existing leach field configuration was made to avoid contact with underground piping and previous boring SB-12 was located. Six boreholes, identified as SB-21 through SB-26 were performed by Benchmark's designated subcontractor, C&W Environmental, using a direct push drill rig (see Figure 1). Boreholes (except SB-26) were located approximately 10 feet from SB-12 in a radial pattern. Borehole SB-26 was located 6-feet from SB-12 due to a physical obstruction.

BOREHOLE FINDINGS

During installation of each borehole, continuous soil samples were collected and described by a Benchmark geologist for: subsurface soil type and composition; visible and/or olfactory evidence of contamination; and moisture conditions. Soil samples were continuously field screened for volatile organic compounds (VOCs) with a photoionization detector (PID) equipped with a 10.6 eV lamp. The PID provides an indication of the presence of volatile organic compounds within the soil matrix. Specifically, the PID is capable of detecting the presence of volatile organic compounds such as petroleum products and solvents with ionization potentials less than 10.6 eV, but cannot identify or quantify specific compounds. No visual evidence of impacted soil material was observed in the six boreholes. Olfactory evidence of impacted soil material was identified in borehole locations SB-21 and SB-26. Similarly, PID scans of soil samples detected the presence of VOCs exceeding above background concentrations in locations SB-21 (i.e., 11 ppm) and SB-26 (i.e., 17 ppm).

At each borehole location, saturated conditions were encountered prior to completion depth. Soil typically encountered included fine sand, silt, clayey silt and various amounts of rounded gravel. Borehole observations are presented in Table 2 along with PID scan readings.

Two soil grab samples were collected from the following intervals in each borehole: 2 to 3 feet below grade surface and 3 to 4 feet below grade surface. These depths correspond approximately with the first two feet below the leach field pipe inverts. The samples were collected using dedicated stainless steel spoons and placed directly into the laboratory provided sample jars, sealed and properly labeled. The samples were placed in a laboratory provided cooler, cooled in the field to 4 °C and transported under chain-of-custody command to Severn Trent Analytical Services, Inc. (STL), a New York State Department of Health ELAP certified laboratory located in Amherst, New York, for analysis. Each soil sample was submitted for analysis of total chromium and lead by Method SW6010B.

In each borehole, soil samples were also collected at 2-foot interval depths (until refusal was encountered) below the 3 to 4 foot interval and archived for future analysis if required. These deeper soil samples were only to be analyzed in the event that one of the shallower (i.e., 2-3' or 3-4') samples exhibited concentrations exceeding the Work Plan Threshold Criteria for Further Investigation. PID readings exceeded 5 ppm in two of the boreholes (i.e. SB-21 at the 2-3' interval and SB-26 at the 4-5' interval), therefore a soil sample was collected at each location from the interval exhibiting the highest PID reading and analyzed for Target Compound List (TCL) VOCs. Temporary monitoring wells were installed in boreholes SB-21 and SB-26 and groundwater samples were subsequently collected for analysis of TCL VOCs.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical reports are presented in Attachment 1 for soil and groundwater sampling. The analytical results from this supplemental investigation are summarized in Tables 3, 4 and 5 and compared with the associated Work Plan Threshold Criteria for Further Investigation, TAGM 4046 values or New York State Groundwater Quality Standards, as appropriate. The correspondence regarding the Threshold Criteria is provided as Attachment 2. A discussion of the results is presented below.

Soil Samples

As indicated in Table 3, inorganic results for soil samples analyzed were below the Criteria for Further Investigation with the exception of SB-21 at the 2 - 3 foot interval (i.e., 24.4 mg/kg total chromium). This value was slightly above the Criteria, and in accordance with the Work Plan, the next lower interval (i.e., 3 - 4 foot) was analyzed in SB-21 and found to have a concentration of 12.4 mg/kg total chromium. Therefore, further analyses at lower depths were not conducted.

Table 4 presents a summary of the two soil samples submitted for TCL VOC analysis. All concentrations were reported as "not detected" by the laboratory.

Groundwater Samples

Table 5 presents a summary of TCL VOC analyses for the groundwater samples collected from SB-21 and SB-26. TCL VOCs were not detected in either sample.

SUMMARY AND CONCLUSIONS

Based upon the soil analytical results, slightly elevated levels of chromium have been detected in subsurface soils at the Site in two locations, WF-12 and SB-21, in the vicinity of the leach field. Based on this Supplemental Site Investigation, it appears that the slightly elevated concentration is confined in its vertical and horizontal extent. At the request of the NYSDEC, additional groundwater samples at SB-21

and SB-26 were collected for analysis of total chromium and will be assessed and reported to the NYSDEC as an addendum to this report.

Target Compound List VOCs were not detected in soil or groundwater at the Site and as such will not be investigated further.

Please do not hesitate to contact us if you have any questions or require additional information.

Sincerely,
Benchmark Environmental Engineering & Science, PLLC

Patrick T. Martin, P.E.
Project Manager

att.

cc: W. Hadley, West Falls Machine Co.
J. Charles, NYSDEC (w/o Attachments)
file: 0067-001-100, CC

TABLES

BENCHMARK

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TABLE 1

SUMMARY OF GROUNDWATER ANALYTICAL RESULTS [1] FROM 1998 PHASE II INVESTIGATION
WEST FALLS MACHINE CO,INC
EAST AURORA, NEW YORK

Parameter	WF#1, 16'	WF#2, 16'	WF#3, 16'	WF#4, 16'	WF#5, 18'	WF#6, 18'	WF#7, 18'	WF#8, 15'	WF#9, 14'	WF#10, 14'	NYSDEC Class "GA" Standard [2]
Inorganics - mg/L											
Chromium	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026	0.05

Parameter	WF#11, 15'	WF#12, 15'	WF#13, 16'	WF#14, 16'	WF#15, 13'	WF#16, 14'	WF#17, 15'	WF#18, 15'	WF#19, 15'	WF#20, 15'	
Inorganics - mg/L											
Chromium	<0.026	**1.38**	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026	0.05

Notes:

1. Samples were collected by Green Environmental on June 4 & 5, 1998 from direct push boreholes & were analyzed by Trans-Enviro Analytical Services, Inc.
2. NYSDEC Part 703 Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations., issued October 1993.
3. Bold Value indicates an exceedance of NYSDEC Class "GA" Groundwater Quality Standard..

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TABLE 2

SUMMARY OF SOIL DESCRIPTIONS
WEST FALLS MACHINE CO,INC
EAST AURORA, NEW YORK

Location	Depth (fbgs)	Peak PID Scan (ppm)	Soil Sample I.D.	Depth (fbgs) and Soil Description
SB-21	0.0 - 4.0	11	SB-21 (2' - 3'),(3'-4')	21" Recovery, Fine sand w/gravel and some silt-Moist. Petroleum type odor detected (highest PID reading- 11 ppm) . Collected a sample for VOC's and Cr, Pb at 2-3'. Cr and Pb collected at 3-4'. Matrix Spike & Matrix Spike Duplicate Collected at 2'-3' for
	4.0-8.0	3	Archive sample collected from 4-6', 6-8'.	35" Recovery, Grey/Brown silt material with some round gravel, Moist to wet at bottom of core
	8.0-12.0	0	Archive sample collected from 8-10', 10-12'.	44" Recovery, Brown sandy silt w/ some small round gravel-Soft, Wet from 0-20".
	12.0-14.0	0	Archive sample collected from 12-14'.	2.5' Recovery, Fine brown sand w/ some round gravel. Soft. Temporary Monitoring well set at 14' w/ 10' screen.
SB-22	0.0 - 4.0	0	SB-22 (2' - 3'),(3'-4')	30" Recovery, 0-6" Coarse gravel and round stone-Dry. 6"-30" Brown fine sand w/some shale pieces and gravel-Moist. Collected samples for Cr and Pb at 2-3' and 3-4'. Matrix Spike & Matrix Spike Duplicate sample collected at 3-4' interval.
	4.0-8.0	0	Archive sample collected from 4-6', 6-8'.	30" Recovery, Grey silt w/ fine sand, some round stone, Increasing sand content at bottom of core-Soft, Moist to Wet.
	8.0-12.0	0	Archive sample collected from 8-10', 10-12'.	36" Recovery, Uniform fine to med size brown sand. Saturated at 8-9', Soft.

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TABLE 2

SUMMARY OF SOIL DESCRIPTIONS
WEST FALLS MACHINE CO,INC
EAST AURORA, NEW YORK

Location	Depth (fbgs)	Peak PID Scan (ppm)	Soil Sample I.D.	Depth (fbgs) and Soil Description
SB-23	0.0 - 4.0	0	SB-23 (2' - 3'),(3'-4')	39" Recovery, 0-2' coarse gravel and stone 1/2"-1" diameter with fine sand-Dry.
	4.0-8.0	0	Archive sample collected from 4-6', 6-8'.	36" Recovery, 0-23"- Fine brown sand w/ gravel & round stone-Moist. Wet @ 24". 24-36" Brown clayey silt w/small angular gravel.
SB-24	0.0 - 4.0	0	SB-24 (2' - 3'),(3'-4')	4' Recovery, 0-4' Fine brown sand w/ gravel pieces 1/8"-1/2" diameter. Dry to Moist at bottom of core.
	4.0-8.0	0	Archive sample collected from 4-6', 6-8'.	33" Recovery, 0-17" Uniform brown sand w/ gravel pieces, Wet at 17". 17-19"-Black stained clay/silt w/some organic woody debris. Slight odor.
	8.0-12.0	0	Archive sample collected from 8-10', 10-12'.	4' Recovery, 0-2' Grey clayey silt w/ fine sand, Wet. 2-4' Angular gravel with sandy silt. Very wet.
SB-25	0.0 - 4.0	0	SB-23 (2' - 3'),(3'-4')	3' Recovery, 0-12" Crushed stone, and gravel w/ some fine sand-Dry. 12-24"- Fine brown sand w/ round stone 1/8" diameter. 20-36"- Mixture of sand, clayey silt and round stone 1/2 " diameter. Slightly Moist.
	4.0-8.0	0	Achieve sample collected from 4-6', 6-8'.	31" Recovery, 0-17" Brown sand and gravel, black staining at 17". 17"-31" -Grey clayey silt w/some shale fragments- Moist.
	8.0-12.0	0	Archive sample collected from 8-10', 10-12'.	3.5' Recovery, 0-17" Grey clayey silt. 17"-42"- Brown silty sand w/ some small pieces of gravel. Very wet at 24".

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TABLE 2

SUMMARY OF SOIL DESCRIPTIONS
WEST FALLS MACHINE CO,INC
EAST AURORA, NEW YORK

Location	Depth (fbgs)	Peak PID Scan (ppm)	Soil Sample I.D.	Depth (fbgs) and Soil Description
SB-26	0.0 - 4.0	0	SB-26 (2' - 3'),(3'-4')	3' Recovery, 0-1' Crushed stone and gravel-Dry, 1-3' Unsorted brown sand and gravel, pieces of gravel 1/2" diameter, some layers of silty clay- Moist.
	4.0-8.0	17ppm @ 4.5'	Archive sample collected from 4-6', 6-8'.	3' Recovery, 0-8" Brown sand and gravel, 8-12" grey sand and gravel, moist. Petroleum- type odor (highest PID reading- 1 ppm). VOC's sample collected at 4.5'. 12"-36" Grey clayey silt some small round stone- Firm, Moist.
	8.0-12.0	0	Archive sample collected from 8-10', 10-12'.	4' Recovery, 0-1' grey clayey silt and fine sand, 1-4' Brown fine uniform sand, Very wet. Temporary Monitoring well set at 12' w/ 10' screen.

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TABLE 3
SUMMARY OF SOIL ANALYTICAL RESULTS
WEST FALLS MACHINE CO,INC
EAST AURORA, NEW YORK

Boring Number	SB-21		SB-22		SB-23		SB-24		SB-25		SB-26		Work Plan Threshold Criteria for Further Investigation (mg/kg)
Depth below Grade	2- 3'	3- 4'	2- 3'	3- 4'	2- 3'	3- 4'	2- 3'	3- 4'	2- 3'	3- 4'	2- 3'	3- 4'	
Inorganic Parameter, mg/kg													
Chromium	24.4 (1)	12.4	19.1	16.8	8.37	6.53	8.74	10.6	13.3	16.9	15.7	12.5	20
Lead	14.3	20.5	11.7	12.4	10.6	8.41	12.7	14.8	12.9	17.6	12.3	16.2	400

Notes:

1. Value exceeds 20 mg/kg threshold, therfefore next lower interval (3 -4' bgs) analyzed per Work Plan.

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TABLE 4
SUMMARY OF SOIL ANALYTICAL RESULTS
WEST FALLS MACHINE CO,INC

EAST AURORA, NEW YORK

Boring Number/ Depth below Grade	SB-21 2- 3'	SB-26 4- 5'	Rec. Soil Cleanup Objective (mg/kg) [1]
Volatile Organic Compounds, mg/kg			
Acetone	<4	<4	0.2
Acrolein	<2	<2	
Acrylonitrile	<2	<2	
Benzene	<0.2	<0.2	0.06
Bromoform	<0.2	<0.2	-
Bromomethane	<1.2	<1.2	-
2-Butanone	<1	<1	0.3
Carbon Disulfide	<0.2	<0.2	2.7
Carbon Tetrachloride	<0.2	<0.2	0.6
Chlorobenzene	<0.2	<0.2	1.7
Chlorodibromomethane	<0.2	<0.2	
Chloroethane	<0.2	<0.2	1.9
Chloroform	<0.2	<0.2	3
Chloromethane	<0.2	<0.2	-
1,2-Dichlorobenzene	<0.2	<0.2	7.9
1,3-Dichlorobenzene	<0.2	<0.2	1.6
1,4-Dichlorobenzene	<0.2	<0.2	8.5
Dichlorobromomethane	<0.2	<0.2	
1,1-Dichloroethane	<0.2	<0.2	0.2
1,2-Dichloroethane	<0.2	<0.2	0.1
1,1-Dichloroethene	<0.2	<0.2	0.4
Ethylene Dibromide	<0.2	<0.2	
1,2-Dibromo-3-chloropropane	<1.0	<1.0	-
cis-1,2-Dichloroethene	<0.2	<0.2	-
trans-1,2-Dichloroethene	<0.2	<0.2	0.3
1,2-Dichloropropane	<0.2	<0.2	-
cis-1,3-Dichloropropene	<0.2	<0.2	0.3
trans-1,3-Dichloropropene	<0.2	<0.2	0.3
Ethylbenzene	<0.2	<0.2	5.5
2-Hexanone	<1	<1	-
Methylene Chloride	<4	<4	0.1
4-Methyl-2-Pentanone	<1	<1	1
Styrene	<0.2	<0.2	-
1,1,1,2-Tetrachloroethane	<0.2	<0.2	0.6
1,1,2,2-Tetrachloroethane	<0.2	<0.2	0.6
Tetrachloroethene	<0.2	<0.2	1.4
Toluene	<0.2	<0.2	1.5
1,1,1-Trichloroethane	<0.2	<0.2	0.8
1,1,2-Trichloroethane	<0.2	<0.2	-
Trichloroethene	<0.2	<0.2	0.7
Trichlorofluoromethane	<0.2	<0.2	-
Vinyl Chloride	<0.2	<0.2	0.2
m,p-Xylenes	<0.2	<0.2	
o-Xylene	<0.2	<0.2	
Isopropylbenzene	<0.2	<0.2	5

Notes:
1. NYSDEC Technical and Administrative Guidance Memorandum (TAGM #4046), issued January 1994.

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TABLE 5
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
WEST FALLS MACHINE CO,INC

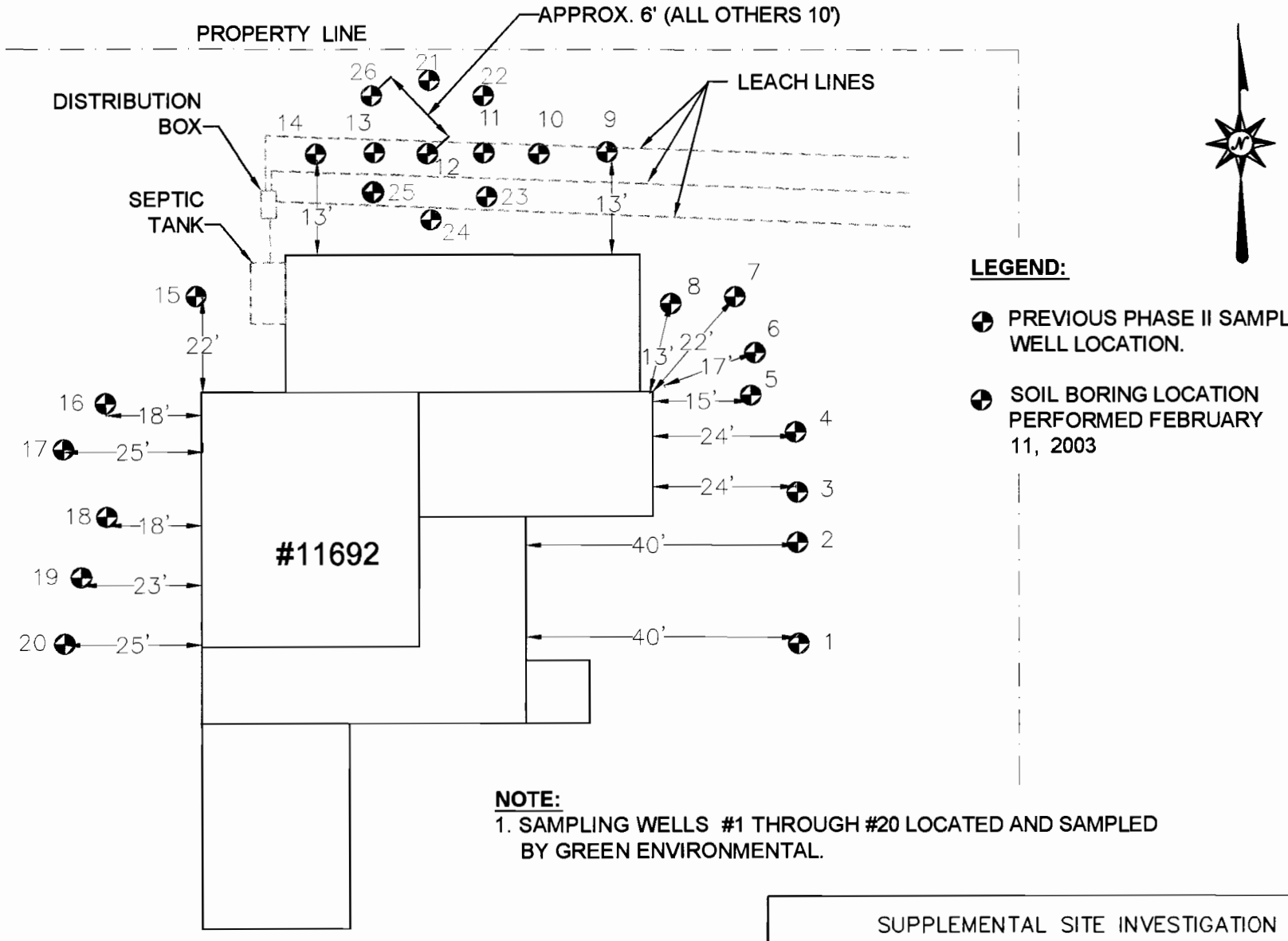
EAST AURORA, NEW YORK

Parameter	SB-21	SB-26	NYSDEC Class "GA" Standards & Guidance Values [1]
Volatile Organic Compounds, ug/L			
Acetone	<64	<12.7	50*
Acrolein	<26	<5.1	5
Acrylonitrile	<14	<2.1	5
Benzene	<2.5	<0.5	1
Bromoform	<3.5	<0.7	50*
Bromomethane	<5	<1	5
2-Butanone	<16	<3.2	-
Carbon Disulfide	<4.5	<0.9	-
Carbon Tetrachloride	<3.5	<0.7	5
Chlorobenzene	<3	<0.6	5
Chlorodibromomethane	<2	<0.4	-
Chloroethane	<4.5	<0.9	5
Chloroform	<2	<0.4	7
Chloromethane	<7	<1.4	5
1,2-Dichlorobenzene	<4	<0.8	5
1,3-Dichlorobenzene	<9	<1.8	5
1,4-Dichlorobenzene	<8	<1.6	5
Dichlorobromomethane	<2	<0.4	5
1,1-Dichloroethane	<2.5	<0.5	5
1,2-Dichloroethane	<2	<0.4	0.6
1,1-Dichloroethene	<3.5	<0.7	5
Ethylene Dibromide	<2	<0.4	6×10^{-4}
1,2-Dibromo-3-chloropropane	<50	<10	0.04
cis-1,2-Dichloroethene	<3	<0.6	5
trans-1,2-Dichloroethene	<2.5	<0.5	5
1,2-Dichloropropane	<3.5	<0.7	1
cis-1,3-Dichloropropene	<1.5	<0.3	5
trans-1,3-Dichloropropene	<3	<0.6	5
Ethylbenzene	<2.5	<0.5	5
2-Hexanone	<6.5	<1.3	50*
Methylene Chloride	<12	<2.3	5
4-Methyl-2-Pentanone	<7.5	<1.5	-
Styrene	<3	<0.6	5
1,1,1,2-Tetrachloroethane	<3	<0.6	5
1,1,2,2-Tetrachloroethane	<4	<0.8	5
Tetrachloroethene	<2.5	<0.5	5
Toluene	<5	<1	5
1,1,1-Trichloroethane	<4	<0.8	5
1,1,2-Trichloroethane	<3	<0.6	1
Trichloroethene	<5	<1	5
Trichlorofluoromethane	<9	<1.8	5
Vinyl Chloride	<4.5	<0.9	2
m,p-Xylenes	<5.5	<1.1	5
o-Xylene	<2.5	<0.5	5
Isopropylbenzene	-	-	5

Notes:

1. NYSDEC Part 703 Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitation

FIGURES



LEGEND:

- PREVIOUS PHASE II SAMPLING WELL LOCATION.
- SOIL BORING LOCATION PERFORMED FEBRUARY 11, 2003

NOTE:

1. SAMPLING WELLS #1 THROUGH #20 LOCATED AND SAMPLED BY GREEN ENVIRONMENTAL.

SITE LAYOUT

NOT TO SCALE

SUPPLEMENTAL SITE INVESTIGATION
WEST FALLS MACHINE SHOP
11692 EAST MAIN STREET
EAST AURORA, NEW YORK

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC	Project No. 0067-001-100	Figure 1

DATE: March 2003
DRAFTED BY: JRM
FILEPATH: f:\benchmark\cad\west falls machine\well location plan

ATTACHMENT 1

ANALYTICAL DATA REPORTS

BENCHMARK

ANALYTICAL DATA QUALITY DELIVERABLE

PREPARED BY
PSC ANALYTICAL SERVICES
READING, PENNSYLVANIA

PSC WORK ORDER R03020260

FOR
C & W Environmental

CLIENT CONTACT: Jim Wienher

Data Deliverable Reviewed by: John T. Rowe Date 3/14/03

PSC Analytical Services Data Deliverables Package
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PSC ANALYTICAL SERVICES

4418 Pottsville Pike
Reading, PA 19605
(610) 921-8833

Title Page/Sample Key
(Field ID v. Laboratory ID)

ClientSampID	SampID
SB-21 3-4'	R03020260-01
SB-21 2-3'	R03020260-02
SB-22 2-3'	R03020260-08
SB-22 3-4'	R03020260-09
SB-23 2-3'	R03020260-14
SB-23 3-4'	R03020260-15
SB-24 2-3'	R03020260-18
SB-24 3-4'	R03020260-19
SB-25 2-3'	R03020260-24
SB-25 3-4'	R03020260-25
SB-26 2-3'	R03020260-30
SB-26 3-4'	R03020260-31

PSC ANALYTICAL SERVICES

4418 Pottsville Pike
Reading, PA 19605
(610) 921-8833

Field Chain-of-Custody

PSC Analytical Services
4418 Pottsville Pike
Reading, PA 19605
phone: (610) 921-8833
fax: (610) 921-9667 or 921-8407

CHAIN OF CUSTODY

PSC Work Order # R0302260
Page 1 of 6

Report Results To:
PO # Quote #
Name PAT Martin
Company Benchmark Environmental Engineering & Sci., PLLC
Mailing Address 50 Fountain PLAZA Suite 1350
City BUFFALO State NY. ZIP 14202
Telephone # 716-856-0599 Fax # 716-856-0583

JOB ID:

Submit Invoice To:
Name
Company SAME
Mailing Address
City State ZIP
Telephone # Fax #
Credit Card Info (include exp. date)

Sampled by: RLO Sampling Location (Specify State): ~~Upstates~~ NY
Due Date: (Rush TAT requires Lab approval)

REPORTING REQUIREMENTS (Circle all that apply)
Full Data Package Reduced Deliverables Package Electronic Data Deliverables
UST NPDES MIPP RCRA Stormwater DEP (PWS # ASP CLP Category B Deliverables Package)

ANALYSIS REQUESTED
Use attachments if necessary.
Please specify method requirements.

Preservatives Key:
A = Ascorbic Acid
C = HCl N2 = NaS2O3
H = HNO3 S = H2SO4
I = Ice Z = ZnAcetate
N = NaOH X = None
O = Other:

Preservatives (See above key, list all that apply)
Type (P=Plastic G=Glass A=Air)
Container Volume (Liter etc)
Number of Containers

ITEM #	SAMPLE DESCRIPTION (ID must match container labels)	Final Air Volume (L or min)	Matrix Type	Sampling Info Date	Sampling Info Time	Tot Cr, Pb	TCL VOC's PCB		Archive Sample until Further Instructions*
1	SB-21 3-4'		Soil	2/11/03	0900	X			
2	SB-21 - 2-3'		↓	↓	0900	X	X		
3	SB-21 - 4-6' *		↓	↓	0900				X
4	SB-21 - 6-8' *		↓	↓	0900				X
5	SB-21 - 8-10' *		↓	↓	0900				X
6	SB-21 - 10-12' *		↓	↓	0900				X
7	SB-21 - 12-14' *		↓	↓	0900				X
8	SB-21 MS/MSD 2-3' *			↓	0900		X		
9									
10									

	Date	Time		Date	Time		Date	Time
(1) Relinquished by: [signature]	2-12-02	0800	(2) Received by:			(3) Relinquished by:		
(4) Received by:			(5) Relinquished by:			(6) Received at Lab: TMA	2/13/03	9:45

Method of Delivery: UPS (FED-EX) PAS Courier Client US Mail Other

PSC Analytical Services
4418 Pottsville Pike
Reading, PA 19605
phone: (610) 921-8833
fax: (610) 921-9667 or 921-8407

CHAIN OF CUSTODY

PSC Work Order # 2030260
Page 2 of 6

Report Results To:
PO #   Quote #
Name: PAT Martin
Company: BenchMARK Env Eng & Sci, PLLC
Mailing Address: 50 Fountain Plaza Suite 1350
City: BUFFALO   State: NY   ZIP: 14202
Telephone #: 716-856-0599   Fax #: 716-856-0583

Submit Invoice To:
Name
Company: SAME
Mailing Address
City   State   ZIP
Telephone #   Fax #
Credit Card Info (include exp. date)

Sampled by: RLO   Sampling Location (Specify State): NY
Due Date: (Rush TAT requires Lab approval)

REPORTING REQUIREMENTS (Circle all that apply)
Full Data Package   Reduced Deliverables Package   Electronic Data Deliverables
UST   NPDES   MIPP   RCRA   Stormwater   DEP (PWS # ASPCLP Category B Deliverables Package)

JOB ID:

ANALYSIS REQUESTED
Use attachments if necessary.
Please specify method requirements.

Preservatives Key:
A = Ascorbic Acid
C = HCl   N2 = NaS2O3
H = HNO3   S = H2SO4
I = Ice   Z = ZnAcetate
N = NaOH   X = None
O = Other:

ITEM #	SAMPLE DESCRIPTION (ID must match container labels)	Final Air Volume (L or min)	Matrix Type	Sampling Info Date	Sampling Info Time	Total Cl, Pb,	Archive Sample Until Further Instructions *
	Preservatives (See above key) (list all that apply)					X	X
	Type (P=Plastic G=Glass A=Air)					G	G
	Container Volume (Liter, etc)						
	Number of Containers					3	4
1	SB-22- 2-3'		Soil	2/11/03	0945	X	
2	SB-22- 3-4'		↓	↓	0945	X	
3	SB-22- 4-6' *				0945		X
4	SB-22 - 6-8' *				0945		X
5	SB-22- 8-10' *				0945		X
6	SB-22 - 10-12' *				0945		X
7	MS/MSD-SB-22 3-4				0945	X	
8							
9							
10							

	Date	Time		Date	Time		Date	Time
(1) Relinquished by: [signature]	2-12-02	0800	(2) Received by:			(3) Relinquished by:		
(4) Received by:			(5) Relinquished by:			(6) Received at Lab: MAH	2/13/03	9:45

Method of Delivery: UPS   FED-EX (circled)   PAS Courier   Client   US Mail   Other

PSC Analytical Services
4418 Pottsville Pike
Reading, PA 19605
phone: (610) 921-8833
fax: (610) 921-9667 or 921-8407

CHAIN OF CUSTODY

PSC Work Order # R0B0020led

Report Results To:
PO # Quote #
Name: PAT Martin
Company: Benchmark Env Eng & Sci PLLC
Mailing Address: 50 Fountain Plaza Suite 1350
City: Buffalo State: NY ZIP: 14202
Telephone # Fax #

Submit Invoice To:
Name
Company: SAME
Mailing Address
City State ZIP
Telephone # Fax #
Credit Card Info (include exp. date)

JOB ID:

Sampled by: RLD Sampling Location (Specify State): NY
Due Date: (Rush TAT requires Lab approval)

REPORTING REQUIREMENTS (Circle all that apply)
Full Data Package Reduced Deliverables Package Electronic Data Deliverables
UST NPDES MIPP RCRA Stormwater DEP (PWS #) ASP CLP Category B Deliverables Package

ANALYSIS REQUESTED
Use attachments if necessary.
Please specify method requirements.

Preservatives Key:
A = Ascorbic Acid
C = HCl N2 = NaS2O3
H = HNO3 S = H2SO4
I = Ice Z = ZnAcetate
N = NaOH X = None
O = Other:

ITEM #	SAMPLE DESCRIPTION (ID must match container labels)	Final Air Volume (L or min)	Matrix Type	Date	Time	TOT Cr, Pb	Archive Sample until Further Instructions
	Preservatives (See above Key) (list all that apply)					X	X
	Type (P=Plastic, G=Glass, A=Air)					G	G
	Container Volume (Liter, etc)					X	X
	Number of Containers					4	7
1	SB-23-2-3'		SOIL	2/11/03	1015	X	
2	SB-23-3-4'		↓	↓	1015	X	
3	SB-23-4-6' *				1015		X
4	SB-23-6-8' *				1015		X
5	SB-24-2-3'				1045	X	
6	SB-24-3-4' *				1045	X	
7	SB-24-4-6' *				1045		X
8	SB-24-6-8' *				1045		X
9	SB-24-8-10' *				1045		X
10	SB-24-10-12' *				1045		X

(1) Relinquished by: [signature]	Date 2-12-02	Time 0800	(2) Received by:	Date	Time	(3) Relinquished by:	Date	Time
(4) Received by:	Date	Time	(5) Relinquished by:	Date	Time	(6) Received at Lab: [signature]	Date 2/13/03	Time 9:45

Method of Delivery: UPS FED-EX (circled) PAS Courier Client US Mail Other

PSC Analytical Services
4418 Pottsville Pike
Reading, PA 19605
phone: (610) 921-8833
fax: (610) 921-9667 or 921-8407

CHAIN OF CUSTODY

PSC Work Order # P0300260
Page 4 of 6

Report Results To:
PO #   Quote #
Name: PAT Martin
Company: Benchmark Env Eng & Sci, PLLC
Mailing Address: 50 Fountain Plaza Suite 1350
City: Buffalo State: NY ZIP: 14202
Telephone #   Fax #

Submit Invoice To:
Name / Company: SAME
Mailing Address
City State ZIP
Telephone # Fax #
Credit Card Info (include exp. date)

JOB ID:

Sampled by: RLD   Sampling Location (Specify State): NY
Due Date: (Rush TAT requires Lab approval)

REPORTING REQUIREMENTS (Circle all that apply)
Full Data Package   Reduced Deliverables Package   Electronic Data Deliverables
ASP CLP Category B Deliverables Package
UST NPDES MIPP RCRA Stormwater DEP (PWS #)

ANALYSIS REQUESTED
Use attachments if necessary.
Please specify method requirements.

Analysis columns: TOT or & Pb; Archive Sample until further instructions *

Preservatives Key:
A = Ascorbic Acid
C = HCl   N2 = NaS2O3
H = HNO3   S = H2SO4
I = Ice   Z = ZnAcetate
N = NaOH   X = None
O = Other:

Preservatives (See above key, list all that apply); Type (P=Plastic, G=Glass, A=Air); Container Volume (liter, etc); Number of Containers

ITEM #	SAMPLE DESCRIPTION (ID must match container labels)	Final Air Volume (L or min)	Matrix Type	Date	Time	TOT or & Pb	Archive Sample until further instructions *
1	SB-25-2-3'		SOIL	2/11/03	1105	X	
2	SB-25-3-4'		↓	↓	1105	X	
3	SB-25-4-6' *		↓	↓	1105		X
4	SB-25-6-8' *		↓	↓	1105		X
5	SB-25-8-10' *		↓	↓	1105		X
6	SB-25-10-12' *		↓	↓	1105		X
7							
8							
9							
10							

	Date	Time		Date	Time		Date	Time
(1) Relinquished by: [signature]	2-12-02	0800	(2) Received by:			(3) Relinquished by:		
(4) Received by:			(5) Relinquished by:			(6) Received at Lab: [signature]	2/13/03	9:45

Method of Delivery: UPS (FED-EX) PAS Courier Client US Mail Other

PSC Analytical Services
4418 Pottsville Pike
Reading, PA 19605
phone: (610) 921-8833
fax: (610) 921-9667 or 921-8407

CHAIN OF CUSTODY

PSC Work Order # R0800460
Page 5 of 6

JOB ID: _____

Report Results To:	PO #	Quote #
	Name	PAT Martin
	Company	Benchmark Env Eng & Sci, PLLC
	Mailing Address	50 Fountain Plaza Suite 1350
	City	BUFFALO State NY ZIP 14202
	Telephone #	Fax #
Submit Invoice To:	Name	
	Company	SAME
	Mailing Address	
	City	State ZIP
	Telephone #	Fax #
	Credit Card Info (include exp. date)	

Sampled by: RLO Sampling Location (Specify State): NY
Due Date: (Rush TAT requires Lab approval)

REPORTING REQUIREMENTS (Circle all that apply)

Full Data Package Reduced Deliverables Package Electronic Data Deliverables
UST NPDES MIPP RCRA Stormwater DEP (PWS #) ASP CLP Category B Deliverables Package

ANALYSIS REQUESTED
Use attachments if necessary.
Please specify method requirements.

Preservatives Key:
A = Ascorbic Acid
C = HCl N2 = NaS2O3
H = HNO3 S = H2SO4
I = Ice Z = ZnAcetate
N = NaOH X = None
O = Other: _____

ITEM #	SAMPLE DESCRIPTION (ID must match container labels)	Final Air Volume (L or min)	Matrix Type	Sampling Info Date	Sampling Info Time	Tot. cr, Pb	Archive Sample until Further Instructions *	TCL VOCs 8260B											
	Preservatives (see above key, list all that apply)					X	X												
	Type (P=Plastic, G=Glass, A=Air)					G	G												
	Container Volume (Liter etc)					4oz	4oz												
	Number of Containers					2	1	1											
1	SB-26-2-3'		Soil	2/11/03	1145	X													
2	SB-26-3-4'				1145	X													
3	SB-26-4-6' *				1145		X												
4	SB-26-6-8' *				1145		X												
5	SB-26-8-10' *				1145		X												
6	SB-26-10-12' *				1145		X												
7	SB-26-4-5'				1145			X											
8																			
9																			
10																			

(1) Relinquished by:	Date	Time	(2) Received by:	Date	Time	(3) Relinquished by:	Date	Time
	2-12-03	0800						
(4) Received by:	Date	Time	(5) Relinquished by:	Date	Time	(6) Received at Lab:	Date	Time
							2/13/03	9:45

Method of Delivery: UPS FED-EX PAS Courier Client US Mail Other _____

PSC Analytical Services
4418 Pottsville Pike
Reading, PA 19605
phone: (610) 921-8833
fax: (610) 921-9667 or 921-8407

CHAIN OF CUSTODY

PSC Work Order # R0300260
Page 6 of 6

JOB ID: ______

Report Results To:
PO #   Quote #
Name: PAT Martin
Company: Benchmark Env Eng & Sc., PLLC
Mailing Address: 50 Fountain Plaza Suite 1350
City: Buffalo State: NY ZIP: 14202
Telephone #   Fax #

Submit Invoice To:
Name
Company: SAME
Mailing Address
City State ZIP
Telephone # Fax #
Credit Card Info (include exp. date)

Sampled by: RLD Sampling Location (Specify State): NY
Due Date: (Rush TAT requires Lab approval)

REPORTING REQUIREMENTS (Circle all that apply)
Full Data Package Reduced Deliverables Package Electronic Data Deliverables
UST NPDES MIPP RCRA Stormwater DEP (PWS # ASPCLP Category B Deliverables Package)

ANALYSIS REQUESTED
Use attachments if necessary.
Please specify method requirements.

Analysis column 1: TCL VOCs 8260B

Preservatives Key:
A = Ascorbic Acid
C = HCl N2 = NaS2O3
H = HNO3 S = H2SO4
I = Ice Z = ZnAcetate
N = NaOH X = None
O = Other: ______

	Analysis 1
Preservatives (see above Key; list all that apply)	C
Type (P=Plastic, G=Glass, A=Air)	G
Container Volume (Liters, etc)	40
Number of Containers	2

ITEM #	SAMPLE DESCRIPTION (ID must match container labels)	Final Air Volume (L or min)	Matrix Type	Sampling Info Date	Sampling Info Time	TCL VOCs 8260B
1	SB-21		water	2/11/03	1346	X
2	SB-26		↓	↓	1412	X
3	SB-26 /MS-MSD		↓	↓	1412	X
4	Trip Blank		↓	↓	1600	X
5						
6						
7						
8						
9						
10						

	Date	Time		Date	Time		Date	Time
(1) Relinquished by: [signature]	2/12/03	0800	(2) Received by:			(3) Relinquished by:		
(4) Received by:			(5) Relinquished by:			(6) Received at Lab: MHA	2/13/03	9:45

Method of Delivery: UPS (FED-EX) PAS Courier Client US Mail Other ______

PSC ANALYTICAL SERVICES

4418 Pottsville Pike
Reading, PA 19605
(610) 921-8833

Laboratory Chronicle

ClientSampID	SampID	CollectionDate	DateReceived	TestNo	Analyte	PrepDate	AnalDate
SB-22 2-3'	R03020260-08A	2/11/03	2/13/03	SW6010B	Chromium	2/15/03	2/19/03
SB-24 2-3'	R03020260-18A	2/11/03	2/13/03	SW6010B	Chromium	2/15/03	2/19/03
SB-23 2-3'	R03020260-14A	2/11/03	2/13/03	SW6010B	Chromium	2/15/03	2/19/03
SB-24 3-4'	R03020260-19A	2/11/03	2/13/03	SW6010B	Chromium	2/15/03	2/19/03
SB-22 3-4'	R03020260-09A	2/11/03	2/13/03	SW6010B	Chromium	2/15/03	2/19/03
SB-25 2-3'	R03020260-24A	2/11/03	2/13/03	SW6010B	Chromium	2/15/03	2/19/03
SB-23 3-4'	R03020260-15A	2/11/03	2/13/03	SW6010B	Chromium	2/15/03	2/19/03
SB-25 3-4'	R03020260-25A	2/11/03	2/13/03	SW6010B	Chromium	2/15/03	2/19/03
SB-21 2-3'	R03020260-02A	2/11/03	2/13/03	SW6010B	Chromium	2/15/03	2/19/03
SB-26 2-3'	R03020260-30A	2/11/03	2/13/03	SW6010B	Chromium	2/15/03	2/19/03
SB-21 3-4'	R03020260-01A	2/11/03	2/13/03	SW6010B	Chromium	2/15/03	2/19/03
SB-26 3-4'	R03020260-31A	2/11/03	2/13/03	SW6010B	Chromium	2/15/03	2/19/03
SB-21 2-3'	R03020260-02A	2/11/03	2/13/03	SW6010B	Lead	2/15/03	2/19/03
SB-23 3-4'	R03020260-15A	2/11/03	2/13/03	SW6010B	Lead	2/15/03	2/19/03
SB-22 3-4'	R03020260-09A	2/11/03	2/13/03	SW6010B	Lead	2/15/03	2/19/03
SB-21 3-4'	R03020260-01A	2/11/03	2/13/03	SW6010B	Lead	2/15/03	2/19/03
SB-23 2-3'	R03020260-14A	2/11/03	2/13/03	SW6010B	Lead	2/15/03	2/19/03
SB-22 2-3'	R03020260-08A	2/11/03	2/13/03	SW6010B	Lead	2/15/03	2/19/03
SB-25 2-3'	R03020260-24A	2/11/03	2/13/03	SW6010B	Lead	2/15/03	2/19/03
SB-26 2-3'	R03020260-30A	2/11/03	2/13/03	SW6010B	Lead	2/15/03	2/19/03
SB-24 2-3'	R03020260-18A	2/11/03	2/13/03	SW6010B	Lead	2/15/03	2/19/03
SB-24 3-4'	R03020260-19A	2/11/03	2/13/03	SW6010B	Lead	2/15/03	2/19/03
SB-25 3-4'	R03020260-25A	2/11/03	2/13/03	SW6010B	Lead	2/15/03	2/19/03
SB-26 3-4'	R03020260-31A	2/11/03	2/13/03	SW6010B	Lead	2/15/03	2/19/03
SB-26 3-4'	R03020260-31A	2/11/03	2/13/03	D2216	Percent Moisture		2/13/03
SB-21 2-3'	R03020260-02A	2/11/03	2/13/03	D2216	Percent Moisture		2/13/03
SB-26 2-3'	R03020260-30A	2/11/03	2/13/03	D2216	Percent Moisture		2/13/03
SB-22 2-3'	R03020260-08A	2/11/03	2/13/03	D2216	Percent Moisture		2/13/03
SB-24 2-3'	R03020260-18A	2/11/03	2/13/03	D2216	Percent Moisture		2/13/03
SB-22 3-4'	R03020260-09A	2/11/03	2/13/03	D2216	Percent Moisture		2/13/03
SB-25 2-3'	R03020260-24A	2/11/03	2/13/03	D2216	Percent Moisture		2/13/03
SB-23 2-3'	R03020260-14A	2/11/03	2/13/03	D2216	Percent Moisture		2/13/03
SB-24 3-4'	R03020260-19A	2/11/03	2/13/03	D2216	Percent Moisture		2/13/03
SB-23 3-4'	R03020260-15A	2/11/03	2/13/03	D2216	Percent Moisture		2/13/03

ClientSampID	SampID	CollectionDate	DateReceived	TestNo	Analyte	PrepDate	AnalDate
SB-21 3-4'	R03020260-01A	2/11/03	2/13/03	D2216	Percent Moisture		2/13/03
SB-25 3-4'	R03020260-25A	2/11/03	2/13/03	D2216	Percent Moisture		2/13/03

PSC ANALYTICAL SERVICES

4418 Pottsville Pike
Reading, PA 19605
(610) 921-8833

Certificate of Analytical Sample Results for All Parameters/Final Report

PSC ANALYTICAL SERVICES

4418 Pottsville Pike Reading, PA 19605
(Tel) 610-921-8833 (Fax) 610-921-9667

INDUSTRIAL HYGIENE | ENVIRONMENTAL TESTING

•EPA PA-00136 •NY DOH/NELAC 10903 •NJ DEP PA020
•AIHA ACCREDITATION NO. 100439 •PA DEP 06-353 •CT DPH PH-0238
•NC DENR 599

Date: *14-Mar-03*

CLIENT: C&W Environmental
Lab Order: R03020260
Project: Metals and Volatiles Analyses
Lab ID: R03020260-01

Client Sample ID: SB-21 3-4'
Collection Date: 2/11/03 9:00:00 AM
Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		**D2216**				Analyst: **ELP**
Percent Moisture	19.9	0.100		wt%	1	2/13/03
ICP METALS, TOTAL		**SW6010B**				Analyst: **JDC**
Chromium	12.4	0.631		mg/Kg-dry	1	2/19/03 11:22:00 AM
Lead	20.5	0.631		mg/Kg-dry	1	2/19/03 11:22:00 AM

Qualifiers:

BRL - Below Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

PSC ANALYTICAL SERVICES

4418 Pottsville Pike Reading, PA 19605
(Tel) 610-921-8833 (Fax) 610-921-9667

INDUSTRIAL HYGIENE | ENVIRONMENTAL TESTING

•EPA PA-00136 •NY DOH/NELAC 10903 •NJ DEP PA020
•AIHA ACCREDITATION NO. 100439 •PA DEP 06-353 •CT DPH PH-0238
•NC DENR 599

Date: *14-Mar-03*

CLIENT: C&W Environmental
Lab Order: R03020260
Project: Metals and Volatiles Analyses
Lab ID: R03020260-02

Client Sample ID: SB-21 2-3'
Collection Date: 2/11/03 9:00:00 AM
Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		**D2216**				Analyst: **ELP**
Percent Moisture	14.6	0.100		wt%	1	2/13/03
ICP METALS, TOTAL		**SW6010B**				Analyst: **JDC**
Chromium	24.4	0.604		mg/Kg-dry	1	2/19/03 11:34:00 AM
Lead	14.3	0.604		mg/Kg-dry	1	2/19/03 11:34:00 AM
VOLATILE ORGANICS TCL		**SW8260B**				Analyst: **SUB**
Volatile Organics	See Attached				1	2/19/03

Qualifiers:

BRL - Below Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

PSC ANALYTICAL SERVICES

4418 Pottsville Pike Reading, PA 19605
(Tel) 610-921-8833 (Fax) 610-921-9667

INDUSTRIAL HYGIENE ENVIRONMENTAL TESTING

•EPA PA-00136 •NY DOH/NELAC 10903 •NJ DEP PA020
•AIHA ACCREDITATION NO. 100439 •PA DEP 06-353 •CT DPH PH-0238
•NC DENR 599

Date: *14-Mar-03*

CLIENT: C&W Environmental
Lab Order: R03020260
Project: Metals and Volatiles Analyses
Lab ID: R03020260-08

Client Sample ID: SB-22 2-3'
Collection Date: 2/11/03 9:45:00 AM
Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		**D2216**				Analyst: **ELP**
Percent Moisture	8.27	0.100		wt%	1	2/13/03
ICP METALS, TOTAL		**SW6010B**				Analyst: **JDC**
Chromium	19.1	0.519		mg/Kg-dry	1	2/19/03 11:38:00 AM
Lead	11.7	0.519		mg/Kg-dry	1	2/19/03 11:38:00 AM

Qualifiers:

BRL - Below Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

PSC ANALYTICAL SERVICES
4418 Pottsville Pike Reading, PA 19605
(Tel) 610-921-8833 (Fax) 610-921-9667

INDUSTRIAL HYGIENE | ENVIRONMENTAL TESTING

•EPA PA-00136 •NY DOH/NELAC 10903 •NJ DEP PA020
•AIHA ACCREDITATION NO. 100439 •PA DEP 06-353 •CT DPH PH-0238
•NC DENR 599

Date: *14-Mar-03*

CLIENT: C&W Environmental
Lab Order: R03020260
Project: Metals and Volatiles Analyses
Lab ID: R03020260-09

Client Sample ID: SB-22 3-4'
Collection Date: 2/11/03 9:45:00 AM
Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		**D2216**				Analyst: **ELP**
Percent Moisture	8.30	0.100		wt%	1	2/13/03
ICP METALS, TOTAL		**SW6010B**				Analyst: **JDC**
Chromium	16.8	0.551		mg/Kg-dry	1	2/19/03 11:41:00 AM
Lead	12.4	0.551		mg/Kg-dry	1	2/19/03 11:41:00 AM

Qualifiers:

BRL - Below Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

PSC ANALYTICAL SERVICES

4418 Pottsville Pike Reading, PA 19605
(Tel) 610-921-8833 (Fax) 610-921-9667

INDUSTRIAL HYGIENE ENVIRONMENTAL TESTING

•EPA PA-00136 •NY DOH/NELAC 10903 •NJ DEP PA020
•AIHA ACCREDITATION NO. 100439 •PA DEP 06-353 •CT DPH PH-0238
•NC DENR 599

Date: *14-Mar-03*

CLIENT: C&W Environmental
Lab Order: R03020260
Project: Metals and Volatiles Analyses
Lab ID: R03020260-14

Client Sample ID: SB-23 2-3'
Collection Date: 2/11/03 10:15:00 AM
Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		**D2216**				Analyst: **ELP**
Percent Moisture	6.03	0.100		wt%	1	2/13/03
ICP METALS, TOTAL		**SW6010B**				Analyst: **JDC**
Chromium	8.37	0.527		mg/Kg-dry	1	2/19/03 11:45:00 AM
Lead	10.6	0.527		mg/Kg-dry	1	2/19/03 11:45:00 AM

Qualifiers:

BRL - Below Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

PSC ANALYTICAL SERVICES
4418 Pottsville Pike Reading, PA 19605
(Tel) 610-921-8833 (Fax) 610-921-9667

INDUSTRIAL HYGIENE ENVIRONMENTAL TESTING

•EPA PA-00136 •NY DOH/NELAC 10903 •NJ DEP PA020
•AIHA ACCREDITATION NO. 100439 •PA DEP 06-353 •CT DPH PH-0238
•NC DENR 599

Date: *14-Mar-03*

CLIENT: C&W Environmental
Lab Order: R03020260
Project: Metals and Volatiles Analyses
Lab ID: R03020260-15

Client Sample ID: SB-23 3-4'
Collection Date: 2/11/03 10:15:00 AM
Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		**D2216**				Analyst: **ELP**
Percent Moisture	7.30	0.100		wt%	1	2/13/03
ICP METALS, TOTAL		**SW6010B**				Analyst: **JDC**
Chromium	6.53	0.545		mg/Kg-dry	1	2/19/03 12:07:00 PM
Lead	8.41	0.545		mg/Kg-dry	1	2/19/03 12:07:00 PM

Qualifiers:
BRL - Below Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

PSC ANALYTICAL SERVICES

4418 Pottsville Pike Reading, PA 19605
(Tel) 610-921-8833 (Fax) 610-921-9667

INDUSTRIAL HYGIENE | ENVIRONMENTAL TESTING

•EPA PA-00136 •NY DOH/NELAC 10903 •NJ DEP PA020
•AIHA ACCREDITATION NO. 100439 •PA DEP 06-353 •CT DPH PH-0238
•NC DENR 599

Date: *14-Mar-03*

CLIENT: C&W Environmental
Lab Order: R03020260
Project: Metals and Volatiles Analyses
Lab ID: R03020260-18

Client Sample ID: SB-24 2-3'
Collection Date: 2/11/03 10:45:00 AM
Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		**D2216**				Analyst: **ELP**
Percent Moisture	11.5	0.100		wt%	1	2/13/03
ICP METALS, TOTAL		**SW6010B**				Analyst: **JDC**
Chromium	8.74	0.589		mg/Kg-dry	1	2/19/03 12:21:00 PM
Lead	12.7	0.589		mg/Kg-dry	1	2/19/03 12:21:00 PM

Qualifiers:

BRL - Below Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

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•NC DENR 599

Date: *14-Mar-03*

CLIENT: C&W Environmental
Lab Order: R03020260
Project: Metals and Volatiles Analyses
Lab ID: R03020260-19

Client Sample ID: SB-24 3-4'
Collection Date: 2/11/03 10:45:00 AM
Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		**D2216**				Analyst: **ELP**
Percent Moisture	6.33	0.100		wt%	1	2/13/03
ICP METALS, TOTAL		**SW6010B**				Analyst: **JDC**
Chromium	10.6	0.523		mg/Kg-dry	1	2/19/03 12:25:00 PM
Lead	14.8	0.523		mg/Kg-dry	1	2/19/03 12:25:00 PM

Qualifiers:

BRL - Below Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

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•NC DENR 599

Date: *14-Mar-03*

CLIENT: C&W Environmental
Lab Order: R03020260
Project: Metals and Volatiles Analyses
Lab ID: R03020260-24

Client Sample ID: SB-25 2-3'
Collection Date: 2/11/03 11:05:00 AM
Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		**D2216**				Analyst: **ELP**
Percent Moisture	7.14	0.100		wt%	1	2/13/03
ICP METALS, TOTAL		**SW6010B**				Analyst: **JDC**
Chromium	13.3	0.567		mg/Kg-dry	1	2/19/03 12:28:00 PM
Lead	12.9	0.567		mg/Kg-dry	1	2/19/03 12:28:00 PM

Qualifiers:

BRL - Below Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

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•NC DENR 599

Date: *14-Mar-03*

CLIENT: C&W Environmental
Lab Order: R03020260
Project: Metals and Volatiles Analyses
Lab ID: R03020260-25

Client Sample ID: SB-25 3-4'
Collection Date: 2/11/03 11:05:00 AM
Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		**D2216**				Analyst: **ELP**
Percent Moisture	13.3	0.100		wt%	1	2/13/03
ICP METALS, TOTAL		**SW6010B**				Analyst: **JDC**
Chromium	16.9	0.607		mg/Kg-dry	1	2/19/03 12:32:00 PM
Lead	17.6	0.607		mg/Kg-dry	1	2/19/03 12:32:00 PM

Qualifiers:

BRL - Below Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

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•NC DENR 599

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(Tel) 610-921-8833 (Fax) 610-921-9667

Date: *14-Mar-03*

CLIENT:	C&W Environmental	**Client Sample ID:**	SB-26 2-3'
Lab Order:	R03020260	**Collection Date:**	2/11/03 11:45:00 AM
Project:	Metals and Volatiles Analyses		
Lab ID:	R03020260-30	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		**D2216**				Analyst: **ELP**
Percent Moisture	10.5	0.100		wt%	1	2/13/03
ICP METALS, TOTAL		**SW6010B**				Analyst: **JDC**
Chromium	15.7	0.537		mg/Kg-dry	1	2/19/03 12:35:00 PM
Lead	12.3	0.537		mg/Kg-dry	1	2/19/03 12:35:00 PM

Qualifiers:

BRL - Below Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

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•NC DENR 599

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(Tel) 610-921-8833 (Fax) 610-921-9667

Date: *14-Mar-03*

CLIENT: C&W Environmental
Lab Order: R03020260
Project: Metals and Volatiles Analyses
Lab ID: R03020260-31

Client Sample ID: SB-26 3-4'
Collection Date: 2/11/03 11:45:00 AM
Matrix: SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PERCENT MOISTURE		**D2216**				Analyst: **ELP**
Percent Moisture	8.29	0.100		wt%	1	2/13/03
ICP METALS, TOTAL		**SW6010B**				Analyst: **JDC**
Chromium	12.5	0.568		mg/Kg-dry	1	2/19/03 12:38:00 PM
Lead	16.2	0.568		mg/Kg-dry	1	2/19/03 12:38:00 PM

Qualifiers:

BRL - Below Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

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•NC DENR 599

Date: *14-Mar-03*

CLIENT:	C&W Environmental	**Client Sample ID:**	SB-26 4-5'
Lab Order:	R03020260	**Collection Date:**	2/11/03 11:45:00 AM
Project:	Metals and Volatiles Analyses		
Lab ID:	R03020260-36	**Matrix:**	SOIL

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS TCL		**SW8260B**				Analyst: **SUB**
Volatile Organics	See Attached				1	2/19/03

Qualifiers:

BRL - Below Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

PSC ANALYTICAL SERVICES

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•AIHA ACCREDITATION NO. 100439 •PA DEP 06-353 •CT DPH PH-0238
•NC DENR 599

Date: *14-Mar-03*

CLIENT: C&W Environmental
Lab Order: R03020260
Project: Metals and Volatiles Analyses
Lab ID: R03020260-37

Client Sample ID: SB-21
Collection Date: 2/11/03 1:46:00 PM
Matrix: AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS TCL		**SW8260B**				Analyst: **SUB**
Volatile Organics	See Attached	0			1	2/19/03

Qualifiers:

BRL - Below Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

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•NC DENR 599

Date: *14-Mar-03*

CLIENT:	C&W Environmental	**Client Sample ID:**	SB-26
Lab Order:	R03020260	**Collection Date:**	2/11/03 2:12:00 PM
Project:	Metals and Volatiles Analyses		
Lab ID:	R03020260-38	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS TCL		**SW8260B**				Analyst: **SUB**
Volatile Organics	See Attached	0			1	2/19/03

Qualifiers:

BRL - Below Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

PSC ANALYTICAL SERVICES

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•AIHA ACCREDITATION NO. 100439 •PA DEP 06-353 •CT DPH PH-0238
•NC DENR 599

Date: *14-Mar-03*

CLIENT:	C&W Environmental	**Client Sample ID:**	Trip Blank
Lab Order:	R03020260	**Collection Date:**	2/11/03 4:00:00 PM
Project:	Metals and Volatiles Analyses		
Lab ID:	R03020260-39	**Matrix:**	AQUEOUS

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILE ORGANICS TCL		**SW8260B**				Analyst: **SUB**
Volatile Organics	See Attached	0			1	2/19/03

Qualifiers:

BRL - Below Reporting Limit
J - Analyte detected below quanititation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

PSC ANALYTICAL SERVICES

4418 Pottsville Pike
Reading, PA 19605
(610) 921-8833

Case Narrative/ Non-Conformance Summary

PSC Analytical, Reading, PA, Case Narrative/Non-Conformance Summary

PSC Work Order #: R03020260
PSC Sample Numbers #: R03020260-01A, -02A, -08A, -09A, -14A, -15A, -18A, -19A, -24A, -25A, -30A, and –31A
Analyst's Name: JDC
Run Dates: 2/19/03
Today's Date: 3/13/03

The samples were prepared and analyzed for Cr and Pb according to criteria set forth in Method 6010B.

Metals:

- All samples were digested and analyzed within the holding time.
- Spike recoveries for all applicable parameters met EPA criteria.
- Duplicate sample criteria for relative percent difference (RPD) met EPA criteria of +/- 20%.
- All Laboratory Control Sample recoveries met criteria of +/- 20%.
- Method Blank results for all inorganic parameters were reported below the reporting level.
- Initial and Continuing Calibration (ICV/CCV) criteria met EPA criteria for metals analysis.
- ICP Interference Check Sample recoveries for metal analyses met EPA criteria.
- ICP Serial Dilution recoveries for % Difference met criteria.

Damian F. Losh
Signature of Laboratory Technical Director

Organic Data Package

For

Philip Analytical Services Inc

P.O.# R03020260
Project:C&W Env.

Prepared by PSC Analytical Services Corp.

5555 North Service Road

Burlington, ON

Canada L7L 5H7

PSC Project #: AN030198

Submission #(s):3B0474

PSC Sample ID: 006513-006518

Prepared By: Kimberley Jasper - CSR

Reviewed By: Julius Fulop – Project Manager

1. CASE NARRATIVE

PROJECT NARRATIVE

PHILIP Analytical Services Inc (Burlington ON)
Philip Project: AN030198
Philip Submission #:3B0474

Client: Philip Analytical Services Inc
Client Project: C&W ENV.

I. SAMPLE RECEIPT/ANALYSIS

a) Sample Listing

Philip ID	Client Sample ID	Date Sampled	Date Received	Date Prepped	Run Date	Matrix
Volatiles via SW846 Method 8260						
006513 03	R03020260-02B	03/02/11	03/02/14	03/02/19	03/02/19	Soil
006514 03	R03020260-36A	03/02/11	03/02/14	03/02/19	03/02/19	Soil
006516 03	R03020260-37A	03/02/11	03/02/14	03/02/19	03/02/19	Water
006517 03	R03020260-38A	03/02/11	03/02/14	03/02/19	03/02/19	Water
006518 03	R03020260-39A	03/02/11	03/02/14	03/02/19	03/02/19	Water

Run Date is defined as the date of injection of the last calibration standard (12 hour or less) prior to the samples analyzed within that run sequence. Therefore the time of calibration injection that defines the run date is always within 12 hours of the time of sample injection.

b) Shipping Problems: none encountered

c) Documentation Problems: none encountered

II. SAMPLE PREP:

No problems encountered

III. SAMPLE ANALYSIS:

See also comments within the appropriate Certificate of Analysis.

a) Hold Times: all within recommended hold times

b) Instrument Calibration: all within control limits

c) Surrogate/Internal Recoveries: except where noted otherwise, all within control limits

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above.
In addition, I certify, that to the best of my knowledge and belief, the data as reported are true and accurate.
Release of the data contained in this data package has been authorized by the cognizant laboratory official or his/her designee, as verified by this signature.

Julius Fulop, Project Manager

2003-02-28
Date

2. DATA SUMMARY

- Certificate of Analysis –

- Sample analyte result
- Method blank result
- LCS Results with % Recoveries
- Matrix Spike data with % Recoveries
- Matrix Spike Duplicate data with % Recoveries
- Surrogate recoveries

Certificate of Analysis

CLIENT INFORMATION

Attention:	Wendy Beard
Client Name:	Philip Analytical Services Inc
Project:	C&W ENV.
Project Desc:	C&W ENV.
Address:	4418 Pottsville Pike Reading, Pennsylvania 19605
Fax Number:	610 921-9667
Phone Number:	610 921-8833

LABORATORY INFORMATION

Contact:	Julius Fulop, M.Sc., C.Chem.
Project:	AN030198
Date Received:	14-Feb-2003
Date Reported:	20-Feb-2003
Submission No.:	3B0474
Sample No.:	006512-006514

NOTES:

'-' = not analysed '<' = less than Method Detection Limit (MDL) 'NA' = no data available
LOQ can by determined for all analytes by multiplying the appropriate MDL X 3.33
Blank correction is only performed on oil and grease, BTEX, total purgeable hydrocarbons and VOC analyses when Canadian methods are utilized.
Solids data is based on dry weight except for biota analyses.
Organic analyses are not corrected for extraction recovery standards except for isotope dilution methods, (i.e. CARB 429 PAH, all PCDD/F and DBD/DBF analyses)
The enclosed copy of the Chain of Custody Record may contain information necessary for the interpretation of the data.

Methods used by PSC Analytical Services are based upon those found in 'Standard Methods for the Examination of Water and Wastewater', Nineteenth Edition. Other methods are based on the principles of MISA or EPA methodologies. New York State: ELAP Identification Number 10756.

All work recorded herein has been done in accordance with normal professional standards using accepted testing methodologies, quality assurance and quality control procedures except where otherwise agreed to by the client and testing company in writing. Any and all use of these test results shall be limited to the actual cost of the pertinent analysis done. There is no other warranty expressed or implied. Your samples will be retained at PSC Analytical Services for a period of three weeks from receipt of data or as per contract.

COMMENTS:

Certified by:

Page 5

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SB-21
SOIL

			Method	Blank	%	R03020260	R03020260
	Client ID:		Blank	Spike	Recovery	02B	02B
	Lab No.:		006512 03	006512 03	006512 03	006513 03	006513 03
	Date Sampled:		11-Feb-2003	11-Feb-2003	11-Feb-2003	11-Feb-2003	11-Feb-2003
Component	**MDL**	**Units**					M. Spike
Acetone	0.020	mg/kg	<	0.056	89	<4.0	13
Acrolein	0.010	"	<	0.11	170	<2.0	22
Acrylonitrile	0.010	"	<	0.066	100	<2.0	10.0
Benzene	0.001	"	<	0.062	99	<0.20	12
Bromoform	0.001	"	<	0.064	100	<0.20	9.9
Bromomethane	0.006	"	<	0.055	88	<1.2	9.9
2-Butanone	0.005	"	<	0.065	100	<1.0	12
Carbon Disulfide	0.001	"	<	0.062	100	<0.20	12
Carbon Tetrachloride	0.001	"	<	0.065	100	<0.20	13
Chlorobenzene	0.001	"	<	0.062	100	<0.20	12
Chlorodibromomethane	0.001	"	<	0.063	100	<0.20	11
Chloroethane	0.001	"	<	0.062	99	<0.20	13
Chloroform	0.001	"	<	0.062	99	<0.20	12
Chloromethane	0.001	"	<	0.060	97	<0.20	13
1,2-Dichlorobenzene	0.001	"	<	0.063	100	<0.20	11
1,3-Dichlorobenzene	0.001	"	<	0.064	100	<0.20	11
1,4-Dichlorobenzene	0.001	"	<	0.062	100	<0.20	11
Dichlorobromomethane	0.001	"	<	0.063	100	<0.20	12
1,1-Dichloroethane	0.001	"	<	0.063	100	<0.20	12
1,2-Dichloroethane	0.001	"	<	0.064	100	<0.20	12
1,1-Dichloroethene	0.001	"	<	0.064	100	<0.20	12
Ethylene Dibromide	0.001	"	<	0.064	100	<0.20	11
1,2-Dibromo-3-Chloropropane	0.005	"	<	0.064	100	<1.0	10
cis-1,2-Dichloroethene	0.001	"	<	0.062	99	<0.20	12
trans-1,2-Dichloroethene	0.001	"	<	0.064	100	<0.20	12
1,2-Dichloropropane	0.001	"	<	0.061	97	<0.20	11
cis-1,3-Dichloropropene	0.001	"	<	0.064	100	<0.20	12
trans-1,3-Dichloropropene	0.001	"	<	0.066	110	<0.20	12
Ethylbenzene	0.001	"	<	0.062	100	<0.20	12
2-Hexanone	0.005	"	<	0.063	100	<1.0	12
Methylene Chloride	0.020	"	<	0.061	98	<4.0	12
4-Methyl-2-Pentanone	0.005	"	<	0.065	100	<1.0	11
Styrene	0.001	"	<	0.065	100	<0.20	13
1,1,1,2-Tetrachloroethane	0.001	"	<	0.063	100	<0.20	12
1,1,2,2-Tetrachloroethane	0.001	"	<	0.064	100	<0.20	14
Tetracbloroethene	0.001	"	<	0.064	100	<0.20	12
Toluene	0.001	"	<	0.061	97	<0.20	12
1,1,1-Trichloroethane	0.001	"	<	0.064	100	<0.20	12
1,1,2-Trichloroethane	0.001	"	<	0.062	99	<0.20	11
Trichloroethene	0.001	"	<	0.063	100	<0.20	13
Trichlorfluoromethane	0.001	"	<	0.065	100	<0.20	13
Vinyl Chloride	0.001	"	<	0.060	96	<0.20	11
m&p-Xylene	0.001	"	<	0.13	100	<0.20	26
o-Xylene	0.001	"	<	0.064	100	<0.20	13
Isopropylbenzene	0.001	"	<	0.062	100	<0.20	11
Surrogate Recoveries		%					
d4-1,2-Dichloroethane			83	95	95	80	82
d8-Toluene			92	101	101	90	88
Bromofluorobenzene			98	108	108	98	98

Client:Philip Analytical Services Inc Project:C ENV.

SB-26
SOIL

			R03020260	R03020260	R03020260	R03020260
	Client ID:		02B	02B	02B	36A
	Lab No.:		006513 03	006513 03	006513 03	006514 03
	Date Sampled:		11-Feb-2003	11-Feb-2003	11-Feb-2003	11-Feb-2003
Component	**MDL**	**Units**	MS % Rec.	MS Dup	MSD % Rec.	
Acetone	0.020	mg/kg	110	13	110	<4.0
Acrolein	0.010	"	180	21	180	<2.0
Acrylonitrile	0.010	"	83	9.9	84	<2.0
Benzene	0.001	"	98	11	96	<0.20
Bromoform	0.001	"	82	10	86	<0.20
Bromomethane	0.006	"	83	9.1	77	<1.2
2-Butanone	0.005	"	100	12	100	<1.0
Carbon Disulfide	0.001	"	98	11	95	<0.20
Carbon Tetrachloride	0.001	"	110	12	100	<0.20
Chlorobenzene	0.001	"	97	11	97	<0.20
Chlorodibromomethane	0.001	"	92	11	92	<0.20
Chloroethane	0.001	"	110	11	95	<0.20
Chloroform	0.001	"	100	11	96	<0.20
Chloromethane	0.001	"	100	11	91	<0.20
1,2-Dichlorobenzene	0.001	"	90	10	89	<0.20
1,3-Dichlorobenzene	0.001	"	90	11	90	<0.20
1,4-Dichlorobenzene	0.001	"	88	10	88	<0.20
Dichlorobromomethane	0.001	"	99	11	95	<0.20
1,1-Dichloroethane	0.001	"	100	12	99	<0.20
1,2-Dichloroethane	0.001	"	100	11	95	<0.20
1,1-Dichloroethene	0.001	"	100	12	100	<0.20
Ethylene Dibromide	0.001	"	93	11	92	<0.20
1,2-Dibromo-3-Chloropropane	0.005	"	84	9.9	84	<1.0
cis-1,2-Dichloroethene	0.001	"	99	11	96	<0.20
trans-1,2-Dichloroethene	0.001	"	100	12	100	<0.20
1,2-Dichloropropane	0.001	"	95	11	94	<0.20
cis-1,3-Dichloropropene	0.001	"	97	11	96	<0.20
trans-1,3-Dichloropropene	0.001	"	98	11	96	<0.20
Ethylbenzene	0.001	"	100	11	98	<0.20
2-Hexanone	0.005	"	100	12	99	<1.0
Methylene Chloride	0.020	"	96	11	95	<4.0
4-Methyl-2-Pentanone	0.005	"	90	10	88	<1.0
Styrene	0.001	"	110	12	100	<0.20
1,1,1,2-Tetrachloroethane	0.001	"	98	11	96	<0.20
1,1,2,2-Tetrachloroethane	0.001	"	110	13	110	<0.20
Tetrachloroethene	0.001	"	99	11	98	<0.20
Toluene	0.001	"	96	11	95	<0.20
1,1,1-Trichloroethane	0.001	"	100	12	100	<0.20
1,1,2-Trichloroethane	0.001	"	94	11	93	<0.20
Trichloroethene	0.001	"	110	12	110	<0.20
Trichlorfluoromethane	0.001	"	100	10	88	<0.20
Vinyl Chloride	0.001	"	95	9.8	84	<0.20
m&p-Xylene	0.001	"	110	24	100	<0.20
o-Xylene	0.001	"	110	12	100	<0.20
Isopropylbenzene	0.001	"	95	11	97	<0.20
Surrogate Recoveries		%				
d4-1,2-Dichloroethane			82	79	79	77
d8-Toluene			88	89	89	91
Bromofluorobenzene			98	95	95	98

PASC - Certificate of Analysis

			Method	Blank	%	SB-21 GROUND-WATER R03020260	SB-26 GROUND WATER R03020260
	Client ID:		Blank	Spike	Recovery	37A	38A
	Lab No.:		006515 03	006515 03	006515 03	006516 03	006517 03
	Date Sampled:		11-Feb-2003	11-Feb-2003	11-Feb-2003	11-Feb-2003	11-Feb-2003
Component	**MDL**	**Units**					
pH of VOC vials			7.00	-	-	3.00	1.50
Acetone	12.7	ug/L	<	54	110	<64	<
Acrolein	5.1	"	<	56	110	<26	<
Acrylonitrile	2.7	"	<	44	89	<14	<
Benzene	0.5	"	<	50	100	<2.5	<
Bromoform	0.7	"	<	51	100	<3.5	<
Bromomethane	1.0	"	<	41	81	<5.0	<
2-Butanone	3.2	"	<	48	97	<16	<
Carbon Disulfide	0.9	"	<	49	97	<4.5	<
Carbon Tetrachloride	0.7	"	<	55	110	<3.5	<
Chlorobenzene	0.6	"	<	50	100	<3.0	<
Chlorodibromomethane	0.4	"	<	53	110	<2.0	<
Chloroethane	0.9	"	<	55	110	<4.5	<
Chloroform	0.4	"	<	52	100	<2.0	<
Chloromethane	1.4	"	<	53	110	<7.0	<
1,2-Dichlorobenzene	0.8	"	<	51	100	<4.0	<
1,3-Dichlorobenzene	1.8	"	<	51	100	<9.0	<
1,4-Dichlorobenzene	1.6	"	<	50	100	<8.0	<
Dichlorobromomethane	0.4	"	<	53	110	<2.0	<
1,1-Dichloroethane	0.5	"	<	52	100	<2.5	<
1,2-Dichloroethane	0.4	"	<	52	100	<2.0	<
1,1-Dichloroethene	0.7	"	<	50	100	<3.5	<
Ethylene Dibromide	0.4	"	<	50	100	<2.0	<
1,2-Dibromo-3-Chloropropane	10	"	<	47	93	<50	<
cis-1,2-Dichloroethene	0.6	"	<	51	100	<3.0	<
trans-1,2-Dichloroethene	0.5	"	<	53	110	<2.5	<
1,2-Dichloropropane	0.7	"	<	50	100	<3.5	<
cis-1,3-Dichloropropene	0.3	"	<	52	100	<1.5	<
trans-1,3-Dichloropropene	0.6	"	<	55	110	<3.0	<
Ethylbenzene	0.5	"	<	52	100	<2.5	<
2-Hexanone	1.3	"	<	50	99	<6.5	<
Methylene Chloride	2.3	"	<	51	100	<12	<
4-Methyl-2-Pentanone	1.5	"	<	49	97	<7.5	<
Styrene	0.6	"	<	53	110	<3.0	<
1,1,1,2-Tetrachloroethane	0.6	"	<	53	110	<3.0	<
1,1,2,2-Tetrachloroethane	0.8	"	<	49	97	<4.0	<
Tetrachloroethene	0.5	"	<	50	99	<2.5	<
Toluene	1.0	"	<	51	100	<5.0	<
1,1,1-Trichloroethane	0.8	"	<	53	110	<4.0	<
1,1,2-Trichloroethane	0.6	"	<	49	98	<3.0	<
Trichloroethene	1.0	"	<	50	100	<5.0	<
Trichlorofluoromethane	1.8	"	<	54	110	<9.0	<
Vinyl Chloride	0.9	"	<	55	110	<4.5	<
m&p-Xylene	1.1	"	<	100	100	<5.5	<
o-Xylene	0.5	"	<	53	110	<2.5	<
Surrogate Recoveries		%					
d4-1,2-Dichloroethane			91	94	94	100	96
d8-Toluene			94	92	92	92	92
Bromofluorobenzene			89	94	94	92	89

Client:Philip Analytical Services Inc Project:C ENV.

TRIP BLANK

	Client ID:		R03020260 38A	R03020260 38A	R03020260 38A	R03020260 38A	R03020260 39A
	Lab No.:		006517 03	006517 03	006517 03	006517 03	006518 03
	Date Sampled:		11-Feb-2003	11-Feb-2003	11-Feb-2003	11-Feb-2003	11-Feb-2003
Component	**MDL**	**Units**	M. Spike	MS % Rec.	MS Dup	MSD % Rec.	
pH of VOC vials			-	-	-	-	1.50
Acetone	12.7	ug/L	41	83	41	83	<
Acrolein	5.1	"	54	110	55	110	<
Acrylonitrile	2.7	"	43	86	45	90	<
Benzene	0.5	"	49	98	49	98	<
Bromoform	0.7	"	49	98	50	100	<
Bromomethane	1.0	"	42	84	41	81	<
2-Butanone	3.2	"	44	87	44	88	<
Carbon Disulfide	0.9	"	46	92	46	93	<
Carbon Tetrachloride	0.7	"	53	110	53	110	<
Chlorobenzene	0.6	"	48	96	48	97	<
Chlorodibromomethane	0.4	"	51	100	51	100	<
Chloroethane	0.9	"	56	110	53	100	<
Chloroform	0.4	"	52	100	52	100	<
Chloromethane	1.4	"	54	110	52	100	<
1,2-Dichlorobenzene	0.8	"	47	94	48	96	<
1,3-Dichlorobenzene	1.8	"	46	92	47	93	<
1,4-Dichlorobenzene	1.6	"	46	91	47	93	<
Dichlorobromomethane	0.4	"	53	110	52	100	<
1,1-Dichloroethane	0.5	"	51	100	51	100	<
1,2-Dichloroethane	0.4	"	54	110	52	100	<
1,1-Dichloroethene	0.7	"	48	95	48	97	<
Ethylene Dibromide	0.4	"	49	98	50	100	<
1,2-Dibromo-3-Chloropropane	10	"	46	92	49	97	<
cis-1,2-Dichloroethene	0.6	"	50	100	50	100	<
trans-1,2-Dichloroethene	0.5	"	51	100	52	100	<
1,2-Dichloropropane	0.7	"	49	98	50	99	<
cis-1,3-Dichloropropene	0.3	"	50	100	50	100	<
trans-1,3-Dichloropropene	0.6	"	53	110	53	110	<
Ethylbenzene	0.5	"	50	100	50	99	<
2-Hexanone	1.3	"	48	95	49	98	<
Methylene Chloride	2.3	"	50	99	51	100	<
4-Methyl-2-Pentanone	1.5	"	51	100	51	100	<
Styrene	0.6	"	51	100	51	100	<
1,1,1,2-Tetrachloroethane	0.6	"	52	100	52	100	<
1,1,2,2-Tetrachloroethane	0.8	"	50	99	50	99	<
Tetrachloroethene	0.5	"	46	92	46	91	<
Toluene	1.0	"	49	98	50	99	<
1,1,1-Trichloroethane	0.8	"	53	110	52	100	<
1,1,2-Trichloroethane	0.6	"	48	95	48	97	<
Trichloroethene	1.0	"	46	93	47	94	<
Trichlorofluoromethane	1.8	"	54	110	51	100	<
Vinyl Chloride	0.9	"	55	110	52	100	<
m&p-Xylene	1.1	"	100	100	100	100	<
o-Xylene	0.5	"	52	100	51	100	<
Surrogate Recoveries		%					
d4-1,2-Dichloroethane			100	100	95	95	94
d8-Toluene			91	91	91	91	93
Bromofluorobenzene			95	95	92	92	88

Client:Philip Analytical Services Inc Project:C ENV.

Batch Code:	**0219SM01**
Acetone	006512 03
	006513 03
	006514 03
Date Analysed:	03/02/19
Date Prepared:	03/02/19
Batch Code:	**0219SM01**
cis-1,2-Dichloroethene	006512 03
	006513 03
	006514 03
Date Analysed:	03/02/19
Date Prepared:	03/02/19
Batch Code:	**0219MC01**
pH of VOC vials	006515 03
	006516 03
	006517 03
	006518 03
Date Analysed:	03/02/19
Date Prepared:	03/02/19
Batch Code:	**0219MC01**
Acetone	006515 03
	006516 03
	006517 03
	006518 03
Date Analysed:	03/02/19
Date Prepared:	03/02/19
Batch Code:	**0219MC01**
cis-1,2-Dichloroethene	006515 03
	006516 03
	006517 03
	006518 03
Date Analysed:	03/02/19
Date Prepared:	03/02/19

ATTACHMENT 2

CORRESPONDENCE ON WORK PLAN

BENCHMARK

New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 9
270 Michigan Avenue, Buffalo, New York, 14203-2999
Phone: (716) 851-7220 • **FAX:** (716) 851-7226
Website: www.dec.state.ny.us

Erin M. Crotty
Commissioner

January 22, 2003

Patrick Martin, P.E.
Benchmark Environmental Engineering & Science LLC
50 Fountain Plaza
Suite 1350
Buffalo, New York 14202

Dear Mr. Martin:

West Falls Machine
Aurora (T), Erie County

The Department has completed review of the report entitled, "Supplemental Site Investigation Work Plan, West Falls Machine Co., Inc., East Aurora, NY", dated December 2002 and submitted by Benchmark Engineering.

The following comments are offered:

1. Section 2.3, Page 2-2: It is not acceptable to use "2 times the upper range of the eastern U.S. Background concentrations" to determine if additional sample analysis is warranted. While the upper eastern background range for chromium is 40 mg/kg, there is no specific value for lead provided in TAGM 4046. It is suggested that values for chromium and lead of 20 mg/kg and 400 mg/kg respectively be used as trigger values for the site. These values are "typical" for soil in the western New York area.

2. Section 2.3, Page 2-2: It is suggested that an analysis for TCLP metals not be conducted until after the results of the total metals analysis can be reviewed. Soil samples can be archived for later TCLP analysis at the laboratory.

If you have any questions, please contact me at the above number.

Sincerely,

Gregory P. Sutton, P.E.
Project Engineer
Division of Environmental Remediation

GPS/tl

BENCHMARK
ENVIRONMENTAL
ENGINEERING &
SCIENCE, PLLC

January 28, 2003

Mr. Gregory P. Sutton, P.E.
Project Engineer
Division of Environmental Remediation
New York State Department of
Environmental Remediation
270 Michigan Avenue
Buffalo, New York 14203-2999

Re: West Falls Machine, East Aurora, NY - Response to Comments on December 2002 Supplemental Site Investigation Work Plan

Dear Mr. Sutton:

Benchmark has reviewed the Department's January 22, 2003 comments on the above-referenced Work Plan. We are in agreement with the requested modifications to the sampling and analytical program. The changes (refer to revised pages, attached) will be incorporated in the scope of work.

We have tentatively scheduled field activities to be performed on February 11th, 2003, pending suitable weather conditions.

Please contact us if you have any questions or require additional information.

Sincerely,
Benchmark Environmental Engineering & Science, PLLC

Patrick T. Martin, P.E.
Project Manager

C: J. Charles, NYSDEC
W. Hadley, West Falls Machine Co.

0067-001-100, CG

building reference points (via tape measure) and recorded as well. Drilling tools will be decontaminated between each boring location using tap water and Alconox (soap). New, dedicated plastic sleeves will be used for each boring and depth interval. Field Operating Procedures for borehole/drilling documentation requirements and equipment decontamination are provided in Appendix B. Health and Safety procedures to be followed during the field investigation program are presented in Appendix C.

2.2 Temporary Well Installation

As stated above, in soil borings with PID readings that exceed 5 ppm, a temporary well comprised of one-inch, schedule 80 PVC well will be installed. A five-foot screen will be used to straddle the water table. The wells will be installed to the completion depth of the boring.

2.3 Soil Sampling and Analysis

Soil grab samples will be collected from each of the cores at 1-foot depth intervals below the approximate elevation of the leach bed (approximately 2 feet below ground surface, as reported by West Falls Machine Company). Initially, only the two uppermost depth intervals will be analyzed for chromium and lead. The laboratory will be instructed to archive all remaining ~~deeper~~ samples (in refrigeration) until further instruction by Benchmark. If these parameters are detected at concentrations exceeding ~~2 times the upper range of eastern U.S. Background concentrations as published in NYSDEC Technical Assistance and Guidance Memorandum (TAGM) HWR-94-4046~~400 mg/Kg (lead) or 20 mg/Kg (chromium) in one or more of the sampled intervals, additional depth samples in that same boring will be submitted for analysis to determine the vertical limits of contamination, if needed. The specific sample depth intervals to be analyzed from such borings will be discussed with NYSDEC prior to analysis.

At least one of the shallow samples submitted to the laboratory will also be analyzed for leachable (RCRA) metals via the Toxicity Characteristic Leaching Procedure (TCLP).

This sample will be ~~collected from a boring located within the leach field proximate to (MW-12)~~selected from the archived samples, with NYSDEC concurrence, following review of the total metals results. In addition, if any soil intervals exhibit elevated PID readings above 5 ppm, a sample of the unsaturated soil will be collected across the depth of the boring and analyzed for Target Compound List (TCL) VOCs.

All soil samples will be placed in laboratory-provided, 4-ounce precleaned sample jars for discrete analysis. Soil will be placed into each jar using a dedicated stainless steel spoon or trowel directly from the clear PVC sleeve. Soil jars will be labeled according to borehole number and depth of sampling interval, and will be temporarily stored in coolers to maintain temperature at or below 4°C. Samples will be delivered to the laboratory under strict chain of custody procedures. Sample labeling, shipping and chain of custody FOPs are provided in Appendix B.

The soil sampling and analytical program is summarized on Tables 1 and 2. As indicated, all samples will be analyzed in accordance with USEPA Method SW-846 methodology by a NYSDEC ASP CLP laboratory and will be reported with equivalent ASP Category B deliverables.

2.4 Groundwater Sampling Procedure

If groundwater sampling is necessary based on the criteria described above, Groundwater will be collected from temporary monitoring wells using either a peristaltic pump or disposable bailer. If the peristaltic pump is used, the pumping rate will be set at approximately 500 ml/min to provide for low-flow purging of the wells and minimize elevated turbidity levels. Field parameters of pH, turbidity, temperature and specific conductance will be measured and recorded during sampling. Groundwater elevation will also be recorded.

The groundwater sampling and analytical program is summarized on Tables 1 and 2. Groundwater samples will be analyzed in accordance with USEPA Method SW-846 methodology by a NYSDEC ASP CLP laboratory, and will be reported with equivalent ASP Category B deliverables.