

## Grauvogel & Associates

November 2, 2004

City of South Bend  
Community and Economic Development  
1200 County-City Building  
South Bend, IN 46601

Attention: Mr. Andy Laurent  
Subject: Oliver Plow Phase IV – Buildings 46/47 Paint Solids, Contaminated Soil

Dear Andy:

Enclosed are the laboratory results documenting the characteristics of the soil with a fuel oil odor found in the concrete vault at the south end of Building 47 (Item 1012-1), the soil with the paint solvent odor found adjacent to the paint tank under Building 46 (Item 1012-2) and the black paint solids recovered from the Building 46 paint tank pit (Item 0930-1). We have combined these three waste materials together because none is RCRA hazardous waste, but none can be disposed of in Warner & Sons fill site.

The South pit fuel oil soil was analyzed for TPH and SVOC's. It contains TPH = 530 mg/kg, and no additional SVOC's were detected. TCLP analysis for SVOC's was not completed as a result. This material contains cinders and small pieces of hard coal.

The North solvent soil was analyzed for TPH, SVOC's and VOC's. It contains TPH = 670 mg/kg, 1.5 mg/kg xylenes, 10 mg/kg pyrene and 12 mg/kg fluoranthene. No other constituents were detected. TCLP analysis for SVOC's and VOC's was not completed based on these results. It has odor that suggests contamination from paint solvents, but apparently there is no significant solvent residual and fuel oil is also present.

The black paint solids were analyzed for total metals, TCLP metals, TCLP SVOC's and total VOC's. The TCLP metals, TCLP SVOC's and total VOC's were below detection limits. TCLP analysis for VOC's was not done as a result. The total metals results were below the 1996 VRP limits. Total lead was below the 2001 RISC limit for industrial activity used previously for on-site soil disposal decisions during Phase II.

We have completed the waste profile for this combined wastestream and submitted it to Waste Management for approval and pricing. We estimate a combined total of 65 CY/80T of this material. This includes the one 55-gallon drum already filled. These materials may be suitable to be left on-site, at the City's option. Direct further questions to my attention. Thank you for this opportunity to serve you.

Sincerely,

Grauvogel & Associates

Lawrence W. Grauvogel PE, CIH, CSP, CHMM

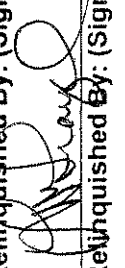
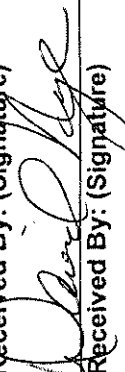
Attachments: EIS Reports 0410-105, 0409-347

cc: L. Turley/Hull, T. Baehr/Hull

**CHAIN OF CUSTODY RECORD**

PROJ. NO		PROJECT NAME				Total No.	of	Con-tainers	Lab Order ID	
2436		Oliver Plow Bldg 40/47 <i>Demo</i>							0409.347	
SAMPLERS: (Print Name & Sign)						Total Metals	TCP Metals	TAT	Sample Type	Lab Number
FIELD ID	DATE	TIME	C O M P	G R A B	STATION LOCATION					
430-1	9/30/01	1330		<input checked="" type="checkbox"/>	Black Paint	2	✓	✓	Sludge	99431
					Notes TCP SVOC added in mid October					

Relinquished By: (Signature)	Date	Time	Received By: (Signature)	EIS QUOTE NO:	
	9/30/01	1512			
Relinquished By: (Signature)	Date	Time	Received By: (Signature)	Ship To:	
Relinquished By: (Signature)	Date	Time	Received By: (Signature)		

**NOTES: 1) If you were issued a quote number, it must appear on this document.**

2) Instructions & area for comments are on reverse side.



**REPORT OF ANALYSIS**

Mr Larry Grauvogel  
Grauvogel & Associates  
17660 Fall Creek Drive  
Granger, IN 46530  
Tel No: 277-4770  
Fax No: 277-5281  
PO No:

Report Date: 11/1/04  
EIS Order No: 040900347  
EIS Sample No: 099431  
EIS Project No: 2730-1000-04

Project Name: Oliver Plow Works

Client Sample ID: Black Paint  
Date Collected: 9/30/04  
Date Received: 9/30/04  
Collected By: L. Grauvogel

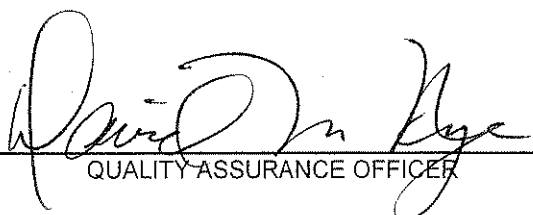
This report presents results of analysis for your sample(s) received under our Order No above. This Number is to be used in all inquiries concerning this report. The EIS Sample No above, as well as your Sample ID, refer to the first sample in a multi-sample submission

**DEFINITIONS:**

- MDL = Method Detection Limit normally achieved in the absence of interferences or other matrix difficulties.
- RDL = Reporting Detection Limit achieved in your sample. If numerically greater than the MDL, dilutions were required in order to perform the analysis. If numerically less than the MDL, alternate techniques were employed.
- nd = Not Detected at the RDL value. If present, result is less than this value.
- < = Not Detected at the numerical value shown. If present, result is less than this value.
- [ ] = Result is estimated due to matrix interferences or calibration curve exceedence.

CHAIN-OF-CUSTODY is enclosed if received with your sample submission.

DRINKING WATER CERTIFICATIONS: Chemistry = C-71-02 Bacteriology = M-76-5

  
QUALITY ASSURANCE OFFICER

  
LABORATORY DIRECTOR

The data in this report has been reviewed and complies with EIS Quality Control unless specifically addressed above.

**SAMPLE RESULTS**

CLIENT SAMPLE ID: Black Paint  
 CLIENT PROJECT: Oliver Plow Works  
 SAMPLE TYPE: Soil/Sludge/Solid  
 Date Collected: 9/30/04

Report Date: 11/1/04  
 EIS Sample No: 099431  
 EIS Order No: 040900347  
 Date Received: 9/30/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
<b>METALS</b>							
Arsenic, Total	<10	mg/kg(wet)	10	10	10/7/04	E09	6010
Barium, Total	1970	mg/kg(wet)	10	1	10/7/04	E09	6010
Cadmium, Total	3.3	mg/kg(wet)	1	1	10/7/04	E09	6010
Chromium, Total	174	mg/kg(wet)	2	2	10/7/04	E09	6010
Lead, Total	788	mg/kg(wet)	5	5	10/7/04	E09	6010
Mercury, Total	<0.2	mg/kg(wet)	0.2	0.2	10/20/04	E09	7471
Selenium, Total	<10	mg/kg(wet)	10	10	10/7/04	E09	6010
Silver, Total	<1	mg/kg(wet)	1	1	10/7/04	E09	6010

**SAMPLE RESULTS**

CLIENT SAMPLE ID: Black Paint  
 CLIENT PROJECT: Oliver Plow Works  
 SAMPLE TYPE: Soil/Sludge/Solid  
 Date Collected: 9/30/04

Report Date: 11/1/04  
 EIS Sample No: 099431  
 EIS Order No: 040900347  
 Date Received: 9/30/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
<b>TCLP SEMIVOLATILES</b>							
Cresol (meta) TCLP	nd	mg/L	0.1	0.1	10/29/04	E01	8270 C
Cresol (ortho) TCLP	nd	mg/L	0.1	0.1	10/29/04	E01	8270 C
Cresol (para) TCLP	nd	mg/L	0.1	0.1	10/29/04	E01	8270 C
Dinitrotoluene (2,4) TCLP	nd	mg/L	0.1	0.1	10/29/04	E01	8270 C
Hexachloro-1,3-butadiene,TCLP	nd	mg/L	0.1	0.1	10/29/04	E01	8270 C
Hexachlorobenzene,TCLP	nd	mg/L	0.1	0.1	10/29/04	E01	8270 C
Hexachloroethane,TCLP	nd	mg/L	0.1	0.1	10/29/04	E01	8270 C
Nitrobenzene,TCLP	nd	mg/L	0.1	0.1	10/29/04	E01	8270 C
Pentachlorophenol,TCLP	nd	mg/L	1	1	10/29/04	E01	8270 C
Pyridine,TCLP	nd	mg/L	0.1	0.1	10/29/04	E01	8270 C
Total Cresols,TCLP	nd	mg/L	0.3	0.3	10/29/04	E01	8270 C
Trichlorophenol (2,4,5) TCLP	nd	mg/L	1	1	10/29/04	E01	8270 C
Trichlorophenol (2,4,6) TCLP	nd	mg/L	0.1	0.1	10/29/04	E01	8270 C

## SAMPLE RESULTS

Page 5 of 6

CLIENT SAMPLE ID: **Black Paint**  
 CLIENT PROJECT: **Oliver Plow Works**  
 SAMPLE TYPE: **Soil/Sludge/Solid**  
 Date Collected: **9/30/04**

Report Date: **11/1/04**  
 EIS Sample No: **099431**  
 EIS Order No: **040900347**  
 Date Received: **9/30/04**

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
<b>VOLATILE ORGANICS</b>							
Acetone	nd	mg/kg(wet)	5	0.5	10/14/04	E04	8260 B
Benzene	nd	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Bromobenzene	nd	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Bromochloromethane	nd	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Bromodichloromethane	nd	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Bromoform	nd	mg/kg(wet)	1	0.1	10/14/04	E04	8260 B
Bromomethane	nd	mg/kg(wet)	2.5	0.25	10/14/04	E04	8260 B
Butylbenzene (normal)	630	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Butylbenzene (sec)	nd	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Butylbenzene (terf)	3000	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Carbon Tetrachloride	nd	mg/kg(wet)	1	0.1	10/14/04	E04	8260 B
Chlorobenzene	nd	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Chloroethane	nd	mg/kg(wet)	1	0.1	10/14/04	E04	8260 B
Chloroform	nd	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Chloromethane	nd	mg/kg(wet)	1	0.1	10/14/04	E04	8260 B
Chlorotoluene (2)	nd	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Chlorotoluene (4)	nd	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Dibromo-3-chloropropane (1,2)	nd	mg/kg(wet)	2.5	0.25	10/14/04	E04	8260 B
Dibromochloromethane	nd	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Dibromoethane (1,2)	nd	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Dibromomethane	nd	mg/kg(wet)	1	0.1	10/14/04	E04	8260 B
Dichlorobenzene (1,2)	nd	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Dichlorobenzene (1,3)	nd	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Dichlorobenzene (1,4)	nd	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Dichlorodifluoromethane	nd	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Dichloroethane (1,1)	nd	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Dichloroethane (1,2)	nd	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Dichloroethene (1,1)	nd	mg/kg(wet)	1	0.1	10/14/04	E04	8260 B
Dichloroethene (c-1,2)	nd	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Dichloroethene (t-1,2)	nd	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Dichloropropane (1,2)	nd	mg/kg(wet)	2.5	0.25	10/14/04	E04	8260 B
Dichloropropane (1,3)	nd	mg/kg(wet)	2.5	0.25	10/14/04	E04	8260 B
Dichloropropane (2,2)	nd	mg/kg(wet)	2.5	0.25	10/14/04	E04	8260 B
Dichloropropene (1,1)	nd	mg/kg(wet)	2.5	0.25	10/14/04	E04	8260 B
Dichloropropene (c-1,3)	nd	mg/kg(wet)	2.5	0.25	10/14/04	E04	8260 B
Dichloropropene (t-1,3)	nd	mg/kg(wet)	2.5	0.25	10/14/04	E04	8260 B
Diethyl ether	nd	mg/kg(wet)	5	0.5	10/14/04	E04	8260 B
Ethylbenzene	nd	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B

**SAMPLE RESULTS**

CLIENT SAMPLE ID: **Black Paint**  
 CLIENT PROJECT: **Oliver Plow Works**  
 SAMPLE TYPE: **Soil/Sludge/Solid**  
 Date Collected: **9/30/04**

Report Date: **11/1/04**  
 EIS Sample No: **099431**  
 EIS Order No: **040900347**  
 Date Received: **9/30/04**

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Hexachlorobutadiene	nd	mg/kg(wet)	1	0.1	10/14/04	E04	8260 B
Hexanone (2-)	nd	mg/kg(wet)	5	0.5	10/14/04	E04	8260 B
Isopropylbenzene	nd	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Isopropyltoluene (para)	nd	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Methyl Ethyl Ketone (MEK)	nd	mg/kg(wet)	5	0.5	10/14/04	E04	8260 B
Methyl Isobutyl Ketone (MIBK)	nd	mg/kg(wet)	5	0.5	10/14/04	E04	8260 B
Methylbutylether (tert) (MTBE)	nd	mg/kg(wet)	1	0.1	10/14/04	E04	8260 B
Methylene chloride	nd	mg/kg(wet)	1	0.1	10/14/04	E04	8260 B
Naphthalene	750	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Propylbenzene (normal)	1670	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Styrene	nd	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Tetrachloroethane (1,1,1,2)	nd	mg/kg(wet)	1	0.1	10/14/04	E04	8260 B
Tetrachloroethane (1,1,2,2)	nd	mg/kg(wet)	1	0.1	10/14/04	E04	8260 B
Tetrachloroethene	nd	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Toluene	nd	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Trichlorobenzene (1,2,3)	nd	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Trichlorobenzene (1,2,4)	nd	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Trichloroethane (1,1,1)	nd	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Trichloroethane (1,1,2)	nd	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Trichloroethene	nd	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Trichlorofluoromethane	nd	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Trichloropropane (1,2,3)	nd	mg/kg(wet)	2.5	0.25	10/14/04	E04	8260 B
Trimethylbenzene (1,2,4)	15700	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Trimethylbenzene (1,3,5)	12560	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Vinyl acetate	nd	mg/kg(wet)	5	0.5	10/14/04	E04	8260 B
Vinyl Chloride	nd	mg/kg(wet)	1	0.1	10/14/04	E04	8260 B
Xylene (ortho)	1260	mg/kg(wet)	0.5	0.05	10/14/04	E04	8260 B
Xylenes (meta + para)	1880	mg/kg(wet)	1	0.1	10/14/04	E04	8260 B

## SAMPLE PREPARATION INFORMATION

Client Name: Grauvogel & Associates  
Client Project: Oliver Plow Works

Report Date: 11/1/04  
EIS Order No: 040900347

EIS Lab Number	Client Description	Sample Date	Procedure	Result	Date Completed	Analyst	Method
099431	Black Paint	9/30/04	Digest Mercury	Complete	10/19/04	E09	7471
		9/30/04	Digest Mercury(TCLP Extract)	Complete	10/19/04	E09	7470
		9/30/04	Digest ICP Metals	Complete	10/7/04	E09	3050 B
		9/30/04	Digest ICP Metals(TCLP Extract)	Complete	10/5/04	E09	3005 A
		9/30/04	Extract SVOC(TCLP Extract)	Complete	10/19/04	E16	3510 C
		9/30/04	Extract VOC	Complete	10/6/04	E16	8260 B
		9/30/04	TCLP Extraction	Complete	10/4/04	E16	1311



**QUALITY ASSURANCE / QUALITY CONTROL DATA**  
**Method Specific Surrogate Compound Recoveries**

EIS Order ID: 040900347

Normal Test	Surrogate	QUALITY CONTROL LIMITS			
		Methods		QC Limits	
		Water	Soil	Water	Soil
Herbicides	2,4-Dichlorophenylacetic acid(DCAA)	615 / 8151A / 8270C	8270C	15 - 135	
Pesticides / PCB	2,4,5,6-Tetrachloro-m-xylene(TCMX)	608 / 8081A / 8082 / 508	8082	22 - 145	40 - 150
Pesticides / PCB	Decachlorobiphenyl(DCB)	608 / 8081A / 508	8082	22 - 145	40 - 150
SOC (svoc)	Perylene, d12	525.2		30 - 140	
SVOC (acid)	2-Fluorophenol	625 / 8270C	8270C	21 - 100	25 - 121
SVOC (acid)	Phenol, d5	625 / 8270C	8270C	10 - 94	24 - 113
SVOC (base/neutral)	Nitrobenzene, d5	625 / 8270C	8270C	35 - 114	23 - 120
SVOC (base/neutral)	2-Fluorobiphenyl	625 / 8270C	8270C	43 - 116	30 - 115
SVOC (acid)	2,4,6-Tribromophenol	625 / 8270C	8270C	10 - 123	19 - 122
SVOC (base/neutral)	Terphenyl, d14	625 / 8270C	8270C	33 - 141	18 - 137
TPH	Styrene	8015M	8015M	30 - 90	34 - 90
VOC / BETX / TPH	1,2-Dichloroethane, d4	624 / 8260B / 524.2	8260B	70 - 130	70 - 130
VOC / BETX / TPH	Toluene, d8	624 / 8260B / 524.2	8260B	70 - 130	70 - 130
VOC / BETX / TPH	Bromofluorobenzene(BFB)	624 / 8260B / 524.2	8260B	70 - 130	70 - 130

EIS Lab No	Client Sample ID	Method	Matrix	Surrogate	%Recovery
099431	Black Paint	8260 B	Soil/Sludge/Solid	1,2-Dichloroethane-d4 (SS)	96
		8260 B	Soil/Sludge/Solid	4-Bromofluorobenzene (SS)	108
		8260 B	Soil/Sludge/Solid	Toluene-d8 (SS)	108
099431	Black Paint	8270 C	Soil/Sludge/Solid	2,4,6-Tribromophenol (SS)	124
		8270 C	Soil/Sludge/Solid	2-Fluorobiphenyl (SS)	61
		8270 C	Soil/Sludge/Solid	2-Fluorophenol (SS)	57
		8270 C	Soil/Sludge/Solid	Nitrobenzene-d5 (SS)	79
		8270 C	Soil/Sludge/Solid	Phenol-d5 (SS)	47
		8270 C	Soil/Sludge/Solid	Terphenyl-d14 (SS)	64

Legend: -1 = Surrogates diluted out    -2 = Surrogates not used    -999 = Interference in response area





**REPORT OF ANALYSIS**

Mr Larry Grauvogel  
Grauvogel & Associates  
17660 Fall Creek Drive  
Granger, IN 46530  
Tel No: 277-4770  
Fax No: 277-5281  
PO No: 2436

Report Date: 11/1/04  
EIS Order No: 041000105  
EIS Sample No: 099701  
EIS Project No: 2730-1000-04

**Project Name: Oliver Buildings.**

**Client Sample ID: South Pit Soil**  
Date Collected: 10/12/04  
Date Received: 10/12/04  
Collected By: L. Grauvogel

This report presents results of analysis for your sample(s) received under our Order No above. This Number is to be used in all inquiries concerning this report. The EIS Sample No above, as well as your Sample ID, refer to the first sample in a multi-sample submission

**DEFINITIONS:**

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- < = Not Detected at the numerical value shown. If present, result is less than this value.
- [ ] = Result is estimated due to matrix interferences or calibration curve exceedence.

CHAIN-OF-CUSTODY is enclosed if received with your sample submission.

DRINKING WATER CERTIFICATIONS: Chemistry = C-71-02 Bacteriology = M-76-5

NOTE: The North Waste Soil showed the presence of numerous substituted benzene compounds not part of VOC, SVOC or TPH targets. Concentration of these compounds is ESTIMATED at 10000 ppm.

\_\_\_\_\_  
QUALITY ASSURANCE OFFICER

  
\_\_\_\_\_  
LABORATORY DIRECTOR

The data in this report has been reviewed and complies with EIS Quality Control unless specifically addressed above.

# SAMPLE RESULTS

Page 2 of 9

CLIENT SAMPLE ID: South Pit Soil  
CLIENT PROJECT: Oliver Buildings.  
SAMPLE TYPE: Soil/Sludge/Solid  
Date Collected: 10/12/04

Report Date: 11/1/04  
EIS Sample No: 099701  
EIS Order No: 041000105  
Date Received: 10/12/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Moisture(%)	18	%	0.1	0.1	10/18/04	E21	160.3
TPH (DRO)	530	mg/kg(wet)	80	20	10/21/04	E16	8015 M

## SAMPLE RESULTS

CLIENT SAMPLE ID: South Pit Soil  
 CLIENT PROJECT: Oliver Buildings.  
 SAMPLE TYPE: Soil/Sludge/Solid  
 Date Collected: 10/12/04

Report Date: 11/1/04  
 EIS Sample No: 099701  
 EIS Order No: 041000105  
 Date Received: 10/12/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
<b>SEMIVOLATILE ORGANICS</b>							
Acenaphthene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Acenaphthylene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Aniline	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Anthracene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Benzidine	nd	mg/kg(wet)	50	2.5	10/29/04	E01	8270 C
Benzo(a)anthracene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Benzo(a)pyrene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Benzo(b)fluoranthene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Benzo(ghi)perylene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Benzo(k)fluoranthene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Benzoic acid	nd	mg/kg(wet)	50	2.5	10/29/04	E01	8270 C
Benzyl alcohol	nd	mg/kg(wet)	20	1	10/29/04	E01	8270 C
Bis(2-chloroethoxy)methane	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Bis(2-chloroethyl)ether	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Bis(2-chloroisopropyl)ether	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Bis(2-ethylhexyl)phthalate	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Bromophenyl-phenylether (4)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Butyl benzyl phthalate	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Chloro-3-methylphenol (4)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Chloroaniline (4)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Chloronaphthalene (2)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Chlorophenol (2)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Chlorophenyl phenyl ether (4)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Chrysene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Di-n-butylphthalate	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Di-n-octylphthalate	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Dibenzo(a,h)anthracene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Dibenzofuran	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Dichlorobenzene (1,2)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Dichlorobenzene (1,3)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Dichlorobenzene (1,4)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Dichlorobenzidine (3,3')	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Dichlorophenol (2,4)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Diethyl phthalate	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Dimethyl phthalate	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Dimethylphenol (2,4)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
nitrophenol (2,4)	nd	mg/kg(wet)	50	2.5	10/29/04	E01	8270 C
Dinitrotoluene (2,4)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C

## SAMPLE RESULTS

Page 4 of 9

CLIENT SAMPLE ID: South Pit Soil  
 CLIENT PROJECT: Oliver Buildings.  
 SAMPLE TYPE: Soil/Sludge/Solid  
 Date Collected: 10/12/04

Report Date: 11/1/04  
 EIS Sample No: 099701  
 EIS Order No: 041000105  
 Date Received: 10/12/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Dinitrotoluene (2,6)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Diphenylhydrazine (1,2)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Fluoranthene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Fluorene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Hexachlorobenzene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Hexachlorobutadiene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Hexachlorocyclopentadiene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Hexachloroethane	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Indeno(1,2,3-cd)pyrene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Isophorone	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Methyl-4,6-dinitrophenol (2)	nd	mg/kg(wet)	50	2.5	10/29/04	E01	8270 C
Methylnaphthalene (2)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Methylphenol (2)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Methylphenol (4)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Naphthalene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Nitroaniline (2)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Nitroaniline (3)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Nitroaniline (4)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Nitrobenzene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Nitrophenol (2)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Nitrophenol (4)	nd	mg/kg(wet)	50	2.5	10/29/04	E01	8270 C
Nitroso-di-methylamine (normal)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Nitroso-di-n-propylamine (normal)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Nitroso-di-phenylamine (normal)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Pentachlorophenol	nd	mg/kg(wet)	50	2.5	10/29/04	E01	8270 C
Phenanthrene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Phenol	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Pyrene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Pyridine	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Trichlorobenzene (1,2,4)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Trichlorophenol (2,4,5)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Trichlorophenol (2,4,6)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C

# SAMPLE RESULTS

Page 5 of 9

CLIENT SAMPLE ID: North Waste Soil  
CLIENT PROJECT: Oliver Buildings.  
SAMPLE TYPE: Soil/Sludge/Solid  
Date Collected: 10/12/04

Report Date: 11/1/04  
EIS Sample No: 099702  
EIS Order No: 041000105  
Date Received: 10/12/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Moisture(%)	11	%	0.1	0.1	10/18/04	E21	160.3
TPH (DRO)	670	mg/kg(wet)	80	20	10/21/04	E16	8015 M

## SAMPLE RESULTS

Page 6 of 9

CLIENT SAMPLE ID: North Waste Soil  
 CLIENT PROJECT: Oliver Buildings.  
 SAMPLE TYPE: Soil/Sludge/Solid  
 Date Collected: 10/12/04

Report Date: 11/1/04  
 EIS Sample No: 099702  
 EIS Order No: 041000105  
 Date Received: 10/12/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
<b>SEMIVOLATILE ORGANICS</b>							
Acenaphthene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Acenaphthylene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Aniline	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Anthracene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Benzidine	nd	mg/kg(wet)	50	2.5	10/29/04	E01	8270 C
Benzo(a)anthracene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Benzo(a)pyrene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Benzo(b)fluoranthene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Benzo(ghi)perylene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Benzo(k)fluoranthene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Benzoic acid	nd	mg/kg(wet)	50	2.5	10/29/04	E01	8270 C
Benzyl alcohol	nd	mg/kg(wet)	20	1	10/29/04	E01	8270 C
Bis(2-chloroethoxy)methane	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Bis(2-chloroethyl)ether	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Bis(2-chloroisopropyl)ether	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Bis(2-ethylhexyl)phthalate	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Bromophenyl-phenylether (4)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Butyl benzyl phthalate	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Chloro-3-methylphenol (4)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Chloroaniline (4)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Chloronaphthalene (2)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Chlorophenol (2)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Chlorophenyl phenyl ether (4)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Chrysene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Di-n-butylphthalate	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Di-n-octylphthalate	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Dibenzo(a,h)anthracene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Dibenzofuran	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Dichlorobenzene (1,2)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Dichlorobenzene (1,3)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Dichlorobenzene (1,4)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Dichlorobenzidine (3,3')	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Dichlorophenol (2,4)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Diethyl phthalate	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Dimethyl phthalate	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Dimethylphenol (2,4)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
4-nitrophenol (2,4)	nd	mg/kg(wet)	50	2.5	10/29/04	E01	8270 C
Dinitrotoluene (2,4)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C



## SAMPLE RESULTS

Page 7 of 9

CLIENT SAMPLE ID: North Waste Soil  
 CLIENT PROJECT: Oliver Buildings.  
 SAMPLE TYPE: Soil/Sludge/Solid  
 Date Collected: 10/12/04

Report Date: 11/1/04  
 EIS Sample No: 099702  
 EIS Order No: 041000105  
 Date Received: 10/12/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Dinitrotoluene (2,6)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Diphenylhydrazine (1,2)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Fluoranthene	12.0	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Fluorene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Hexachlorobenzene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Hexachlorobutadiene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Hexachlorocyclopentadiene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Hexachloroethane	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Indeno(1,2,3-cd)pyrene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Isophorone	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Methyl-4,6-dinitrophenol (2)	nd	mg/kg(wet)	50	2.5	10/29/04	E01	8270 C
Methylnaphthalene (2)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Methylphenol (2)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Methylphenol (4)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Naphthalene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Nitroaniline (2)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Nitroaniline (3)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Nitroaniline (4)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Nitrobenzene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Nitrophenol (2)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Nitrophenol (4)	nd	mg/kg(wet)	50	2.5	10/29/04	E01	8270 C
Nitroso-di-methylamine (normal)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Nitroso-di-n-propylamine (normal)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Nitroso-di-phenylamine (normal)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Pentachlorophenol	nd	mg/kg(wet)	50	2.5	10/29/04	E01	8270 C
Phenanthrene	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Phenol	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Pyrene	10.0	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Pyridine	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Trichlorobenzene (1,2,4)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Trichlorophenol (2,4,5)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C
Trichlorophenol (2,4,6)	nd	mg/kg(wet)	10	0.5	10/29/04	E01	8270 C

## SAMPLE RESULTS

Page 8 of 9

CLIENT SAMPLE ID: North Waste Soil  
 CLIENT PROJECT: Oliver Buildings.  
 SAMPLE TYPE: Soil/Sludge/Solid  
 Date Collected: 10/12/04

Report Date: 11/1/04  
 EIS Sample No: 099702  
 EIS Order No: 041000105  
 Date Received: 10/12/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
<b>VOLATILE ORGANICS</b>							
Acetone	nd	mg/kg(wet)	2.2	0.5	10/29/04	E04	8260 B
Benzene	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Bromobenzene	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Bromochloromethane	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Bromodichloromethane	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Bromoform	nd	mg/kg(wet)	0.44	0.1	10/29/04	E04	8260 B
Bromomethane	nd	mg/kg(wet)	1.1	0.25	10/29/04	E04	8260 B
Butylbenzene (normal)	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Butylbenzene (sec)	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Butylbenzene (terf)	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Carbon Tetrachloride	nd	mg/kg(wet)	0.44	0.1	10/29/04	E04	8260 B
Chlorobenzene	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Chloroethane	nd	mg/kg(wet)	0.44	0.1	10/29/04	E04	8260 B
Chloroform	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Chloromethane	nd	mg/kg(wet)	0.44	0.1	10/29/04	E04	8260 B
Chlorotoluene (2)	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Chlorotoluene (4)	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Dibromo-3-chloropropane (1,2)	nd	mg/kg(wet)	1.1	0.25	10/29/04	E04	8260 B
Dibromochloromethane	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Dibromoethane (1,2)	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Dibromomethane	nd	mg/kg(wet)	0.44	0.1	10/29/04	E04	8260 B
Dichlorobenzene (1,2)	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Dichlorobenzene (1,3)	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Dichlorobenzene (1,4)	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Dichlorodifluoromethane	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Dichloroethane (1,1)	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Dichloroethane (1,2)	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Dichloroethene (1,1)	nd	mg/kg(wet)	0.44	0.1	10/29/04	E04	8260 B
Dichloroethene (c-1,2)	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Dichloroethene (t-1,2)	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Dichloropropane (1,2)	nd	mg/kg(wet)	1.1	0.25	10/29/04	E04	8260 B
Dichloropropane (1,3)	nd	mg/kg(wet)	1.1	0.25	10/29/04	E04	8260 B
Dichloropropane (2,2)	nd	mg/kg(wet)	1.1	0.25	10/29/04	E04	8260 B
Dichloropropene (1,1)	nd	mg/kg(wet)	1.1	0.25	10/29/04	E04	8260 B
Dichloropropene (c-1,3)	nd	mg/kg(wet)	1.1	0.25	10/29/04	E04	8260 B
Dichloropropene (t-1,3)	nd	mg/kg(wet)	1.1	0.25	10/29/04	E04	8260 B
Diethyl ether	nd	mg/kg(wet)	2.2	0.5	10/29/04	E04	8260 B
Ethylbenzene	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B

## SAMPLE RESULTS

Page 9 of 9

**CLIENT SAMPLE ID:** North Waste Soil  
**CLIENT PROJECT:** Oliver Buildings.  
**SAMPLE TYPE:** Soil/Sludge/Solid  
**Date Collected:** 10/12/04

**Report Date:** 11/1/04  
**EIS Sample No:** 099702  
**EIS Order No:** 041000105  
**Date Received:** 10/12/04

Parameter	Results	Units	RDL	MDL	Test Date	Analyst ID	Method
Hexachlorobutadiene	nd	mg/kg(wet)	0.44	0.1	10/29/04	E04	8260 B
Hexanone (2-)	nd	mg/kg(wet)	2.2	0.5	10/29/04	E04	8260 B
Isopropylbenzene	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Isopropyltoluene (para)	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Methyl Ethyl Ketone (MEK)	nd	mg/kg(wet)	2.2	0.5	10/29/04	E04	8260 B
Methyl Isobutyl Ketone (MIBK)	nd	mg/kg(wet)	2.2	0.5	10/29/04	E04	8260 B
Methylbutylether (tert) (MTBE)	nd	mg/kg(wet)	0.44	0.1	10/29/04	E04	8260 B
Methylene chloride	nd	mg/kg(wet)	0.44	0.1	10/29/04	E04	8260 B
Naphthalene	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Propylbenzene (normal)	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Styrene	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Tetrachloroethane (1,1,1,2)	nd	mg/kg(wet)	0.44	0.1	10/29/04	E04	8260 B
Tetrachloroethane (1,1,2,2)	nd	mg/kg(wet)	0.44	0.1	10/29/04	E04	8260 B
Tetrachloroethene	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Toluene	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Trichlorobenzene (1,2,3)	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Trichlorobenzene (1,2,4)	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Trichloroethane (1,1,1)	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Trichloroethane (1,1,2)	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Trichloroethene	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Trichlorofluoromethane	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Trichloropropane (1,2,3)	nd	mg/kg(wet)	1.1	0.25	10/29/04	E04	8260 B
Trimethylbenzene (1,2,4)	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Trimethylbenzene (1,3,5)	nd	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Vinyl acetate	nd	mg/kg(wet)	2.2	0.5	10/29/04	E04	8260 B
Vinyl Chloride	nd	mg/kg(wet)	0.44	0.1	10/29/04	E04	8260 B
Xylene (ortho)	1.50	mg/kg(wet)	0.22	0.05	10/29/04	E04	8260 B
Xylenes (meta + para)	nd	mg/kg(wet)	0.44	0.1	10/29/04	E04	8260 B

# SAMPLE PREPARATION INFORMATION

Client Name: Grauvogel & Associates

Report Date: 11/1/04

Client Project: Oliver Buildings.

EIS Order No: 041000105

EIS Lab Number	Client Description	Sample Date	Procedure	Result	Date Completed	Analyst	Method
099701	South Pit Soil	10/12/04	Extract BETX/TPH	Complete	10/18/04	E16	8015
		10/12/04	Extract SVOC	Complete	10/19/04	E16	3540 C
099702	North Waste Soil	10/12/04	Extract BETX/TPH	Complete	10/18/04	E16	8015
		10/12/04	Extract SVOC	Complete	10/19/04	E16	3540 C
		10/12/04	Extract VOC	Complete	10/18/04	E16	8260 B

**QUALITY ASSURANCE / QUALITY CONTROL DATA**  
**Method Specific Surrogate Compound Recoveries**

EIS Order ID: 041000105

Normal Test	Surrogate	QUALITY CONTROL LIMITS			
		Methods		QC Limits	
		Water	Soil	Water	Soil
Herbicides	2,4-Dichlorophenylaceticacid(DCAA)	615 / 8151A / 8270C	8270C	15 - 135	
Pesticides / PCB	2,4,5,6-Tetrachloro-m-xylene(TCMX)	608 / 8081A / 8082 / 508	8082	22 - 145	40 - 150
Pesticides / PCB	Decachlorobiphenyl(DCB)	608 / 8081A / 508	8082	22 - 145	40 - 150
SOC (svoc)	Perylene, d12	525.2		30 - 140	
SVOC (acid)	2-Fluorophenol	625 / 8270C	8270C	21 - 100	25 - 121
SVOC (acid)	Phenol, d5	625 / 8270C	8270C	10 - 94	24 - 113
SVOC (base/neutral)	Nitrobenzene, d5	625 / 8270C	8270C	35 - 114	23 - 120
SVOC (base/neutral)	2-Fluorobiphenyl	625 / 8270C	8270C	43 - 116	30 - 115
SVOC (acid)	2,4,6-Tribromophenol	625 / 8270C	8270C	10 - 123	19 - 122
SVOC (base/neutral)	Terphenyl, d14	625 / 8270C	8270C	33 - 141	18 - 137
TPH	Styrene	8015M	8015M	30 - 90	34 - 90
VOC / BETX / TPH	1,2-Dichloroethane, d4	624 / 8260B / 524.2	8260B	70 - 130	70 - 130
VOC / BETX / TPH	Toluene, d8	624 / 8260B / 524.2	8260B	70 - 130	70 - 130
VOC / BETX / TPH	Bromofluorobenzene(BFB)	624 / 8260B / 524.2	8260B	70 - 130	70 - 130

EIS Lab No	Client Sample ID	Method	Matrix	Surrogate	%Recovery
099701	South Pit Soil	8015 M	Soil/Sludge/Solid	Styrene (SS)	46
099701	South Pit Soil	8270 C	Soil/Sludge/Solid	2,4,6-Tribromophenol (SS)	84
		8270 C	Soil/Sludge/Solid	2-Fluorobiphenyl (SS)	50
		8270 C	Soil/Sludge/Solid	2-Fluorophenol (SS)	90
		8270 C	Soil/Sludge/Solid	Nitrobenzene-d5 (SS)	72
		8270 C	Soil/Sludge/Solid	Phenol-d5 (SS)	85
		8270 C	Soil/Sludge/Solid	Terphenyl-d14 (SS)	53
099702	North Waste Soil	8015 M	Soil/Sludge/Solid	Styrene (SS)	-1
099702	North Waste Soil	8260 B	Soil/Sludge/Solid	1,2-Dichloroethane-d4 (SS)	83
		8260 B	Soil/Sludge/Solid	4-Bromofluorobenzene (SS)	100
		8260 B	Soil/Sludge/Solid	Toluene-d8 (SS)	103
099702	North Waste Soil	8270 C	Soil/Sludge/Solid	2,4,6-Tribromophenol (SS)	80
		8270 C	Soil/Sludge/Solid	2-Fluorobiphenyl (SS)	53
		8270 C	Soil/Sludge/Solid	2-Fluorophenol (SS)	95
		8270 C	Soil/Sludge/Solid	Nitrobenzene-d5 (SS)	70
		8270 C	Soil/Sludge/Solid	Phenol-d5 (SS)	85
		8270 C	Soil/Sludge/Solid	Terphenyl-d14 (SS)	55

**Legend:** -1 = Surrogates diluted out      -2 = Surrogates not used      -999 = Interference in response area