MSD

October 28, 2002

Mr. Femi Akindele
Residual Project Manager
Kentucky/Tennessee Section
U.S. Environmental Protection Agency
Region IV
61 Forsyth Street
Atlanta, GA 30303

Re: Sampling Event # 28, Result of Groundwater Quality Monitoring - FY 03, First Quarter (FY03-1Q), Lees Lane Superfund Site, Jefferson County, Kentucky, Administrative Order on Consent, USEPA Docket No-91-32-C

Dear Mr. Akindele

In accordance with paragraph 11, under Reporting Requirements, of the subject Consent Order and Attachment 1, Operation and Maintenance Plan For Post-Removal Site Control at the Lee's Lane Landfill Site, Section 4.4, Groundwater Quality Monitoring, attached for your information files is one photocopy each of the following analyses and reports prepared by Heritage Laboratories, Inc., 7901 W. Morris Street, Indianapolis, Indiana 46231 for MSD.

The data package contains all of the analytical results and Quality Assurance reports for samples relating to the event.

Certificate of Analysis

WELL LOCATION	SAMPLE DESCRIPTION	LAB ID	REPORT LENGTH
MW-02	LLMW0228	A607634	8 pages
MW-04	LLMW0428	A607630	8
Duplicate	LLMW0428DUP	A607631	8
MW-05	LLMW0528	A607632	8
MW-A	LLMWA28	A607636	8
MW-B	LLMWB28	A607635	8
Field Blank	LLMW28FB	A607633	8

10862973

Quality Assurance Reports

DESCRIPTION	REPORT LENGTH
Quality Assurance Report	39 pages
Chain of Custody (COPY)	1 page

The above identified Certificate of Analysis and Quality Assurance Reports were received by the undersigned on October 25, 2002 and transmitted within the five (5) working day requirement of Paragraph 11 of the Consent Order.

Please advise if you have any questions concerning the attached information.

Sincerely,

Richard H. Watkins, Sr.
Special Assistant to Director
RHW/rw
Lees-03-1Qtr

Enc.

cc: Kentucky National Resource Environment Protection Cabinet
Mr. Rick Hogan, Division of Waste Management
H. J. Schardein, Jr., Acting Executive Director
Lees Lane File

C E R T I F I C A T E O F A N A L Y S I S

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, LLC	25-SEP-02		A607634
COMMERCIAL LABORATORY OPERATIONS	Complete	PO Number	
7901 W. MORRIS ST.	09-OCT-02	DP 00151	
INDIANAPOLIS, IN 46231	Printed	Sampled	
(317)243-8304	09-OCT-02	25-SEP-02 12:51	

Report To	Bill To
DAN SAMMONS, MFWTP IND. WASTE LABORATORY	ACCOUNTS PAYABLE
LOUISVILLE AND JEFFERSON COUNTY M.S.D.	LOUISVILLE & JEFFERSON COUNTY M.S.D.
P.O. BOX 740011	PO BOX 740011
LOUISVILLE, KY 40201	LOUISVILLE, KY 40201

Sample Description

CLIENT ID: MW02-28
MATRIX TYPE: NON-SPECIFIC WATER
WELL NUMBER: MW02-28
Submitter Code :4217

VOLATILE ORGANICS SW846-8240B NELAC:N

Analyst: R. SHAMP Analysis Date: 02-OCT-02 14:05 Instrument: GC/MS VOA Test: 0510 3 0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	20	ug/L
ACROLEIN	BDL	50	ug/L
ACRYLONITRILE	BDL	70	ug/L
BENZENE	BDL	5.0	ug/L
BROMODICHLOROMETHANE	BDL	5.0	ug/L
BROMOFORM	BDL	5.0	ug/L
BROMOMETHANE	BDL	10	ug/L
CARBON DISULFIDE	BDL	5.0	ug/L
CARBON TETRACHLORIDE	BDL	5.0	ug/L
CHLOROBENZENE	BDL	5.0	ug/L
CHLOROETHANE	BDL	10	ug/L
CHLOROFORM	BDL	5.0	ug/L
CHLOROMETHANE	BDL	10	ug/L
DIBROMOCHLOROMETHANE	BDL	5.0	ug/L
CIS-1,3-DICHLOROPROPENE	BDL	5.0	ug/L
DICHLORODIFLUOROMETHANE	BDL	5.0	ug/L
1,1-DICHLOROETHANE	BDL	5.0	ug/L
1,2-DICHLOROETHANE	BDL	5.0	ug/L
1,1-DICHLOROETHENE	BDL	5.0	ug/L
1,2-DICHLOROPROPANE	BDL	5.0	ug/L
ETHYLBENZENE	BDL	5.0	ug/L
FLUOROTRICHLOROMETHANE	BDL	5.0	ug/L
2-HEXANONE	BDL	10	ug/L
METHYLENE CHLORIDE	BDL	5.0	ug/L
METHYL ETHYL KETONE	BDL	10	ug/L
4-METHYL-2-PENTANONE	BDL	10	ug/L
STYRENE	BDL	5.0	ug/L
1,1,2,2-TETRACHLOROETHANE	BDL	5.0	ug/L

 (continued on next page)

Parameter	Result	Det. Limit	Units
TETRACHLOROETHENE	BDL	5.0	ug/L
TETRAHYDROFURAN	BDL	25	ug/L
TOLUENE	BDL	5.0	ug/L
1,2-DICHLOROETHENE (TOTAL)	BDL	5.0	ug/L
TRANS-1,3-DICHLOROPROPENE	BDL	5.0	ug/L
1,1,1-TRICHLOROETHANE	BDL	5.0	ug/L
1,1,2-TRICHLOROETHANE	BDL	5.0	ug/L
TRICHLOROETHENE	BDL	5.0	ug/L
VINYL ACETATE	BDL	10	ug/L
VINYL CHLORIDE	BDL	10	ug/L
XYLENE (TOTAL)	BDL	5.0	ug/L
SURROGATE RECOVERY			
DICHLOROETHANE-D4	123		% Rec
TOLUENE-D8	103		% Rec
BROMOFLUOROBENZENE	110		% Rec

Prep Method SW846-5030B Purge and Trap

GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C

Analyst: C. WILLHITE Analysis Date: 01-OCT-02 Instrument: PREP Test: P233.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270C NELAC:Y

Analyst: J. MINNIEAR, II Analysis Date: 02-OCT-02 16:20 Instrument: GC/MS SVOA Test: O505.3.0

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C P233.4.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	10	ug/L
ACENAPHTHYLENE	BDL	10	ug/L
ANTHRACENE	BDL	10	ug/L
BENZ(A)ANTHRACENE	BDL	10	ug/L
BENZO(A)PYRENE	BDL	10	ug/L
BENZO(B)FLUORANTHENE	BDL	10	ug/L
BENZO(G,H,I)PERYLENE	BDL	10	ug/L
BENZO(K)FLUORANTHENE	BDL	10	ug/L
BENZYL ALCOHOL	BDL	10	ug/L
BENZYLBUTYLPHTHALATE	BDL	10	ug/L
BIS(2-CHLOROETHOXY)METHANE	BDL	10	ug/L
BIS(2-CHLOROETHYL)ETHER	BDL	10	ug/L
BIS(2-CHLOROISOPROPYL)ETHER	BDL	10	ug/L
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	10	ug/L
4-BROMOPHENYLPHENYLETHER	BDL	10	ug/L
CARBAZOLE	BDL	10	ug/L
4-CHLOROANILINE	BDL	10	ug/L
2-CHLORONAPHTHALENE	BDL	10	ug/L
4-CHLOROPHENYLPHENYLETHER	BDL	10	ug/L
CHRYSENE	BDL	10	ug/L
DIBENZ(A,H)ANTHRACENE	BDL	10	ug/L
DIBENZOFURAN	BDL	10	ug/L
1,2-DICHLOROBENZENE	BDL	10	ug/L

Parameter	Result	Det. Limit	Units
1,3-DICHLOROBENZENE	BDL	10	ug/L
1,4-DICHLOROBENZENE	BDL	10	ug/L
3,3'-DICHLOROBENZIDINE	BDL	20	ug/L
DIETHYLPHTHALATE	BDL	10	ug/L
DIMETHYLPHTHALATE	BDL	10	ug/L
DI-N-BUTYLPHTHALATE	BDL	10	ug/L
DINITROBENZENES	BDL	50	ug/L
2,4-DINITROTOLUENE	BDL	10	ug/L
2,6-DINITROTOLUENE	BDL	10	ug/L
DI-N-OCTYLPHTHALATE	BDL	10	ug/L
FLUORANTHENE	BDL	10	ug/L
FLUORENE	BDL	10	ug/L
HEXACHLOROBENZENE	BDL	10	ug/L
HEXACHLOROBUTADIENE	BDL	10	ug/L
HEXACHLOROCYCLOPENTADIENE	BDL	10	ug/L
HEXACHLOROETHANE	BDL	10	ug/L
INDENO(1,2,3-CD)PYRENE	BDL	10	ug/L
ISOPHORONE	BDL	10	ug/L
2-METHYLNAPHTHALENE	BDL	10	ug/L
NAPHTHALENE	BDL	10	ug/L
2-NITROANILINE	BDL	50	ug/L
3-NITROANILINE	BDL	50	ug/L
4-NITROANILINE	BDL	50	ug/L
NITROBENZENE	BDL	10	ug/L
N-NITROSO-DIPHENYLAMINE	BDL	10	ug/L
N-NITROSO-DI-N-PROPYLAMINE	BDL	10	ug/L
PHENANTHRENE	BDL	10	ug/L
2-PICOLINE	BDL	50	ug/L
PYRENE	BDL	10	ug/L
PYRIDINE	BDL	50	ug/L
1,2,4,5-TETRACHLOROBENZENE	BDL	10	ug/L
TOLUENEDIAMINE	BDL	50	ug/L
1,2,4-TRICHLOROBENZENE	BDL	10	ug/L
BENZOIC ACID	BDL	50	ug/L
4-CHLORO-3-METHYLPHENOL	BDL	10	ug/L
2-CHLOROPHENOL	BDL	10	ug/L
2,4-DICHLOROPHENOL	BDL	10	ug/L
2,4-DIMETHYLPHENOL	BDL	10	ug/L
4,6-DINITRO-2-METHYLPHENOL	BDL	50	ug/L
2,4-DINITROPHENOL	BDL	50	ug/L
2-METHYLPHENOL	BDL	10	ug/L
4-METHYLPHENOL	BDL	10	ug/L
2-NITROPHENOL	BDL	10	ug/L
4-NITROPHENOL	BDL	50	ug/L
PENTACHLOROPHENOL	BDL	50	ug/L
PHENOL	BDL	10	ug/L
1,2,4,5-TETRACHLOROBENZENE	BDL	10	ug/L
2,4,5-TRICHLOROPHENOL	BDL	50	ug/L
2,4,6-TRICHLOROPHENOL	BDL	10	ug/L
SURROGATE RECOVERY			
2-FLUOROPHENOL	66		% Rec

Parameter	Result	Det. Limit	Units
PHENOL-D5	50		% Rec
NITROBENZENE-D5	96		% Rec
2-FLUOROBIPHENYL	87		% Rec
2,4,6-TRIBROMOPHENOL	91		% Rec
TERPHENYL-D14	99		% Rec

GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C
Analyst: G. CLOUSE Analysis Date: 27-SEP-02 Instrument: PREP Test: P233.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	980		mL
FINAL VOLUME	10		mL

PCB/PESTICIDE SCAN GC:ECD SW846-8081 NELAC:Y
Analyst: M. KEEZER Analysis Date: 05-OCT-02 08:52 Instrument: GC/ECD Test: O305.1.0
Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C P233.1.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.05	ug/L
BETA-BHC	BDL	0.05	ug/L
DELTA-BHC	BDL	0.05	ug/L
GAMMA-BHC (LINDANE)	BDL	0.05	ug/L
HEPTACHLOR	BDL	0.05	ug/L
ALDRIN	BDL	0.05	ug/L
HEPTACHLOR EPOXIDE	BDL	0.05	ug/L
ENDOSULFAN I	BDL	0.05	ug/L
DIELDRIN	BDL	0.1	ug/L
4,4'-DDE	BDL	0.1	ug/L
ENDRIN	BDL	0.1	ug/L
ENDOSULFAN II	BDL	0.1	ug/L
4,4'-DDD	BDL	0.1	ug/L
ENDOSULFAN SULFATE	BDL	0.1	ug/L
4,4'-DDT	BDL	0.1	ug/L
METHOXYCHLOR	BDL	0.5	ug/L
ENDRIN ALDEHYDE	BDL	0.1	ug/L
ENDRIN KETONE	BDL	0.1	ug/L
ALPHA-CHLORDANE	BDL	0.5	ug/L
GAMMA-CHLORDANE	BDL	0.5	ug/L
TOXAPHENE	BDL	1	ug/L
PCB AROCLOR 1016	BDL	0.5	ug/L
PCB AROCLOR 1221	BDL	0.5	ug/L
PCB AROCLOR 1232	BDL	0.5	ug/L
PCB AROCLOR 1242	BDL	0.5	ug/L
PCB AROCLOR 1248	BDL	0.5	ug/L
PCB AROCLOR 1254	BDL	1	ug/L
PCB AROCLOR 1260	BDL	1	ug/L
...			
SURROGATE RECOVERY			

DECACHLOROBIPHENYL (DCB)	74.2		% Rec

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A
Analyst: D. THOMPSON Analysis Date: 02-OCT-02 09:20 Instrument: PREP Test: P130.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	-50		mL
FINAL WEIGHT OR VOLUME	50		mL

ALUMINUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:07 Instrument: ICP Test: M101.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ALUMINUM	BDL	0.050	mg/L

ANTIMONY ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:07 Instrument: ICP Test: M102.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	0.010	mg/L

BARIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:07 Instrument: ICP Test: M104.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BARIUM	0.19	0.010	mg/L

BERYLLIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:07 Instrument: ICP Test: M105.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.0040	mg/L

CADMIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:07 Instrument: ICP Test: M108.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.0050	mg/L

CALCIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:07 Instrument: ICP Test: M109.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CALCIUM	110	0.10	mg/L

CHROMIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:07 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.010	mg/L

COBALT ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:07 Instrument: ICP Test: M111.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COBALT	BDL	0.010	mg/L

COPPER ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:07 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COPPER	BDL	0.020	mg/L

IRON ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:07 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
IRON	4.6	0.020	mg/L

MAGNESIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:07 Instrument: ICP Test: M118.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	35.	0.10	mg/L

MANGANESE ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:07 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MANGANESE	0.21	0.010	mg/L

NICKEL ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:07 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
NICKEL	BDL	0.010	mg/L

POTASSIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:07 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
POTASSIUM	1.9	0.10	mg/L

SILVER ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:07 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.010	mg/L

SODIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:07 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SODIUM	11.	0.10	mg/L

VANADIUM ICP SW846-6010B NELAC:N
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:07 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
VANADIUM	BDL	0.010	mg/L

ZINC ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:07 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ZINC	BDL	0.020	mg/L

ARSENIC TRACE ICP SW846-6010B NELAC:Y
Analyst: J. LEAK Analysis Date: 08-OCT-02 17:02 Instrument: TRACE ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.0050	mg/L

LEAD TRACE ICP SW846-6010B NELAC:Y
Analyst: J. LEAK Analysis Date: 08-OCT-02 17:02 Instrument: TRACE ICP Test: M116.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
LEAD	BDL	0.0050	mg/L

SELENIUM TRACE ICP SW846-6010B NELAC:Y
Analyst: J. LEAK Analysis Date: 08-OCT-02 17:02 Instrument: TRACE ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.0050	mg/L

THALLIUM TRACE ICP SW846-6010B NELAC:Y
Analyst: J. LEAK Analysis Date: 08-OCT-02 17:02 Instrument: TRACE ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	0.010	mg/L

MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470A
Analyst: J. O'BRYAN Analysis Date: 01-OCT-02 14:00 Instrument: PREP Test: P131.6.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	40		mL
FINAL VOLUME	40		mL

MERCURY CVAA SW846-7470A NELAC:Y
Analyst: J. O'BRYAN Analysis Date: 03-OCT-02 17:37 Instrument: CVAA Test: M120.1.0
Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470A P131.6.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.00020	mg/L

CYANIDE DISTILLATION SW846-9010B
Analyst: J. TITLEY Analysis Date: 27-SEP-02 16:00 Instrument: PREP Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	250		mL
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012A NELAC:Y
Analyst: B. BATTANI Analysis Date: 30-SEP-02 10:30 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010B P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.005	mg/L

Sample Comments

CONTAINERS DO NOT HAVE THE "28" SUFFIX ON THEM. JP 09-26-02

BDL Below Detection Limit

Sample was received on ice at temperature 1 C.
All aqueous samples are reported on a wet weight basis unless otherwise noted.
Sample chain of custody number 117977.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.
The sample results relate only to the analytes of interest tested or to the sample as received by the lab.
Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.
Heritage Environmental Services, LLC is accredited under Illinois NELAC accreditation number 100401.
Arizona License Number AZ0627.

Approved : R.K. Solice QA

C E R T I F I C A T E O F A N A L Y S I S

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, LLC COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8304	25-SEP-02		A607630
	Complete	PO Number	
	09-OCT-02	DP 00151	
	Printed	Sampled	
	09-OCT-02	25-SEP-02 09:25	

Report To	Bill To
DAN SAMMONS, MFWTP IND. WASTE LABORATORY LOUISVILLE AND JEFFERSON COUNTY M.S.D. P.O. BOX 740011 LOUISVILLE, KY 40201	ACCOUNTS PAYABLE LOUISVILLE & JEFFERSON COUNTY M.S.D. PO BOX 740011 LOUISVILLE, KY 40201

Sample Description

CLIENT ID: MW04-28
MATRIX TYPE: NON-SPECIFIC WATER
WELL NUMBER: MW-04-28
Submitter Code :4217

VOLATILE ORGANICS SW846-8240B NELAC:N

Analyst: H. WILLIAMS Analysis Date: 02-OCT-02 15:07 Instrument: GC/MS VOA Test: 0510.3.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	20	ug/L
ACROLEIN	BDL	50	ug/L
ACRYLONITRILE	BDL	70	ug/L
BENZENE	BDL	5.0	ug/L
BROMODICHLOROMETHANE	BDL	5.0	ug/L
BROMOFORM	BDL	5.0	ug/L
BROMOMETHANE	BDL	10	ug/L
CARBON DISULFIDE	BDL	5.0	ug/L
CARBON TETRACHLORIDE	BDL	5.0	ug/L
CHLOROBENZENE	BDL	5.0	ug/L
CHLOROETHANE	BDL	10	ug/L
CHLOROFORM	BDL	5.0	ug/L
CHLOROMETHANE	BDL	10	ug/L
DIBROMOCHLOROMETHANE	BDL	5.0	ug/L
CIS-1,3-DICHLOROPROPENE	BDL	5.0	ug/L
DICHLORODIFLUOROMETHANE	BDL	5.0	ug/L
1,1-DICHLOROETHANE	BDL	5.0	ug/L
1,2-DICHLOROETHANE	BDL	5.0	ug/L
1,1-DICHLOROETHENE	BDL	5.0	ug/L
1,2-DICHLOROPROPANE	BDL	5.0	ug/L
ETHYLBENZENE	BDL	5.0	ug/L
FLUOROTRICHLOROMETHANE	BDL	5.0	ug/L
2-HEXANONE	BDL	10	ug/L
METHYLENE CHLORIDE	BDL	5.0	ug/L
METHYL ETHYL KETONE	BDL	10	ug/L
4-METHYL-2-PENTANONE	BDL	10	ug/L
STYRENE	BDL	5.0	ug/L
1,1,2,2-TETRACHLOROETHANE	BDL	5.0	ug/L

Parameter	Result	Det. Limit	Units
TETRACHLOROETHENE	BDL	5.0	ug/L
TETRAHYDROFURAN	BDL	25	ug/L
TOLUENE	BDL	5.0	ug/L
1,2-DICHLOROETHENE (TOTAL)	BDL	5.0	ug/L
TRANS-1,3-DICHLOROPROPENE	BDL	5.0	ug/L
1,1,1-TRICHLOROETHANE	BDL	5.0	ug/L
1,1,2-TRICHLOROETHANE	BDL	5.0	ug/L
TRICHLOROETHENE	BDL	5.0	ug/L
VINYL ACETATE	BDL	10	ug/L
VINYL CHLORIDE	BDL	10	ug/L
XYLENE (TOTAL)	BDL	5.0	ug/L
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	118		% Rec
TOLUENE-D8	104		% Rec
BROMOFLUOROBENZENE	95		% Rec

Prep Method SW846-5030B Purge and Trap

GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C
Analyst: C. WILLHITE Analysis Date: 01-OCT-02 Instrument: PREP Test: P233.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270C NELAC:Y
Analyst: L. CALLAHAN Analysis Date: 02-OCT-02 18:52 Instrument: GC/MS SVOA Test: O505.3.0
Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C P233.4.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	10	ug/L
ACENAPHTHYLENE	BDL	10	ug/L
ANTHRACENE	BDL	10	ug/L
BENZ(A)ANTHRACENE	BDL	10	ug/L
BENZO(A)PYRENE	BDL	10	ug/L
BENZO(B)FLUORANTHENE	BDL	10	ug/L
BENZO(G,H,I)PERYLENE	BDL	10	ug/L
BENZO(K)FLUORANTHENE	BDL	10	ug/L
BENZYL ALCOHOL	BDL	10	ug/L
BENZYLBUTYLPHTHALATE	BDL	10	ug/L
BIS(2-CHLOROETHOXY)METHANE	BDL	10	ug/L
BIS(2-CHLOROETHYL)ETHER	BDL	10	ug/L
BIS(2-CHLOROISOPROPYL)ETHER	BDL	10	ug/L
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	10	ug/L
4-BROMOPHENYLPHENYLETHER	BDL	10	ug/L
CARBAZOLE	BDL	10	ug/L
4-CHLOROANILINE	BDL	10	ug/L
2-CHLORONAPHTHALENE	BDL	10	ug/L
4-CHLOROPHENYLPHENYLETHER	BDL	10	ug/L
CHRYSENE	BDL	10	ug/L
DIBENZ(A,H)ANTHRACENE	BDL	10	ug/L
DIBENZOFURAN	BDL	10	ug/L
1,2-DICHLOROBENZENE	BDL	10	ug/L

Parameter	Result	Det. Limit	Units
1,3-DICHLOROBENZENE	BDL	10	ug/L
1,4-DICHLOROBENZENE	BDL	10	ug/L
3,3'-DICHLOROBENZIDINE	BDL	20	ug/L
DIETHYLPHTHALATE	BDL	10	ug/L
DIMETHYLPHTHALATE	BDL	10	ug/L
DI-N-BUTYLPHTHALATE	BDL	10	ug/L
DINITROBENZENES	BDL	50	ug/L
2,4-DINITROTOLUENE	BDL	10	ug/L
2,6-DINITROTOLUENE	BDL	10	ug/L
DI-N-OCTYLPHTHALATE	BDL	10	ug/L
FLUORANTHENE	BDL	10	ug/L
FLUORENE	BDL	10	ug/L
HEXACHLOROBENZENE	BDL	10	ug/L
HEXACHLOROBUTADIENE	BDL	10	ug/L
HEXACHLOROCYCLOPENTADIENE	BDL	10	ug/L
HEXACHLOROETHANE	BDL	10	ug/L
INDENO(1,2,3-CD)PYRENE	BDL	10	ug/L
ISOPHORONE	BDL	10	ug/L
2-METHYLNAPHTHALENE	BDL	10	ug/L
NAPHTHALENE	BDL	10	ug/L
2-NITROANILINE	BDL	50	ug/L
3-NITROANILINE	BDL	50	ug/L
4-NITROANILINE	BDL	50	ug/L
NITROBENZENE	BDL	10	ug/L
N-NITROSO-DIPHENYLAMINE	BDL	10	ug/L
N-NITROSO-DI-N-PROPYLAMINE	BDL	10	ug/L
PHENANTHRENE	BDL	10	ug/L
2-PICOLINE	BDL	50	ug/L
PYRENE	BDL	10	ug/L
PYRIDINE	BDL	50	ug/L
1,2,4,5-TETRACHLOROBENZENE	BDL	10	ug/L
TOLUENEDIAMINE	BDL	50	ug/L
1,2,4-TRICHLOROBENZENE	BDL	10	ug/L
BENZOIC ACID	BDL	50	ug/L
4-CHLORO-3-METHYLPHENOL	BDL	10	ug/L
2-CHLOROPHENOL	BDL	10	ug/L
2,4-DICHLOROPHENOL	BDL	10	ug/L
2,4-DIMETHYLPHENOL	BDL	10	ug/L
4,6-DINITRO-2-METHYLPHENOL	BDL	50	ug/L
2,4-DINITROPHENOL	BDL	50	ug/L
2-METHYLPHENOL	BDL	10	ug/L
4-METHYLPHENOL	BDL	10	ug/L
2-NITROPHENOL	BDL	10	ug/L
4-NITROPHENOL	BDL	50	ug/L
PENTACHLOROPHENOL	BDL	50	ug/L
PHENOL	BDL	10	ug/L
1,2,4,5-TETRACHLOROBENZENE	BDL	10	ug/L
2,4,5-TRICHLOROPHENOL	BDL	50	ug/L
2,4,6-TRICHLOROPHENOL	BDL	10	ug/L
SURROGATE RECOVERY			
2-FLUOROPHENOL	42		% Rec

Parameter	Result	Det. Limit	Units
PHENOL-D5	33		% Rec
NITROBENZENE-D5	75		% Rec
2-FLUOROBIPHENYL	70		% Rec
2,4,6-TRIBROMOPHENOL	80		% Rec
TERPHENYL-D14	123		% Rec

GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C
Analyst: G. CLOUSE Analysis Date: 27-SEP-02 Instrument: PREP Test: P233.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	970		mL
FINAL VOLUME	10		mL

PCB/PESTICIDE SCAN GC:ECD SW846-8081 NELAC:Y
Analyst: M. KEEZER Analysis Date: 05-OCT-02 05:45 Instrument: GC/ECD Test: O305.1.0
Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C P233.1.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.05	ug/L
BETA-BHC	BDL	0.05	ug/L
DELTA-BHC	BDL	0.05	ug/L
GAMMA-BHC (LINDANE)	BDL	0.05	ug/L
HEPTACHLOR	BDL	0.05	ug/L
ALDRIN	BDL	0.05	ug/L
HEPTACHLOR EPOXIDE	BDL	0.05	ug/L
ENDOSULFAN I	BDL	0.05	ug/L
DIELDRIN	BDL	0.1	ug/L
4,4'-DDE	BDL	0.1	ug/L
ENDRIN	BDL	0.1	ug/L
ENDOSULFAN II	BDL	0.1	ug/L
4,4'-DDD	BDL	0.1	ug/L
ENDOSULFAN SULFATE	BDL	0.1	ug/L
4,4'-DDT	BDL	0.1	ug/L
METHOXYCHLOR	BDL	0.5	ug/L
ENDRIN ALDEHYDE	BDL	0.1	ug/L
ENDRIN KETONE	BDL	0.1	ug/L
ALPHA-CHLORDANE	BDL	0.5	ug/L
GAMMA-CHLORDANE	BDL	0.5	ug/L
TOXAPHENE	BDL	1	ug/L
PCB AROCLOR 1016	BDL	0.5	ug/L
PCB AROCLOR 1221	BDL	0.5	ug/L
PCB AROCLOR 1232	BDL	0.5	ug/L
PCB AROCLOR 1242	BDL	0.5	ug/L
PCB AROCLOR 1248	BDL	0.5	ug/L
PCB AROCLOR 1254	BDL	1	ug/L
PCB AROCLOR 1260	BDL	1	ug/L
...			
SURROGATE RECOVERY			

DECACHLOROBIPHENYL (DCB)	56.4		% Rec

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A
Analyst: D. THOMPSON Analysis Date: 02-OCT-02 09:20 Instrument: PREP Test: P130.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL WEIGHT OR VOLUME	50		mL

ALUMINUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:26 Instrument: ICP Test: M101.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ALUMINUM	0.060	0.050	mg/L

ANTIMONY ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:26 Instrument: ICP Test: M102.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	0.010	mg/L

BARIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:26 Instrument: ICP Test: M104.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BARIUM	0.12	0.010	mg/L

BERYLLIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:26 Instrument: ICP Test: M105.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.0040	mg/L

CADMIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:26 Instrument: ICP Test: M108.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.0050	mg/L

CALCIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:26 Instrument: ICP Test: M109.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CALCIUM	120	0.10	mg/L

CHROMIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:26 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.010	mg/L

COBALT ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:26 Instrument: ICP Test: M111.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COBALT	BDL	0.010	mg/L

COPPER ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:26 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COPPER	BDL	0.020	mg/L

IRON ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:26 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
IRON	6.4	0.020	mg/L

MAGNESIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:26 Instrument: ICP Test: M118.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	40.	0.10	mg/L

MANGANESE ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:26 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MANGANESE	0.15	0.010	mg/L

NICKEL ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:26 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
NICKEL	BDL	0.010	mg/L

POTASSIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:26 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
POTASSIUM	2.3	0.10	mg/L

SILVER ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:26 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.010	mg/L

SODIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:26 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SODIUM	29.	0.10	mg/L

VANADIUM ICP SW846-6010B NELAC:N
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:26 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
VANADIUM	BDL	0.010	mg/L

ZINC ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:26 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ZINC	BDL	0.020	mg/L

ARSENIC TRACE ICP SW846-6010B NELAC:Y
Analyst: J. LEAK Analysis Date: 08-OCT-02 16:20 Instrument: TRACE ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ARSENIC	0.0061	0.0050	mg/L

LEAD TRACE ICP SW846-6010B NELAC:Y
Analyst: J. LEAK Analysis Date: 08-OCT-02 16:20 Instrument: TRACE ICP Test: M116.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
LEAD	BDL	0.0050	mg/L

SELENIUM TRACE ICP SW846-6010B NELAC:Y
Analyst: J. LEAK Analysis Date: 08-OCT-02 16:20 Instrument: TRACE ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.0050	mg/L

THALLIUM TRACE ICP SW846-6010B NELAC:Y
Analyst: J. LEAK Analysis Date: 08-OCT-02 16:20 Instrument: TRACE ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	0.010	mg/L

MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470A
Analyst: J. O'BRYAN Analysis Date: 01-OCT-02 14:00 Instrument: PREP Test: P131.6.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	40		mL
FINAL VOLUME	40		mL

MERCURY CVAA SW846-7470A NELAC:Y
Analyst: J. O'BRYAN Analysis Date: 03-OCT-02 17:37 Instrument: CVAA Test: M120.1.0
Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470A P131.6.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.00020	mg/L

CYANIDE DISTILLATION SW846-9010B
Analyst: J. TITLEY Analysis Date: 27-SEP-02 16:00 Instrument: PREP Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	250		mL
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012A NELAC:Y
Analyst: B. BATTANI Analysis Date: 30-SEP-02 10:30 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010B P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.005	mg/L

Sample Comments

CONTAINERS DO NOT HAVE THE "28" SUFFIX WRITTEN ON THEM. JP 09-26-02

BDL Below Detection Limit

Sample was received on ice at temperature 1 C.
All aqueous samples are reported on a wet weight basis unless otherwise noted.
Sample chain of custody number 117977.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.
The sample results relate only to the analytes of interest tested or to the sample as received by the lab.
Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.
Heritage Environmental Services, LLC is accredited under Illinois NELAC accreditation number 100401.
Arizona License Number AZ0627.

Approved : R.K. Sauce QAO

C E R T I F I C A T E O F A N A L Y S I S

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, LLC COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8304	25-SEP-02		A607631
	Complete	PO Number	
	09-OCT-02	DP 00151	
	Printed	Sampled	
	09-OCT-02	25-SEP-02 09:25	

Report To	Bill To
DAN SAMMONS, MFWTP IND. WASTE LABORATORY LOUISVILLE AND JEFFERSON COUNTY M.S.D. P.O. BOX 740011 LOUISVILLE, KY 40201	ACCOUNTS PAYABLE LOUISVILLE & JEFFERSON COUNTY M.S.D. PO BOX 740011 LOUISVILLE, KY 40201

Sample Description

CLIENT ID: MW04-DUP28
MATRIX TYPE: NON-SPECIFIC WATER
WELL NUMBER: MW04-DUP28
Submitter Code :4217

VOLATILE ORGANICS SW846-8240B NELAC:N

Analyst: R. SHAMP Analysis Date: 02-OCT-02 12:37 Instrument: GC/MS VOA Test: 0510.3.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	20	ug/L
ACROLEIN	BDL	50	ug/L
ACRYLONITRILE	BDL	70	ug/L
BENZENE	BDL	5.0	ug/L
BROMODICHLOROMETHANE	BDL	5.0	ug/L
BROMOFORM	BDL	5.0	ug/L
BROMOMETHANE	BDL	10	ug/L
CARBON DISULFIDE	BDL	5.0	ug/L
CARBON TETRACHLORIDE	BDL	5.0	ug/L
CHLOROBENZENE	BDL	5.0	ug/L
CHLOROETHANE	BDL	10	ug/L
CHLOROFORM	BDL	5.0	ug/L
CHLOROMETHANE	BDL	10	ug/L
DIBROMOCHLOROMETHANE	BDL	5.0	ug/L
CIS-1,3-DICHLOROPROPENE	BDL	5.0	ug/L
DICHLORODIFLUOROMETHANE	BDL	5.0	ug/L
1,1-DICHLOROETHANE	BDL	5.0	ug/L
1,2-DICHLOROETHANE	BDL	5.0	ug/L
1,1-DICHLOROETHENE	BDL	5.0	ug/L
1,2-DICHLOROPROPANE	BDL	5.0	ug/L
ETHYLBENZENE	BDL	5.0	ug/L
FLUOROTRICHLOROMETHANE	BDL	5.0	ug/L
2-HEXANONE	BDL	10	ug/L
METHYLENE CHLORIDE	BDL	5.0	ug/L
METHYL ETHYL KETONE	BDL	10	ug/L
4-METHYL-2-PENTANONE	BDL	10	ug/L
STYRENE	BDL	5.0	ug/L
1,1,2,2-TETRACHLOROETHANE	BDL	5.0	ug/L

Parameter	Result	Det. Limit	Units
TETRACHLOROETHENE	BDL	5.0	ug/L
TETRAHYDROFURAN	BDL	25	ug/L
TOLUENE	BDL	5.0	ug/L
1,2-DICHLOROETHENE (TOTAL)	BDL	5.0	ug/L
TRANS-1,3-DICHLOROPROPENE	BDL	5.0	ug/L
1,1,1-TRICHLOROETHANE	BDL	5.0	ug/L
1,1,2-TRICHLOROETHANE	BDL	5.0	ug/L
TRICHLOROETHENE	BDL	5.0	ug/L
VINYL ACETATE	BDL	10	ug/L
VINYL CHLORIDE	BDL	10	ug/L
XYLENE (TOTAL)	BDL	5.0	ug/L
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	124		% Rec
TOLUENE-D8	103		% Rec
BROMOFLUOROBENZENE	109		% Rec

PH=6

Prep Method SW846-5030B Purge and Trap

GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C

Analyst: C. WILLHITE Analysis Date: 01-OCT-02 Instrument: PREP Test: P233.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270C NELAC:Y

Analyst: L. CALLAHAN Analysis Date: 02-OCT-02 19:33 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C P233.4.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	10	ug/L
ACENAPHTHYLENE	BDL	10	ug/L
ANTHRACENE	BDL	10	ug/L
BENZ(A)ANTHRACENE	BDL	10	ug/L
BENZO(A)PYRENE	BDL	10	ug/L
BENZO(B)FLUORANTHENE	BDL	10	ug/L
BENZO(G,H,I)PERYLENE	BDL	10	ug/L
BENZO(K)FLUORANTHENE	BDL	10	ug/L
BENZYL ALCOHOL	BDL	10	ug/L
BENZYLBUTYLPHTHALATE	BDL	10	ug/L
BIS(2-CHLOROETHOXY)METHANE	BDL	10	ug/L
BIS(2-CHLOROETHYL)ETHER	BDL	10	ug/L
BIS(2-CHLOROISOPROPYL)ETHER	BDL	10	ug/L
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	10	ug/L
4-BROMOPHENYLPHENYLETHER	BDL	10	ug/L
CARBAZOLE	BDL	10	ug/L
4-CHLOROANILINE	BDL	10	ug/L
2-CHLORONAPHTHALENE	BDL	10	ug/L
4-CHLOROPHENYLPHENYLETHER	BDL	10	ug/L
CHRYSENE	BDL	10	ug/L
DIBENZ(A,H)ANTHRACENE	BDL	10	ug/L
DIBENZOFURAN	BDL	10	ug/L

Parameter	Result	Det. Limit	Units
1,2-DICHLOROBENZENE	BDL	10	ug/L
1,3-DICHLOROBENZENE	BDL	10	ug/L
1,4-DICHLOROBENZENE	BDL	10	ug/L
3,3'-DICHLOROBENZIDINE	BDL	20	ug/L
DIETHYLPHTHALATE	BDL	10	ug/L
DIMETHYLPHTHALATE	BDL	10	ug/L
DI-N-BUTYLPHTHALATE	BDL	10	ug/L
DINITROBENZENES	BDL	50	ug/L
2,4-DINITROTOLUENE	BDL	10	ug/L
2,6-DINITROTOLUENE	BDL	10	ug/L
DI-N-OCTYLPHTHALATE	BDL	10	ug/L
FLUORANTHENE	BDL	10	ug/L
FLUORENE	BDL	10	ug/L
HEXACHLOROBENZENE	BDL	10	ug/L
HEXACHLOROBUTADIENE	BDL	10	ug/L
HEXACHLOROCYCLOPENTADIENE	BDL	10	ug/L
HEXACHLOROETHANE	BDL	10	ug/L
INDENO(1,2,3-CD)PYRENE	BDL	10	ug/L
ISOPHORONE	BDL	10	ug/L
2-METHYLNAPHTHALENE	BDL	10	ug/L
NAPHTHALENE	BDL	10	ug/L
2-NITROANILINE	BDL	50	ug/L
3-NITROANILINE	BDL	50	ug/L
4-NITROANILINE	BDL	50	ug/L
NITROBENZENE	BDL	10	ug/L
N-NITROSO-DIPHENYLAMINE	BDL	10	ug/L
N-NITROSO-DI-N-PROPYLAMINE	BDL	10	ug/L
PHENANTHRENE	BDL	10	ug/L
2-PICOLINE	BDL	50	ug/L
PYRENE	BDL	10	ug/L
PYRIDINE	BDL	50	ug/L
1,2,4,5-TETRACHLOROBENZENE	BDL	10	ug/L
TOLUENEDIAMINE	BDL	50	ug/L
1,2,4-TRICHLOROBENZENE	BDL	10	ug/L
BENZOIC ACID	BDL	50	ug/L
4-CHLORO-3-METHYLPHENOL	BDL	10	ug/L
2-CHLOROPHENOL	BDL	10	ug/L
2,4-DICHLOROPHENOL	BDL	10	ug/L
2,4-DIMETHYLPHENOL	BDL	10	ug/L
4,6-DINITRO-2-METHYLPHENOL	BDL	50	ug/L
2,4-DINITROPHENOL	BDL	50	ug/L
2-METHYLPHENOL	BDL	10	ug/L
4-METHYLPHENOL	BDL	10	ug/L
2-NITROPHENOL	BDL	10	ug/L
4-NITROPHENOL	BDL	50	ug/L
PENTACHLOROPHENOL	BDL	50	ug/L
PHENOL	BDL	10	ug/L
1,2,4,5-TETRACHLOROBENZENE	BDL	10	ug/L
2,4,5-TRICHLOROPHENOL	BDL	50	ug/L
2,4,6-TRICHLOROPHENOL	BDL	10	ug/L
SURROGATE RECOVERY			

Parameter	Result	Det. Limit	Units
2-FLUOROPHENOL	47		% Rec
PHENOL-D5	33		% Rec
NITROBENZENE-D5	92		% Rec
2-FLUOROBIPHENYL	82		% Rec
2,4,6-TRIBROMOPHENOL	87		% Rec
TERPHENYL-D14	102		% Rec

GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C
Analyst: G. CLOUSE Analysis Date: 27-SEP-02 Instrument: PREP Test: P233.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	970		mL
FINAL VOLUME	10		mL

PCB/PESTICIDE SCAN GC:ECD SW846-8081 NELAC:Y
Analyst: M. KEEZER Analysis Date: 05-OCT-02 07:19 Instrument: GC/ECD Test: O305.1.0
Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C P233.1.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.05	ug/L
BETA-BHC	BDL	0.05	ug/L
DELTA-BHC	BDL	0.05	ug/L
GAMMA-BHC (LINDANE)	BDL	0.05	ug/L
HEPTACHLOR	BDL	0.05	ug/L
ALDRIN	BDL	0.05	ug/L
HEPTACHLOR EPOXIDE	BDL	0.05	ug/L
ENDOSULFAN I	BDL	0.05	ug/L
DIELDRIN	BDL	0.1	ug/L
4,4'-DDE	BDL	0.1	ug/L
ENDRIN	BDL	0.1	ug/L
ENDOSULFAN II	BDL	0.1	ug/L
4,4'-DDD	BDL	0.1	ug/L
ENDOSULFAN SULFATE	BDL	0.1	ug/L
4,4'-DDT	BDL	0.1	ug/L
METHOXYCHLOR	BDL	0.5	ug/L
ENDRIN ALDEHYDE	BDL	0.1	ug/L
ENDRIN KETONE	BDL	0.1	ug/L
ALPHA-CHLORDANE	BDL	0.5	ug/L
GAMMA-CHLORDANE	BDL	0.5	ug/L
TOXAPHENE	BDL	1	ug/L
PCB AROCLOR 1016	BDL	0.5	ug/L
PCB AROCLOR 1221	BDL	0.5	ug/L
PCB AROCLOR 1232	BDL	0.5	ug/L
PCB AROCLOR 1242	BDL	0.5	ug/L
PCB AROCLOR 1248	BDL	0.5	ug/L
PCB AROCLOR 1254	BDL	1	ug/L
PCB AROCLOR 1260	BDL	1	ug/L
...			
SURROGATE RECOVERY			

DECACHLOROBIPHENYL (DCB)	68.8		% Rec

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A
Analyst: D. THOMPSON Analysis Date: 02-OCT-02 09:20 Instrument: PREP Test: P130.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL WEIGHT OR VOLUME	50		mL

ALUMINUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:55 Instrument: ICP Test: M101.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ALUMINUM	0.082	0.050	mg/L

ANTIMONY ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:55 Instrument: ICP Test: M102.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	0.010	mg/L

BARIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:55 Instrument: ICP Test: M104.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BARIUM	0.12	0.010	mg/L

BERYLLIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:55 Instrument: ICP Test: M105.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.0040	mg/L

CADMIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:55 Instrument: ICP Test: M108.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.0050	mg/L

CALCIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:55 Instrument: ICP Test: M109.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CALCIUM	120	0.10	mg/L

CHROMIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:55 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.010	mg/L

COBALT ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:55 Instrument: ICP Test: M111.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COBALT	BDL	0.010	mg/L

COPPER ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:55 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COPPER	BDL	0.020	mg/L

IRON ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:55 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
IRON	6.5	0.020	mg/L

MAGNESIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:55 Instrument: ICP Test: M118.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	39.	0.10	mg/L

MANGANESE ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:55 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MANGANESE	0.15	0.010	mg/L

NICKEL ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:55 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
NICKEL	BDL	0.010	mg/L

POTASSIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:55 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
POTASSIUM	2.2	0.10	mg/L

SILVER ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:55 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.010	mg/L

SODIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:55 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SODIUM	29.	0.10	mg/L

VANADIUM ICP SW846-6010B NELAC:N
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:55 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
VANADIUM	BDL	0.010	mg/L

ZINC ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:55 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ZINC	BDL	0.020	mg/L

ARSENIC TRACE ICP SW846-6010B NELAC:Y
Analyst: J. LEAK Analysis Date: 08-OCT-02 16:46 Instrument: TRACE ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ARSENIC	0.0064	0.0050	mg/L

LEAD TRACE ICP SW846-6010B NELAC:Y
Analyst: J. LEAK Analysis Date: 08-OCT-02 16:46 Instrument: TRACE ICP Test: M116.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
LEAD	0.015	0.0050	mg/L

SELENIUM TRACE ICP SW846-6010B NELAC:Y
Analyst: J. LEAK Analysis Date: 08-OCT-02 16:46 Instrument: TRACE ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.0050	mg/L

THALLIUM TRACE ICP SW846-6010B NELAC:Y
Analyst: J. LEAK Analysis Date: 08-OCT-02 16:46 Instrument: TRACE ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	0.010	mg/L

MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470A
Analyst: J. O'BRYAN Analysis Date: 01-OCT-02 14:00 Instrument: PREP Test: P131.6.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	40		mL
FINAL VOLUME	40		mL

MERCURY CVAA SW846-7470A NELAC:Y
Analyst: J. O'BRYAN Analysis Date: 03-OCT-02 17:37 Instrument: CVAA Test: M120.1.0
Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470A P131.6.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.00020	mg/L

CYANIDE DISTILLATION SW846-9010B
Analyst: J. TITLEY Analysis Date: 27-SEP-02 16:00 Instrument: PREP Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	250		mL
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012A NELAC:Y
Analyst: B. BATTANI Analysis Date: 30-SEP-02 10:30 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010B P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.005	mg/L

Sample Comments

CONTAINERS DO NOT HAVE THE "28" SUFFIX ON THEM. JP 09-26-02

BDL Below Detection Limit

Sample was received on ice at temperature 1 C.
All aqueous samples are reported on a wet weight basis unless otherwise noted.
Sample chain of custody number 117977.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.
The sample results relate only to the analytes of interest tested or to the sample as received by the lab.
Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.
Heritage Environmental Services, LLC is accredited under Illinois NELAC accreditation number 100401.
Arizona License Number AZ0627.

Approved : R.K. Solice QAO

CERTIFICATE OF ANALYSIS

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, LLC COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8304	25-SEP-02		A607632
	Complete	PO Number	
	09-OCT-02	DP 00151	
	Printed	Sampled	
	09-OCT-02	25-SEP-02 11:10	

Report To	Bill To
DAN SAMMONS, MFWTP IND. WASTE LABORATORY LOUISVILLE AND JEFFERSON COUNTY M.S.D. P.O. BOX 740011 LOUISVILLE, KY 40201	ACCOUNTS PAYABLE LOUISVILLE & JEFFERSON COUNTY M.S.D. PO BOX 740011 LOUISVILLE, KY 40201

Sample Description

CLIENT ID: MW05-28
MATRIX TYPE: NON-SPECIFIC WATER
WELL NUMBER: MW05-28
Submitter Code :4217

VOLATILE ORGANICS SW846-8240B NELAC:N

Analyst: R. SHAMP Analysis Date: 02-OCT-02 13:06 Instrument: GC/MS VOA Test: 0510 3.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	20	ug/L
ACROLEIN	BDL	50	ug/L
ACRYLONITRILE	BDL	70	ug/L
BENZENE	BDL	5.0	ug/L
BROMODICHLOROMETHANE	BDL	5.0	ug/L
BROMOFORM	BDL	5.0	ug/L
BROMOMETHANE	BDL	10	ug/L
CARBON DISULFIDE	BDL	5.0	ug/L
CARBON TETRACHLORIDE	BDL	5.0	ug/L
CHLOROBENZENE	BDL	5.0	ug/L
CHLOROETHANE	BDL	10	ug/L
CHLOROFORM	BDL	5.0	ug/L
CHLOROMETHANE	BDL	10	ug/L
DIBROMOCHLOROMETHANE	BDL	5.0	ug/L
CIS-1,3-DICHLOROPROPENE	BDL	5.0	ug/L
DICHLORODIFLUOROMETHANE	BDL	5.0	ug/L
1,1-DICHLOROETHANE	BDL	5.0	ug/L
1,2-DICHLOROETHANE	BDL	5.0	ug/L
1,1-DICHLOROETHENE	BDL	5.0	ug/L
1,2-DICHLOROPROPANE	BDL	5.0	ug/L
ETHYLBENZENE	BDL	5.0	ug/L
FLUOROTRICHLOROMETHANE	BDL	5.0	ug/L
2-HEXANONE	BDL	10	ug/L
METHYLENE CHLORIDE	BDL	5.0	ug/L
METHYL ETHYL KETONE	BDL	10	ug/L
4-METHYL-2-PENTANONE	BDL	10	ug/L
STYRENE	BDL	5.0	ug/L
1,1,2,2-TETRACHLOROETHANE	BDL	5.0	ug/L

 (continued on next page)

Parameter	Result	Det. Limit	Units
TETRACHLOROETHENE	BDL	5.0	ug/L
TETRAHYDROFURAN	BDL	25	ug/L
TOLUENE	BDL	5.0	ug/L
1,2-DICHLOROETHENE (TOTAL)	BDL	5.0	ug/L
TRANS-1,3-DICHLOROPROPENE	BDL	5.0	ug/L
1,1,1-TRICHLOROETHANE	BDL	5.0	ug/L
1,1,2-TRICHLOROETHANE	BDL	5.0	ug/L
TRICHLOROETHENE	BDL	5.0	ug/L
VINYL ACETATE	BDL	10	ug/L
VINYL CHLORIDE	BDL	10	ug/L
XYLENE (TOTAL)	BDL	5.0	ug/L
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	122		% Rec
TOLUENE-D8	103		% Rec
BROMOFLUOROBENZENE	112		% Rec

Prep Method SW846-5030B Purge and Trap

GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C

Analyst: C. WILLHITE Analysis Date: 01-OCT-02 Instrument: PREP Test: P233.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270C NELAC:Y

Analyst: L. CALLAHAN Analysis Date: 02-OCT-02 20:13 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C P233.4.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	10	ug/L
ACENAPHTHYLENE	BDL	10	ug/L
ANTHRACENE	BDL	10	ug/L
BENZ(A)ANTHRACENE	BDL	10	ug/L
BENZO(A)PYRENE	BDL	10	ug/L
BENZO(B)FLUORANTHENE	BDL	10	ug/L
BENZO(G,H,I)PERYLENE	BDL	10	ug/L
BENZO(K)FLUORANTHENE	BDL	10	ug/L
BENZYL ALCOHOL	BDL	10	ug/L
BENZYLBUTYLPHTHALATE	BDL	10	ug/L
BIS(2-CHLOROETHOXY)METHANE	BDL	10	ug/L
BIS(2-CHLOROETHYL)ETHER	BDL	10	ug/L
BIS(2-CHLOROISOPROPYL)ETHER	BDL	10	ug/L
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	10	ug/L
4-BROMOPHENYLPHENYLETHER	BDL	10	ug/L
CARBAZOLE	BDL	10	ug/L
4-CHLOROANILINE	BDL	10	ug/L
2-CHLORONAPHTHALENE	BDL	10	ug/L
4-CHLOROPHENYLPHENYLETHER	BDL	10	ug/L
CHRYSENE	BDL	10	ug/L
DIBENZ(A,H)ANTHRACENE	BDL	10	ug/L
DIBENZOFURAN	BDL	10	ug/L
1,2-DICHLOROBENZENE	BDL	10	ug/L

Parameter	Result	Det. Limit	Units
1,3-DICHLOROBENZENE	BDL	10	ug/L
1,4-DICHLOROBENZENE	BDL	10	ug/L
3,3'-DICHLOROBENZIDINE	BDL	20	ug/L
DIETHYLPHTHALATE	BDL	10	ug/L
DIMETHYLPHTHALATE	BDL	10	ug/L
DI-N-BUTYLPHTHALATE	BDL	10	ug/L
DINITROBENZENES	BDL	50	ug/L
2,4-DINITROTOLUENE	BDL	10	ug/L
2,6-DINITROTOLUENE	BDL	10	ug/L
DI-N-OCTYLPHTHALATE	BDL	10	ug/L
FLUORANTHENE	BDL	10	ug/L
FLUORENE	BDL	10	ug/L
HEXACHLOROBENZENE	BDL	10	ug/L
HEXACHLOROBUTADIENE	BDL	10	ug/L
HEXACHLOROCYCLOPENTADIENE	BDL	10	ug/L
HEXACHLOROETHANE	BDL	10	ug/L
INDENO(1,2,3-CD)PYRENE	BDL	10	ug/L
ISOPHORONE	BDL	10	ug/L
2-METHYLNAPHTHALENE	BDL	10	ug/L
NAPHTHALENE	BDL	10	ug/L
2-NITROANILINE	BDL	50	ug/L
3-NITROANILINE	BDL	50	ug/L
4-NITROANILINE	BDL	50	ug/L
NITROBENZENE	BDL	10	ug/L
N-NITROSO-DIPHENYLAMINE	BDL	10	ug/L
N-NITROSO-DI-N-PROPYLAMINE	BDL	10	ug/L
PHENANTHRENE	BDL	10	ug/L
2-PICOLINE	BDL	50	ug/L
PYRENE	BDL	10	ug/L
PYRIDINE	BDL	50	ug/L
1,2,4,5-TETRACHLOROBENZENE	BDL	10	ug/L
TOLUENEDIAMINE	BDL	50	ug/L
1,2,4-TRICHLOROBENZENE	BDL	10	ug/L
BENZOIC ACID	BDL	50	ug/L
4-CHLORO-3-METHYLPHENOL	BDL	10	ug/L
2-CHLOROPHENOL	BDL	10	ug/L
2,4-DICHLOROPHENOL	BDL	10	ug/L
2,4-DIMETHYLPHENOL	BDL	10	ug/L
4,6-DINITRO-2-METHYLPHENOL	BDL	50	ug/L
2,4-DINITROPHENOL	BDL	50	ug/L
2-METHYLPHENOL	BDL	10	ug/L
4-METHYLPHENOL	BDL	10	ug/L
2-NITROPHENOL	BDL	10	ug/L
4-NITROPHENOL	BDL	50	ug/L
PENTACHLOROPHENOL	BDL	50	ug/L
PHENOL	BDL	10	ug/L
1,2,4,5-TETRACHLOROBENZENE	BDL	10	ug/L
2,4,5-TRICHLOROPHENOL	BDL	50	ug/L
2,4,6-TRICHLOROPHENOL	BDL	10	ug/L
SURROGATE RECOVERY			
2-FLUOROPHENOL	42		% Rec

Parameter	Result	Det. Limit	Units
PHENOL-D5	31		% Rec
NITROBENZENE-D5	75		% Rec
2-FLUOROBIPHENYL	69		% Rec
2,4,6-TRIBROMOPHENOL	78		% Rec
TERPHENYL-D14	106		% Rec

GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C
Analyst: G. CLOUSE Analysis Date: 27-SEP-02 Instrument: PREP Test: P233.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	980		mL
FINAL VOLUME	10		mL

PCB/PESTICIDE SCAN GC:ECD SW846-8081 NELAC:Y
Analyst: M. KEEZER Analysis Date: 05-OCT-02 07:50 Instrument: GC/ECD Test: O305.1.0
Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C P233.1.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.05	ug/L
BETA-BHC	BDL	0.05	ug/L
DELTA-BHC	BDL	0.05	ug/L
GAMMA-BHC (LINDANE)	BDL	0.05	ug/L
HEPTACHLOR	BDL	0.05	ug/L
ALDRIN	BDL	0.05	ug/L
HEPTACHLOR EPOXIDE	BDL	0.05	ug/L
ENDOSULFAN I	BDL	0.05	ug/L
DIELDRIN	BDL	0.1	ug/L
4,4'-DDE	BDL	0.1	ug/L
ENDRIN	BDL	0.1	ug/L
ENDOSULFAN II	BDL	0.1	ug/L
4,4'-DDD	BDL	0.1	ug/L
ENDOSULFAN SULFATE	BDL	0.1	ug/L
4,4'-DDT	BDL	0.1	ug/L
METHOXYCHLOR	BDL	0.5	ug/L
ENDRIN ALDEHYDE	BDL	0.1	ug/L
ENDRIN KETONE	BDL	0.1	ug/L
ALPHA-CHLORDANE	BDL	0.5	ug/L
GAMMA-CHLORDANE	BDL	0.5	ug/L
TOXAPHENE	BDL	1	ug/L
PCB AROCLOR 1016	BDL	0.5	ug/L
PCB AROCLOR 1221	BDL	0.5	ug/L
PCB AROCLOR 1232	BDL	0.5	ug/L
PCB AROCLOR 1242	BDL	0.5	ug/L
PCB AROCLOR 1248	BDL	0.5	ug/L
PCB AROCLOR 1254	BDL	1	ug/L
PCB AROCLOR 1260	BDL	1	ug/L
...			
SURROGATE RECOVERY			

DECACHLOROBIPHENYL (DCB)	69.6		% Rec

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A
Analyst: D. THOMPSON Analysis Date: 02-OCT-02 09:20 Instrument: PREP Test: P130.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL WEIGHT OR VOLUME	50		mL

ALUMINUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:58 Instrument: ICP Test: M101.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ALUMINUM	0.68	0.050	mg/L

ANTIMONY ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:58 Instrument: ICP Test: M102.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	0.010	mg/L

BARIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:58 Instrument: ICP Test: M104.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BARIUM	2.4	0.010	mg/L

BERYLLIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:58 Instrument: ICP Test: M105.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.0040	mg/L

CADMIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:58 Instrument: ICP Test: M108.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.0050	mg/L

CALCIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:58 Instrument: ICP Test: M109.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CALCIUM	100	0.10	mg/L

CHROMIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:58 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.010	mg/L

COBALT ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:58 Instrument: ICP Test: M111.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COBALT	0.014	0.010	mg/L

COPPER ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:58 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COPPER	BDL	0.020	mg/L

IRON ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:58 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
IRON	26.	0.020	mg/L

MAGNESIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:58 Instrument: ICP Test: M118.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	35.	0.10	mg/L

MANGANESE ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:58 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MANGANESE	0.92	0.010	mg/L

NICKEL ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:58 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
NICKEL	0.020	0.010	mg/L

POTASSIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:58 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
POTASSIUM	16.	0.10	mg/L

SILVER ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:58 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.010	mg/L

SODIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:58 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SODIUM	37.	0.10	mg/L

VANADIUM ICP SW846-6010B NELAC:N
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:58 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
VANADIUM	BDL	0.010	mg/L

ZINC ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 02:58 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ZINC	BDL	0.020	mg/L

ARSENIC TRACE ICP SW846-6010B NELAC:Y
Analyst: J. LEAK Analysis Date: 08-OCT-02 16:52 Instrument: TRACE ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ARSENIC	0.10	0.0050	mg/L

LEAD TRACE ICP SW846-6010B NELAC:Y
Analyst: J. LEAK Analysis Date: 08-OCT-02 16:52 Instrument: TRACE ICP Test: M116.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
LEAD	0.088	0.0050	mg/L

SELENIUM TRACE ICP SW846-6010B NELAC:Y
Analyst: J. LEAK Analysis Date: 08-OCT-02 16:52 Instrument: TRACE ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.0050	mg/L

THALLIUM TRACE ICP SW846-6010B NELAC:Y
Analyst: J. LEAK Analysis Date: 08-OCT-02 16:52 Instrument: TRACE ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	0.010	mg/L

MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470A
Analyst: J. O'BRYAN Analysis Date: 01-OCT-02 14:00 Instrument: PREP Test: P131.6.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	40		mL
FINAL VOLUME	40		mL

MERCURY CVAA SW846-7470A NELAC:Y
Analyst: J. O'BRYAN Analysis Date: 03-OCT-02 17:37 Instrument: CVAA Test: M120.1.0
Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470A P131.6.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.00020	mg/L

CYANIDE DISTILLATION SW846-9010B
Analyst: J. TITLEY Analysis Date: 27-SEP-02 16:00 Instrument: PREP Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	250		mL
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012A NELAC:Y
Analyst: B. BATTANI Analysis Date: 30-SEP-02 10:30 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010B P101.4.0

 (continued on next page)

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.005	mg/L

Sample Comments

CONTAINERS DO NOT HAVE THE "28" SUFFIX ON THEM. JP 09-26-02

BDL Below Detection Limit

Sample was received on ice at temperature 1 C.
All aqueous samples are reported on a wet weight basis unless otherwise noted.
Sample chain of custody number 117977.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.
The sample results relate only to the analytes of interest tested or to the sample as received by the lab.
Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.
Heritage Environmental Services, LLC is accredited under Illinois NELAC accreditation number 100401.
Arizona License Number AZ0627.

Approved : P.K. Spence QAO

C E R T I F I C A T E O F A N A L Y S I S

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, LLC COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8304	25-SEP-02		A607636
	Complete	PO Number	
	09-OCT-02	DP 00151	
	Printed	Sampled	
	09-OCT-02	25-SEP-02 14:32	

Report To	Bill To
DAN SAMMONS, MFWTP IND. WASTE LABORATORY LOUISVILLE AND JEFFERSON COUNTY M.S.D. P.O. BOX 740011 LOUISVILLE, KY 40201	ACCOUNTS PAYABLE LOUISVILLE & JEFFERSON COUNTY M.S.D. PO BOX 740011 LOUISVILLE, KY 40201

Sample Description

CLIENT ID: MWA-28
MATRIX TYPE: NON-SPECIFIC WATER
WELL NUMBER: MWA-28
Submitter Code :4217

VOLATILE ORGANICS SW846-8240B NELAC:N

Analyst: R. SHAMP Analysis Date: 02-OCT-02 15:03 Instrument: GC/MS VOA Test: 0510 3.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	20	ug/L
ACROLEIN	BDL	50	ug/L
ACRYLONITRILE	BDL	70	ug/L
BENZENE	BDL	5.0	ug/L
BROMODICHLOROMETHANE	BDL	5.0	ug/L
BROMOFORM	BDL	5.0	ug/L
BROMOMETHANE	BDL	10	ug/L
CARBON DISULFIDE	BDL	5.0	ug/L
CARBON TETRACHLORIDE	BDL	5.0	ug/L
CHLOROBENZENE	BDL	5.0	ug/L
CHLOROETHANE	BDL	10	ug/L
CHLOROFORM	BDL	5.0	ug/L
CHLOROMETHANE	BDL	10	ug/L
DIBROMOCHLOROMETHANE	BDL	5.0	ug/L
CIS-1,3-DICHLOROPROPENE	BDL	5.0	ug/L
DICHLORODIFLUOROMETHANE	BDL	5.0	ug/L
1,1-DICHLOROETHANE	BDL	5.0	ug/L
1,2-DICHLOROETHANE	BDL	5.0	ug/L
1,1-DICHLOROETHENE	BDL	5.0	ug/L
1,2-DICHLOROPROPANE	BDL	5.0	ug/L
ETHYLBENZENE	BDL	5.0	ug/L
FLUOROTRICHLOROMETHANE	BDL	5.0	ug/L
2-HEXANONE	BDL	10	ug/L
METHYLENE CHLORIDE	BDL	5.0	ug/L
METHYL ETHYL KETONE	BDL	10	ug/L
4-METHYL-2-PENTANONE	BDL	10	ug/L
STYRENE	BDL	5.0	ug/L
1,1,2,2-TETRACHLOROETHANE	BDL	5.0	ug/L

Parameter	Result	Det. Limit	Units
TETRACHLOROETHENE	BDL	5.0	ug/L
TETRAHYDROFURAN	BDL	25	ug/L
TOLUENE	BDL	5.0	ug/L
1,2-DICHLOROETHENE (TOTAL)	BDL	5.0	ug/L
TRANS-1,3-DICHLOROPROPENE	BDL	5.0	ug/L
1,1,1-TRICHLOROETHANE	BDL	5.0	ug/L
1,1,2-TRICHLOROETHANE	BDL	5.0	ug/L
TRICHLOROETHENE	BDL	5.0	ug/L
VINYL ACETATE	BDL	10	ug/L
VINYL CHLORIDE	BDL	10	ug/L
XYLENE (TOTAL)	BDL	5.0	ug/L
SURROGATE RECOVERY			
DICHLOROETHANE-D4	129		% Rec
TOLUENE-D8	101		% Rec
BROMOFLUOROBENZENE	118		% Rec

Prep Method SW846-5030B Purge and Trap

GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C

Analyst: L. CALLAHAN Analysis Date: 01-OCT-02 Instrument: PREP Test: P233.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270C NELAC:Y

Analyst: J. MINNIEAR, II Analysis Date: 02-OCT-02 17:35 Instrument: GC/MS SVOA Test: O505.3.0

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C P233.4.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	10	ug/L
ACENAPHTHYLENE	BDL	10	ug/L
ANTHRACENE	BDL	10	ug/L
BENZ(A)ANTHRACENE	BDL	10	ug/L
BENZO(A)PYRENE	BDL	10	ug/L
BENZO(B)FLUORANTHENE	BDL	10	ug/L
BENZO(G,H,I)PERYLENE	BDL	10	ug/L
BENZO(K)FLUORANTHENE	BDL	10	ug/L
BENZYL ALCOHOL	BDL	10	ug/L
BENZYLBUTYLPHTHALATE	BDL	10	ug/L
BIS(2-CHLOROETHOXY)METHANE	BDL	10	ug/L
BIS(2-CHLOROETHYL)ETHER	BDL	10	ug/L
BIS(2-CHLOROISOPROPYL)ETHER	BDL	10	ug/L
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	10	ug/L
4-BROMOPHENYLPHENYLETHER	BDL	10	ug/L
CARBAZOLE	BDL	10	ug/L
4-CHLOROANILINE	BDL	10	ug/L
2-CHLORONAPHTHALENE	BDL	10	ug/L
4-CHLOROPHENYLPHENYLETHER	BDL	10	ug/L
CHRYSENE	BDL	10	ug/L
DIBENZ(A,H)ANTHRACENE	BDL	10	ug/L
DIBENZOFURAN	BDL	10	ug/L
1,2-DICHLOROBENZENE	BDL	10	ug/L

Parameter	Result	Det. Limit	Units
1,3-DICHLOROBENZENE	BDL	10	ug/L
1,4-DICHLOROBENZENE	BDL	10	ug/L
3,3'-DICHLOROBENZIDINE	BDL	20	ug/L
DIETHYLPHTHALATE	BDL	10	ug/L
DIMETHYLPHTHALATE	BDL	10	ug/L
DI-N-BUTYLPHTHALATE	BDL	10	ug/L
DINITROBENZENES	BDL	50	ug/L
2,4-DINITROTOLUENE	BDL	10	ug/L
2,6-DINITROTOLUENE	BDL	10	ug/L
DI-N-OCTYLPHTHALATE	BDL	10	ug/L
FLUORANTHENE	BDL	10	ug/L
FLUORENE	BDL	10	ug/L
HEXACHLOROBENZENE	BDL	10	ug/L
HEXACHLOROBUTADIENE	BDL	10	ug/L
HEXACHLOROCYCLOPENTADIENE	BDL	10	ug/L
HEXACHLOROETHANE	BDL	10	ug/L
INDENO(1,2,3-CD)PYRENE	BDL	10	ug/L
ISOPHORONE	BDL	10	ug/L
2-METHYLNAPHTHALENE	BDL	10	ug/L
NAPHTHALENE	BDL	10	ug/L
2-NITROANILINE	BDL	50	ug/L
3-NITROANILINE	BDL	50	ug/L
4-NITROANILINE	BDL	50	ug/L
NITROBENZENE	BDL	10	ug/L
N-NITROSO-DIPHENYLAMINE	BDL	10	ug/L
N-NITROSO-DI-N-PROPYLAMINE	BDL	10	ug/L
PHENANTHRENE	BDL	10	ug/L
2-PICOLINE	BDL	50	ug/L
PYRENE	BDL	10	ug/L
PYRIDINE	BDL	50	ug/L
1,2,4,5-TETRACHLOROBENZENE	BDL	10	ug/L
TOLUENEDIAMINE	BDL	50	ug/L
1,2,4-TRICHLOROBENZENE	BDL	10	ug/L
BENZOIC ACID	BDL	50	ug/L
4-CHLORO-3-METHYLPHENOL	BDL	10	ug/L
2-CHLOROPHENOL	BDL	10	ug/L
2,4-DICHLOROPHENOL	BDL	10	ug/L
2,4-DIMETHYLPHENOL	BDL	10	ug/L
4,6-DINITRO-2-METHYLPHENOL	BDL	50	ug/L
2,4-DINITROPHENOL	BDL	50	ug/L
2-METHYLPHENOL	BDL	10	ug/L
4-METHYLPHENOL	BDL	10	ug/L
2-NITROPHENOL	BDL	10	ug/L
4-NITROPHENOL	BDL	50	ug/L
PENTACHLOROPHENOL	BDL	50	ug/L
PHENOL	BDL	10	ug/L
1,2,4,5-TETRACHLOROBENZENE	BDL	10	ug/L
2,4,5-TRICHLOROPHENOL	BDL	50	ug/L
2,4,6-TRICHLOROPHENOL	BDL	10	ug/L
SURROGATE RECOVERY			
2-FLUOROPHENOL	54		% Rec

Parameter	Result	Det. Limit	Units
PHENOL-D5	38		% Rec
NITROBENZENE-D5	89		% Rec
2-FLUOROBIPHENYL	81		% Rec
2,4,6-TRIBROMOPHENOL	76		% Rec
TERPHENYL-D14	103		% Rec

GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C
Analyst: G. CLOUSE Analysis Date: 27-SEP-02 Instrument: PREP Test: P233.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	990		mL
FINAL VOLUME	10		mL

PCB/PESTICIDE SCAN GC:ECD SW846-8081 NELAC:Y
Analyst: M. KEEZER Analysis Date: 05-OCT-02 04:12 Instrument: GC/ECD Test: O305.1.0
Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C P233.1.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.05	ug/L
BETA-BHC	BDL	0.05	ug/L
DELTA-BHC	BDL	0.05	ug/L
GAMMA-BHC (LINDANE)	BDL	0.05	ug/L
HEPTACHLOR	BDL	0.05	ug/L
ALDRIN	BDL	0.05	ug/L
HEPTACHLOR EPOXIDE	BDL	0.05	ug/L
ENDOSULFAN I	BDL	0.05	ug/L
DIELDRIN	BDL	0.1	ug/L
4,4'-DDE	BDL	0.1	ug/L
ENDRIN	BDL	0.1	ug/L
ENDOSULFAN II	BDL	0.1	ug/L
4,4'-DDD	BDL	0.1	ug/L
ENDOSULFAN SULFATE	BDL	0.1	ug/L
4,4'-DDT	BDL	0.1	ug/L
METHOXYCHLOR	BDL	0.5	ug/L
ENDRIN ALDEHYDE	BDL	0.1	ug/L
ENDRIN KETONE	BDL	0.1	ug/L
ALPHA-CHLORDANE	BDL	0.5	ug/L
GAMMA-CHLORDANE	BDL	0.5	ug/L
TOXAPHENE	BDL	1	ug/L
PCB AROCLOR 1016	BDL	0.5	ug/L
PCB AROCLOR 1221	BDL	0.5	ug/L
PCB AROCLOR 1232	BDL	0.5	ug/L
PCB AROCLOR 1242	BDL	0.5	ug/L
PCB AROCLOR 1248	BDL	0.5	ug/L
PCB AROCLOR 1254	BDL	1	ug/L
PCB AROCLOR 1260	BDL	1	ug/L
...			
SURROGATE RECOVERY			

DECACHLOROBIPHENYL (DCB)	73.0		% Rec

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A
Analyst: D. THOMPSON Analysis Date: 02-OCT-02 09:20 Instrument: PREP Test: P130.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL WEIGHT OR VOLUME	50		mL

ALUMINUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:15 Instrument: ICP Test: M101 3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ALUMINUM	0.14	0.050	mg/L

ANTIMONY ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:15 Instrument: ICP Test: M102 3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	0.010	mg/L

BARIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:15 Instrument: ICP Test: M104 3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BARIUM	0.021	0.010	mg/L

BERYLLIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:15 Instrument: ICP Test: M105 3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.0040	mg/L

CADMIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:15 Instrument: ICP Test: M108 3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.0050	mg/L

CALCIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:15 Instrument: ICP Test: M109 3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CALCIUM	100	0.10	mg/L

CHROMIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:15 Instrument: ICP Test: M110 3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CHROMIUM	0.064	0.010	mg/L

COBALT ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:15 Instrument: ICP Test: M111 3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COBALT	BDL	0.010	mg/L

COPPER ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:15 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COPPER	BDL	0.020	mg/L

IRON ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:15 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
IRON	0.66	0.020	mg/L

MAGNESIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:15 Instrument: ICP Test: M118.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	36.	0.10	mg/L

MANGANESE ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:15 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MANGANESE	0.025	0.010	mg/L

NICKEL ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:15 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
NICKEL	0.030	0.010	mg/L

POTASSIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:15 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
POTASSIUM	2.4	0.10	mg/L

SILVER ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:15 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.010	mg/L

SODIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:15 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SODIUM	36.	0.10	mg/L

VANADIUM ICP SW846-6010B NELAC:N
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:15 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
VANADIUM	BDL	0.010	mg/L

ZINC ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:15 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ZINC	BDL	0.020	mg/L

ARSENIC TRACE ICP SW846-6010B NELAC:Y
Analyst: J. LEAK Analysis Date: 08-OCT-02 17:13 Instrument: TRACE ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.0050	mg/L

LEAD TRACE ICP SW846-6010B NELAC:Y
Analyst: J. LEAK Analysis Date: 08-OCT-02 17:13 Instrument: TRACE ICP Test: M116.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
LEAD	BDL	0.0050	mg/L

SELENIUM TRACE ICP SW846-6010B NELAC:Y
Analyst: J. LEAK Analysis Date: 08-OCT-02 17:13 Instrument: TRACE ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.0050	mg/L

THALLIUM TRACE ICP SW846-6010B NELAC:Y
Analyst: J. LEAK Analysis Date: 08-OCT-02 17:13 Instrument: TRACE ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	0.010	mg/L

MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470A
Analyst: J. O'BRYAN Analysis Date: 01-OCT-02 14:00 Instrument: PREP Test: P131.6.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	40		mL
FINAL VOLUME	40		mL

MERCURY CVAA SW846-7470A NELAC:Y
Analyst: J. O'BRYAN Analysis Date: 03-OCT-02 17:37 Instrument: CVAA Test: M120.1.0
Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470A P131.6.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.00020	mg/L

CYANIDE DISTILLATION SW846-9010B
Analyst: J. TITLEY Analysis Date: 27-SEP-02 16:00 Instrument: PREP Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	250		mL
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012A NELAC:Y
Analyst: B. BATTANI Analysis Date: 30-SEP-02 10:30 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010B P101.4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.005	mg/L

Sample Comments

CONTAINERS DO NOT HAVE THE "28" SUFFIX ON THEM. JP 09-26-02

BDL Below Detection Limit

Sample was received on ice at temperature 1 C.
All aqueous samples are reported on a wet weight basis unless otherwise noted.
Sample chain of custody number 117977.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.
The sample results relate only to the analytes of interest tested or to the sample as received by the lab.
Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.
Heritage Environmental Services, LLC is accredited under Illinois NELAC accreditation number 100401.
Arizona License Number AZ0627.

Approved : P.K. Spence QA

C E R T I F I C A T E O F A N A L Y S I S

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, LLC COMMERCIAL LABORATORY OPERATIONS 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8304	25-SEP-02		A607635
	Complete	PO Number	
	09-OCT-02	DP 00151	
	Printed	Sampled	
	09-OCT-02	25-SEP-02 13:46	

Report To	Bill To
DAN SAMMONS, MFWTP IND. WASTE LABORATORY LOUISVILLE AND JEFFERSON COUNTY M.S.D. P.O. BOX 740011 LOUISVILLE, KY 40201	ACCOUNTS PAYABLE LOUISVILLE & JEFFERSON COUNTY M.S.D. PO BOX 740011 LOUISVILLE, KY 40201

Sample Description

CLIENT ID: MWB-28
MATRIX TYPE: NON-SPECIFIC WATER
WELL NUMBER: MWB-28
Submitter Code :4217

VOLATILE ORGANICS SW846-8240B NELAC:N

Analyst: R. SHAMP Analysis Date: 02-OCT-02 14:34 Instrument: GC/MS VOA Test: 0510.3.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	20	ug/L
ACROLEIN	BDL	50	ug/L
ACRYLONITRILE	BDL	70	ug/L
BENZENE	BDL	5.0	ug/L
BROMODICHLOROMETHANE	BDL	5.0	ug/L
BROMOFORM	BDL	5.0	ug/L
BROMOMETHANE	BDL	10	ug/L
CARBON DISULFIDE	BDL	5.0	ug/L
CARBON TETRACHLORIDE	BDL	5.0	ug/L
CHLOROBENZENE	BDL	5.0	ug/L
CHLOROETHANE	BDL	10	ug/L
CHLOROFORM	BDL	5.0	ug/L
CHLOROMETHANE	BDL	10	ug/L
DIBROMOCHLOROMETHANE	BDL	5.0	ug/L
CIS-1,3-DICHLOROPROPENE	BDL	5.0	ug/L
DICHLORODIFLUOROMETHANE	BDL	5.0	ug/L
1,1-DICHLOROETHANE	BDL	5.0	ug/L
1,2-DICHLOROETHANE	BDL	5.0	ug/L
1,1-DICHLOROETHENE	BDL	5.0	ug/L
1,2-DICHLOROPROPANE	BDL	5.0	ug/L
ETHYLBENZENE	BDL	5.0	ug/L
FLUOROTRICHLOROMETHANE	BDL	5.0	ug/L
2-HEXANONE	BDL	10	ug/L
METHYLENE CHLORIDE	BDL	5.0	ug/L
METHYL ETHYL KETONE	BDL	10	ug/L
4-METHYL-2-PENTANONE	BDL	10	ug/L
STYRENE	BDL	5.0	ug/L
1,1,2,2-TETRACHLOROETHANE	BDL	5.0	ug/L

Parameter	Result	Det. Limit	Units
TETRACHLOROETHENE	BDL	5.0	ug/L
TETRAHYDROFURAN	BDL	25	ug/L
TOLUENE	BDL	5.0	ug/L
1,2-DICHLOROETHENE (TOTAL)	BDL	5.0	ug/L
TRANS-1,3-DICHLOROPROPENE	BDL	5.0	ug/L
1,1,1-TRICHLOROETHANE	BDL	5.0	ug/L
1,1,2-TRICHLOROETHANE	BDL	5.0	ug/L
TRICHLOROETHENE	BDL	5.0	ug/L
VINYL ACETATE	BDL	10	ug/L
VINYL CHLORIDE	BDL	10	ug/L
XYLENE (TOTAL)	BDL	5.0	ug/L
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	125		% Rec
TOLUENE-D8	104		% Rec
BROMOFLUOROBENZENE	114		% Rec

Prep Method SW846-5030B Purge and Trap

GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C
Analyst: C. WILLHITE Analysis Date: 01-OCT-02 Instrument: PREP Test: P233.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270C NELAC:Y
Analyst: J. MINNIEAR, II Analysis Date: 02-OCT-02 16:58 Instrument: GC/MS SVOA Test: O505.3.0
Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C P233.4.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	10	ug/L
ACENAPHTHYLENE	BDL	10	ug/L
ANTHRACENE	BDL	10	ug/L
BENZ(A)ANTHRACENE	BDL	10	ug/L
BENZO(A)PYRENE	BDL	10	ug/L
BENZO(B)FLUORANTHENE	BDL	10	ug/L
BENZO(G,H,I)PERYLENE	BDL	10	ug/L
BENZO(K)FLUORANTHENE	BDL	10	ug/L
BENZYL ALCOHOL	BDL	10	ug/L
BENZYLBUTYLPHTHALATE	BDL	10	ug/L
BIS(2-CHLOROETHOXY)METHANE	BDL	10	ug/L
BIS(2-CHLOROETHYL)ETHER	BDL	10	ug/L
BIS(2-CHLOROISOPROPYL)ETHER	BDL	10	ug/L
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	10	ug/L
4-BROMOPHENYLPHENYLETHER	BDL	10	ug/L
CARBAZOLE	BDL	10	ug/L
4-CHLOROANILINE	BDL	10	ug/L
2-CHLORONAPHTHALENE	BDL	10	ug/L
4-CHLOROPHENYLPHENYLETHER	BDL	10	ug/L
CHRYSENE	BDL	10	ug/L
DIBENZ(A,H)ANTHRACENE	BDL	10	ug/L
DIBENZOFURAN	BDL	10	ug/L
1,2-DICHLOROBENZENE	BDL	10	ug/L

Parameter	Result	Det. Limit	Units
1,3-DICHLOROBENZENE	BDL	10	ug/L
1,4-DICHLOROBENZENE	BDL	10	ug/L
3,3'-DICHLOROBENZIDINE	BDL	20	ug/L
DIETHYLPHTHALATE	BDL	10	ug/L
DIMETHYLPHTHALATE	BDL	10	ug/L
DI-N-BUTYLPHTHALATE	BDL	10	ug/L
DINITROBENZENES	BDL	50	ug/L
2,4-DINITROTOLUENE	BDL	10	ug/L
2,6-DINITROTOLUENE	BDL	10	ug/L
DI-N-OCTYLPHTHALATE	BDL	10	ug/L
FLUORANTHENE	BDL	10	ug/L
FLUORENE	BDL	10	ug/L
HEXACHLOROBENZENE	BDL	10	ug/L
HEXACHLOROBUTADIENE	BDL	10	ug/L
HEXACHLOROCYCLOPENTADIENE	BDL	10	ug/L
HEXACHLOROETHANE	BDL	10	ug/L
INDENO(1,2,3-CD)PYRENE	BDL	10	ug/L
ISOPHORONE	BDL	10	ug/L
2-METHYLNAPHTHALENE	BDL	10	ug/L
NAPHTHALENE	BDL	10	ug/L
2-NITROANILINE	BDL	50	ug/L
3-NITROANILINE	BDL	50	ug/L
4-NITROANILINE	BDL	50	ug/L
NITROBENZENE	BDL	10	ug/L
N-NITROSO-DIPHENYLAMINE	BDL	10	ug/L
N-NITROSO-DI-N-PROPYLAMINE	BDL	10	ug/L
PHENANTHRENE	BDL	10	ug/L
2-PICOLINE	BDL	50	ug/L
PYRENE	BDL	10	ug/L
PYRIDINE	BDL	50	ug/L
1,2,4,5-TETRACHLOROBENZENE	BDL	10	ug/L
TOLUENEDIAMINE	BDL	50	ug/L
1,2,4-TRICHLOROBENZENE	BDL	10	ug/L
BENZOIC ACID	BDL	50	ug/L
4-CHLORO-3-METHYLPHENOL	BDL	10	ug/L
2-CHLOROPHENOL	BDL	10	ug/L
2,4-DICHLOROPHENOL	BDL	10	ug/L
2,4-DIMETHYLPHENOL	BDL	10	ug/L
4,6-DINITRO-2-METHYLPHENOL	BDL	50	ug/L
2,4-DINITROPHENOL	BDL	50	ug/L
2-METHYLPHENOL	BDL	10	ug/L
4-METHYLPHENOL	BDL	10	ug/L
2-NITROPHENOL	BDL	10	ug/L
4-NITROPHENOL	BDL	50	ug/L
PENTACHLOROPHENOL	BDL	50	ug/L
PHENOL	BDL	10	ug/L
1,2,4,5-TETRACHLOROBENZENE	BDL	10	ug/L
2,4,5-TRICHLOROPHENOL	BDL	50	ug/L
2,4,6-TRICHLOROPHENOL	BDL	10	ug/L
SURROGATE RECOVERY			
2-FLUOROPHENOL	51		% Rec

Parameter	Result	Det. Limit	Units
PHENOL-D5	37		% Rec
NITROBENZENE-D5	81		% Rec
2-FLUOROBIPHENYL	72		% Rec
2,4,6-TRIBROMOPHENOL	74		% Rec
TERPHENYL-D14	86		% Rec

GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C
Analyst: G. CLOUSE Analysis Date: 27-SEP-02 Instrument: PREP Test: P233.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	960		mL
FINAL VOLUME	10		mL

PCB/PESTICIDE SCAN GC:ECD SW846-8081 NELAC:Y
Analyst: M. KEEZER Analysis Date: 05-OCT-02 09:23 Instrument: GC/ECD Test: O305.1.0
Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C P233.1.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.05	ug/L
BETA-BHC	BDL	0.05	ug/L
DELTA-BHC	BDL	0.05	ug/L
GAMMA-BHC (LINDANE)	BDL	0.05	ug/L
HEPTACHLOR	BDL	0.05	ug/L
ALDRIN	BDL	0.05	ug/L
HEPTACHLOR EPOXIDE	BDL	0.05	ug/L
ENDOSULFAN I	BDL	0.05	ug/L
DIELDRIN	BDL	0.1	ug/L
4,4'-DDE	BDL	0.1	ug/L
ENDRIN	BDL	0.1	ug/L
ENDOSULFAN II	BDL	0.1	ug/L
4,4'-DDD	BDL	0.1	ug/L
ENDOSULFAN SULFATE	BDL	0.1	ug/L
4,4'-DDT	BDL	0.1	ug/L
METHOXYCHLOR	BDL	0.5	ug/L
ENDRIN ALDEHYDE	BDL	0.1	ug/L
ENDRIN KETONE	BDL	0.1	ug/L
ALPHA-CHLORDANE	BDL	0.5	ug/L
GAMMA-CHLORDANE	BDL	0.5	ug/L
TOXAPHENE	BDL	1	ug/L
PCB AROCLOR 1016	BDL	0.5	ug/L
PCB AROCLOR 1221	BDL	0.5	ug/L
PCB AROCLOR 1232	BDL	0.5	ug/L
PCB AROCLOR 1242	BDL	0.5	ug/L
PCB AROCLOR 1248	BDL	0.5	ug/L
PCB AROCLOR 1254	BDL	1	ug/L
PCB AROCLOR 1260	BDL	1	ug/L
...			
SURROGATE RECOVERY			

DECACHLOROBIPHENYL (DCB)	96.0		% Rec

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A
Analyst: D. THOMPSON Analysis Date: 02-OCT-02 09:20 Instrument: PREP Test: P130.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL WEIGHT OR VOLUME	50		mL

ALUMINUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:11 Instrument: ICP Test: M101.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ALUMINUM	0.10	0.050	mg/L

ANTIMONY ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:11 Instrument: ICP Test: M102.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	0.010	mg/L

BARIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:11 Instrument: ICP Test: M104.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BARIUM	0.020	0.010	mg/L

BERYLLIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:11 Instrument: ICP Test: M105.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.0040	mg/L

CADMIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:11 Instrument: ICP Test: M108.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.0050	mg/L

CALCIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:11 Instrument: ICP Test: M109.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CALCIUM	100	0.10	mg/L

CHROMIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:11 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CHROMIUM	0.21	0.010	mg/L

COBALT ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:11 Instrument: ICP Test: M111.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COBALT	BDL	0.010	mg/L

COPPER ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:11 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COPPER	BDL	0.020	mg/L

IRON ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:11 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
IRON	3.9	0.020	mg/L

MAGNESIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:11 Instrument: ICP Test: M118.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	36.	0.10	mg/L

MANGANESE ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:11 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MANGANESE	0.33	0.010	mg/L

NICKEL ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:11 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
NICKEL	0.025	0.010	mg/L

POTASSIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:11 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
POTASSIUM	2.5	0.10	mg/L

SILVER ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:11 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.010	mg/L

SODIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:11 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SODIUM	37.	0.10	mg/L

VANADIUM ICP SW846-6010B NELAC:N
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:11 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
VANADIUM	BDL	0.010	mg/L

ZINC ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:11 Instrument: ICP Test: M139.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ZINC	BDL	0.020	mg/L

ARSENIC TRACE ICP SW846-6010B NELAC:Y
Analyst: J. LEAK Analysis Date: 08-OCT-02 17:08 Instrument: TRACE ICP Test: M103.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.0050	mg/L

LEAD TRACE ICP SW846-6010B NELAC:Y
Analyst: J. LEAK Analysis Date: 08-OCT-02 17:08 Instrument: TRACE ICP Test: M116.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
LEAD	BDL	0.0050	mg/L

SELENIUM TRACE ICP SW846-6010B NELAC:Y
Analyst: J. LEAK Analysis Date: 08-OCT-02 17:08 Instrument: TRACE ICP Test: M128.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.0050	mg/L

THALLIUM TRACE ICP SW846-6010B NELAC:Y
Analyst: J. LEAK Analysis Date: 08-OCT-02 17:08 Instrument: TRACE ICP Test: M134.0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	0.010	mg/L

MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470A
Analyst: J. O'BRYAN Analysis Date: 01-OCT-02 14:00 Instrument: PREP Test: P131.6.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	40		mL
FINAL VOLUME	40		mL

MERCURY CVAA SW846-7470A NELAC:Y
Analyst: J. O'BRYAN Analysis Date: 03-OCT-02 17:37 Instrument: CVAA Test: M120.1.0
Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470A P131.6.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.00020	mg/L

CYANIDE DISTILLATION SW846-9010B
Analyst: J. TITLEY Analysis Date: 27-SEP-02 16:00 Instrument: PREP Test: P101.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	250		mL
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012A NELAC:Y
Analyst: B. BATTANI Analysis Date: 30-SEP-02 10:30 Instrument: AUTO-ANALYZER Test: G101.4.0
Prep: CYANIDE DISTILLATION SW846-9010B P101.4.0

 (continued on next page)

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.005	mg/L

Sample Comments

CONTAINERS DO NOT HAVE THE "28" SUFFIX ON THEM. JP 09-26-02

BDL Below Detection Limit

Sample was received on ice at temperature 1 C.
All aqueous samples are reported on a wet weight basis unless otherwise noted.
Sample chain of custody number 117977.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.
The sample results relate only to the analytes of interest tested or to the sample as received by the lab.
Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.
Heritage Environmental Services, LLC is accredited under Illinois NELAC accreditation number 100401.
Arizona License Number AZ0627.

Approved : P.K. Spence QA

C E R T I F I C A T E O F A N A L Y S I S

Service Location	Received	Project	Lab ID
HERITAGE ENVIRONMENTAL SERVICES, LLC	25-SEP-02		A607633
COMMERCIAL LABORATORY OPERATIONS	Complete	PO Number	
7901 W. MORRIS ST.	09-OCT-02	DP 00151	
INDIANAPOLIS, IN 46231	Printed	Sampled	
(317)243-8304	09-OCT-02	25-SEP-02 10:55	

Report To	Bill To
DAN SAMMONS, MFWTP IND. WASTE LABORATORY	ACCOUNTS PAYABLE
LOUISVILLE AND JEFFERSON COUNTY M.S.D.	LOUISVILLE & JEFFERSON COUNTY M.S.D.
P.O. BOX 740011	PO BOX 740011
LOUISVILLE, KY 40201	LOUISVILLE, KY 40201

Sample Description

CLIENT ID: MW05-FB-28
MATRIX TYPE: NON-SPECIFIC WATER
WELL NUMBER: MW05-FB-28
Submitter Code :4217

VOLATILE ORGANICS SW846-8240B NELAC:N

Analyst: R. SHAMP Analysis Date: 02-OCT-02 13:35 Instrument: GC/MS VOA Test: 0510.3.0

Parameter	Result	Det. Limit	Units
ACETONE	BDL	20	ug/L
ACROLEIN	BDL	50	ug/L
ACRYLONITRILE	BDL	70	ug/L
BENZENE	BDL	5.0	ug/L
BROMODICHLOROMETHANE	BDL	5.0	ug/L
BROMOFORM	BDL	5.0	ug/L
BROMOMETHANE	BDL	10	ug/L
CARBON DISULFIDE	BDL	5.0	ug/L
CARBON TETRACHLORIDE	BDL	5.0	ug/L
CHLOROBENZENE	5.4	5.0	ug/L
CHLOROETHANE	BDL	10	ug/L
CHLOROFORM	BDL	5.0	ug/L
CHLOROMETHANE	BDL	10	ug/L
DIBROMOCHLOROMETHANE	BDL	5.0	ug/L
CIS-1,3-DICHLOROPROPENE	BDL	5.0	ug/L
DICHLORODIFLUOROMETHANE	BDL	5.0	ug/L
1,1-DICHLOROETHANE	BDL	5.0	ug/L
1,2-DICHLOROETHANE	BDL	5.0	ug/L
1,1-DICHLOROETHENE	BDL	5.0	ug/L
1,2-DICHLOROPROPANE	BDL	5.0	ug/L
ETHYLBENZENE	BDL	5.0	ug/L
FLUOROTRICHLOROMETHANE	BDL	5.0	ug/L
2-HEXANONE	BDL	10	ug/L
METHYLENE CHLORIDE	BDL	5.0	ug/L
METHYL ETHYL KETONE	BDL	10	ug/L
4-METHYL-2-PENTANONE	BDL	10	ug/L
STYRENE	BDL	5.0	ug/L
1,1,2,2-TETRACHLOROETHANE	BDL	5.0	ug/L

Parameter	Result	Det. Limit	Units
TETRACHLOROETHENE	BDL	5.0	ug/L
TETRAHYDROFURAN	BDL	25	ug/L
TOLUENE	BDL	5.0	ug/L
1,2-DICHLOROETHENE (TOTAL)	BDL	5.0	ug/L
TRANS-1,3-DICHLOROPROPENE	BDL	5.0	ug/L
1,1,1-TRICHLOROETHANE	BDL	5.0	ug/L
1,1,2-TRICHLOROETHANE	BDL	5.0	ug/L
TRICHLOROETHENE	BDL	5.0	ug/L
VINYL ACETATE	BDL	10	ug/L
VINYL CHLORIDE	BDL	10	ug/L
XYLENE (TOTAL)	BDL	5.0	ug/L
...			
SURROGATE RECOVERY			

DICHLOROETHANE-D4	122		% Rec
TOLUENE-D8	104		% Rec
BROMOFLUOROBENZENE	107		% Rec

Prep Method SW846-5030B Purge and Trap

GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C

Analyst: C. WILLHITE Analysis Date: 01-OCT-02 Instrument: PREP Test: P233.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	1000		mL
FINAL VOLUME	1.0		mL

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270C NELAC:Y

Analyst: L. CALLAHAN Analysis Date: 02-OCT-02 20:54 Instrument: GC/MS SVOA Test: 0505.3.0

Prep: GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C P233.4.0

Parameter	Result	Det. Limit	Units
ACENAPHTHENE	BDL	10	ug/L
ACENAPHTHYLENE	BDL	10	ug/L
ANTHRACENE	BDL	10	ug/L
BENZ(A)ANTHRACENE	BDL	10	ug/L
BENZO(A)PYRENE	BDL	10	ug/L
BENZO(B)FLUORANTHENE	BDL	10	ug/L
BENZO(G,H,I)PERYLENE	BDL	10	ug/L
BENZO(K)FLUORANTHENE	BDL	10	ug/L
BENZYL ALCOHOL	BDL	10	ug/L
BENZYLBUTYLPHTHALATE	BDL	10	ug/L
BIS(2-CHLOROETHOXY)METHANE	BDL	10	ug/L
BIS(2-CHLOROETHYL)ETHER	BDL	10	ug/L
BIS(2-CHLOROISOPROPYL)ETHER	BDL	10	ug/L
BIS(2-ETHYLHEXYL)PHTHALATE	BDL	10	ug/L
4-BROMOPHENYLPHENYLETHER	BDL	10	ug/L
CARBAZOLE	BDL	10	ug/L
4-CHLOROANILINE	BDL	10	ug/L
2-CHLORONAPHTHALENE	BDL	10	ug/L
4-CHLOROPHENYLPHENYLETHER	BDL	10	ug/L
CHRYSENE	BDL	10	ug/L
DIBENZ(A,H)ANTHRACENE	BDL	10	ug/L
DIBENZOFURAN	BDL	10	ug/L
1,2-DICHLOROBENZENE	BDL	10	ug/L

Parameter	Result	Det. Limit	Units
1,3-DICHLOROBENZENE	BDL	10	ug/L
1,4-DICHLOROBENZENE	BDL	10	ug/L
3,3'-DICHLOROBENZIDINE	BDL	20	ug/L
DIETHYLPHTHALATE	BDL	10	ug/L
DIMETHYLPHTHALATE	BDL	10	ug/L
DI-N-BUTYLPHTHALATE	BDL	10	ug/L
DINITROBENZENES	BDL	50	ug/L
2,4-DINITROTOLUENE	BDL	10	ug/L
2,6-DINITROTOLUENE	BDL	10	ug/L
DI-N-OCTYLPHTHALATE	BDL	10	ug/L
FLUORANTHENE	BDL	10	ug/L
FLUORENE	BDL	10	ug/L
HEXACHLOROBENZENE	BDL	10	ug/L
HEXACHLOROBUTADIENE	BDL	10	ug/L
HEXACHLOROCYCLOPENTADIENE	BDL	10	ug/L
HEXACHLOROETHANE	BDL	10	ug/L
INDENO(1,2,3-CD)PYRENE	BDL	10	ug/L
ISOPHORONE	BDL	10	ug/L
2-METHYLNAPHTHALENE	BDL	10	ug/L
NAPHTHALENE	BDL	10	ug/L
2-NITROANILINE	BDL	50	ug/L
3-NITROANILINE	BDL	50	ug/L
4-NITROANILINE	BDL	50	ug/L
NITROBENZENE	BDL	10	ug/L
N-NITROSO-DIPHENYLAMINE	BDL	10	ug/L
N-NITROSO-DI-N-PROPYLAMINE	BDL	10	ug/L
PHENANTHRENE	BDL	10	ug/L
2-PICOLINE	BDL	50	ug/L
PYRENE	BDL	10	ug/L
PYRIDINE	BDL	50	ug/L
1,2,4,5-TETRACHLOROBENZENE	BDL	10	ug/L
TOLUENEDIAMINE	BDL	50	ug/L
1,2,4-TRICHLOROBENZENE	BDL	10	ug/L
BENZOIC ACID	BDL	50	ug/L
4-CHLORO-3-METHYLPHENOL	BDL	10	ug/L
2-CHLOROPHENOL	BDL	10	ug/L
2,4-DICHLOROPHENOL	BDL	10	ug/L
2,4-DIMETHYLPHENOL	BDL	10	ug/L
4,6-DINITRO-2-METHYLPHENOL	BDL	50	ug/L
2,4-DINITROPHENOL	BDL	50	ug/L
2-METHYLPHENOL	BDL	10	ug/L
4-METHYLPHENOL	BDL	10	ug/L
2-NITROPHENOL	BDL	10	ug/L
4-NITROPHENOL	BDL	50	ug/L
PENTACHLOROPHENOL	BDL	50	ug/L
PHENOL	BDL	10	ug/L
1,2,4,5-TETRACHLOROBENZENE	BDL	10	ug/L
2,4,5-TRICHLOROPHENOL	BDL	50	ug/L
2,4,6-TRICHLOROPHENOL	BDL	10	ug/L
SURROGATE RECOVERY			

2-FLUOROPHENOL	55		% Rec

Parameter	Result	Det. Limit	Units
PHENOL-D5	44		% Rec
NITROBENZENE-D5	83		% Rec
2-FLUOROBIPHENYL	73		% Rec
2,4,6-TRIBROMOPHENOL	78		% Rec
TERPHENYL-D14	93		% Rec

GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C
Analyst: G. CLOUSE Analysis Date: 27-SEP-02 Instrument: PREP Test: P233.1.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	980		mL
FINAL VOLUME	10		mL

PCB/PESTICIDE SCAN GC:ECD SW846-8081 NELAC:Y
Analyst: M. KEEZER Analysis Date: 05-OCT-02 08:21 Instrument: GC/ECD Test: O305.1.0
Prep: GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C P233.1.0

Parameter	Result	Det. Limit	Units
ALPHA-BHC	BDL	0.05	ug/L
BETA-BHC	BDL	0.05	ug/L
DELTA-BHC	BDL	0.05	ug/L
GAMMA-BHC (LINDANE)	BDL	0.05	ug/L
HEPTACHLOR	BDL	0.05	ug/L
ALDRIN	BDL	0.05	ug/L
HEPTACHLOR EPOXIDE	BDL	0.05	ug/L
ENDOSULFAN I	BDL	0.05	ug/L
DIELDRIN	BDL	0.1	ug/L
4,4'-DDE	BDL	0.1	ug/L
ENDRIN	BDL	0.1	ug/L
ENDOSULFAN II	BDL	0.1	ug/L
4,4'-DDD	BDL	0.1	ug/L
ENDOSULFAN SULFATE	BDL	0.1	ug/L
4,4'-DDT	BDL	0.1	ug/L
METHOXYCHLOR	BDL	0.5	ug/L
ENDRIN ALDEHYDE	BDL	0.1	ug/L
ENDRIN KETONE	BDL	0.1	ug/L
ALPHA-CHLORDANE	BDL	0.5	ug/L
GAMMA-CHLORDANE	BDL	0.5	ug/L
TOXAPHENE	BDL	1	ug/L
PCB AROCLOR 1016	BDL	0.5	ug/L
PCB AROCLOR 1221	BDL	0.5	ug/L
PCB AROCLOR 1232	BDL	0.5	ug/L
PCB AROCLOR 1242	BDL	0.5	ug/L
PCB AROCLOR 1248	BDL	0.5	ug/L
PCB AROCLOR 1254	BDL	1	ug/L
PCB AROCLOR 1260	BDL	1	ug/L
...			
SURROGATE RECOVERY			

DECACHLOROBIPHENYL (DCB)	82.3		% Rec

FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A
Analyst: D. THOMPSON Analysis Date: 02-OCT-02 09:20 Instrument: PREP Test: P130.4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL WEIGHT OR VOLUME	50		mL

ALUMINUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:02 Instrument: ICP Test: M101.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ALUMINUM	BDL	0.050	mg/L

ANTIMONY ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:02 Instrument: ICP Test: M102.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
ANTIMONY	BDL	0.010	mg/L

BARIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:02 Instrument: ICP Test: M104.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BARIUM	BDL	0.010	mg/L

BERYLLIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:02 Instrument: ICP Test: M105.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
BERYLLIUM	BDL	0.0040	mg/L

CADMIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:02 Instrument: ICP Test: M108.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CADMIUM	BDL	0.0050	mg/L

CALCIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:02 Instrument: ICP Test: M109.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CALCIUM	0.11	0.10	mg/L

CHROMIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:02 Instrument: ICP Test: M110.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
CHROMIUM	BDL	0.010	mg/L

COBALT ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:02 Instrument: ICP Test: M111.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COBALT	BDL	0.010	mg/L

COPPER ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:02 Instrument: ICP Test: M112.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
COPPER	BDL	0.020	mg/L

IRON ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:02 Instrument: ICP Test: M115.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
IRON	BDL	0.020	mg/L

MAGNESIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:02 Instrument: ICP Test: M118.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MAGNESIUM	BDL	0.10	mg/L

MANGANESE ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:02 Instrument: ICP Test: M119.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
MANGANESE	BDL	0.010	mg/L

NICKEL ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:02 Instrument: ICP Test: M122.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
NICKEL	BDL	0.010	mg/L

POTASSIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:02 Instrument: ICP Test: M126.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
POTASSIUM	BDL	0.10	mg/L

SILVER ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:02 Instrument: ICP Test: M130.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SILVER	BDL	0.010	mg/L

SODIUM ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:02 Instrument: ICP Test: M131.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
SODIUM	BDL	0.10	mg/L

VANADIUM ICP SW846-6010B NELAC:N
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:02 Instrument: ICP Test: M138.3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130.4.0

Parameter	Result	Det. Limit	Units
VANADIUM	BDL	0.010	mg/L

ZINC ICP SW846-6010B NELAC:Y
Analyst: J. KRAMER Analysis Date: 03-OCT-02 03:02 Instrument: ICP Test: M139 3.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130 4.0

Parameter	Result	Det. Limit	Units
ZINC	BDL	0.020	mg/L

ARSENIC TRACE ICP SW846-6010B NELAC:Y
Analyst: J. LEAK Analysis Date: 08-OCT-02 16:57 Instrument: TRACE ICP Test: M103 0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130 4.0

Parameter	Result	Det. Limit	Units
ARSENIC	BDL	0.0050	mg/L

LEAD TRACE ICP SW846-6010B NELAC:Y
Analyst: J. LEAK Analysis Date: 08-OCT-02 16:57 Instrument: TRACE ICP Test: M116 0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130 4.0

Parameter	Result	Det. Limit	Units
LEAD	BDL	0.0050	mg/L

SELENIUM TRACE ICP SW846-6010B NELAC:Y
Analyst: J. LEAK Analysis Date: 08-OCT-02 16:57 Instrument: TRACE ICP Test: M128 0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130 4.0

Parameter	Result	Det. Limit	Units
SELENIUM	BDL	0.0050	mg/L

THALLIUM TRACE ICP SW846-6010B NELAC:Y
Analyst: J. LEAK Analysis Date: 08-OCT-02 16:57 Instrument: TRACE ICP Test: M134 0.0
Prep: FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A P130 4.0

Parameter	Result	Det. Limit	Units
THALLIUM	BDL	0.010	mg/L

MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470A
Analyst: J. O'BRYAN Analysis Date: 01-OCT-02 14:00 Instrument: PREP Test: P131 6.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	40		mL
FINAL VOLUME	40		mL

MERCURY CVAA SW846-7470A NELAC:Y
Analyst: J. O'BRYAN Analysis Date: 03-OCT-02 17:37 Instrument: CVAA Test: M120 1.0
Prep: MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470A P131 6.0

Parameter	Result	Det. Limit	Units
MERCURY	BDL	0.00020	mg/L

CYANIDE DISTILLATION SW846-9010B
Analyst: J. TITLEY Analysis Date: 27-SEP-02 16:00 Instrument: PREP Test: P101 4.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	250		mL
FINAL VOLUME	250		mL

CYANIDE, TOTAL (AUTOMATED) SW846-9012A NELAC:Y
Analyst: B. BATTANI Analysis Date: 30-SEP-02 10:30 Instrument: AUTO-ANALYZER Test: G101 4.0
Prep: CYANIDE DISTILLATION SW846-9010B P101 4.0

Parameter	Result	Det. Limit	Units
CYANIDE	BDL	0.005	mg/L

Sample Comments

CONTAINERS DO NOT HAVE THE "28" SUFFIX ON THEM. JP 09-26-02

BDL Below Detection Limit

Sample was received on ice at temperature 1 C.
All aqueous samples are reported on a wet weight basis unless otherwise noted.
Sample chain of custody number 117977.

This Certificate shall not be reproduced, except in full, without the written approval of the lab.
The sample results relate only to the analytes of interest tested or to the sample as received by the lab.
Heritage Environmental Services, LLC certifies that the test results indicated as NELAC (National Environmental Laboratory Accreditation Conference) accredited (Yes for NELAC) meet all requirements of NELAC and Illinois EPA Part 186 unless otherwise explained or justified as to the the exact nature of the deviations.
Heritage Environmental Services, LLC is accredited under Illinois NELAC accreditation number 100401.
Arizona License Number AZ0627.

Approved : R.K. Sluce QAO

QUALITY ASSURANCE REPORT

Service Location
Heritage Environmental Services, LLC
Comercial Laboratory Operations
7901 West Morris Street
Indianapolis, IN 26231
(317) 243-8304

Report Date : 10-Oct-02

Submitter
DAN SAMMONS, MFWTP IND. WASTE LABORATORY
LOUISVILLE AND JEFFERSON COUNTY M.S.D.
P.O. BOX 740011
LOUISVILLE, KY 40201

Client ID	Lab Sample ID	Date/Time Sampled	Date Received	Date Complete
MW04-28.....	A607630	25-Sep-02 09:25	25-Sep-02	09-Oct-02
		WELL NUMBER MW-04-28		
MW04-DUP28.....	A607631	25-Sep-02 09:25	25-Sep-02	09-Oct-02
		WELL NUMBER MW04-DUP28		
MW05-28.....	A607632	25-Sep-02 11:10	25-Sep-02	09-Oct-02
		WELL NUMBER MW05-28		
MW05-FB-28.....	A607633	25-Sep-02 10:55	25-Sep-02	09-Oct-02
		WELL NUMBER MW05-FB-28		
MW02-28.....	A607634	25-Sep-02 12:51	25-Sep-02	09-Oct-02
		WELL NUMBER MW02-28		
MWB-28.....	A607635	25-Sep-02 13:46	25-Sep-02	09-Oct-02
		WELL NUMBER MWB-28		
MWA-28.....	A607636	25-Sep-02 14:32	25-Sep-02	09-Oct-02
		WELL NUMBER MWA-28		

HERITAGE ENVIRONMENTAL SERVICES, LLC

CYANIDE, TOTAL (AUTOMATED) SW846-9012A **G101.4**
Prep : CYANIDE DISTILLATION SW846-9010B

R440422 Analyst: J TITLEY Run Date: 27-Sep-02 Instrument: PREP
Prep Reviewer: K FULLMER Review Date: 30-Sep-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
BLA02	Q1421222		Analytical Run: R440548							
LFB02L	Q1421223		Analytical Run: R440548							
LFB02H	Q1421224		Analytical Run: R440548							
SAMPLE	A607630	Rep: 0	Analytical Run: R440548							
SAMPLE	A607631	Rep: 0	Analytical Run: R440548							
SAMPLE	A607632	Rep: 0	Analytical Run: R440548							
SPI02	Q1421225	A607632	Analytical Run: R440548							
DPS02	Q1421226	A607632	Analytical Run: R440548							
SAMPLE	A607633	Rep: 0	Analytical Run: R440548							
SAMPLE	A607634	Rep: 0	Analytical Run: R440548							
SAMPLE	A607635	Rep: 0	Analytical Run: R440548							
SAMPLE	A607636	Rep: 0	Analytical Run: R440548							
DUP02	Q1421227	A607636	Analytical Run: R440548							

R440548 Analyst: B BATTANI Run Date: 30-Sep-02 Instrument: AUTO-ANALYZER
Analytical Reviewer: B SHRAKE Review Date: 30-Sep-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
CDL01	Q1422156		CYANIDE	0.02			0.0191	mg/L	95.5	
ICV01	Q1422157		CYANIDE	0.15			0.159	mg/L	106	
BLA02	Q1421222		CYANIDE			BDL	0.005	mg/L		
LFB02L	Q1421223		CYANIDE	0.05			0.0475	mg/L	95	
LFB02H	Q1421224		CYANIDE	0.25			0.232	mg/L	92.8	
CCV	Q1422158		CYANIDE	0.1			0.104	mg/L	104	
BLA01	Q1422159		CYANIDE			BDL	0.005	mg/L		
SAMPLE	A607633		See Certificate of Analysis, Rep: 0							
SAMPLE	A607630		See Certificate of Analysis, Rep: 0							
SAMPLE	A607632		See Certificate of Analysis, Rep: 0							
SPI02	Q1421225	A607632	CYANIDE	0	0.1		0.1	mg/L	100	
DPS02	Q1421226	A607632	CYANIDE	0	0.1		0.102	mg/L	102	2
CCV	Q1422160		CYANIDE	0.1			0.108	mg/L	108	
BLA01	Q1422161		CYANIDE			BDL	0.005	mg/L		
SAMPLE	A607631		See Certificate of Analysis, Rep: 0							
SAMPLE	A607634		See Certificate of Analysis, Rep: 0							
SAMPLE	A607635		See Certificate of Analysis, Rep: 0							
SAMPLE	A607636		See Certificate of Analysis, Rep: 0							
DUP02	Q1421227	A607636	CYANIDE	0		BDL		mg/L		
CCV	Q1422162		CYANIDE	0.1			0.104	mg/L	104	
BLA01	Q1422163		CYANIDE			BDL	0.005	mg/L		

Qualifiers

BDL Below Detection Limit

ALUMINUM ICP SW846-6010B **M101.3**
Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

R440544 Analyst: D THOMPSON Run Date: 02-Oct-02 Instrument: PREP
Prep Reviewer: W WATNESS Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SAMPLE	A607630	Rep: 0	Analytical Run: R440641							
SAMPLE	A607631	Rep: 0	Analytical Run: R440641							
SAMPLE	A607632	Rep: 0	Analytical Run: R440641							
SAMPLE	A607633	Rep: 0	Analytical Run: R440641							

HERITAGE ENVIRONMENTAL SERVICES, LLC

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SAMPLE	A607634	Rep: 0	Analytical Run: R440641							
SAMPLE	A607635	Rep: 0	Analytical Run: R440641							
SAMPLE	A607636	Rep: 0	Analytical Run: R440641							
BLA02	Q1422132	NA	Analytical Run: R440641							
LCS	Q1422133	SPEX	Analytical Run: R440641							
SPI02	Q1422134	A607630	Analytical Run: R440641							
DPS02	Q1422135	A607630	Analytical Run: R440641							

R440641 Analyst: J KRAMER Run Date: 02-Oct-02 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1422865	PERKIN ELM	ALUMINUM	1			1.05	mg/L	105	
CDL01	Q1422870	INORGANIC	ALUMINUM	10			9.90	mg/L	99	
ICS-A	Q1422872	PERKIN ELM	ALUMINUM	500			552.	mg/L	110.4	
CCV	Q1422882	INORGANIC	ALUMINUM	5.00			5.30	mg/L	106	
BLA01	Q1422883	NA	ALUMINUM			<	0.0200	mg/L		
BLA02	Q1422132	NA	ALUMINUM				0.0371	mg/L		
LCS	Q1422133	SPEX	ALUMINUM	20.0			21.7	mg/L	108.5	
SAMPLE	A607630		See Certificate of Analysis, Rep: 0							
SPI02	Q1422134	A607630	ALUMINUM	0.0595	2.00		2.41	mg/L	117.5	
DPS02	Q1422135	A607630	ALUMINUM	0.0595	2.00		2.43	mg/L	118.5	0.8
CCV	Q1422889	INORGANIC	ALUMINUM	5.00			5.46	mg/L	109.2	
BLA01	Q1422890	NA	ALUMINUM			<	0.0200	mg/L		
SAMPLE	A607631		See Certificate of Analysis, Rep: 0							
SAMPLE	A607632		See Certificate of Analysis, Rep: 0							
SAMPLE	A607633		See Certificate of Analysis, Rep: 0							
SAMPLE	A607634		See Certificate of Analysis, Rep: 0							
SAMPLE	A607635		See Certificate of Analysis, Rep: 0							
SAMPLE	A607636		See Certificate of Analysis, Rep: 0							
CCV	Q1422891	INORGANIC	ALUMINUM	5.00			5.49	mg/L	109.8	
BLA01	Q1422892	NA	ALUMINUM			<	0.0200	mg/L		
CDL01	Q1422907	INORGANIC	ALUMINUM	0.0500			0.0577	mg/L	115.4	
ICS-A	Q1422909	PERKIN-ELM	ALUMINUM	500			560.	mg/L	112	

Qualifiers

< Less Than Lower Detection Limit

ANTIMONY ICP SW846-6010B **M102.3**

Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

R440544 Analyst: D THOMPSON Run Date: 02-Oct-02 Instrument: PREP
Prep Reviewer: W WATNESS Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SAMPLE	A607630	Rep: 0	Analytical Run: R440641							
SAMPLE	A607631	Rep: 0	Analytical Run: R440641							
SAMPLE	A607632	Rep: 0	Analytical Run: R440641							
SAMPLE	A607633	Rep: 0	Analytical Run: R440641							
SAMPLE	A607634	Rep: 0	Analytical Run: R440641							
SAMPLE	A607635	Rep: 0	Analytical Run: R440641							
SAMPLE	A607636	Rep: 0	Analytical Run: R440641							
BLA02	Q1422132	NA	Analytical Run: R440641							
LCS	Q1422133	SPEX	Analytical Run: R440641							
SPI02	Q1422134	A607630	Analytical Run: R440641							
DPS02	Q1422135	A607630	Analytical Run: R440641							

R440641 Analyst: J KRAMER Run Date: 02-Oct-02 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 03-Oct-02

HERITAGE ENVIRONMENTAL SERVICES, LLC

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1422864	PERKIN ELM	ANTIMONY	1			1.01	mg/L	101	
CDL01	Q1422869	PERKIN ELM	ANTIMONY	0.120			0.123	mg/L	102.5	
ICS-A	Q1422872	PERKIN ELM	ANTIMONY	0.6			0.628	mg/L	104.7	
CCV	Q1422882	INORGANIC	ANTIMONY	1			1.02	mg/L	102	
BLA01	Q1422883	NA	ANTIMONY				0.00590	mg/L		
BLA02	Q1422132	NA	ANTIMONY				0.00476	mg/L		
LCS	Q1422133	SPEX	ANTIMONY	5.00			5.22	mg/L	104.4	
SAMPLE	A607630		See Certificate of Analysis, Rep: 0							
SPI02	Q1422134	A607630	ANTIMONY	0	0.500		0.512	mg/L	102.4	
DPS02	Q1422135	A607630	ANTIMONY	0	0.500		0.516	MG/L	103.2	0.8
CCV	Q1422889	INORGANIC	ANTIMONY	1			1.01	mg/L	101	
BLA01	Q1422890	NA	ANTIMONY			<	0.00400	mg/L		
SAMPLE	A607631		See Certificate of Analysis, Rep: 0							
SAMPLE	A607632		See Certificate of Analysis, Rep: 0							
SAMPLE	A607633		See Certificate of Analysis, Rep: 0							
SAMPLE	A607634		See Certificate of Analysis, Rep: 0							
SAMPLE	A607635		See Certificate of Analysis, Rep: 0							
SAMPLE	A607636		See Certificate of Analysis, Rep: 0							
CCV	Q1422891	INORGANIC	ANTIMONY	1			1.01	mg/L	101	
BLA01	Q1422892	NA	ANTIMONY			<	0.00400	mg/L		
CDL01	Q1422907	INORGANIC	ANTIMONY	0.01			0.0148	mg/L	148	
ICS-A	Q1422910	PERKIN ELM	ANTIMONY	0.6			0.632	mg/L	105.3	

Qualifiers

< Less Than Lower Detection Limit

ARSENIC TRACE ICP SW846-6010B **M103.0**

Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

R440544 Analyst: D THOMPSON Run Date: 02-Oct-02 Instrument: PREP
Prep Reviewer: W WATNESS Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
BLA02	Q1422502	NA	Analytical Run: R440936							
LCS	Q1422503	INORGANIC	Analytical Run: R440936							
SPI02	Q1422504	A607630	Analytical Run: R440936							
DPS02	Q1422505	A607630	Analytical Run: R440936							
SAMPLE	A607630	Rep: 0	Analytical Run: R440936							
SAMPLE	A607631	Rep: 0	Analytical Run: R440936							
SAMPLE	A607632	Rep: 0	Analytical Run: R440936							
SAMPLE	A607633	Rep: 0	Analytical Run: R440936							
SAMPLE	A607634	Rep: 0	Analytical Run: R440936							
SAMPLE	A607635	Rep: 0	Analytical Run: R440936							
SAMPLE	A607636	Rep: 0	Analytical Run: R440936							

R440936 Analyst: J LEAK Run Date: 08-Oct-02 Instrument: TRACE ICP
Analytical Reviewer: S ENDERSEN Review Date: 08-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1424705	PERKIN ELM	ARSENIC	1			0.972	mg/L	97.2	
CDL01	Q1424718	PERKIN ELM	ARSENIC	0.02			0.0185	mg/L	92.5	
ICS-A	Q1424720	PERKIN ELM	ARSENIC	0.1			0.102	mg/L	102	
CCV	Q1424729	INORGANIC	ARSENIC	5			5.12	mg/L	102.4	
BLA01	Q1424730	NA	ARSENIC			<	0.00200	mg/L		
BLA02	Q1422502	NA	ARSENIC			<	0.00200	mg/L		
LCS	Q1422503	INORGANIC	ARSENIC	0.5			0.506	mg/L	101.2	
SAMPLE	A607630		See Certificate of Analysis, Rep: 0							
SPI02	Q1422504	A607630	ARSENIC	0.00612	2		2.06	mg/L	102.7	
DPS02	Q1422505	A607630	ARSENIC	0.00612	2		2.06	mg/L	102.7	0

HERITAGE ENVIRONMENTAL SERVICES, LLC

ARSENIC TRACE ICP SW846-6010B **M103.0** (cont.)
Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

R440936 Analyst: J LEAK Run Date: 08-Oct-02 Instrument: TRACE ICP (cont.)
Analytical Reviewer: S ENDERSEN Review Date: 08-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
CCV	Q1424731	INORGANIC	ARSENIC	5			5.05	mg/L	101	
BLA01	Q1424732	NA	ARSENIC			<	0.00200	mg/L		
SAMPLE	A607631		See Certificate of Analysis, Rep: 0							
SAMPLE	A607632		See Certificate of Analysis, Rep: 0							
SAMPLE	A607633		See Certificate of Analysis, Rep: 0							
SAMPLE	A607634		See Certificate of Analysis, Rep: 0							
SAMPLE	A607635		See Certificate of Analysis, Rep: 0							
SAMPLE	A607636		See Certificate of Analysis, Rep: 0							
CCV	Q1424733	INORGANIC	ARSENIC	5			5.10	mg/L	102	
BLA01	Q1424734	NA	ARSENIC			<	0.00200	mg/L		
CDL01	Q1424737	PERKIN ELM	ARSENIC	0.02			0.0195	mg/L	97.5	
ICS-A	Q1424739	PERKIN ELM	ARSENIC	0.1			0.108	mg/L	108	

Qualifiers
< Less Than Lower Detection Limit

BARIUM ICP SW846-6010B **M104.3**
Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

R440544 Analyst: D THOMPSON Run Date: 02-Oct-02 Instrument: PREP
Prep Reviewer: W WATNESS Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SAMPLE	A607630	Rep: 0	Analytical Run: R440641							
SAMPLE	A607631	Rep: 0	Analytical Run: R440641							
SAMPLE	A607632	Rep: 0	Analytical Run: R440641							
SAMPLE	A607633	Rep: 0	Analytical Run: R440641							
SAMPLE	A607634	Rep: 0	Analytical Run: R440641							
SAMPLE	A607635	Rep: 0	Analytical Run: R440641							
SAMPLE	A607636	Rep: 0	Analytical Run: R440641							
BLA02	Q1422132	NA	Analytical Run: R440641							
LCS	Q1422133	SPEX	Analytical Run: R440641							
SPI02	Q1422134	A607630	Analytical Run: R440641							
DPS02	Q1422135	A607630	Analytical Run: R440641							

R440641 Analyst: J KRAMER Run Date: 02-Oct-02 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1422865	PERKIN ELM	BARIUM	1			1.05	mg/L	105	
CDL01	Q1422870	INORGANIC	BARIUM	10			10.0	mg/L	100	
ICS-A	Q1422872	PERKIN ELM	BARIUM	0.500			0.536	mg/L	107.2	
CCV	Q1422882	INORGANIC	BARIUM	5.00			5.17	mg/L	103.4	
BLA01	Q1422883	NA	BARIUM			<	0.00400	mg/L		
BLA02	Q1422132	NA	BARIUM			<	0.00400	mg/L		
LCS	Q1422133	SPEX	BARIUM	20.0			20.4	mg/L	102	
SAMPLE	A607630		See Certificate of Analysis, Rep: 0							
SPI02	Q1422134	A607630	BARIUM	0.125	2.00		2.18	mg/L	102.8	
DPS02	Q1422135	A607630	BARIUM	0.125	2.00		2.20	mg/L	103.8	1
CCV	Q1422889	INORGANIC	BARIUM	5.00			5.11	mg/L	102.2	
BLA01	Q1422890	NA	BARIUM			<	0.00400	mg/L		
SAMPLE	A607631		See Certificate of Analysis, Rep: 0							
SAMPLE	A607632		See Certificate of Analysis, Rep: 0							
SAMPLE	A607633		See Certificate of Analysis, Rep: 0							

HERITAGE ENVIRONMENTAL SERVICES, LLC

BARIUM ICP SW846-6010B **M104.3** (cont.)
Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

R440641 Analyst: J KRAMER Run Date: 02-Oct-02 Instrument: ICP (cont.)
Analytical Reviewer: S ENDERSEN Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SAMPLE	A607634		See Certificate of Analysis, Rep: 0							
SAMPLE	A607635		See Certificate of Analysis, Rep: 0							
SAMPLE	A607636		See Certificate of Analysis, Rep: 0							
CCV	Q1422891	INORGANIC	BARIUM	5.00			5.18	mg/L	103.6	
BLA01	Q1422892	NA	BARIUM			<	0.00400	mg/L		
CDL01	Q1422907	INORGANIC	BARIUM	0.0100			0.0106	mg/L	106	
ICS-A	Q1422910	PERKIN ELM	BARIUM	0.500			0.539	mg/L	107.8	

Qualifiers
< Less Than Lower Detection Limit

BERYLLIUM ICP SW846-6010B **M105.3**
Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

R440544 Analyst: D THOMPSON Run Date: 02-Oct-02 Instrument: PREP
Prep Reviewer: W WATNESS Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SAMPLE	A607630	Rep: 0	Analytical Run: R440641							
SAMPLE	A607631	Rep: 0	Analytical Run: R440641							
SAMPLE	A607632	Rep: 0	Analytical Run: R440641							
SAMPLE	A607633	Rep: 0	Analytical Run: R440641							
SAMPLE	A607634	Rep: 0	Analytical Run: R440641							
SAMPLE	A607635	Rep: 0	Analytical Run: R440641							
SAMPLE	A607636	Rep: 0	Analytical Run: R440641							
BLA02	Q1422132	NA	Analytical Run: R440641							
LCS	Q1422133	SPEX	Analytical Run: R440641							
SPI02	Q1422134	A607630	Analytical Run: R440641							
DPS02	Q1422135	A607630	Analytical Run: R440641							

R440641 Analyst: J KRAMER Run Date: 02-Oct-02 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1422864	PERKIN ELM	BERYLLIUM	1			1.06	mg/L	106	
CDL01	Q1422870	INORGANIC	BERYLLIUM	10			9.94	mg/L	99.4	
ICS-A	Q1422872	PERKIN ELM	BERYLLIUM	0.500			0.552	mg/L	110.4	
CCV	Q1422882	INORGANIC	BERYLLIUM	5.00			5.38	mg/L	107.6	
BLA01	Q1422883	NA	BERYLLIUM			<	0.00160	mg/L		
BLA02	Q1422132	NA	BERYLLIUM			<	0.00160	mg/L		
LCS	Q1422133	SPEX	BERYLLIUM	0.500			0.556	mg/L	111.2	
SAMPLE	A607630		See Certificate of Analysis, Rep: 0							
SPI02	Q1422134	A607630	BERYLLIUM	0	0.050		0.0514	mg/L	102.8	
DPS02	Q1422135	A607630	BERYLLIUM	0	0.050		0.0522	MG/L	104.4	1.5
CCV	Q1422889	INORGANIC	BERYLLIUM	5.00			5.19	mg/L	103.8	
BLA01	Q1422890	NA	BERYLLIUM			<	0.00160	mg/L		
SAMPLE	A607631		See Certificate of Analysis, Rep: 0							
SAMPLE	A607632		See Certificate of Analysis, Rep: 0							
SAMPLE	A607633		See Certificate of Analysis, Rep: 0							
SAMPLE	A607634		See Certificate of Analysis, Rep: 0							
SAMPLE	A607635		See Certificate of Analysis, Rep: 0							
SAMPLE	A607636		See Certificate of Analysis, Rep: 0							
CCV	Q1422891	INORGANIC	BERYLLIUM	5.00			5.32	mg/L	106.4	
BLA01	Q1422892	NA	BERYLLIUM			<	0.00160	mg/L		

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BERYLLIUM ICP SW846-6010B **M105.3** (cont.)
Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

R440641 Analyst: J KRAMER Run Date: 02-Oct-02 Instrument: ICP (cont.)
Analytical Reviewer: S ENDERSEN Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
CDL01	Q1422907	INORGANIC	BERYLLIUM	0.004			0.00446	mg/L	111.5	
ICS-A	Q1422910	PERKIN ELM	BERYLLIUM	0.500			0.574	mg/L	114.8	

Qualifiers
< Less Than Lower Detection Limit

CADMIUM ICP SW846-6010B **M108.3**
Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

R440544 Analyst: D THOMPSON Run Date: 02-Oct-02 Instrument: PREP
Prep Reviewer: W WATNESS Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SAMPLE	A607630	Rep: 0	Analytical Run: R440641							
SAMPLE	A607631	Rep: 0	Analytical Run: R440641							
SAMPLE	A607632	Rep: 0	Analytical Run: R440641							
SAMPLE	A607633	Rep: 0	Analytical Run: R440641							
SAMPLE	A607634	Rep: 0	Analytical Run: R440641							
SAMPLE	A607635	Rep: 0	Analytical Run: R440641							
SAMPLE	A607636	Rep: 0	Analytical Run: R440641							
BLA02	Q1422132	NA	Analytical Run: R440641							
LCS	Q1422133	SPEX	Analytical Run: R440641							
SPI02	Q1422134	A607630	Analytical Run: R440641							
DPS02	Q1422135	A607630	Analytical Run: R440641							

R440641 Analyst: J KRAMER Run Date: 02-Oct-02 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1422864	PERKIN ELM	CADMIUM	1			1.07	mg/L	107	
CDL01	Q1422870	INORGANIC	CADMIUM	10			10.0	mg/L	100	
ICS-A	Q1422872	PERKIN ELM	CADMIUM	1.00			1.11	mg/L	111	
CCV	Q1422882	INORGANIC	CADMIUM	5.00			5.23	mg/L	104.6	
BLA01	Q1422883	NA	CADMIUM			<	0.00200	mg/L		
BLA02	Q1422132	NA	CADMIUM			<	0.00200	mg/L		
LCS	Q1422133	SPEX	CADMIUM	0.500			0.519	mg/L	103.8	
SAMPLE	A607630		See Certificate of Analysis, Rep: 0							
SPI02	Q1422134	A607630	CADMIUM	0	0.050		0.0537	mg/L	107.4	
DPS02	Q1422135	A607630	CADMIUM	0	0.050		0.0541	MG/L	108.2	0.7
CCV	Q1422889	INORGANIC	CADMIUM	5.00			5.25	mg/L	105	
BLA01	Q1422890	NA	CADMIUM			<	0.00200	mg/L		
SAMPLE	A607631		See Certificate of Analysis, Rep: 0							
SAMPLE	A607632		See Certificate of Analysis, Rep: 0							
SAMPLE	A607633		See Certificate of Analysis, Rep: 0							
SAMPLE	A607634		See Certificate of Analysis, Rep: 0							
SAMPLE	A607635		See Certificate of Analysis, Rep: 0							
SAMPLE	A607636		See Certificate of Analysis, Rep: 0							
CCV	Q1422891	INORGANIC	CADMIUM	5.00			5.30	mg/L	106	
BLA01	Q1422892	NA	CADMIUM			<	0.00200	mg/L		
CDL01	Q1422908	PERKIN ELM	CADMIUM	0.010			0.0106	mg/L	106	
ICS-A	Q1422910	PERKIN ELM	CADMIUM	1.00			1.12	mg/L	112	

Qualifiers
< Less Than Lower Detection Limit

HERITAGE ENVIRONMENTAL SERVICES, LLC

CALCIUM ICP SW846-6010B **M109.3**
Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

R440544 Analyst: D THOMPSON Run Date: 02-Oct-02 Instrument: PREP
Prep Reviewer: W WATNESS Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SAMPLE	A607630	Rep: 0	Analytical Run: R440641							
SAMPLE	A607631	Rep: 0	Analytical Run: R440641							
SAMPLE	A607632	Rep: 0	Analytical Run: R440641							
SAMPLE	A607633	Rep: 0	Analytical Run: R440641							
SAMPLE	A607634	Rep: 0	Analytical Run: R440641							
SAMPLE	A607635	Rep: 0	Analytical Run: R440641							
SAMPLE	A607636	Rep: 0	Analytical Run: R440641							
BLA02	Q1422132	NA	Analytical Run: R440641							
LCS	Q1422133	SPEX	Analytical Run: R440641							
SPI02	Q1422134	A607630	Analytical Run: R440641							
DPS02	Q1422135	A607630	Analytical Run: R440641							

R440641 Analyst: J KRAMER Run Date: 02-Oct-02 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1422866	SPEX	CALCIUM	20			21.0	mg/L	105	
CDL01	Q1422868	INORGANIC	CALCIUM	0.1			0.104	mg/L	104	
ICS-A	Q1422872	PERKIN ELM	CALCIUM	500			501.	mg/L	100.2	
CCV	Q1422882	INORGANIC	CALCIUM	50.0			51.2	mg/L	102.4	
BLA01	Q1422883	NA	CALCIUM			<	0.0400	mg/L		
BLA02	Q1422132	NA	CALCIUM				0.0807	mg/L		
LCS	Q1422133	SPEX	CALCIUM	100			102.	mg/L	102	
SAMPLE	A607630		See Certificate of Analysis, Rep: 0							
SPI02	Q1422134	A607630	CALCIUM	118.	100		210.	mg/L	92	
DPS02	Q1422135	A607630	CALCIUM	118.	100		214.	mg/L	96	4.3
CCV	Q1422889	INORGANIC	CALCIUM	50.0			50.8	mg/L	101.6	
BLA01	Q1422890	NA	CALCIUM			<	0.0400	mg/L		
SAMPLE	A607631		See Certificate of Analysis, Rep: 0							
SAMPLE	A607632		See Certificate of Analysis, Rep: 0							
SAMPLE	A607633		See Certificate of Analysis, Rep: 0							
SAMPLE	A607634		See Certificate of Analysis, Rep: 0							
SAMPLE	A607635		See Certificate of Analysis, Rep: 0							
SAMPLE	A607636		See Certificate of Analysis, Rep: 0							
CCV	Q1422891	INORGANIC	CALCIUM	50.0			51.6	mg/L	103.2	
BLA01	Q1422892	NA	CALCIUM			<	0.0400	mg/L		
CDL01	Q1422907	INORGANIC	CALCIUM	0.1			0.112	mg/L	112	
ICS-A	Q1422909	PERKIN-ELM	CALCIUM	500			512.	mg/L	102.4	

Qualifiers

< Less Than Lower Detection Limit

CHROMIUM ICP SW846-6010B **M110.3**
Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

R440544 Analyst: D THOMPSON Run Date: 02-Oct-02 Instrument: PREP
Prep Reviewer: W WATNESS Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SAMPLE	A607630	Rep: 0	Analytical Run: R440641							
SAMPLE	A607631	Rep: 0	Analytical Run: R440641							
SAMPLE	A607632	Rep: 0	Analytical Run: R440641							
SAMPLE	A607633	Rep: 0	Analytical Run: R440641							
SAMPLE	A607634	Rep: 0	Analytical Run: R440641							

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QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SAMPLE	A607635	Rep: 0	Analytical Run: R440641							
SAMPLE	A607636	Rep: 0	Analytical Run: R440641							
BLA02	Q1422132	NA	Analytical Run: R440641							
LCS	Q1422133	SPEX	Analytical Run: R440641							
SPI02	Q1422134	A607630	Analytical Run: R440641							
DPS02	Q1422135	A607630	Analytical Run: R440641							

R440641 Analyst: J KRAMER Run Date: 02-Oct-02 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1422864	PERKIN ELM	CHROMIUM	1			1.07	mg/L	107	
CDL01	Q1422870	INORGANIC	CHROMIUM	10			10.0	mg/L	100	
ICS-A	Q1422872	PERKIN ELM	CHROMIUM	0.500			0.519	mg/L	103.8	
CCV	Q1422882	INORGANIC	CHROMIUM	5.00			5.18	mg/L	103.6	
BLA01	Q1422883	NA	CHROMIUM			<	0.00400	mg/L		
BLA02	Q1422132	NA	CHROMIUM			<	0.00400	mg/L		
LCS	Q1422133	SPEX	CHROMIUM	2.00			2.11	mg/L	105.5	
SAMPLE	A607630		See Certificate of Analysis, Rep: 0							
SPI02	Q1422134	A607630	CHROMIUM	0	0.200		0.218	mg/L	109	
DPS02	Q1422135	A607630	CHROMIUM	0	0.200		0.214	MG/L	107	1.9
CCV	Q1422889	INORGANIC	CHROMIUM	5.00			5.17	mg/L	103.4	
BLA01	Q1422890	NA	CHROMIUM			<	0.00400	mg/L		
SAMPLE	A607631		See Certificate of Analysis, Rep: 0							
SAMPLE	A607632		See Certificate of Analysis, Rep: 0							
SAMPLE	A607633		See Certificate of Analysis, Rep: 0							
SAMPLE	A607634		See Certificate of Analysis, Rep: 0							
SAMPLE	A607635		See Certificate of Analysis, Rep: 0							
SAMPLE	A607636		See Certificate of Analysis, Rep: 0							
CCV	Q1422891	INORGANIC	CHROMIUM	5.00			5.24	mg/L	104.8	
BLA01	Q1422892	NA	CHROMIUM			<	0.00400	mg/L		
CDL01	Q1422907	INORGANIC	CHROMIUM	0.0100			0.0111	mg/L	111	
ICS-A	Q1422910	PERKIN ELM	CHROMIUM	0.500			0.533	mg/L	106.6	

Qualifiers

< Less Than Lower Detection Limit

COBALT ICP SW846-6010B **M111.3**

Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

R440544 Analyst: D THOMPSON Run Date: 02-Oct-02 Instrument: PREP
Prep Reviewer: W WATNESS Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SAMPLE	A607630	Rep: 0	Analytical Run: R440641							
SAMPLE	A607631	Rep: 0	Analytical Run: R440641							
SAMPLE	A607632	Rep: 0	Analytical Run: R440641							
SAMPLE	A607633	Rep: 0	Analytical Run: R440641							
SAMPLE	A607634	Rep: 0	Analytical Run: R440641							
SAMPLE	A607635	Rep: 0	Analytical Run: R440641							
SAMPLE	A607636	Rep: 0	Analytical Run: R440641							
BLA02	Q1422132	NA	Analytical Run: R440641							
LCS	Q1422133	SPEX	Analytical Run: R440641							
SPI02	Q1422134	A607630	Analytical Run: R440641							
DPS02	Q1422135	A607630	Analytical Run: R440641							

R440641 Analyst: J KRAMER Run Date: 02-Oct-02 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD

ICV01	Q1422864	PERKIN ELM	COBALT	1			1.09	mg/L	109	
CDL01	Q1422870	INORGANIC	COBALT	10			10.0	mg/L	100	
ICS-A	Q1422872	PERKIN ELM	COBALT	0.500			0.506	mg/L	101.2	
CCV	Q1422882	INORGANIC	COBALT	5.00			5.17	mg/L	103.4	
BLA01	Q1422883	NA	COBALT			<	0.00400	mg/L		
BLA02	Q1422132	NA	COBALT			<	0.00400	mg/L		
LCS	Q1422133	SPEX	COBALT	5.00			5.32	mg/L	106.4	
SAMPLE	A607630		See Certificate of Analysis, Rep: 0							
SPI02	Q1422134	A607630	COBALT	0	0.500		0.523	mg/L	104.6	
DPS02	Q1422135	A607630	COBALT	0	0.500		0.528	MG/L	105.6	1
CCV	Q1422889	INORGANIC	COBALT	5.00			5.12	mg/L	102.4	
BLA01	Q1422890	NA	COBALT			<	0.00400	mg/L		
SAMPLE	A607631		See Certificate of Analysis, Rep: 0							
SAMPLE	A607632		See Certificate of Analysis, Rep: 0							
SAMPLE	A607633		See Certificate of Analysis, Rep: 0							
SAMPLE	A607634		See Certificate of Analysis, Rep: 0							
SAMPLE	A607635		See Certificate of Analysis, Rep: 0							
SAMPLE	A607636		See Certificate of Analysis, Rep: 0							
CCV	Q1422891	INORGANIC	COBALT	5.00			5.21	mg/L	104.2	
BLA01	Q1422892	NA	COBALT			<	0.00400	mg/L		
CDL01	Q1422907	INORGANIC	COBALT	0.0100			0.0110	mg/L	110	
ICS-A	Q1422910	PERKIN ELM	COBALT	0.500			0.520	mg/L	104	

Qualifiers

< Less Than Lower Detection Limit

COPPER ICP SW846-6010B **M112.3**

Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

R440544 Analyst: D THOMPSON Run Date: 02-Oct-02 Instrument: PREP
Prep Reviewer: W WATNESS Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SAMPLE	A607630	Rep: 0	Analytical Run: R440641							
SAMPLE	A607631	Rep: 0	Analytical Run: R440641							
SAMPLE	A607632	Rep: 0	Analytical Run: R440641							
SAMPLE	A607633	Rep: 0	Analytical Run: R440641							
SAMPLE	A607634	Rep: 0	Analytical Run: R440641							
SAMPLE	A607635	Rep: 0	Analytical Run: R440641							
SAMPLE	A607636	Rep: 0	Analytical Run: R440641							
BLA02	Q1422132	NA	Analytical Run: R440641							
LCS	Q1422133	SPEX	Analytical Run: R440641							
SPI02	Q1422134	A607630	Analytical Run: R440641							
DPS02	Q1422135	A607630	Analytical Run: R440641							

R440641 Analyst: J KRAMER Run Date: 02-Oct-02 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1422864	PERKIN ELM	COPPER	1			1.06	mg/L	106	
CDL01	Q1422870	INORGANIC	COPPER	10			9.98	mg/L	99.8	
ICS-A	Q1422872	PERKIN ELM	COPPER	0.500			0.555	mg/L	111	
CCV	Q1422882	INORGANIC	COPPER	5.00			5.18	mg/L	103.6	
BLA01	Q1422883	NA	COPPER			<	0.00800	mg/L		
BLA02	Q1422132	NA	COPPER			<	0.00800	mg/L		
LCS	Q1422133	SPEX	COPPER	2.50			2.68	mg/L	107.2	
SAMPLE	A607630		See Certificate of Analysis, Rep: 0							
SPI02	Q1422134	A607630	COPPER	0	0.250		0.272	mg/L	108.8	
DPS02	Q1422135	A607630	COPPER	0	0.250		0.269	mg/L	107.6	1.1
CCV	Q1422889	INORGANIC	COPPER	5.00			5.13	mg/L	102.6	

COPPER ICP SW846-6010B **M112.3** (cont.)
Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

R440641 Analyst: J KRAMER Run Date: 02-Oct-02 Instrument: ICP (cont.)
Analytical Reviewer: S ENDERSEN Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
BLA01	Q1422890	NA	COPPER			<	0.00800	mg/L		
SAMPLE	A607631		See Certificate of Analysis, Rep: 0							
SAMPLE	A607632		See Certificate of Analysis, Rep: 0							
SAMPLE	A607633		See Certificate of Analysis, Rep: 0							
SAMPLE	A607634		See Certificate of Analysis, Rep: 0							
SAMPLE	A607635		See Certificate of Analysis, Rep: 0							
SAMPLE	A607636		See Certificate of Analysis, Rep: 0							
CCV	Q1422891	INORGANIC	COPPER	5.00			5.20	mg/L	104	
BLA01	Q1422892	NA	COPPER			<	0.00800	mg/L		
CDL01	Q1422907	INORGANIC	COPPER	0.0200			0.0218	mg/L	109	
ICS-A	Q1422910	PERKIN ELM	COPPER	0.500			0.569	mg/L	113.8	

Qualifiers
< Less Than Lower Detection Limit

IRON ICP SW846-6010B **M115.3**
Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

R440544 Analyst: D THOMPSON Run Date: 02-Oct-02 Instrument: PREP
Prep Reviewer: W WATNESS Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SAMPLE	A607630	Rep: 0	Analytical Run: R440641							
SAMPLE	A607631	Rep: 0	Analytical Run: R440641							
SAMPLE	A607632	Rep: 0	Analytical Run: R440641							
SAMPLE	A607633	Rep: 0	Analytical Run: R440641							
SAMPLE	A607634	Rep: 0	Analytical Run: R440641							
SAMPLE	A607635	Rep: 0	Analytical Run: R440641							
SAMPLE	A607636	Rep: 0	Analytical Run: R440641							
BLA02	Q1422132	NA	Analytical Run: R440641							
LCS	Q1422133	SPEX	Analytical Run: R440641							
SPI02	Q1422134	A607630	Analytical Run: R440641							
DPS02	Q1422135	A607630	Analytical Run: R440641							

R440641 Analyst: J KRAMER Run Date: 02-Oct-02 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1422864	PERKIN ELM	IRON	1			1.07	mg/L	107	
CDL01	Q1422870	INORGANIC	IRON	10			10.1	mg/L	101	
ICS-A	Q1422872	PERKIN ELM	IRON	200			200.	mg/L	100	
CCV	Q1422882	INORGANIC	IRON	5.00			5.16	mg/L	103.2	
BLA01	Q1422883	NA	IRON			<	0.00800	mg/L		
BLA02	Q1422132	NA	IRON			<	0.00800	mg/L		
LCS	Q1422133	SPEX	IRON	10.0			10.4	mg/L	104	
SAMPLE	A607630		See Certificate of Analysis, Rep: 0							
SPI02	Q1422134	A607630	IRON	6.36	1	NQR	6.85	mg/L		
DPS02	Q1422135	A607630	IRON	6.36	1	NQR	6.96	mg/L		
CCV	Q1422889	INORGANIC	IRON	5.00			5.11	mg/L	102.2	
BLA01	Q1422890	NA	IRON			<	0.00800	mg/L		
SAMPLE	A607631		See Certificate of Analysis, Rep: 0							
SAMPLE	A607632		See Certificate of Analysis, Rep: 0							
SAMPLE	A607633		See Certificate of Analysis, Rep: 0							
SAMPLE	A607634		See Certificate of Analysis, Rep: 0							

IRON ICP SW846-6010B **M115.3** (cont.)
Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

R440641 Analyst: J KRAMER Run Date: 02-Oct-02 Instrument: ICP (cont.)
Analytical Reviewer: S ENDERSEN Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SAMPLE	A607635		See Certificate of Analysis, Rep: 0							
SAMPLE	A607636		See Certificate of Analysis, Rep: 0							
CCV	Q1422891	INORGANIC	IRON	5.00			5.18	mg/L	103.6	
BLA01	Q1422892	NA	IRON			<	0.00800	mg/L		
CDL01	Q1422907	INORGANIC	IRON	0.0250			0.0267	mg/L	106.8	
ICS-A	Q1422909	PERKIN-ELMI	IRON	200			203.	mg/L	101.5	

Qualifiers

< Less Than Lower Detection Limit
NQR No QC Result. High Sample Concentration.

LEAD TRACE ICP SW846-6010B **M116.0**
Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

R440544 Analyst: D THOMPSON Run Date: 02-Oct-02 Instrument: PREP
Prep Reviewer: W WATNESS Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
BLA02	Q1422502	NA	Analytical Run: R440936							
LCS	Q1422503	INORGANIC	Analytical Run: R440936							
SPI02	Q1422504	A607630	Analytical Run: R440936							
DPS02	Q1422505	A607630	Analytical Run: R440936							
SAMPLE	A607630	Rep: 0	Analytical Run: R440936							
SAMPLE	A607631	Rep: 0	Analytical Run: R440936							
SAMPLE	A607632	Rep: 0	Analytical Run: R440936							
SAMPLE	A607633	Rep: 0	Analytical Run: R440936							
SAMPLE	A607634	Rep: 0	Analytical Run: R440936							
SAMPLE	A607635	Rep: 0	Analytical Run: R440936							
SAMPLE	A607636	Rep: 0	Analytical Run: R440936							

R440936 Analyst: J LEAK Run Date: 08-Oct-02 Instrument: TRACE ICP
Analytical Reviewer: S ENDERSEN Review Date: 08-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1424705	PERKIN ELM	LEAD	1			1.02	mg/L	102	
CDL01	Q1424718	PERKIN ELM	LEAD	0.100			0.0997	mg/L	99.7	
ICS-A	Q1424720	PERKIN ELM	LEAD	1.00			0.941	mg/L	94.1	
CCV	Q1424729	INORGANIC	LEAD	5.00			4.91	mg/L	98.2	
BLA01	Q1424730	NA	LEAD			<	0.00200	mg/L		
BLA02	Q1422502	NA	LEAD			<	0.00200	mg/L		
LCS	Q1422503	INORGANIC	LEAD	0.5			0.514	mg/L	102.8	
SAMPLE	A607630		See Certificate of Analysis, Rep: 0							
SPI02	Q1422504	A607630	LEAD	0	0.5		0.495	mg/L	99	
DPS02	Q1422505	A607630	LEAD	0	0.5		0.499	mg/L	99.8	0.8
CCV	Q1424731	INORGANIC	LEAD	5.00			4.87	mg/L	97.4	
BLA01	Q1424732	NA	LEAD			<	0.00200	mg/L		
SAMPLE	A607631		See Certificate of Analysis, Rep: 0							
SAMPLE	A607632		See Certificate of Analysis, Rep: 0							
SAMPLE	A607633		See Certificate of Analysis, Rep: 0							
SAMPLE	A607634		See Certificate of Analysis, Rep: 0							
SAMPLE	A607635		See Certificate of Analysis, Rep: 0							
SAMPLE	A607636		See Certificate of Analysis, Rep: 0							
CCV	Q1424733	INORGANIC	LEAD	5.00			4.88	mg/L	97.6	
BLA01	Q1424734	NA	LEAD			<	0.00200	mg/L		

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LEAD TRACE ICP SW846-6010B **M116.0** (cont.)
Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

R440936 Analyst: J LEAK Run Date: 08-Oct-02 Instrument: TRACE ICP (cont.)
Analytical Reviewer: S ENDERSEN Review Date: 08-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
CDL01	Q1424737	PERKIN ELM	LEAD	0.100			0.104	mg/L	104	
ICS-A	Q1424739	PERKIN ELM	LEAD	1.00			0.970	mg/L	97	

Qualifiers
< Less Than Lower Detection Limit

MAGNESIUM ICP SW846-6010B **M118.3**
Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

R440544 Analyst: D THOMPSON Run Date: 02-Oct-02 Instrument: PREP
Prep Reviewer: W WATNESS Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SAMPLE	A607630	Rep: 0	Analytical Run: R440641							
SAMPLE	A607631	Rep: 0	Analytical Run: R440641							
SAMPLE	A607632	Rep: 0	Analytical Run: R440641							
SAMPLE	A607633	Rep: 0	Analytical Run: R440641							
SAMPLE	A607634	Rep: 0	Analytical Run: R440641							
SAMPLE	A607635	Rep: 0	Analytical Run: R440641							
SAMPLE	A607636	Rep: 0	Analytical Run: R440641							
BLA02	Q1422132	NA	Analytical Run: R440641							
LCS	Q1422133	SPEX	Analytical Run: R440641							
SPI02	Q1422134	A607630	Analytical Run: R440641							
DPS02	Q1422135	A607630	Analytical Run: R440641							

R440641 Analyst: J KRAMER Run Date: 02-Oct-02 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1422866	SPEX	MAGNESIUM	20			20.8	mg/L	104	
ICS-A	Q1422872	PERKIN ELM	MAGNESIUM	500			524.	mg/L	104.8	
CCV	Q1422882	INORGANIC	MAGNESIUM	50.0			49.6	mg/L	99.2	
BLA01	Q1422883	NA	MAGNESIUM			<	0.0400	mg/L		
BLA02	Q1422132	NA	MAGNESIUM			<	0.0400	mg/L		
LCS	Q1422133	SPEX	MAGNESIUM	100			105.	mg/L	105	
SAMPLE	A607630		See Certificate of Analysis, Rep: 0							
SPI02	Q1422134	A607630	MAGNESIUM	40.3	100		143.	mg/L	102.7	
DPS02	Q1422135	A607630	MAGNESIUM	40.3	100		144.	mg/L	103.7	1
CCV	Q1422889	INORGANIC	MAGNESIUM	50.0			49.6	mg/L	99.2	
BLA01	Q1422890	NA	MAGNESIUM			<	0.0400	mg/L		
SAMPLE	A607631		See Certificate of Analysis, Rep: 0							
SAMPLE	A607632		See Certificate of Analysis, Rep: 0							
SAMPLE	A607633		See Certificate of Analysis, Rep: 0							
SAMPLE	A607634		See Certificate of Analysis, Rep: 0							
SAMPLE	A607635		See Certificate of Analysis, Rep: 0							
SAMPLE	A607636		See Certificate of Analysis, Rep: 0							
CCV	Q1422891	INORGANIC	MAGNESIUM	50.0			50.4	mg/L	100.8	
BLA01	Q1422892	NA	MAGNESIUM			<	0.0400	mg/L		
CDL01	Q1422907	INORGANIC	MAGNESIUM	0.1			0.103	mg/L	103	
ICS-A	Q1422909	PERKIN-ELM	MAGNESIUM	500			539.	mg/L	107.8	

Qualifiers
< Less Than Lower Detection Limit

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MANGANESE ICP SW846-6010B **M119.3**
Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

R440544 Analyst: D THOMPSON Run Date: 02-Oct-02 Instrument: PREP
Prep Reviewer: W WATNESS Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SAMPLE	A607630	Rep: 0	Analytical Run: R440641							
SAMPLE	A607631	Rep: 0	Analytical Run: R440641							
SAMPLE	A607632	Rep: 0	Analytical Run: R440641							
SAMPLE	A607633	Rep: 0	Analytical Run: R440641							
SAMPLE	A607634	Rep: 0	Analytical Run: R440641							
SAMPLE	A607635	Rep: 0	Analytical Run: R440641							
SAMPLE	A607636	Rep: 0	Analytical Run: R440641							
BLA02	Q1422132	NA	Analytical Run: R440641							
LCS	Q1422133	SPEX	Analytical Run: R440641							
SPI02	Q1422134	A607630	Analytical Run: R440641							
DPS02	Q1422135	A607630	Analytical Run: R440641							

R440641 Analyst: J KRAMER Run Date: 02-Oct-02 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1422864	PERKIN ELM	MANGANESE	1			1.06	mg/L	106	
CDL01	Q1422870	INORGANIC	MANGANESE	10			10.0	mg/L	100	
ICS-A	Q1422872	PERKIN ELM	MANGANESE	0.500			0.529	mg/L	105.8	
CCV	Q1422882	INORGANIC	MANGANESE	5.00			5.20	mg/L	104	
BLA01	Q1422883	NA	MANGANESE			<	0.00400	mg/L		
BLA02	Q1422132	NA	MANGANESE			<	0.00400	mg/L		
LCS	Q1422133	SPEX	MANGANESE	5.00			5.32	mg/L	106.4	
SAMPLE	A607630		See Certificate of Analysis, Rep: 0							
SPI02	Q1422134	A607630	MANGANESE	0.147	0.500		0.655	mg/L	101.6	
DPS02	Q1422135	A607630	MANGANESE	0.147	0.500		0.664	MG/L	103.4	1.8
CCV	Q1422889	INORGANIC	MANGANESE	5.00			5.16	mg/L	103.2	
BLA01	Q1422890	NA	MANGANESE			<	0.00400	mg/L		
SAMPLE	A607631		See Certificate of Analysis, Rep: 0							
SAMPLE	A607632		See Certificate of Analysis, Rep: 0							
SAMPLE	A607633		See Certificate of Analysis, Rep: 0							
SAMPLE	A607634		See Certificate of Analysis, Rep: 0							
SAMPLE	A607635		See Certificate of Analysis, Rep: 0							
SAMPLE	A607636		See Certificate of Analysis, Rep: 0							
CCV	Q1422891	INORGANIC	MANGANESE	5.00			5.24	mg/L	104.8	
BLA01	Q1422892	NA	MANGANESE			<	0.00400	mg/L		
CDL01	Q1422907	INORGANIC	MANGANESE	0.0100			0.0108	mg/L	108	
ICS-A	Q1422910	PERKIN ELM	MANGANESE	0.500			0.540	mg/L	108	

Qualifiers

< Less Than Lower Detection Limit

MERCURY CVAA SW846-7470A **M120.1**
Prep : MERCURY CVAA ACID DIGESTION OF AQUEOUS SAMPLES SW846-7470A

R440617 Analyst: J O'BRYAN Run Date: 01-Oct-02 Instrument: PREP
Prep Reviewer: S O'NEAL Review Date: 04-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
LCS	Q1422659		Analytical Run: R440852							
BLA02	Q1422660		Analytical Run: R440852							
SPI02	Q1422661	A607427	Analytical Run: R440852							
DPS02	Q1422662	A607427	Analytical Run: R440852							
SAMPLE	A607630	Rep: 0	Analytical Run: R440852							

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QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SAMPLE	A607631	Rep: 0	Analytical Run: R440852							
SAMPLE	A607632	Rep: 0	Analytical Run: R440852							
SAMPLE	A607633	Rep: 0	Analytical Run: R440852							
SAMPLE	A607634	Rep: 0	Analytical Run: R440852							
SAMPLE	A607635	Rep: 0	Analytical Run: R440852							
SAMPLE	A607636	Rep: 0	Analytical Run: R440852							

R440852 Analyst: J O'BRYAN Run Date: 03-Oct-02 Instrument: CVAA
Analytical Reviewer: S O'NEAL Review Date: 04-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1424127		MERCURY	0.002			0.00212	mg/L	106	
CDL01	Q1424132		MERCURY	0.0001			0.0001	mg/L	100	
LCS	Q1422659		MERCURY	0.002			0.00222	mg/L	111	
BLA02	Q1422660		MERCURY			<	0.00008	mg/L		
SPI02	Q1422661	A607427	MERCURY	0	0.001		0.00107	mg/L	107	
DPS02	Q1422662	A607427	MERCURY	0	0.001		0.00102	mg/L	102	4.8
CCV	Q1424142		MERCURY	0.003			0.00313	mg/L	104.3	
BLA01	Q1424143		MERCURY			<	0.00008	mg/L		
SAMPLE	A607630		See Certificate of Analysis, Rep: 0							
SAMPLE	A607631		See Certificate of Analysis, Rep: 0							
SAMPLE	A607632		See Certificate of Analysis, Rep: 0							
SAMPLE	A607633		See Certificate of Analysis, Rep: 0							
SAMPLE	A607634		See Certificate of Analysis, Rep: 0							
SAMPLE	A607635		See Certificate of Analysis, Rep: 0							
SAMPLE	A607636		See Certificate of Analysis, Rep: 0							
CDL01	Q1424144		MERCURY	0.0001			0.0001	mg/L	100	
CCV	Q1424146		MERCURY	0.003			0.0031	mg/L	103.3	
BLA01	Q1424147		MERCURY			<	0.00008	mg/L		

Qualifiers

< Less Than Lower Detection Limit

NICKEL ICP SW846-6010B **M122.3**
Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

R440544 Analyst: D THOMPSON Run Date: 02-Oct-02 Instrument: PREP
Prep Reviewer: W WATNESS Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SAMPLE	A607630	Rep: 0	Analytical Run: R440641							
SAMPLE	A607631	Rep: 0	Analytical Run: R440641							
SAMPLE	A607632	Rep: 0	Analytical Run: R440641							
SAMPLE	A607633	Rep: 0	Analytical Run: R440641							
SAMPLE	A607634	Rep: 0	Analytical Run: R440641							
SAMPLE	A607635	Rep: 0	Analytical Run: R440641							
SAMPLE	A607636	Rep: 0	Analytical Run: R440641							
BLA02	Q1422132	NA	Analytical Run: R440641							
LCS	Q1422133	SPEX	Analytical Run: R440641							
SPI02	Q1422134	A607630	Analytical Run: R440641							
DPS02	Q1422135	A607630	Analytical Run: R440641							

R440641 Analyst: J KRAMER Run Date: 02-Oct-02 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1422864	PERKIN ELM	NICKEL	1			1.07	mg/L	107	
CDL01	Q1422870	INORGANIC	NICKEL	10			10.0	mg/L	100	
ICS-A	Q1422872	PERKIN ELM	NICKEL	1.00			0.977	mg/L	97.7	
CCV	Q1422882	INORGANIC	NICKEL	5.00			5.09	mg/L	101.8	

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NICKEL ICP SW846-6010B **M122.3** (cont.)
Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

R440641 Analyst: J KRAMER Run Date: 02-Oct-02 Instrument: ICP (cont.)
Analytical Reviewer: S ENDERSEN Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
BLA01	Q1422883	NA	NICKEL			<	0.00400	mg/L		
BLA02	Q1422132	NA	NICKEL			<	0.00400	mg/L		
LCS	Q1422133	SPEX	NICKEL	5.00			5.20	mg/L	104	
SAMPLE	A607630		See Certificate of Analysis, Rep: 0							
SPI02	Q1422134	A607630	NICKEL	0	0.500		0.513	mg/L	102.6	
DPS02	Q1422135	A607630	NICKEL	0	0.500		0.516	mg/L	103.2	0.6
CCV	Q1422889	INORGANIC	NICKEL	5.00			5.03	mg/L	100.6	
BLA01	Q1422890	NA	NICKEL			<	0.00400	mg/L		
SAMPLE	A607631		See Certificate of Analysis, Rep: 0							
SAMPLE	A607632		See Certificate of Analysis, Rep: 0							
SAMPLE	A607633		See Certificate of Analysis, Rep: 0							
SAMPLE	A607634		See Certificate of Analysis, Rep: 0							
SAMPLE	A607635		See Certificate of Analysis, Rep: 0							
SAMPLE	A607636		See Certificate of Analysis, Rep: 0							
CCV	Q1422891	INORGANIC	NICKEL	5.00			5.12	mg/L	102.4	
BLA01	Q1422892	NA	NICKEL			<	0.00400	mg/L		
CDL01	Q1422907	INORGANIC	NICKEL	0.0100			0.0114	mg/L	114	
ICS-A	Q1422910	PERKIN ELM	NICKEL	1.00			1.00	mg/L	100	

Qualifiers

< Less Than Lower Detection Limit

POTASSIUM ICP SW846-6010B **M126.3**
Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

R440544 Analyst: D THOMPSON Run Date: 02-Oct-02 Instrument: PREP
Prep Reviewer: W WATNESS Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SAMPLE	A607630	Rep: 0	Analytical Run: R440641							
SAMPLE	A607631	Rep: 0	Analytical Run: R440641							
SAMPLE	A607632	Rep: 0	Analytical Run: R440641							
SAMPLE	A607633	Rep: 0	Analytical Run: R440641							
SAMPLE	A607634	Rep: 0	Analytical Run: R440641							
SAMPLE	A607635	Rep: 0	Analytical Run: R440641							
SAMPLE	A607636	Rep: 0	Analytical Run: R440641							
BLA02	Q1422132	NA	Analytical Run: R440641							
LCS	Q1422133	SPEX	Analytical Run: R440641							
SPI02	Q1422134	A607630	Analytical Run: R440641							
DPS02	Q1422135	A607630	Analytical Run: R440641							

R440641 Analyst: J KRAMER Run Date: 02-Oct-02 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1422865	PERKIN ELM	POTASSIUM	10			9.47	mg/L	94.7	
ICV01	Q1422866	SPEX	POTASSIUM	20			20.8	mg/L	104	
CCV	Q1422882	INORGANIC	POTASSIUM	50			52.0	mg/L	104	
BLA01	Q1422883	NA	POTASSIUM			<	0.0400	mg/L		
BLA02	Q1422132	NA	POTASSIUM			<	0.0400	mg/L		
LCS	Q1422133	SPEX	POTASSIUM	100			104.	mg/L	104	
SAMPLE	A607630		See Certificate of Analysis, Rep: 0							
SPI02	Q1422134	A607630	POTASSIUM	2.27	100		108.	mg/L	105.7	
DPS02	Q1422135	A607630	POTASSIUM	2.27	100		109.	mg/L	106.7	0.9

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POTASSIUM ICP SW846-6010B **M126.3** (cont.)
Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

R440641 Analyst: J KRAMER Run Date: 02-Oct-02 Instrument: ICP (cont.)
Analytical Reviewer: S ENDERSEN Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
CCV	Q1422889	INORGANIC	POTASSIUM	50			51.6	mg/L	103.2	
BLA01	Q1422890	NA	POTASSIUM			<	0.0400	mg/L		
SAMPLE	A607631		See Certificate of Analysis, Rep: 0							
SAMPLE	A607632		See Certificate of Analysis, Rep: 0							
SAMPLE	A607633		See Certificate of Analysis, Rep: 0							
SAMPLE	A607634		See Certificate of Analysis, Rep: 0							
SAMPLE	A607635		See Certificate of Analysis, Rep: 0							
SAMPLE	A607636		See Certificate of Analysis, Rep: 0							
CCV	Q1422891	INORGANIC	POTASSIUM	50			52.3	mg/L	104.6	
BLA01	Q1422892	NA	POTASSIUM			<	0.0400	mg/L		

Qualifiers
< Less Than Lower Detection Limit

SELENIUM TRACE ICP SW846-6010B **M128.0**
Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

R440544 Analyst: D THOMPSON Run Date: 02-Oct-02 Instrument: PREP
Prep Reviewer: W WATNESS Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
BLA02	Q1422502	NA	Analytical Run: R440936							
LCS	Q1422503	INORGANIC	Analytical Run: R440936							
SPI02	Q1422504	A607630	Analytical Run: R440936							
DPS02	Q1422505	A607630	Analytical Run: R440936							
SAMPLE	A607630	Rep: 0	Analytical Run: R440936							
SAMPLE	A607631	Rep: 0	Analytical Run: R440936							
SAMPLE	A607632	Rep: 0	Analytical Run: R440936							
SAMPLE	A607633	Rep: 0	Analytical Run: R440936							
SAMPLE	A607634	Rep: 0	Analytical Run: R440936							
SAMPLE	A607635	Rep: 0	Analytical Run: R440936							
SAMPLE	A607636	Rep: 0	Analytical Run: R440936							

R440936 Analyst: J LEAK Run Date: 08-Oct-02 Instrument: TRACE ICP
Analytical Reviewer: S ENDERSEN Review Date: 08-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1424705	PERKIN ELM	SELENIUM	1			0.978	mg/L	97.8	
CDL01	Q1424718	PERKIN ELM	SELENIUM	0.01			0.00682	mg/L	68.2	
ICS-A	Q1424720	PERKIN ELM	SELENIUM	0.05			0.0511	mg/L	102.2	
CCV	Q1424729	INORGANIC	SELENIUM	5			5.11	mg/L	102.2	
BLA01	Q1424730	NA	SELENIUM			<	0.00200	mg/L		
BLA02	Q1422502	NA	SELENIUM			<	0.00200	mg/L		
LCS	Q1422503	INORGANIC	SELENIUM	0.5			0.513	mg/L	102.6	
SAMPLE	A607630		See Certificate of Analysis, Rep: 0							
SPI02	Q1422504	A607630	SELENIUM	0	2		2.11	mg/L	105.5	
DPS02	Q1422505	A607630	SELENIUM	0	2		2.12	mg/L	106	0.5
CCV	Q1424731	INORGANIC	SELENIUM	5			5.06	mg/L	101.2	
BLA01	Q1424732	NA	SELENIUM			<	0.00200	mg/L		
SAMPLE	A607631		See Certificate of Analysis, Rep: 0							
SAMPLE	A607632		See Certificate of Analysis, Rep: 0							
SAMPLE	A607633		See Certificate of Analysis, Rep: 0							
SAMPLE	A607634		See Certificate of Analysis, Rep: 0							
SAMPLE	A607635		See Certificate of Analysis, Rep: 0							

SELENIUM TRACE ICP SW846-6010B **M128.0** (cont.)
Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

R440936 Analyst: J LEAK Run Date: 08-Oct-02 Instrument: TRACE ICP (cont.)
Analytical Reviewer: S ENDERSEN Review Date: 08-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SAMPLE	A607636		See Certificate of Analysis, Rep: 0							
CCV	Q1424733	INORGANIC	SELENIUM	5			5.08	mg/L	101.6	
BLA01	Q1424734	NA	SELENIUM			<	0.00200	mg/L		
CDL01	Q1424737	PERKIN ELM	SELENIUM	0.01			0.00846	mg/L	84.6	
ICS-A	Q1424739	PERKIN ELM	SELENIUM	0.05			0.0551	mg/L	110.2	

Qualifiers
< Less Than Lower Detection Limit

SILVER ICP SW846-6010B **M130.3**
Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

R440544 Analyst: D THOMPSON Run Date: 02-Oct-02 Instrument: PREP
Prep Reviewer: W WATNESS Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SAMPLE	A607630	Rep: 0	Analytical Run: R440641							
SAMPLE	A607631	Rep: 0	Analytical Run: R440641							
SAMPLE	A607632	Rep: 0	Analytical Run: R440641							
SAMPLE	A607633	Rep: 0	Analytical Run: R440641							
SAMPLE	A607634	Rep: 0	Analytical Run: R440641							
SAMPLE	A607635	Rep: 0	Analytical Run: R440641							
SAMPLE	A607636	Rep: 0	Analytical Run: R440641							
BLA02	Q1422132	NA	Analytical Run: R440641							
LCS	Q1422133	SPEX	Analytical Run: R440641							
SPI02	Q1422134	A607630	Analytical Run: R440641							
DPS02	Q1422135	A607630	Analytical Run: R440641							

R440641 Analyst: J KRAMER Run Date: 02-Oct-02 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1422865	PERKIN ELM	SILVER	0.5			0.510	mg/L	102	
CDL01	Q1422870	INORGANIC	SILVER	2			1.97	mg/L	98.5	
ICS-A	Q1422872	PERKIN ELM	SILVER	0.2			0.225	mg/L	112.5	
CCV	Q1422882	INORGANIC	SILVER	1.00			1.03	mg/L	103	
BLA01	Q1422883	NA	SILVER			<	0.00400	mg/L		
BLA02	Q1422132	NA	SILVER			<	0.00400	mg/L		
LCS	Q1422133	SPEX	SILVER	0.500			0.543	mg/L	108.6	
SAMPLE	A607630		See Certificate of Analysis, Rep: 0							
SPI02	Q1422134	A607630	SILVER	0	0.050		0.0536	mg/L	107.2	
DPS02	Q1422135	A607630	SILVER	0	0.050		0.0537	MG/L	107.4	0.2
CCV	Q1422889	INORGANIC	SILVER	1.00			1.03	mg/L	103	
BLA01	Q1422890	NA	SILVER			<	0.00400	mg/L		
SAMPLE	A607631		See Certificate of Analysis, Rep: 0							
SAMPLE	A607632		See Certificate of Analysis, Rep: 0							
SAMPLE	A607633		See Certificate of Analysis, Rep: 0							
SAMPLE	A607634		See Certificate of Analysis, Rep: 0							
SAMPLE	A607635		See Certificate of Analysis, Rep: 0							
SAMPLE	A607636		See Certificate of Analysis, Rep: 0							
CCV	Q1422891	INORGANIC	SILVER	1.00			1.04	mg/L	104	
BLA01	Q1422892	NA	SILVER			<	0.00400	mg/L		
CDL01	Q1422907	INORGANIC	SILVER	0.0100			0.0108	mg/L	108	
ICS-A	Q1422910	PERKIN ELM	SILVER	0.2			0.228	mg/L	114	

HERITAGE ENVIRONMENTAL SERVICES, LLC

Qualifiers

< Less Than Lower Detection Limit

SODIUM ICP SW846-6010B — M131.3
Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

R440544 — Analyst: D THOMPSON — Run Date: 02-Oct-02 — Instrument: PREP
Prep — Reviewer: W WATNESS — Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SAMPLE	A607630	Rep: 0	Analytical Run: R440641							
SAMPLE	A607631	Rep: 0	Analytical Run: R440641							
SAMPLE	A607632	Rep: 0	Analytical Run: R440641							
SAMPLE	A607633	Rep: 0	Analytical Run: R440641							
SAMPLE	A607634	Rep: 0	Analytical Run: R440641							
SAMPLE	A607635	Rep: 0	Analytical Run: R440641							
SAMPLE	A607636	Rep: 0	Analytical Run: R440641							
BLA02	Q1422132	NA	Analytical Run: R440641							
LCS	Q1422133	SPEX	Analytical Run: R440641							
SPI02	Q1422134	A607630	Analytical Run: R440641							
DPS02	Q1422135	A607630	Analytical Run: R440641							

R440641 — Analyst: J KRAMER — Run Date: 02-Oct-02 — Instrument: ICP
Analytical — Reviewer: S ENDERSEN — Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1422865	PERKIN ELM	SODIUM	1			0.913	mg/L	91.3	
ICV01	Q1422866	SPEX	SODIUM	20			21.4	mg/L	107	
CCV	Q1422882	INORGANIC	SODIUM	50			52.6	mg/L	105.2	
BLA01	Q1422883	NA	SODIUM			<	0.0400	mg/L		
BLA02	Q1422132	NA	SODIUM			<	0.0400	mg/L		
LCS	Q1422133	SPEX	SODIUM	100			104.	mg/L	104	
SAMPLE	A607630		See Certificate of Analysis, Rep: 0							
SPI02	Q1422134	A607630	SODIUM	29.4	100		136.	mg/L	106.6	
DPS02	Q1422135	A607630	SODIUM	29.4	100		137.	mg/L	107.6	0.9
CCV	Q1422889	INORGANIC	SODIUM	50			53.2	mg/L	106.4	
BLA01	Q1422890	NA	SODIUM			<	0.0400	mg/L		
SAMPLE	A607631		See Certificate of Analysis, Rep: 0							
SAMPLE	A607632		See Certificate of Analysis, Rep: 0							
SAMPLE	A607633		See Certificate of Analysis, Rep: 0							
SAMPLE	A607634		See Certificate of Analysis, Rep: 0							
SAMPLE	A607635		See Certificate of Analysis, Rep: 0							
SAMPLE	A607636		See Certificate of Analysis, Rep: 0							
CCV	Q1422891	INORGANIC	SODIUM	50			53.6	mg/L	107.2	
BLA01	Q1422892	NA	SODIUM			<	0.0400	mg/L		

Qualifiers

< Less Than Lower Detection Limit

THALLIUM TRACE ICP SW846-6010B — M134.0
Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

R440544 — Analyst: D THOMPSON — Run Date: 02-Oct-02 — Instrument: PREP
Prep — Reviewer: W WATNESS — Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
BLA02	Q1422502	NA	Analytical Run: R440936							
LCS	Q1422503	INORGANIC	Analytical Run: R440936							
SPI02	Q1422504	A607630	Analytical Run: R440936							
DPS02	Q1422505	A607630	Analytical Run: R440936							
SAMPLE	A607630	Rep: 0	Analytical Run: R440936							

HERITAGE ENVIRONMENTAL SERVICES, LLC

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SAMPLE	A607631	Rep: 0	Analytical Run: R440936							
SAMPLE	A607632	Rep: 0	Analytical Run: R440936							
SAMPLE	A607633	Rep: 0	Analytical Run: R440936							
SAMPLE	A607634	Rep: 0	Analytical Run: R440936							
SAMPLE	A607635	Rep: 0	Analytical Run: R440936							
SAMPLE	A607636	Rep: 0	Analytical Run: R440936							

R440936 Analyst: J LEAK Run Date: 08-Oct-02 Instrument: TRACE ICP
Analytical Reviewer: S ENDERSEN Review Date: 08-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1424705	PERKIN ELM	THALLIUM	1			1.03	mg/L	103	
CDL01	Q1424718	PERKIN ELM	THALLIUM	0.02			0.0222	mg/L	111	
ICS-A	Q1424720	PERKIN ELM	THALLIUM	0.1			0.0979	mg/L	97.9	
CCV	Q1424729	INORGANIC	THALLIUM	5			4.87	mg/L	97.4	
BLA01	Q1424730	NA	THALLIUM			<	0.00400	mg/L		
BLA02	Q1422502	NA	THALLIUM			<	0.00400	mg/L		
LCS	Q1422503	INORGANIC	THALLIUM	0.5			0.532	mg/L	106.4	
SAMPLE	A607630		See Certificate of Analysis, Rep: 0							
SPI02	Q1422504	A607630	THALLIUM	0	3		2.90	mg/L	96.7	
DPS02	Q1422505	A607630	THALLIUM	0	3		2.94	mg/L	98	1.3
CCV	Q1424731	INORGANIC	THALLIUM	5			4.84	mg/L	96.8	
BLA01	Q1424732	NA	THALLIUM				0.00567	mg/L		
SAMPLE	A607631		See Certificate of Analysis, Rep: 0							
SAMPLE	A607632		See Certificate of Analysis, Rep: 0							
SAMPLE	A607633		See Certificate of Analysis, Rep: 0							
SAMPLE	A607634		See Certificate of Analysis, Rep: 0							
SAMPLE	A607635		See Certificate of Analysis, Rep: 0							
SAMPLE	A607636		See Certificate of Analysis, Rep: 0							
CCV	Q1424733	INORGANIC	THALLIUM	5			4.84	mg/L	96.8	
BLA01	Q1424734	NA	THALLIUM				0.00589	mg/L		
CDL01	Q1424737	PERKIN ELM	THALLIUM	0.02			0.0227	mg/L	113.5	
ICS-A	Q1424739	PERKIN ELM	THALLIUM	0.1			0.103	mg/L	103	

Qualifiers

< Less Than Lower Detection Limit

VANADIUM ICP SW846-6010B **M138.3**
Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

R440544 Analyst: D THOMPSON Run Date: 02-Oct-02 Instrument: PREP
Prep Reviewer: W WATNESS Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SAMPLE	A607630	Rep: 0	Analytical Run: R440641							
SAMPLE	A607631	Rep: 0	Analytical Run: R440641							
SAMPLE	A607632	Rep: 0	Analytical Run: R440641							
SAMPLE	A607633	Rep: 0	Analytical Run: R440641							
SAMPLE	A607634	Rep: 0	Analytical Run: R440641							
SAMPLE	A607635	Rep: 0	Analytical Run: R440641							
SAMPLE	A607636	Rep: 0	Analytical Run: R440641							
BLA02	Q1422132	NA	Analytical Run: R440641							
LCS	Q1422133	SPEX	Analytical Run: R440641							
SPI02	Q1422134	A607630	Analytical Run: R440641							
DPS02	Q1422135	A607630	Analytical Run: R440641							

R440641 Analyst: J KRAMER Run Date: 02-Oct-02 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD

ICV01	Q1422864	PERKIN ELM	VANADIUM	1			1.07	mg/L	107	
CDL01	Q1422870	INORGANIC	VANADIUM	10			10.0	mg/L	100	
ICS-A	Q1422872	PERKIN ELM	VANADIUM	0.500			0.524	mg/L	104.8	
CCV	Q1422882	INORGANIC	VANADIUM	5.00			5.24	mg/L	104.8	
BLA01	Q1422883	NA	VANADIUM			<	0.00400	mg/L		
BLA02	Q1422132	NA	VANADIUM			<	0.00400	mg/L		
LCS	Q1422133	SPEX	VANADIUM	5.00			5.30	mg/L	106	
SAMPLE	A607630		See Certificate of Analysis, Rep: 0							
SPI02	Q1422134	A607630	VANADIUM	0	0.500		0.528	mg/L	105.6	
DPS02	Q1422135	A607630	VANADIUM	0	0.500		0.534	MG/L	106.8	1.1
CCV	Q1422889	INORGANIC	VANADIUM	5.00			5.22	mg/L	104.4	
BLA01	Q1422890	NA	VANADIUM			<	0.00400	mg/L		
SAMPLE	A607631		See Certificate of Analysis, Rep: 0							
SAMPLE	A607632		See Certificate of Analysis, Rep: 0							
SAMPLE	A607633		See Certificate of Analysis, Rep: 0							
SAMPLE	A607634		See Certificate of Analysis, Rep: 0							
SAMPLE	A607635		See Certificate of Analysis, Rep: 0							
SAMPLE	A607636		See Certificate of Analysis, Rep: 0							
CCV	Q1422891	INORGANIC	VANADIUM	5.00			5.29	mg/L	105.8	
BLA01	Q1422892	NA	VANADIUM			<	0.00400	mg/L		
CDL01	Q1422907	INORGANIC	VANADIUM	0.0100			0.0101	mg/L	101	
ICS-A	Q1422910	PERKIN ELM	VANADIUM	0.500			0.536	mg/L	107.2	

Qualifiers

< Less Than Lower Detection Limit

ZINC ICP SW846-6010B **M139.3**

Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

R440544 Analyst: D THOMPSON Run Date: 02-Oct-02 Instrument: PREP
Prep Reviewer: W WATNESS Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SAMPLE	A607630	Rep: 0	Analytical Run: R440641							
SAMPLE	A607631	Rep: 0	Analytical Run: R440641							
SAMPLE	A607632	Rep: 0	Analytical Run: R440641							
SAMPLE	A607633	Rep: 0	Analytical Run: R440641							
SAMPLE	A607634	Rep: 0	Analytical Run: R440641							
SAMPLE	A607635	Rep: 0	Analytical Run: R440641							
SAMPLE	A607636	Rep: 0	Analytical Run: R440641							
BLA02	Q1422132	NA	Analytical Run: R440641							
LCS	Q1422133	SPEX	Analytical Run: R440641							
SPI02	Q1422134	A607630	Analytical Run: R440641							
DPS02	Q1422135	A607630	Analytical Run: R440641							

R440641 Analyst: J KRAMER Run Date: 02-Oct-02 Instrument: ICP
Analytical Reviewer: S ENDERSEN Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1422864	PERKIN ELM	ZINC	1			1.07	mg/L	107	
CDL01	Q1422870	INORGANIC	ZINC	10			9.92	mg/L	99.2	
ICS-A	Q1422872	PERKIN ELM	ZINC	1.00			0.984	mg/L	98.4	
CCV	Q1422882	INORGANIC	ZINC	5.00			5.11	mg/L	102.2	
BLA01	Q1422883	NA	ZINC			<	0.00800	mg/L		
BLA02	Q1422132	NA	ZINC			<	0.00800	mg/L		
LCS	Q1422133	SPEX	ZINC	5.00			5.32	mg/L	106.4	
SAMPLE	A607630		See Certificate of Analysis, Rep: 0							
SPI02	Q1422134	A607630	ZINC	0	0.500		0.574	mg/L	114.8	
DPS02	Q1422135	A607630	ZINC	0	0.500		0.551	mg/L	110.2	4.1
CCV	Q1422889	INORGANIC	ZINC	5.00			5.17	mg/L	103.4	

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ZINC ICP SW846-6010B **M139.3** (cont.)
Prep : FAA OR ICP ACID DIGESTION OF AQUEOUS SAMPLES SW846-3005A

R440641 Analyst: J KRAMER Run Date: 02-Oct-02 Instrument: ICP (cont.)
Analytical Reviewer: S ENDERSEN Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
BLA01	Q1422890	NA	ZINC			<	0.00800	mg/L		
SAMPLE	A607631		See Certificate of Analysis, Rep: 0							
SAMPLE	A607632		See Certificate of Analysis, Rep: 0							
SAMPLE	A607633		See Certificate of Analysis, Rep: 0							
SAMPLE	A607634		See Certificate of Analysis, Rep: 0							
SAMPLE	A607635		See Certificate of Analysis, Rep: 0							
SAMPLE	A607636		See Certificate of Analysis, Rep: 0							
CCV	Q1422891	INORGANIC	ZINC	5.00			5.24	mg/L	104.8	
BLA01	Q1422892	NA	ZINC			<	0.00800	mg/L		
CDL01	Q1422907	INORGANIC	ZINC	0.0200			0.0215	mg/L	107.5	
ICS-A	Q1422910	PERKIN ELM	ZINC	1.00			1.03	mg/L	103	

Qualifiers
< Less Than Lower Detection Limit

PCB/PESTICIDE SCAN GC:ECD SW846-8081 **O305.1**
Prep : GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C

R440381 Analyst: G CLOUSE Run Date: 27-Sep-02 Instrument: PREP
Prep Reviewer: T PINCKERT Review Date: 28-Sep-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
BLA02	Q1420885	LAB	Analytical Run: R440934							
LCS	Q1420886	EMS	Analytical Run: R440934							
SPI02	Q1420887	A607636	Analytical Run: R440934							
DPS02	Q1420888	A607636	Analytical Run: R440934							
SAMPLE	A607630	Rep: 0	Analytical Run: R440934							
SAMPLE	A607631	Rep: 0	Analytical Run: R440934							
SAMPLE	A607632	Rep: 0	Analytical Run: R440934							
SAMPLE	A607633	Rep: 0	Analytical Run: R440934							
SAMPLE	A607634	Rep: 0	Analytical Run: R440934							
SAMPLE	A607635	Rep: 0	Analytical Run: R440934							
SAMPLE	A607636	Rep: 0	Analytical Run: R440934							

R440934 Analyst: M KEEZER Run Date: 04-Oct-02 Instrument: GC/ECD
Analytical Reviewer: E WERNZ Review Date: 08-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1424664		ALPHA-BHC	20			20.3	ug/L	101.5	
ICV01	Q1424664		BETA-BHC	20			18.7	ug/L	93.5	
ICV01	Q1424664		DELTA-BHC	20			18.6	ug/L	93	
ICV01	Q1424664		GAMMA-BHC (LINDANE)	20			22.4	ug/L	112	
ICV01	Q1424664		HEPTACHLOR	20			20.8	ug/L	104	
ICV01	Q1424664		ALDRIN	20			21.1	ug/L	105.5	
ICV01	Q1424664		HEPTACHLOR EPOXIDE	20			20.7	ug/L	103.5	
ICV01	Q1424664		ENDOSULFAN I	20			21.7	ug/L	108.5	
ICV01	Q1424664		DIELDRIN	20			22.6	ug/L	113	
ICV01	Q1424664		4,4'-DDE	20			21.5	ug/L	107.5	
ICV01	Q1424664		ENDRIN	20			22	ug/L	110	
ICV01	Q1424664		ENDOSULFAN II	20			22.1	ug/L	110.5	
ICV01	Q1424664		4,4'-DDD	20			17.7	ug/L	88.5	
ICV01	Q1424664		ENDOSULFAN SULFATE	20			21.8	ug/L	109	
ICV01	Q1424664		4,4'-DDT	20			22.8	ug/L	114	
ICV01	Q1424664		METHOXYCHLOR	20			28.8	ug/L	144	

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PCB/PESTICIDE SCAN GC:ECD SW846-8081 **O305.1** (cont.)
Prep : GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C

R440934 Analyst: M KEEZER Run Date: 04-Oct-02 Instrument: GC/ECD (cont.)
Analytical Reviewer: E WERNZ Review Date: 08-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
ICV01	Q1424664		ENDRIN ALDEHYDE	20			26.6	ug/L	133	
ICV01	Q1424664		ENDRIN KETONE	20			25.1	ug/L	125.5	
ICV01	Q1424664		ALPHA-CHLORDANE	20			22.9	ug/L	114.5	
ICV01	Q1424664		GAMMA-CHLORDANE	20			20.8	ug/L	104	
BLA02	Q1420885	LAB	ALPHA-BHC			BDL	0.05	ug/L		
BLA02	Q1420885	LAB	BETA-BHC			BDL	0.05	ug/L		
BLA02	Q1420885	LAB	DELTA-BHC			BDL	0.05	ug/L		
BLA02	Q1420885	LAB	GAMMA-BHC (LINDANE)			BDL	0.05	ug/L		
BLA02	Q1420885	LAB	HEPTACHLOR			BDL	0.05	ug/L		
BLA02	Q1420885	LAB	ALDRIN			BDL	0.05	ug/L		
BLA02	Q1420885	LAB	HEPTACHLOR EPOXIDE			BDL	0.05	ug/L		
BLA02	Q1420885	LAB	ENDOSULFAN I			BDL	0.05	ug/L		
BLA02	Q1420885	LAB	DIELDRIN			BDL	0.1	ug/L		
BLA02	Q1420885	LAB	4,4'-DDE			BDL	0.1	ug/L		
BLA02	Q1420885	LAB	ENDRIN			BDL	0.1	ug/L		
BLA02	Q1420885	LAB	ENDOSULFAN II			BDL	0.1	ug/L		
BLA02	Q1420885	LAB	4,4'-DDD			BDL	0.1	ug/L		
BLA02	Q1420885	LAB	ENDOSULFAN SULFATE			BDL	0.1	ug/L		
BLA02	Q1420885	LAB	4,4'-DDT			BDL	0.1	ug/L		
BLA02	Q1420885	LAB	METHOXYCHLOR			BDL	0.5	ug/L		
BLA02	Q1420885	LAB	ENDRIN ALDEHYDE			BDL	0.1	ug/L		
BLA02	Q1420885	LAB	ENDRIN KETONE			BDL	0.1	ug/L		
BLA02	Q1420885	LAB	ALPHA-CHLORDANE			BDL	0.5	ug/L		
BLA02	Q1420885	LAB	GAMMA-CHLORDANE			BDL	0.5	ug/L		
BLA02	Q1420885	LAB	TOXAPHENE			BDL	1	ug/L		
BLA02	Q1420885	LAB	PCB AROCLOR 1016			BDL	0.5	ug/L		
BLA02	Q1420885	LAB	PCB AROCLOR 1221			BDL	0.5	ug/L		
BLA02	Q1420885	LAB	PCB AROCLOR 1232			BDL	0.5	ug/L		
BLA02	Q1420885	LAB	PCB AROCLOR 1242			BDL	0.5	ug/L		
BLA02	Q1420885	LAB	PCB AROCLOR 1248			BDL	0.5	ug/L		
BLA02	Q1420885	LAB	PCB AROCLOR 1254			BDL	1	ug/L		
BLA02	Q1420885	LAB	PCB AROCLOR 1260			BDL	1	ug/L		
LCS	Q1420886	EMS	GAMMA-BHC (LINDANE)	0.5			0.468	ug/L	93.6	
LCS	Q1420886	EMS	HEPTACHLOR	0.5			0.419	ug/L	83.8	
LCS	Q1420886	EMS	ALDRIN	0.5			0.425	ug/L	85	
LCS	Q1420886	EMS	DIELDRIN	1			0.908	ug/L	90.8	
LCS	Q1420886	EMS	ENDRIN	1			1.12	ug/L	112	
LCS	Q1420886	EMS	4,4'-DDT	1			0.99	ug/L	99	
SAMPLE	A607636		See Certificate of Analysis, Rep: 0							
SPI02	Q1420887	A607636	GAMMA-BHC (LINDANE)	0	0.51		0.458	ug/L	89.8	
SPI02	Q1420887	A607636	HEPTACHLOR	0	0.51		0.434	ug/L	85.1	
SPI02	Q1420887	A607636	ALDRIN	0	0.51		0.446	ug/L	87.5	
SPI02	Q1420887	A607636	DIELDRIN	0	1.02		0.901	ug/L	88.3	
SPI02	Q1420887	A607636	ENDRIN	0	1.02		1.04	ug/L	102	
SPI02	Q1420887	A607636	4,4'-DDT	0	1.02		0.817	ug/L	80.1	
DPS02	Q1420888	A607636	GAMMA-BHC (LINDANE)	0	0.51		0.433	ug/L	84.9	5.6
DPS02	Q1420888	A607636	HEPTACHLOR	0	0.51		0.391	ug/L	76.7	10.4
DPS02	Q1420888	A607636	ALDRIN	0	0.51		0.374	ug/L	73.3	17.7
DPS02	Q1420888	A607636	DIELDRIN	0	1.02		0.84	ug/L	82.4	6.9
DPS02	Q1420888	A607636	ENDRIN	0	1.02		0.971	ug/L	95.2	6.9
DPS02	Q1420888	A607636	4,4'-DDT	0	1.02		0.809	ug/L	79.3	1
SAMPLE	A607630		See Certificate of Analysis, Rep: 0							
SAMPLE	A607631		See Certificate of Analysis, Rep: 0							

PCB/PESTICIDE SCAN GC:ECD SW846-8081 **O305.1** (cont.)
Prep : GC SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C

R440934 Analyst: M KEEZER Run Date: 04-Oct-02 Instrument: GC/ECD (cont.)
Analytical Reviewer: E WERNZ Review Date: 08-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SAMPLE	A607632		See Certificate of Analysis, Rep: 0							
SAMPLE	A607633		See Certificate of Analysis, Rep: 0							
SAMPLE	A607634		See Certificate of Analysis, Rep: 0							
SAMPLE	A607635		See Certificate of Analysis, Rep: 0							
CCV	Q1424669		ALPHA-BHC	20			17.1	ug/L	85.5	
CCV	Q1424669		GAMMA-BHC (LINDANE)	20			17.7	ug/L	88.5	
CCV	Q1424669		HEPTACHLOR	20			17.5	ug/L	87.5	
CCV	Q1424669		ENDOSULFAN I	20			17.1	ug/L	85.5	
CCV	Q1424669		DIELDRIN	40			34.1	ug/L	85.3	
CCV	Q1424669		ENDRIN	40			37.3	ug/L	93.3	
CCV	Q1424669		4,4'-DDD	40			34.2	ug/L	85.5	
CCV	Q1424669		4,4'-DDT	40			35	ug/L	87.5	
CCV	Q1424669		METHOXYCHLOR	200			175.7	ug/L	87.9	

Qualifiers
BDL Below Detection Limit

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270C **O505.3**
Prep : GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C

R440581 Analyst: P SIMS Run Date: 01-Oct-02 Instrument: PREP
Prep Reviewer: L SMITH Review Date: 02-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
BLA02	Q1422403	HLI	Analytical Run: R440600							
LCS	Q1422404	HLI	Analytical Run: R440600							
SAMPLE	A607630	Rep: 0	Analytical Run: R440600							
SAMPLE	A607631	Rep: 0	Analytical Run: R440600							
SAMPLE	A607632	Rep: 0	Analytical Run: R440600							
SAMPLE	A607633	Rep: 0	Analytical Run: R440600							
SAMPLE	A607634	Rep: 0	Analytical Run: R440626							
SAMPLE	A607635	Rep: 0	Analytical Run: R440626							
SAMPLE	A607636	Rep: 0	Analytical Run: R440626							
SPI02	Q1422407	A607755	Analytical Run: R440815							
DPS02	Q1422408	A607755	Analytical Run: R440815							

R440600 Analyst: L CALLAHAN Run Date: 02-Oct-02 Instrument: GC/MS SVOA
Analytical Reviewer: L SMITH Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
CCVD	Q1422547		Analysis Date/Time: 02-Oct-02 10:00							
CCVD	Q1422547		PYRIDINE	1.1093			1.0828			2.4
CCVD	Q1422547		2-PICOLINE	1.4436			1.4493			0.4
CCVD	Q1422547		PHENOL	1.3724			1.3801			0.6
CCVD	Q1422547		BIS(2-CHLOROETHYL)ETHER	1.1055			1.1945			8.1
CCVD	Q1422547		2-CHLOROPHENOL	1.2493			1.2842			2.8
CCVD	Q1422547		1,3-DICHLOROBENZENE (M-DICHLOROBE	1.5540			1.4886			4.2
CCVD	Q1422547		1,4-DICHLOROBENZENE (P-DICHLOROBEI	1.4190			1.4460			1.9
CCVD	Q1422547		1,2-DICHLOROBENZENE (O-DICHLOROBEI	1.3397			1.3416			0.1
CCVD	Q1422547		BENZYL ALCOHOL	0.7209			0.6979			3.2
CCVD	Q1422547		2-METHYLPHENOL (O-CRESOL)	1.0762			1.1078			2.9
CCVD	Q1422547		BIS(2-CHLOROISOPROPYL)ETHER	2.4366			2.5813			5.9
CCVD	Q1422547		N-NITROSO-DI-N-PROPYLAMINE	0.6926			0.6951			0.4
CCVD	Q1422547		4-METHYLPHENOL (P-CRESOL)	1.0481			1.0576			0.9

HERITAGE ENVIRONMENTAL SERVICES, LLC

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270C **O505.3** (cont.)
Prep : GC/MS SEPARATORY FUNNEL LIQUID-LIQUID-EXTRACTION SW846-3510C

R440600 Analyst: L CALLAHAN Run Date: 02-Oct-02 Instrument: GC/MS SVOA (cont.)
Analytical Reviewer: L SMITH Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
CCVD	Q1422547		HEXACHLOROETHANE	0.5179			0.5195			0.3
CCVD	Q1422547		NITROBENZENE	0.2887			0.2847			1.4
CCVD	Q1422547		ISOPHORONE	0.5385			0.5268			2.2
CCVD	Q1422547		2-NITROPHENOL	0.1987			0.1901			4.3
CCVD	Q1422547		2,4-DIMETHYLPHENOL	0.3068			0.3010			1.9
CCVD	Q1422547		BIS(2-CHLOROETHOXY)METHANE	0.3424			0.3404			0.6
CCVD	Q1422547		2,4-DICHLOROPHENOL	0.2365			0.2308			2.4
CCVD	Q1422547		BENZOIC ACID	0.2320			0.2134			8
CCVD	Q1422547		1,2,4-TRICHLOROBENZENE	0.2603			0.2540			2.4
CCVD	Q1422547		NAPHTHALENE	0.8570			0.8901			3.9
CCVD	Q1422547		4-CHLOROANILINE	0.1256			0.1504			19.7
CCVD	Q1422547		HEXACHLOROBUTADIENE	0.1201			0.1094			8.9
CCVD	Q1422547		4-CHLORO-3-METHYLPHENOL (P-CHLORC	0.2364			0.2305			2.5
CCVD	Q1422547		2-METHYLNAPHTHALENE	0.5087			0.5297			4.1
CCVD	Q1422547		HEXACHLOROCYCLOPENTADIENE	0.2180			0.1820			16.5
CCVD	Q1422547		1,2,4,5-TETRACHLOROBENZENE	0.4736			0.4476			5.5
CCVD	Q1422547		2,4,6-TRICHLOROPHENOL	0.3498			0.3173			9.3
CCVD	Q1422547		2,4,5-TRICHLOROPHENOL	0.3432			0.3334			2.9
CCVD	Q1422547		2-CHLORONAPHTHALENE	0.9931			0.9745			1.9
CCVD	Q1422547		2-NITROANILINE (O-NITROANILINE)	0.3167			0.3122			1.4
CCVD	Q1422547		DIMETHYLPHTHALATE	1.1477			1.1616			1.2
CCVD	Q1422547		2,6-DINITROTOLUENE	0.2927			0.2915			0.4
CCVD	Q1422547		ACENAPHTHYLENE	1.7839			1.8029			1.1
CCVD	Q1422547		3-NITROANILINE (M-NITROANILINE)	0.1489			0.0782			47.5
CCVD	Q1422547		ACENAPHTHENE	1.0724			1.0658			0.6
CCVD	Q1422547		2,4-DINITROPHENOL	0.1223			0.0960			21.5
CCVD	Q1422547		4-NITROPHENOL	0.1150			0.0911			20.8
CCVD	Q1422547		DIBENZOFURAN	1.3362			1.3666			2.3
CCVD	Q1422547		2,4-DINITROTOLUENE	0.3403			0.3454			1.5
CCVD	Q1422547		2,3,4,6-TETRACHLOROPHENOL	0.1984			0.1953			1.6
CCVD	Q1422547		DIETHYLPHTHALATE	1.1303			1.1441			1.2
CCVD	Q1422547		FLUORENE	1.0249			1.0470			2.2
CCVD	Q1422547		4-CHLOROPHENYL-PHENYLETHER	0.4694			0.4673			0.4
CCVD	Q1422547		4-NITROANILINE (P-NITROANILINE)	0.1646			0.1612			2.1
CCVD	Q1422547		N-NITROSODIPHENYLAMINE	0.5943			0.5929			0.2
CCVD	Q1422547		4-BROMODIPHENYL ETHER	0.1711			0.1722			0.6
CCVD	Q1422547		HEXACHLOROBENZENE	0.1395			0.1346			3.5
CCVD	Q1422547		PENTACHLOROPHENOL	0.0934			0.0928			0.6
CCVD	Q1422547		PHENANTHRENE	0.9976			0.9717			2.6
CCVD	Q1422547		ANTHRACENE	1.0005			1.0223			2.2
CCVD	Q1422547		CARBAZOLE	0.6267			0.5117			18.4
CCVD	Q1422547		DI-N-BUTYLPHTHALATE	1.2701			1.2749			0.4
CCVD	Q1422547		FLUORANTHENE	0.8531			0.8539			0.1
CCVD	Q1422547		PYRENE	1.6554			1.6768			1.3
CCVD	Q1422547		BENZYLBUTYLPHTHALATE (BUTYLBENZY	0.9467			0.9813			3.7
CCVD	Q1422547		3,3'-DICHLOROBENZIDINE	0.1341			0.1299			3.1
CCVD	Q1422547		CHRYSENE	1.0769			1.0881			1
CCVD	Q1422547		BIS(2-ETHYLHEXYL)PHTHALATE	1.2636			1.2775			1.1
CCVD	Q1422547		DI-N-OCTYLPHTHALATE	2.5123			2.7632			10
CCVD	Q1422547		BENZO(B)FLUORANTHENE (3,4-BENZOFLU	1.1960			1.1765			1.6
CCVD	Q1422547		BENZO(K)FLUORANTHENE	1.0320			1.0724			3.9
CCVD	Q1422547		BENZO(A)PYRENE	1.0070			1.0439			3.7
CCVD	Q1422547		INDENO(1,2,3-CD)PYRENE	1.0187			0.8919			12.4

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270C **O505.3** (cont.)
Prep : GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C

R440600 Analyst: L CALLAHAN Run Date: 02-Oct-02 Instrument: GC/MS SVOA (cont.)
Analytical Reviewer: L SMITH Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
CCVD	Q1422547		DIBENZ(A,H)ANTHRACENE	0.8498			0.7339			13.6
CCVD	Q1422547		BENZO(G,H,I)PERYLENE	0.8517			0.7532			11.6
CCVD	Q1422547		2-FLUOROPHENOL	1.2283			1.2080			1.7
CCVD	Q1422547		PHENOL-D5	1.2186			1.2154			0.3
CCVD	Q1422547		NITROBENZENE-D5	0.2901			0.2832			2.4
CCVD	Q1422547		2-FLUOROBIPHENYL	1.2347			1.2034			2.5
CCVD	Q1422547		2,4,6-TRIBROMOPHENOL	0.0619			0.0622			0.5
CCVD	Q1422547		TERPHENYL-D14	0.8791			0.8954			1.9
BLA02	Q1422403	HLI	Analysis Date/Time: 02-Oct-02 17:31							
BLA02	Q1422403	HLI	ACENAPHTHENE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	ACENAPHTHYLENE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	ANTHRACENE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	BENZO(A)PYRENE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	BENZO(B)FLUORANTHENE (3,4-BENZOFLUO			BDL	10.	ug/L		
BLA02	Q1422403	HLI	BENZO(G,H,I)PERYLENE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	BENZO(K)FLUORANTHENE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	BENZYL ALCOHOL			BDL	10.	ug/L		
BLA02	Q1422403	HLI	BENZYLBUTYLPHTHALATE (BUTYLBENZYLPH			BDL	10.	ug/L		
BLA02	Q1422403	HLI	BIS(2-CHLOROETHOXY)METHANE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	BIS(2-CHLOROETHYL)ETHER			BDL	10.	ug/L		
BLA02	Q1422403	HLI	BIS(2-CHLOROISOPROPYL)ETHER			BDL	10.	ug/L		
BLA02	Q1422403	HLI	BIS(2-ETHYLHEXYL)PHTHALATE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	4-BROMODIPHENYL ETHER			BDL	10.	ug/L		
BLA02	Q1422403	HLI	CARBAZOLE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	4-CHLOROANILINE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	2-CHLORONAPHTHALENE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	4-CHLOROPHENYL-PHENYLETHER			BDL	10.	ug/L		
BLA02	Q1422403	HLI	CHRYSENE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	DIBENZ(A,H)ANTHRACENE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	DIBENZOFURAN			BDL	10.	ug/L		
BLA02	Q1422403	HLI	1,2-DICHLOROBENZENE (O-DICHLOROBENZ			BDL	10.	ug/L		
BLA02	Q1422403	HLI	1,3-DICHLOROBENZENE (M-DICHLOROBENZ			BDL	10.	ug/L		
BLA02	Q1422403	HLI	1,4-DICHLOROBENZENE (P-DICHLOROBENZ			BDL	10.	ug/L		
BLA02	Q1422403	HLI	3,3'-DICHLOROBENZIDINE			BDL	20.	ug/L		
BLA02	Q1422403	HLI	DIETHYLPHTHALATE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	DIMETHYLPHTHALATE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	DI-N-BUTYLPHTHALATE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	2,4-DINITROTOLUENE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	2,6-DINITROTOLUENE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	DI-N-OCTYLPHTHALATE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	FLUORANTHENE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	FLUORENE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	HEXACHLOROBENZENE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	HEXACHLOROBUTADIENE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	HEXACHLOROCYCLOPENTADIENE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	HEXACHLOROETHANE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	INDENO(1,2,3-CD)PYRENE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	ISOPHORONE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	2-METHYLNAPHTHALENE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	NAPHTHALENE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	2-NITROANILINE (O-NITROANILINE)			BDL	50.	ug/L		
BLA02	Q1422403	HLI	3-NITROANILINE (M-NITROANILINE)			BDL	50.	ug/L		
BLA02	Q1422403	HLI	4-NITROANILINE (P-NITROANILINE)			BDL	50.	ug/L		

HERITAGE ENVIRONMENTAL SERVICES, LLC

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270C **O505.3** (cont.)
Prep : GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C

R440600 Analyst: L CALLAHAN Run Date: 02-Oct-02 Instrument: GC/MS SVOA (cont.)
Analytical Reviewer: L SMITH Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
BLA02	Q1422403	HLI	NITROBENZENE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	N-NITROSODIPHENYLAMINE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	N-NITROSO-DI-N-PROPYLAMINE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	PHENANTHRENE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	2-PICOLINE			BDL	50.	ug/L		
BLA02	Q1422403	HLI	PYRENE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	PYRIDINE			BDL	50.	ug/L		
BLA02	Q1422403	HLI	1,2,4,5-TETRACHLOROBENZENE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	1,2,4-TRICHLOROBENZENE			BDL	10.	ug/L		
BLA02	Q1422403	HLI	BENZOIC ACID			BDL	50.	ug/L		
BLA02	Q1422403	HLI	4-CHLORO-3-METHYLPHENOL (P-CHLORO-M			BDL	10.	ug/L		
BLA02	Q1422403	HLI	2-CHLOROPHENOL			BDL	10.	ug/L		
BLA02	Q1422403	HLI	2,4-DICHLOROPHENOL			BDL	10.	ug/L		
BLA02	Q1422403	HLI	2,4-DIMETHYLPHENOL			BDL	10.	ug/L		
BLA02	Q1422403	HLI	2,4-DINITROPHENOL			BDL	50.	ug/L		
BLA02	Q1422403	HLI	2-METHYLPHENOL (O-CRESOL)			BDL	10.	ug/L		
BLA02	Q1422403	HLI	4-METHYLPHENOL (P-CRESOL)			BDL	10.	ug/L		
BLA02	Q1422403	HLI	2-NITROPHENOL			BDL	10.	ug/L		
BLA02	Q1422403	HLI	4-NITROPHENOL			BDL	50.	ug/L		
BLA02	Q1422403	HLI	PENTACHLOROPHENOL			BDL	50.	ug/L		
BLA02	Q1422403	HLI	PHENOL			BDL	10.	ug/L		
BLA02	Q1422403	HLI	2,3,4,6-TETRACHLOROPHENOL			BDL	10.	ug/L		
BLA02	Q1422403	HLI	2,4,5-TRICHLOROPHENOL			BDL	50.	ug/L		
BLA02	Q1422403	HLI	2,4,6-TRICHLOROPHENOL			BDL	10.	ug/L		
BLA02	Q1422403	HLI	2-FLUOROPHENOL						61	
BLA02	Q1422403	HLI	PHENOL-D5						52	
BLA02	Q1422403	HLI	NITROBENZENE-D5						86	
BLA02	Q1422403	HLI	2-FLUOROBIPHENYL						72	
BLA02	Q1422403	HLI	2,4,6-TRIBROMOPHENOL						81	
BLA02	Q1422403	HLI	TERPHENYL-D14						84	
LCS	Q1422404	HLI	Analysis Date/Time: 02-Oct-02 18:11							
LCS	Q1422404	HLI	ACENAPHTHENE	100			83.3	ug/L	83.3	
LCS	Q1422404	HLI	ACENAPHTHYLENE	100			73.1	ug/L	73.1	
LCS	Q1422404	HLI	ANTHRACENE	100			78	ug/L	78	
LCS	Q1422404	HLI	BENZO(A)PYRENE	100			76.6	ug/L	76.6	
LCS	Q1422404	HLI	BENZO(B)FLUORANTHENE (3,4-BENZOFLUO	100			85.2	ug/L	85.2	
LCS	Q1422404	HLI	BENZO(G,H,I)PERYLENE	100			62	ug/L	62	
LCS	Q1422404	HLI	BENZO(K)FLUORANTHENE	100		!	69.6	ug/L	69.6	
LCS	Q1422404	HLI	BENZYL ALCOHOL	100			85.2	ug/L	85.2	
LCS	Q1422404	HLI	BENZYLBUTYLPHTHALATE (BUTYLBENZYLPI	100			91.6	ug/L	91.6	
LCS	Q1422404	HLI	BIS(2-CHLOROETHOXY)METHANE	100			81	ug/L	81	
LCS	Q1422404	HLI	BIS(2-CHLOROETHYL)ETHER	100			76.4	ug/L	76.4	
LCS	Q1422404	HLI	BIS(2-CHLOROISOPROPYL)ETHER	100			75.1	ug/L	75.1	
LCS	Q1422404	HLI	BIS(2-ETHYLHEXYL)PHTHALATE	100			93	ug/L	93	
LCS	Q1422404	HLI	4-BROMODIPHENYL ETHER	100			75.2	ug/L	75.2	
LCS	Q1422404	HLI	CARBAZOLE	100			111	ug/L	111	
LCS	Q1422404	HLI	4-CHLOROANILINE	100		!	185	ug/L	185	
LCS	Q1422404	HLI	2-CHLORONAPHTHALENE	100			102	ug/L	102	
LCS	Q1422404	HLI	4-CHLOROPHENYL-PHENYLETHER	100			77.9	ug/L	77.9	
LCS	Q1422404	HLI	CHRYSENE	100			84.6	ug/L	84.6	
LCS	Q1422404	HLI	DIBENZ(A,H)ANTHRACENE	100			73.9	ug/L	73.9	
LCS	Q1422404	HLI	DIBENZOFURAN	100			88.2	ug/L	88.2	
LCS	Q1422404	HLI	1,2-DICHLOROBENZENE (O-DICHLOROBENZ	100			61.7	ug/L	61.7	

HERITAGE ENVIRONMENTAL SERVICES, LLC

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270C **O505.3** (cont.)
Prep : GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C

R440600 Analyst: L CALLAHAN Run Date: 02-Oct-02 Instrument: GC/MS SVOA (cont.)
Analytical Reviewer: L SMITH Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
LCS	Q1422404	HLI	1,3-DICHLOROBENZENE (M-DICHLOROBENZ	100			59.9	ug/L	59.9	
LCS	Q1422404	HLI	1,4-DICHLOROBENZENE (P-DICHLOROBENZ	100			66.3	ug/L	66.3	
LCS	Q1422404	HLI	3,3'-DICHLOROBENZIDINE	100			137	ug/L	137	
LCS	Q1422404	HLI	DIETHYLPHTHALATE	100			90	ug/L	90	
LCS	Q1422404	HLI	DIMETHYLPHTHALATE	100			85.5	ug/L	85.5	
LCS	Q1422404	HLI	DI-N-BUTYLPHTHALATE	100			79.3	ug/L	79.3	
LCS	Q1422404	HLI	2,4-DINITROTOLUENE	100			87.2	ug/L	87.2	
LCS	Q1422404	HLI	2,6-DINITROTOLUENE	100			81.1	ug/L	81.1	
LCS	Q1422404	HLI	DI-N-OCTYLPHTHALATE	100			105	ug/L	105	
LCS	Q1422404	HLI	FLUORANTHENE	100			76.9	ug/L	76.9	
LCS	Q1422404	HLI	FLUORENE	100			82.3	ug/L	82.3	
LCS	Q1422404	HLI	HEXACHLOROBENZENE	100			78.3	ug/L	78.3	
LCS	Q1422404	HLI	HEXACHLOROBUTADIENE	100			56.1	ug/L	56.1	
LCS	Q1422404	HLI	HEXACHLOROCYCLOPENTADIENE	100			41.1	ug/L	41.1	
LCS	Q1422404	HLI	HEXACHLOROETHANE	100		!	52.1	ug/L	52.1	
LCS	Q1422404	HLI	INDENO(1,2,3-CD)PYRENE	100			67.6	ug/L	67.6	
LCS	Q1422404	HLI	ISOPHORONE	100			78.7	ug/L	78.7	
LCS	Q1422404	HLI	2-METHYLNAPHTHALENE	100			87.5	ug/L	87.5	
LCS	Q1422404	HLI	NAPHTHALENE	100			73.8	ug/L	73.8	
LCS	Q1422404	HLI	2-NITROANILINE (O-NITROANILINE)	100			93	ug/L	93	
LCS	Q1422404	HLI	3-NITROANILINE (M-NITROANILINE)	100			169	ug/L	169	
LCS	Q1422404	HLI	4-NITROANILINE (P-NITROANILINE)	100			144	ug/L	144	
LCS	Q1422404	HLI	NITROBENZENE	100			77.1	ug/L	77.1	
LCS	Q1422404	HLI	N-NITROSODIPHENYLAMINE	100			115	ug/L	115	
LCS	Q1422404	HLI	N-NITROSO-DI-N-PROPYLAMINE	100			74.1	ug/L	74.1	
LCS	Q1422404	HLI	PHENANTHRENE	100			78.6	ug/L	78.6	
LCS	Q1422404	HLI	2-PICOLINE	100			43.2	ug/L	43.2	
LCS	Q1422404	HLI	PYRENE	100			95.5	ug/L	95.5	
LCS	Q1422404	HLI	PYRIDINE	100			31.7	ug/L	31.7	
LCS	Q1422404	HLI	1,2,4,5-TETRACHLOROBENZENE	100			72.2	ug/L	72.2	
LCS	Q1422404	HLI	1,2,4-TRICHLOROBENZENE	100			67	ug/L	67	
LCS	Q1422404	HLI	BENZOIC ACID	100			24	ug/L	24	
LCS	Q1422404	HLI	4-CHLORO-3-METHYLPHENOL (P-CHLORO-M	100			86	ug/L	86	
LCS	Q1422404	HLI	2-CHLOROPHENOL	100			79	ug/L	79	
LCS	Q1422404	HLI	2,4-DICHLOROPHENOL	100			80.3	ug/L	80.3	
LCS	Q1422404	HLI	2,4-DIMETHYLPHENOL	100			78.7	ug/L	78.7	
LCS	Q1422404	HLI	2,4-DINITROPHENOL	100			64	ug/L	64	
LCS	Q1422404	HLI	2-METHYLPHENOL (O-CRESOL)	100			70.8	ug/L	70.8	
LCS	Q1422404	HLI	4-METHYLPHENOL (P-CRESOL)	100			71.4	ug/L	71.4	
LCS	Q1422404	HLI	2-NITROPHENOL	100			79.2	ug/L	79.2	
LCS	Q1422404	HLI	4-NITROPHENOL	100			54.7	ug/L	54.7	
LCS	Q1422404	HLI	PENTACHLOROPHENOL	100			77.9	ug/L	77.9	
LCS	Q1422404	HLI	PHENOL	100			55.1	ug/L	55.1	
LCS	Q1422404	HLI	2,3,4,6-TETRACHLOROPHENOL	100			79.3	ug/L	79.3	
LCS	Q1422404	HLI	2,4,5-TRICHLOROPHENOL	100			79.2	ug/L	79.2	
LCS	Q1422404	HLI	2,4,6-TRICHLOROPHENOL	100			78.4	ug/L	78.4	
SAMPLE	A607630		Analysis Date/Time: 02-Oct-02 18:52							
SAMPLE	A607630		See Certificate of Analysis, Rep: 0							
SAMPLE	A607631		Analysis Date/Time: 02-Oct-02 19:33							
SAMPLE	A607631		See Certificate of Analysis, Rep: 0							
SAMPLE	A607632		Analysis Date/Time: 02-Oct-02 20:13							
SAMPLE	A607632		See Certificate of Analysis, Rep: 0							
SAMPLE	A607633		Analysis Date/Time: 02-Oct-02 20:54							

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270C **O505.3** (cont.)
Prep : GC/MS SEPARATORY FUNNEL LIQUID-LIQUID-EXTRACTION SW846-3510C

R440600 Analyst: L CALLAHAN Run Date: 02-Oct-02 Instrument: GC/MS SVOA (cont.)
Analytical Reviewer: L SMITH Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SAMPLE	A607633		See Certificate of Analysis, Rep: 0							

R440626 Analyst: J MINNIEAR, II Run Date: 02-Oct-02 Instrument: GC/MS SVOA
Analytical Reviewer: L SMITH Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SAMPLE	A607634		Analysis Date/Time: 02-Oct-02 16:20							
SAMPLE	A607634		See Certificate of Analysis, Rep: 0							
SAMPLE	A607635		Analysis Date/Time: 02-Oct-02 16:58							
SAMPLE	A607635		See Certificate of Analysis, Rep: 0							
SAMPLE	A607636		Analysis Date/Time: 02-Oct-02 17:35							
SAMPLE	A607636		See Certificate of Analysis, Rep: 0							
CAL01	Q1422785		Analysis Date/Time: 02-Oct-02 09:55							
CAL01	Q1422785		PYRIDINE	0.9548						3.7
CAL01	Q1422785		2-PICOLINE	1.2530						8.4
CAL01	Q1422785		PHENOL	1.0315						17.2
CAL01	Q1422785		BIS(2-CHLOROETHYL)ETHER	1.0398						8.6
CAL01	Q1422785		2-CHLOROPHENOL	1.1537						16.5
CAL01	Q1422785		1,3-DICHLOROBENZENE (M-DICHLOROBE	1.4900						10.9
CAL01	Q1422785		1,4-DICHLOROBENZENE (P-DICHLOROBEI	1.4419						12.7
CAL01	Q1422785		1,2-DICHLOROBENZENE (O-DICHLOROBEI	1.3328						15.6
CAL01	Q1422785		BENZYL ALCOHOL	0.7031						4.9
CAL01	Q1422785		2-METHYLPHENOL (O-CRESOL)	1.0509						8.6
CAL01	Q1422785		BIS(2-CHLOROISOPROPYL)ETHER	2.2850						11.7
CAL01	Q1422785		N-NITROSO-DI-N-PROPYLAMINE	0.6061						11.1
CAL01	Q1422785		4-METHYLPHENOL (P-CRESOL)	1.0182						9.9
CAL01	Q1422785		HEXACHLOROETHANE	0.4999						10.2
CAL01	Q1422785		NITROBENZENE	0.2828						13.3
CAL01	Q1422785		ISOPHORONE	0.4606						9.7
CAL01	Q1422785		2-NITROPHENOL	0.1924						3.6
CAL01	Q1422785		2,4-DIMETHYLPHENOL	0.2510						13.5
CAL01	Q1422785		BIS(2-CHLOROETHOXY)METHANE	0.3114						10.1
CAL01	Q1422785		2,4-DICHLOROPHENOL	0.2378						8.4
CAL01	Q1422785		BENZOIC ACID	0.1568						20.5
CAL01	Q1422785		1,2,4-TRICHLOROBENZENE	0.2839						10.7
CAL01	Q1422785		NAPHTHALENE	0.8899						18.8
CAL01	Q1422785		4-CHLOROANILINE	0.1958						8.1
CAL01	Q1422785		HEXACHLOROBUTADIENE	0.1249						11.4
CAL01	Q1422785		4-CHLORO-3-METHYLPHENOL (P-CHLORC	0.1596						17.7
CAL01	Q1422785		2-METHYLNAPHTHALENE	0.6689						20.8
CAL01	Q1422785		HEXACHLOROCYCLOPENTADIENE	0.2289						6.2
CAL01	Q1422785		1,2,4,5-TETRACHLOROBENZENE	0.4693						13.9
CAL01	Q1422785		2,4,6-TRICHLOROPHENOL	0.3206						8.5
CAL01	Q1422785		2,4,5-TRICHLOROPHENOL	0.3080						5.4
CAL01	Q1422785		2-CHLORONAPHTHALENE	1.0992						15.4
CAL01	Q1422785		2-NITROANILINE (O-NITROANILINE)	0.2543						13.7
CAL01	Q1422785		DIMETHYLPHTHALATE	1.0214						16.9
CAL01	Q1422785		2,6-DINITROTOLUENE	0.2622						9.7
CAL01	Q1422785		ACENAPHTHYLENE	1.6087						19.2
CAL01	Q1422785		3-NITROANILINE (M-NITROANILINE)	0.1505						15.2
CAL01	Q1422785		ACENAPHTHENE	1.0250						17.1
CAL01	Q1422785		2,4-DINITROPHENOL	0.0925						38.5
CAL01	Q1422785		4-NITROPHENOL	0.0709						20.2

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270C **O505.3** (cont.)
Prep : GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C

R440626 Analyst: J MINNIEAR, II Run Date: 02-Oct-02 Instrument: GC/MS SVOA (cont.)
Analytical Reviewer: L SMITH Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
CAL01	Q1422785		DIBENZOFURAN	1.3527						14
CAL01	Q1422785		2,4-DINITROTOLUENE	0.3093						6.8
CAL01	Q1422785		2,3,4,6-TETRACHLOROPHENOL	0.1656						6
CAL01	Q1422785		DIETHYLPHTHALATE	0.9599						19.7
CAL01	Q1422785		FLUORENE	1.0549						13.5
CAL01	Q1422785		4-CHLOROPHENYL-PHENYLETHER	0.4421						17.5
CAL01	Q1422785		4-NITROANILINE (P-NITROANILINE)	0.1669						8.3
CAL01	Q1422785		N-NITROSODIPHENYLAMINE	0.5462						17.1
CAL01	Q1422785		4-BROMODIPHENYL ETHER	0.1549						15.5
CAL01	Q1422785		HEXACHLOROBENZENE	0.1247						13.7
CAL01	Q1422785		PENTACHLOROPHENOL	0.0600						15.7
CAL01	Q1422785		PHENANTHRENE	0.9727						12.8
CAL01	Q1422785		ANTHRACENE	1.0308						12.5
CAL01	Q1422785		CARBAZOLE	0.7327						12.1
CAL01	Q1422785		DI-N-BUTYLPHTHALATE	1.1681						11.1
CAL01	Q1422785		FLUORANTHENE	0.8493						6.1
CAL01	Q1422785		PYRENE	1.6871						11.7
CAL01	Q1422785		BENZYLBUTYLPHTHALATE (BUTYLBENZY	0.8775						6.1
CAL01	Q1422785		3,3'-DICHLOROBENZIDINE	0.1533						8.4
CAL01	Q1422785		CHRYSENE	1.0975						14
CAL01	Q1422785		BIS(2-ETHYLHEXYL)PHTHALATE	1.2190						6.7
CAL01	Q1422785		DI-N-OCTYLPHTHALATE	3.1050						9.2
CAL01	Q1422785		BENZO(B)FLUORANTHENE (3,4-BENZOFL	1.1847						8.3
CAL01	Q1422785		BENZO(K)FLUORANTHENE	1.2571						11
CAL01	Q1422785		BENZO(A)PYRENE	1.0946						3
CAL01	Q1422785		INDENO(1,2,3-CD)PYRENE	0.8559						4.1
CAL01	Q1422785		DIBENZ(A,H)ANTHRACENE	0.7048						4.1
CAL01	Q1422785		BENZO(G,H,I)PERYLENE	0.7338						4.5
CAL01	Q1422785		2-FLUOROPHENOL	1.0594						10.2
CAL01	Q1422785		PHENOL-D5	0.9855						22
CAL01	Q1422785		NITROBENZENE-D5	0.2608						6.7
CAL01	Q1422785		2-FLUOROBIPHENYL	1.1951						17.1
CAL01	Q1422785		2,4,6-TRIBROMOPHENOL	0.0488						6.3
CAL01	Q1422785		TERPHENYL-D14	0.8138						13.9

R440815 Analyst: C WILLHITE Run Date: 04-Oct-02 Instrument: GC/MS SVOA
Analytical Reviewer: L CALLAHAN Review Date: 07-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SPI02	Q1422407	A607755	Analysis Date/Time: 04-Oct-02 18:40							
SPI02	Q1422407	A607755	ACENAPHTHENE	0	200		180	ug/L	90	
SPI02	Q1422407	A607755	ACENAPHTHYLENE	0	200		180	ug/L	90	
SPI02	Q1422407	A607755	ANTHRACENE	0	200		179	ug/L	89.5	
SPI02	Q1422407	A607755	BENZO(A)PYRENE	0	200		195	ug/L	97.5	
SPI02	Q1422407	A607755	BENZO(B)FLUORANTHENE (3,4-BENZOFLUO	0	200		207	ug/L	103.5	
SPI02	Q1422407	A607755	BENZO(G,H,I)PERYLENE	0	200		196	ug/L	98	
SPI02	Q1422407	A607755	BENZO(K)FLUORANTHENE	0	200		184	ug/L	92	
SPI02	Q1422407	A607755	BENZYL ALCOHOL	0	200		175	ug/L	87.5	
SPI02	Q1422407	A607755	BENZYLBUTYLPHTHALATE (BUTYLBENZYLPH	0	200		186	ug/L	93	
SPI02	Q1422407	A607755	BIS(2-CHLOROETHOXY)METHANE	0	200		183	ug/L	91.5	
SPI02	Q1422407	A607755	BIS(2-CHLOROETHYL)ETHER	0	200		149	ug/L	74.5	
SPI02	Q1422407	A607755	BIS(2-CHLOROISOPROPYL)ETHER	0	200		165	ug/L	82.5	
SPI02	Q1422407	A607755	BIS(2-ETHYLHEXYL)PHTHALATE	0	200		180	ug/L	90	

HERITAGE ENVIRONMENTAL SERVICES, LLC

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270C **O505.3** (cont.)
Prep : GC/MS SEPARATORY FUNNEL LIQUID-LIQUID-EXTRACTION SW846-3510C

R440815 Analyst: C WILLHITE Run Date: 04-Oct-02 Instrument: GC/MS SVOA (cont.)
Analytical Reviewer: L CALLAHAN Review Date: 07-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SPI02	Q1422407	A607755	4-BROMODIPHENYL ETHER	0	200		178	ug/L	89	
SPI02	Q1422407	A607755	CARBAZOLE	0	200		237	ug/L	118.5	
SPI02	Q1422407	A607755	4-CHLOROANILINE	0	200		256	ug/L	128	
SPI02	Q1422407	A607755	2-CHLORONAPHTHALENE	0	200		227	ug/L	113.5	
SPI02	Q1422407	A607755	4-CHLOROPHENYL-PHENYLETHER	0	200		175	ug/L	87.5	
SPI02	Q1422407	A607755	CHRYSENE	0	200		191	ug/L	95.5	
SPI02	Q1422407	A607755	DIBENZ(A,H)ANTHRACENE	0	200		200	ug/L	100	
SPI02	Q1422407	A607755	DIBENZOFURAN	0	200		188	ug/L	94	
SPI02	Q1422407	A607755	1,2-DICHLOROBENZENE (O-DICHLOROBENZ	0	200		154	ug/L	77	
SPI02	Q1422407	A607755	1,3-DICHLOROBENZENE (M-DICHLOROBENZ	0	200		151	ug/L	75.5	
SPI02	Q1422407	A607755	1,4-DICHLOROBENZENE (P-DICHLOROBENZ	0	200		160	ug/L	80	
SPI02	Q1422407	A607755	3,3'-DICHLOROBENZIDINE	0	200		212	ug/L	106	
SPI02	Q1422407	A607755	DIETHYLPHTHALATE	0	200		182	ug/L	91	
SPI02	Q1422407	A607755	DIMETHYLPHTHALATE	0	200		185	ug/L	92.5	
SPI02	Q1422407	A607755	DI-N-BUTYLPHTHALATE	0	200		172	ug/L	86	
SPI02	Q1422407	A607755	2,4-DINITROTOLUENE	0	200		212	ug/L	106	
SPI02	Q1422407	A607755	2,6-DINITROTOLUENE	0	200		204	ug/L	102	
SPI02	Q1422407	A607755	DI-N-OCTYLPHTHALATE	0	200		187	ug/L	93.5	
SPI02	Q1422407	A607755	FLUORANTHENE	0	200		184	ug/L	92	
SPI02	Q1422407	A607755	FLUORENE	0	200		168	ug/L	84	
SPI02	Q1422407	A607755	HEXACHLOROBENZENE	0	200		178	ug/L	89	
SPI02	Q1422407	A607755	HEXACHLOROBUTADIENE	0	200		162	ug/L	81	
SPI02	Q1422407	A607755	HEXACHLOROCYCLOPENTADIENE	0	200		180	ug/L	90	
SPI02	Q1422407	A607755	HEXACHLOROETHANE	0	200		146	ug/L	73	
SPI02	Q1422407	A607755	INDENO(1,2,3-CD)PYRENE	0	200		198	ug/L	99	
SPI02	Q1422407	A607755	ISOPHORONE	0	200		190	ug/L	95	
SPI02	Q1422407	A607755	2-METHYLNAPHTHALENE	0	200		172	ug/L	86	
SPI02	Q1422407	A607755	NAPHTHALENE	0	200		161	ug/L	80.5	
SPI02	Q1422407	A607755	2-NITROANILINE (O-NITROANILINE)	0	200		205	ug/L	102.5	
SPI02	Q1422407	A607755	3-NITROANILINE (M-NITROANILINE)	0	200		309	ug/L	154.5	
SPI02	Q1422407	A607755	4-NITROANILINE (P-NITROANILINE)	0	200		292	ug/L	146	
SPI02	Q1422407	A607755	NITROBENZENE	0	200		177	ug/L	88.5	
SPI02	Q1422407	A607755	N-NITROSODIPHENYLAMINE	0	200		173	ug/L	86.5	
SPI02	Q1422407	A607755	N-NITROSO-DI-N-PROPYLAMINE	0	200		173	ug/L	86.5	
SPI02	Q1422407	A607755	PHENANTHRENE	0	200		178	ug/L	89	
SPI02	Q1422407	A607755	2-PICOLINE	0	200		71.4	ug/L	35.7	
SPI02	Q1422407	A607755	PYRENE	0	200		183	ug/L	91.5	
SPI02	Q1422407	A607755	PYRIDINE	0	200		70.8	ug/L	35.4	
SPI02	Q1422407	A607755	1,2,4,5-TETRACHLOROBENZENE	0	200		162	ug/L	81	
SPI02	Q1422407	A607755	1,2,4-TRICHLOROBENZENE	0	200		169	ug/L	84.5	
SPI02	Q1422407	A607755	BENZOIC ACID	0	200		112	ug/L	56	
SPI02	Q1422407	A607755	4-CHLORO-3-METHYLPHENOL (P-CHLORO-M	0	200		186	ug/L	93	
SPI02	Q1422407	A607755	2-CHLOROPHENOL	0	200		162	ug/L	81	
SPI02	Q1422407	A607755	2,4-DICHLOROPHENOL	0	200		185	ug/L	92.5	
SPI02	Q1422407	A607755	2,4-DIMETHYLPHENOL	0	200		142	ug/L	71	
SPI02	Q1422407	A607755	2,4-DINITROPHENOL	0	200		266	ug/L	133	
SPI02	Q1422407	A607755	2-METHYLPHENOL (O-CRESOL)	0	200		160	ug/L	80	
SPI02	Q1422407	A607755	4-METHYLPHENOL (P-CRESOL)	0	200		146	ug/L	73	
SPI02	Q1422407	A607755	2-NITROPHENOL	0	200		178	ug/L	89	
SPI02	Q1422407	A607755	4-NITROPHENOL	0	200		136	ug/L	68	
SPI02	Q1422407	A607755	PENTACHLOROPHENOL	0	200		227	ug/L	113.5	
SPI02	Q1422407	A607755	PHENOL	0	200		115	ug/L	57.5	
SPI02	Q1422407	A607755	2,3,4,6-TETRACHLOROPHENOL	0	200		218	ug/L	109	

HERITAGE ENVIRONMENTAL SERVICES, LLC

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270C **O505.3** (cont.)
Prep : GC/MS SEPARATORY FUNNEL LIQUID-LIQUID-EXTRACTION SW846-3510C

R440815 Analyst: C WILLHITE Run Date: 04-Oct-02 Instrument: GC/MS SVOA (cont.)
Analytical Reviewer: L CALLAHAN Review Date: 07-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SPI02	Q1422407	A607755	2,4,5-TRICHLOROPHENOL	0	200		194	ug/L	97	
SPI02	Q1422407	A607755	2,4,6-TRICHLOROPHENOL	0	200		201	ug/L	100.5	
DPS02	Q1422408	A607755	Analysis Date/Time: 04-Oct-02 19:20							
DPS02	Q1422408	A607755	ACENAPHTHENE	0	200		171	ug/L	85.5	5.1
DPS02	Q1422408	A607755	ACENAPHTHYLENE	0	200		173	ug/L	86.5	4.1
DPS02	Q1422408	A607755	ANTHRACENE	0	200		172	ug/L	86	4.1
DPS02	Q1422408	A607755	BENZO(A)PYRENE	0	200		187	ug/L	93.5	4.4
DPS02	Q1422408	A607755	BENZO(B)FLUORANTHENE (3,4-BENZOFLUO	0	200		191	ug/L	95.5	7.8
DPS02	Q1422408	A607755	BENZO(G,H,I)PERYLENE	0	200		195	ug/L	97.5	0.4
DPS02	Q1422408	A607755	BENZO(K)FLUORANTHENE	0	200		179	ug/L	89.5	2.9
DPS02	Q1422408	A607755	BENZYL ALCOHOL	0	200		168	ug/L	84	4
DPS02	Q1422408	A607755	BENZYLBUTYLPHTHALATE (BUTYLBENZYLPH	0	200		174	ug/L	87	6.6
DPS02	Q1422408	A607755	BIS(2-CHLOROETHOXY)METHANE	0	200		177	ug/L	88.5	3.1
DPS02	Q1422408	A607755	BIS(2-CHLOROETHYL)ETHER	0	200		144	ug/L	72	3.7
DPS02	Q1422408	A607755	BIS(2-CHLOROISOPROPYL)ETHER	0	200		157	ug/L	78.5	5
DPS02	Q1422408	A607755	BIS(2-ETHYLHEXYL)PHTHALATE	0	200		170	ug/L	85	5.6
DPS02	Q1422408	A607755	4-BROMODIPHENYL ETHER	0	200		174	ug/L	87	2.4
DPS02	Q1422408	A607755	CARBAZOLE	0	200		223	ug/L	111.5	6.2
DPS02	Q1422408	A607755	4-CHLOROANILINE	0	200		249	ug/L	124.5	2.9
DPS02	Q1422408	A607755	2-CHLORONAPHTHALENE	0	200		218	ug/L	109	4
DPS02	Q1422408	A607755	4-CHLOROPHENYL-PHENYLETHER	0	200		167	ug/L	83.5	4.8
DPS02	Q1422408	A607755	CHRYSENE	0	200		181	ug/L	90.5	5.6
DPS02	Q1422408	A607755	DIBENZ(A,H)ANTHRACENE	0	200		198	ug/L	99	1.2
DPS02	Q1422408	A607755	DIBENZOFURAN	0	200		179	ug/L	89.5	4.9
DPS02	Q1422408	A607755	1,2-DICHLOROBENZENE (O-DICHLOROBENZ	0	200		150	ug/L	75	2.6
DPS02	Q1422408	A607755	1,3-DICHLOROBENZENE (M-DICHLOROBENZ	0	200		147	ug/L	73.5	2.8
DPS02	Q1422408	A607755	1,4-DICHLOROBENZENE (P-DICHLOROBENZ	0	200		156	ug/L	78	2.4
DPS02	Q1422408	A607755	3,3'-DICHLOROBENZIDINE	0	200		203	ug/L	101.5	4.3
DPS02	Q1422408	A607755	DIETHYLPHTHALATE	0	200		171	ug/L	85.5	6.3
DPS02	Q1422408	A607755	DIMETHYLPHTHALATE	0	200		174	ug/L	87	6.1
DPS02	Q1422408	A607755	DI-N-BUTYLPHTHALATE	0	200		162	ug/L	81	6.1
DPS02	Q1422408	A607755	2,4-DINITROTOLUENE	0	200		197	ug/L	98.5	7.3
DPS02	Q1422408	A607755	2,6-DINITROTOLUENE	0	200		190	ug/L	95	7.1
DPS02	Q1422408	A607755	DI-N-OCTYLPHTHALATE	0	200		173	ug/L	86.5	7.9
DPS02	Q1422408	A607755	FLUORANTHENE	0	200		175	ug/L	87.5	5.2
DPS02	Q1422408	A607755	FLUORENE	0	200		160	ug/L	80	4.9
DPS02	Q1422408	A607755	HEXACHLOROBENZENE	0	200		171	ug/L	85.5	3.8
DPS02	Q1422408	A607755	HEXACHLOROBUTADIENE	0	200		160	ug/L	80	1.4
DPS02	Q1422408	A607755	HEXACHLOROCYCLOPENTADIENE	0	200		185	ug/L	92.5	2.7
DPS02	Q1422408	A607755	HEXACHLOROETHANE	0	200		144	ug/L	72	1.4
DPS02	Q1422408	A607755	INDENO(1,2,3-CD)PYRENE	0	200		193	ug/L	96.5	2.5
DPS02	Q1422408	A607755	ISOPHORONE	0	200		182	ug/L	91	4.2
DPS02	Q1422408	A607755	2-METHYLNAPHTHALENE	0	200		167	ug/L	83.5	2.8
DPS02	Q1422408	A607755	NAPHTHALENE	0	200		156	ug/L	78	3.3
DPS02	Q1422408	A607755	2-NITROANILINE (O-NITROANILINE)	0	200		197	ug/L	98.5	4
DPS02	Q1422408	A607755	3-NITROANILINE (M-NITROANILINE)	0	200		288	ug/L	144	7.1
DPS02	Q1422408	A607755	4-NITROANILINE (P-NITROANILINE)	0	200		261	ug/L	130.5	11.3
DPS02	Q1422408	A607755	NITROBENZENE	0	200		173	ug/L	86.5	2.5
DPS02	Q1422408	A607755	N-NITROSODIPHENYLAMINE	0	200		167	ug/L	83.5	3.5
DPS02	Q1422408	A607755	N-NITROSO-DI-N-PROPYLAMINE	0	200		171	ug/L	85.5	0.9
DPS02	Q1422408	A607755	PHENANTHRENE	0	200		170	ug/L	85	4.4
DPS02	Q1422408	A607755	2-PICOLINE	0	200		62.4	ug/L	31.2	13.5
DPS02	Q1422408	A607755	PYRENE	0	200		170	ug/L	85	7.1

HERITAGE ENVIRONMENTAL SERVICES, LLC

SEMI-VOLATILE ORGANICS (BASE/NEUTRAL/ACID FRACTIONS) SW846-8270C **O505.3** (cont.)
Prep : GC/MS SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION SW846-3510C

R440815 Analyst: C WILLHITE Run Date: 04-Oct-02 Instrument: GC/MS SVOA (cont.)
Analytical Reviewer: L CALLAHAN Review Date: 07-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
DPS02	Q1422408	A607755	PYRIDINE	0	200		60	ug/L	30	16.5
DPS02	Q1422408	A607755	1,2,4,5-TETRACHLOROBENZENE	0	200		158	ug/L	79	2.6
DPS02	Q1422408	A607755	1,2,4-TRICHLOROBENZENE	0	200		165	ug/L	82.5	2.3
DPS02	Q1422408	A607755	BENZOIC ACID	0	200		101	ug/L	50.5	10.3
DPS02	Q1422408	A607755	4-CHLORO-3-METHYLPHENOL (P-CHLORO-M	0	200		179	ug/L	89.5	3.6
DPS02	Q1422408	A607755	2-CHLOROPHENOL	0	200		155	ug/L	77.5	4.2
DPS02	Q1422408	A607755	2,4-DICHLOROPHENOL	0	200		181	ug/L	90.5	2.4
DPS02	Q1422408	A607755	2,4-DIMETHYLPHENOL	0	200		138	ug/L	69	2.6
DPS02	Q1422408	A607755	2,4-DINITROPHENOL	0	200		261	ug/L	130.5	1.7
DPS02	Q1422408	A607755	2-METHYLPHENOL (O-CRESOL)	0	200		152	ug/L	76	5.1
DPS02	Q1422408	A607755	4-METHYLPHENOL (P-CRESOL)	0	200		137	ug/L	68.5	6.6
DPS02	Q1422408	A607755	2-NITROPHENOL	0	200		174	ug/L	87	2.5
DPS02	Q1422408	A607755	4-NITROPHENOL	0	200		123	ug/L	61.5	10.2
DPS02	Q1422408	A607755	PENTACHLOROPHENOL	0	200		219	ug/L	109.5	3.7
DPS02	Q1422408	A607755	PHENOL	0	200		104	ug/L	52	10.4
DPS02	Q1422408	A607755	2,3,4,6-TETRACHLOROPHENOL	0	200		206	ug/L	103	5.6
DPS02	Q1422408	A607755	2,4,5-TRICHLOROPHENOL	0	200		185	ug/L	92.5	4.9
DPS02	Q1422408	A607755	2,4,6-TRICHLOROPHENOL	0	200		192	ug/L	96	4.4

Qualifiers

! Outside Lab Generated Control Limits
BDL Below Detection Limit

VOLATILE ORGANICS SW846-8240B **O510.3**

R440660 Analyst: R SHAMP Run Date: 02-Oct-02 Instrument: GC/MS VOA
Analytical Reviewer: H WILLIAMS Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
CCVD	Q1423020		Analysis Date/Time: 02-Oct-02 06:06							
CCVD	Q1423020		DICHLORODIFLUOROMETHANE	0.2413			0.1436			40.5
CCVD	Q1423020		CHLOROMETHANE	0.4497			0.4432			1.4
CCVD	Q1423020		VINYL CHLORIDE	0.2516			0.2237			11.1
CCVD	Q1423020		BROMOMETHANE	0.0983			0.1139			15.9
CCVD	Q1423020		CHLOROETHANE	0.1287			0.1365			6.1
CCVD	Q1423020		TRICHLOROFLUOROMETHANE	0.2768			0.2703			2.3
CCVD	Q1423020		ACROLEIN	0.0168			0.0122			27.4
CCVD	Q1423020		1,1-DICHLOROETHENE	0.2173			0.2092			3.7
CCVD	Q1423020		ACETONE (2-PROPANONE)	0.1051			0.1111			5.7
CCVD	Q1423020		CARBON DISULFIDE	0.6863			0.7158			4.3
CCVD	Q1423020		DICHLOROMETHANE (METHYLENE CHLOI	0.3528			0.3493			1
CCVD	Q1423020		ACRYLONITRILE	0.0639			0.0529			17.2
CCVD	Q1423020		1,1-DICHLOROETHANE	0.5173			0.5648			9.2
CCVD	Q1423020		VINYL ACETATE	0.9740			1.0121			3.9
CCVD	Q1423020		METHYL ETHYL KETONE	0.1609			0.1669			3.7
CCVD	Q1423020		TETRAHYDROFURAN	0.0791			0.0840			6.2
CCVD	Q1423020		CHLOROFORM	0.4607			0.5454			18.4
CCVD	Q1423020		1,1,1-TRICHLOROETHANE	0.3961			0.3913			1.2
CCVD	Q1423020		CARBON TETRACHLORIDE	0.3046			0.2609			14.3
CCVD	Q1423020		BENZENE	1.0408			1.1833			13.7
CCVD	Q1423020		1,2-DICHLOROETHANE	0.4087			0.4651			13.8
CCVD	Q1423020		TRICHLOROETHENE	0.2930			0.3239			10.5
CCVD	Q1423020		1,2-DICHLOROPROPANE	0.3116			0.3284			5.4

VOLATILE ORGANICS SW846-8240B **O510.3** (cont.)

R440660 Analyst: R SHAMP Run Date: 02-Oct-02 Instrument: GC/MS VOA (cont.)
Analytical Reviewer: H WILLIAMS Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
CCVD	Q1423020		CIS-1,3-DICHLOROPROPENE	0.4023			0.3899			3.1
CCVD	Q1423020		TOLUENE	1.0977			1.1595			5.6
CCVD	Q1423020		TRANS-1,3-DICHLOROPROPENE	0.3387			0.3194			5.7
CCVD	Q1423020		1,1,2-TRICHLOROETHANE	0.2552			0.2901			13.7
CCVD	Q1423020		TETRACHLOROETHENE	0.7138			0.7206			1
CCVD	Q1423020		2-HEXANONE	0.5103			0.4426			13.3
CCVD	Q1423020		DIBROMOCHLOROMETHANE	0.5806			0.4972			14.4
CCVD	Q1423020		CHLOROBENZENE	1.7708			1.7300			2.3
CCVD	Q1423020		ETHYL BENZENE	0.8870			0.7635			13.9
CCVD	Q1423020		STYRENE	1.5729			1.4682			6.7
CCVD	Q1423020		BROMOFORM	0.3333			0.2549			23.5
CCVD	Q1423020		1,1,2,2-TETRACHLOROETHANE	0.7002			0.7603			8.6
CCVD	Q1423020		DICHLOROETHANE-D4	0.3407			0.3978			16.8
CCVD	Q1423020		TOLUENE-D8	1.1264			1.1777			4.6
CCVD	Q1423020		4-BROMOFLUOROBENZENE	1.0740			1.0012			6.8
BLA01	Q1423021		Analysis Date/Time: 02-Oct-02 07:12							
BLA01	Q1423021		DICHLORODIFLUOROMETHANE			BDL	1.0	ug/L		
BLA01	Q1423021		CHLOROMETHANE			BDL	1.0	ug/L		
BLA01	Q1423021		VINYL CHLORIDE			BDL	1.0	ug/L		
BLA01	Q1423021		BROMOMETHANE			BDL	1.0	ug/L		
BLA01	Q1423021		CHLOROETHANE			BDL	1.0	ug/L		
BLA01	Q1423021		TRICHLOROFLUOROMETHANE			BDL	1.0	ug/L		
BLA01	Q1423021		ACROLEIN			BDL	25.	ug/L		
BLA01	Q1423021		1,1-DICHLOROETHENE			BDL	1.0	ug/L		
BLA01	Q1423021		ACETONE (2-PROPANONE)			BDL	10.	ug/L		
BLA01	Q1423021		CARBON DISULFIDE			BDL	1.0	ug/L		
BLA01	Q1423021		DICHLOROMETHANE (METHYLENE CHLORIDE			BDL	1.0	ug/L		
BLA01	Q1423021		ACRYLONITRILE			BDL	5.0	ug/L		
BLA01	Q1423021		1,1-DICHLOROETHANE			BDL	1.0	ug/L		
BLA01	Q1423021		VINYL ACETATE			BDL	1.0	ug/L		
BLA01	Q1423021		METHYL ETHYL KETONE			BDL	5.0	ug/L		
BLA01	Q1423021		TETRAHYDROFURAN			BDL	20.	ug/L		
BLA01	Q1423021		CHLOROFORM			BDL	1.0	ug/L		
BLA01	Q1423021		1,1,1-TRICHLOROETHANE			BDL	1.0	ug/L		
BLA01	Q1423021		CARBON TETRACHLORIDE			BDL	1.0	ug/L		
BLA01	Q1423021		BENZENE			BDL	1.0	ug/L		
BLA01	Q1423021		1,2-DICHLOROETHANE			BDL	1.0	ug/L		
BLA01	Q1423021		TRICHLOROETHENE			BDL	1.0	ug/L		
BLA01	Q1423021		1,2-DICHLOROPROPANE			BDL	1.0	ug/L		
BLA01	Q1423021		CIS-1,3-DICHLOROPROPENE			BDL	1.0	ug/L		
BLA01	Q1423021		TOLUENE			BDL	1.0	ug/L		
BLA01	Q1423021		TRANS-1,3-DICHLOROPROPENE			BDL	1.0	ug/L		
BLA01	Q1423021		1,1,2-TRICHLOROETHANE			BDL	1.0	ug/L		
BLA01	Q1423021		TETRACHLOROETHENE			BDL	1.0	ug/L		
BLA01	Q1423021		2-HEXANONE			BDL	5.0	ug/L		
BLA01	Q1423021		DIBROMOCHLOROMETHANE			BDL	1.0	ug/L		
BLA01	Q1423021		CHLOROBENZENE			BDL	1.0	ug/L		
BLA01	Q1423021		ETHYL BENZENE			BDL	1.0	ug/L		
BLA01	Q1423021		STYRENE			BDL	1.0	ug/L		
BLA01	Q1423021		BROMOFORM			BDL	1.0	ug/L		
BLA01	Q1423021		1,1,2,2-TETRACHLOROETHANE			BDL	1.0	ug/L		
BLA01	Q1423021		DICHLOROETHANE-D4						123	
BLA01	Q1423021		TOLUENE-D8						100	

VOLATILE ORGANICS SW846-8240B **O510.3** (cont.)

R440660 Analyst: R SHAMP Run Date: 02-Oct-02 Instrument: GC/MS VOA (cont.)
Analytical Reviewer: H WILLIAMS Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
BLA01	Q1423021		4-BROMOFLUOROBENZENE						115	
LCS01	Q1423022		Analysis Date/Time: 02-Oct-02 07:45							
LCS01	Q1423022		BROMOMETHANE	10			11.3	ug/L	113	
LCS01	Q1423022		ACRYLONITRILE	100			81.4	ug/L	81.4	
SAMPLE	A607631		Analysis Date/Time: 02-Oct-02 12:37							
SAMPLE	A607631		See Certificate of Analysis, Rep: 0							
SAMPLE	A607632		Analysis Date/Time: 02-Oct-02 13:06							
SAMPLE	A607632		See Certificate of Analysis, Rep: 0							
SAMPLE	A607633		Analysis Date/Time: 02-Oct-02 13:35							
SAMPLE	A607633		See Certificate of Analysis, Rep: 0							
SAMPLE	A607634		Analysis Date/Time: 02-Oct-02 14:05							
SAMPLE	A607634		See Certificate of Analysis, Rep: 0							
SAMPLE	A607635		Analysis Date/Time: 02-Oct-02 14:34							
SAMPLE	A607635		See Certificate of Analysis, Rep: 0							
SAMPLE	A607636		Analysis Date/Time: 02-Oct-02 15:03							
SAMPLE	A607636		See Certificate of Analysis, Rep: 0							
SPI01	Q1423023	A607639	Analysis Date/Time: 02-Oct-02 17:00							
SPI01	Q1423023	A607639	BENZENE	0	10		13.2	ug/L	132	
SPI01	Q1423023	A607639	CARBON TETRACHLORIDE	0	10		12.3	ug/L	123	
SPI01	Q1423023	A607639	1,2-DICHLOROETHANE	0	10		12.3	ug/L	123	
SPI01	Q1423023	A607639	1,1-DICHLOROETHENE	0	10		12.5	ug/L	125	
SPI01	Q1423023	A607639	1,1,1-TRICHLOROETHANE	0	10		12.8	ug/L	128	
SPI01	Q1423023	A607639	TRICHLOROETHENE	0	10		12	ug/L	120	
SPI01	Q1423023	A607639	VINYL CHLORIDE	0	10		11.1	ug/L	111	
SPI01	Q1423023	A607639	BROMODICHLOROMETHANE	0	10		11.8	ug/L	118	
SPI01	Q1423023	A607639	BROMOFORM	0	10		7.99	ug/L	79.9	
SPI01	Q1423023	A607639	BROMOMETHANE	0	10		14.2	ug/L	142	
SPI01	Q1423023	A607639	CHLOROBENZENE	0	10		9.03	ug/L	90.3	
SPI01	Q1423023	A607639	DIBROMOCHLOROMETHANE	0	10		9.75	ug/L	97.5	
SPI01	Q1423023	A607639	CHLOROETHANE	0	10		11.2	ug/L	112	
SPI01	Q1423023	A607639	CHLOROFORM	0	10		13.1	ug/L	131	
SPI01	Q1423023	A607639	CHLOROMETHANE	0	10		11.3	ug/L	113	
SPI01	Q1423023	A607639	DICHLOROMETHANE (METHYLENE CHLORIDE	0	10		10.2	ug/L	102	
SPI01	Q1423023	A607639	1,1-DICHLOROETHANE	0	10		12.5	ug/L	125	
SPI01	Q1423023	A607639	1,2-DICHLOROPROPANE	0	10		11.6	ug/L	116	
SPI01	Q1423023	A607639	CIS-1,3-DICHLOROPROPENE	0	10		9.83	ug/L	98.3	
SPI01	Q1423023	A607639	TRANS-1,3-DICHLOROPROPENE	0	10		9.53	ug/L	95.3	
SPI01	Q1423023	A607639	ETHYL BENZENE	0	10		8.65	ug/L	86.5	
SPI01	Q1423023	A607639	STYRENE	0	10		8.55	ug/L	85.5	
SPI01	Q1423023	A607639	1,1,2-TRICHLOROETHANE	0	10		12.3	ug/L	123	
SPI01	Q1423023	A607639	1,1,2,2-TETRACHLOROETHANE	0	10		11.1	ug/L	111	
SPI01	Q1423023	A607639	TETRACHLOROETHENE	0	10		10.3	ug/L	103	
SPI01	Q1423023	A607639	TOLUENE	0	10		12.5	ug/L	125	
SPI01	Q1423023	A607639	DICHLORODIFLUOROMETHANE	0	10		10.4	ug/L	104	
SPI01	Q1423023	A607639	TRICHLOROFLUOROMETHANE	0	10		13.4	ug/L	134	
SPI01	Q1423023	A607639	ACROLEIN	0	100		134	ug/L	134	
SPI01	Q1423023	A607639	ACETONE (2-PROPANONE)	0	50		61.7	ug/L	123.4	
SPI01	Q1423023	A607639	ACRYLONITRILE	0	100	!	193	ug/L	193	
SPI01	Q1423023	A607639	CARBON DISULFIDE	0	10		12.4	ug/L	124	
SPI01	Q1423023	A607639	VINYL ACETATE	0	10		10.7	ug/L	107	
SPI01	Q1423023	A607639	4-METHYL-2-PENTANONE	0	50		55.6	ug/L	111.2	
SPI01	Q1423023	A607639	2-HEXANONE	0	50		45.9	ug/L	91.8	
DPS01	Q1423024	A607639	Analysis Date/Time: 02-Oct-02 17:29							

VOLATILE ORGANICS SW846-8240B **O510.3** (cont.)

R440660 Analyst: R SHAMP Run Date: 02-Oct-02 Instrument: GC/MS VOA (cont.)
Analytical Reviewer: H WILLIAMS Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
DPS01	Q1423024	A607639	BENZENE	0	10		12.6	ug/L	126	4.6
DPS01	Q1423024	A607639	CARBON TETRACHLORIDE	0	10		11.4	ug/L	114	7.4
DPS01	Q1423024	A607639	1,2-DICHLOROETHANE	0	10		11.4	ug/L	114	7.7
DPS01	Q1423024	A607639	1,1-DICHLOROETHENE	0	10		11.9	ug/L	119	4.8
DPS01	Q1423024	A607639	1,1,1-TRICHLOROETHANE	0	10		12.1	ug/L	121	5.9
DPS01	Q1423024	A607639	TRICHLOROETHENE	0	10		11.4	ug/L	114	5.4
DPS01	Q1423024	A607639	VINYL CHLORIDE	0	10		11.4	ug/L	114	2.6
DPS01	Q1423024	A607639	BROMODICHLOROMETHANE	0	10		10.7	ug/L	107	9.9
DPS01	Q1423024	A607639	BROMOFORM	0	10		7.91	ug/L	79.1	1
DPS01	Q1423024	A607639	BROMOMETHANE	0	10	!	15.6	ug/L	156	9.4
DPS01	Q1423024	A607639	CHLOROBENZENE	0	10		8.57	ug/L	85.7	5.2
DPS01	Q1423024	A607639	DIBROMOCHLOROMETHANE	0	10		9.27	ug/L	92.7	5
DPS01	Q1423024	A607639	CHLOROETHANE	0	10		12.1	ug/L	121	7.6
DPS01	Q1423024	A607639	CHLOROFORM	0	10		12.2	ug/L	122	6.8
DPS01	Q1423024	A607639	CHLOROMETHANE	0	10		10.9	ug/L	109	3.6
DPS01	Q1423024	A607639	DICHLOROMETHANE (METHYLENE CHLORIDE	0	10		9.61	ug/L	96.1	5.6
DPS01	Q1423024	A607639	1,1-DICHLOROETHANE	0	10		11.7	ug/L	117	6.7
DPS01	Q1423024	A607639	1,2-DICHLOROPROPANE	0	10		11	ug/L	110	4.9
DPS01	Q1423024	A607639	CIS-1,3-DICHLOROPROPENE	0	10		9.26	ug/L	92.6	6
DPS01	Q1423024	A607639	TRANS-1,3-DICHLOROPROPENE	0	10		9.04	ug/L	90.4	5.3
DPS01	Q1423024	A607639	ETHYL BENZENE	0	10		7.93	ug/L	79.3	8.7
DPS01	Q1423024	A607639	STYRENE	0	10		8.24	ug/L	82.4	3.7
DPS01	Q1423024	A607639	1,1,2-TRICHLOROETHANE	0	10		11.6	ug/L	116	6.1
DPS01	Q1423024	A607639	1,1,2,2-TETRACHLOROETHANE	0	10		10.3	ug/L	103	7.7
DPS01	Q1423024	A607639	TETRACHLOROETHENE	0	10		9.37	ug/L	93.7	9.7
DPS01	Q1423024	A607639	TOLUENE	0	10		11.7	ug/L	117	6.9
DPS01	Q1423024	A607639	DICHLORODIFLUOROMETHANE	0	10		9.9	ug/L	99	4.9
DPS01	Q1423024	A607639	TRICHLOROFLUOROMETHANE	0	10		13.9	ug/L	139	3.4
DPS01	Q1423024	A607639	ACROLEIN	0	100		96.7	ug/L	96.7	32.4
DPS01	Q1423024	A607639	ACETONE (2-PROPANONE)	0	50		63.8	ug/L	127.6	3.4
DPS01	Q1423024	A607639	ACRYLONITRILE	0	100		171	ug/L	171	11.9
DPS01	Q1423024	A607639	CARBON DISULFIDE	0	10		12	ug/L	120	3.4
DPS01	Q1423024	A607639	VINYL ACETATE	0	10		9.53	ug/L	95.3	11.1
DPS01	Q1423024	A607639	4-METHYL-2-PENTANONE	0	50		53.5	ug/L	107	3.8
DPS01	Q1423024	A607639	2-HEXANONE	0	50		44.3	ug/L	88.6	3.5

Q1423021	Analytes present greater than 1/2 of the detection limit are reported.
Q1423023	2-Chloroethyl vinyl ether degrades under acidic conditions. No recovery
Q1423023	possible. Unacidified sample not available.
Q1423024	2-Chloroethyl vinyl ether degrades under acidic conditions. No recovery
Q1423024	possible. Unacidified sample not available.

R440662 Analyst: H WILLIAMS Run Date: 02-Oct-02 Instrument: GC/MS VOA
Analytical Reviewer: R SHAMP Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
CCVD	Q1423032		Analysis Date/Time: 02-Oct-02 04:14							
CCVD	Q1423032		DICHLORODIFLUOROMETHANE	0.4621			0.4689			1.5
CCVD	Q1423032		CHLOROMETHANE	0.1872			0.1701			9.1
CCVD	Q1423032		VINYL CHLORIDE	0.1908			0.2208			15.7
CCVD	Q1423032		BROMOMETHANE	0.2223			0.2465			10.9
CCVD	Q1423032		CHLOROETHANE	0.1357			0.1479			9

HERITAGE ENVIRONMENTAL SERVICES, LLC

VOLATILE ORGANICS SW846-8240B **O510.3** (cont.)

R440662 Analyst: H WILLIAMS Run Date: 02-Oct-02 Instrument: GC/MS VOA (cont.)
Analytical Reviewer: R SHAMP Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
CCVD	Q1423032		TRICHLOROFLUOROMETHANE	0.7471			0.7471			0
CCVD	Q1423032		ACROLEIN	0.0059			0.0027			54.2
CCVD	Q1423032		1,1-DICHLOROETHENE	0.2932			0.2718			7.3
CCVD	Q1423032		ACETONE (2-PROPANONE)	0.0167			0.0159			4.8
CCVD	Q1423032		CARBON DISULFIDE	0.7398			0.6697			9.5
CCVD	Q1423032		DICHLOROMETHANE (METHYLENE CHLOI	0.2638			0.2225			15.7
CCVD	Q1423032		ACRYLONITRILE	0.0128			0.0060			53.1
CCVD	Q1423032		1,1-DICHLOROETHANE	0.5763			0.5038			12.6
CCVD	Q1423032		VINYL ACETATE	0.5210			0.4284			17.8
CCVD	Q1423032		METHYL ETHYL KETONE	0.0215			0.0200			7
CCVD	Q1423032		TETRAHYDROFURAN	0.0096			0.0081			15.6
CCVD	Q1423032		CHLOROFORM	0.7082			0.6376			10
CCVD	Q1423032		1,1,1-TRICHLOROETHANE	0.7734			0.6842			11.5
CCVD	Q1423032		CARBON TETRACHLORIDE	0.7951			0.7181			9.7
CCVD	Q1423032		BENZENE	0.7129			0.6235			12.5
CCVD	Q1423032		1,2-DICHLOROETHANE	0.3022			0.2641			12.6
CCVD	Q1423032		TRICHLOROETHENE	0.4701			0.3975			15.4
CCVD	Q1423032		1,2-DICHLOROPROPANE	0.2482			0.2103			15.3
CCVD	Q1423032		CIS-1,3-DICHLOROPROPENE	0.3186			0.2639			17.2
CCVD	Q1423032		TOLUENE	0.4708			0.4156			11.7
CCVD	Q1423032		TRANS-1,3-DICHLOROPROPENE	0.2229			0.1816			18.5
CCVD	Q1423032		1,1,2-TRICHLOROETHANE	0.1287			0.1086			15.6
CCVD	Q1423032		TETRACHLOROETHENE	0.9075			0.8582			5.4
CCVD	Q1423032		2-HEXANONE	0.0664			0.0600			9.6
CCVD	Q1423032		DIBROMOCHLOROMETHANE	0.5720			0.5028			12.1
CCVD	Q1423032		CHLOROBENZENE	0.9378			0.7764			17.2
CCVD	Q1423032		STYRENE	0.7302			0.6180			15.4
CCVD	Q1423032		BROMOFORM	0.3458			0.3107			10.2
CCVD	Q1423032		1,1,2,2-TETRACHLOROETHANE	0.4601			0.3727			19
CCVD	Q1423032		ETHYL BENZENE	1.6819			1.3883			17.5
CCVD	Q1423032		DICHLOROETHANE-D4	0.3091			0.3054			1.2
CCVD	Q1423032		TOLUENE-D8	0.8506			0.8524			0.2
CCVD	Q1423032		4-BROMOFLUOROBENZENE	1.7545			1.5611			11
BLA01	Q1423033		Analysis Date/Time: 02-Oct-02 04:50							
BLA01	Q1423033		DICHLORODIFLUOROMETHANE			BDL	1.0	ug/L		
BLA01	Q1423033		CHLOROMETHANE			BDL	1.0	ug/L		
BLA01	Q1423033		VINYL CHLORIDE			BDL	1.0	ug/L		
BLA01	Q1423033		BROMOMETHANE			BDL	1.0	ug/L		
BLA01	Q1423033		CHLOROETHANE			BDL	1.0	ug/L		
BLA01	Q1423033		TRICHLOROFLUOROMETHANE			BDL	1.0	ug/L		
BLA01	Q1423033		ACROLEIN			BDL	25.	ug/L		
BLA01	Q1423033		1,1-DICHLOROETHENE			BDL	1.0	ug/L		
BLA01	Q1423033		ACETONE (2-PROPANONE)			BDL	10.	ug/L		
BLA01	Q1423033		CARBON DISULFIDE			BDL	1.0	ug/L		
BLA01	Q1423033		DICHLOROMETHANE (METHYLENE CHLORIDE			BDL	1.0	ug/L		
BLA01	Q1423033		ACRYLONITRILE			BDL	5.0	ug/L		
BLA01	Q1423033		1,1-DICHLOROETHANE			BDL	1.0	ug/L		
BLA01	Q1423033		VINYL ACETATE			BDL	1.0	ug/L		
BLA01	Q1423033		METHYL ETHYL KETONE			BDL	5.0	ug/L		
BLA01	Q1423033		TETRAHYDROFURAN			BDL	15.	ug/L		
BLA01	Q1423033		CHLOROFORM			BDL	1.0	ug/L		
BLA01	Q1423033		1,1,1-TRICHLOROETHANE			BDL	1.0	ug/L		
BLA01	Q1423033		CARBON TETRACHLORIDE			BDL	1.0	ug/L		

HERITAGE ENVIRONMENTAL SERVICES, LLC

VOLATILE ORGANICS SW846-8240B **O510.3** (cont.)

R440662 Analyst: H WILLIAMS Run Date: 02-Oct-02 Instrument: GC/MS VOA (cont.)
Analytical Reviewer: R SHAMP Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
BLA01	Q1423033		BENZENE			BDL	1.0	ug/L		
BLA01	Q1423033		1,2-DICHLOROETHANE			BDL	1.0	ug/L		
BLA01	Q1423033		TRICHLOROETHENE			BDL	1.0	ug/L		
BLA01	Q1423033		1,2-DICHLOROPROPANE			BDL	1.0	ug/L		
BLA01	Q1423033		CIS-1,3-DICHLOROPROPENE			BDL	1.0	ug/L		
BLA01	Q1423033		TOLUENE			BDL	1.0	ug/L		
BLA01	Q1423033		TRANS-1,3-DICHLOROPROPENE			BDL	1.0	ug/L		
BLA01	Q1423033		1,1,2-TRICHLOROETHANE			BDL	1.0	ug/L		
BLA01	Q1423033		TETRACHLOROETHENE			BDL	1.0	ug/L		
BLA01	Q1423033		2-HEXANONE			BDL	5.0	ug/L		
BLA01	Q1423033		DIBROMOCHLOROMETHANE			BDL	1.0	ug/L		
BLA01	Q1423033		CHLOROBENZENE			BDL	1.0	ug/L		
BLA01	Q1423033		STYRENE			BDL	1.0	ug/L		
BLA01	Q1423033		BROMOFORM			BDL	1.0	ug/L		
BLA01	Q1423033		1,1,2,2-TETRACHLOROETHANE			BDL	1.0	ug/L		
BLA01	Q1423033		ETHYL BENZENE			BDL	1.0	ug/L		
BLA01	Q1423033		DICHLOROETHANE-D4						99	
BLA01	Q1423033		TOLUENE-D8						103	
BLA01	Q1423033		4-BROMOFLUOROBENZENE						92	
SAMPLE	A607630		Analysis Date/Time: 02-Oct-02 15:07							
SAMPLE	A607630		See Certificate of Analysis, Rep: 0							
SPI01	Q1423038	A607480	Analysis Date/Time: 02-Oct-02 12:51							
SPI01	Q1423038	A607480	BENZENE	0	10		9.58	ug/L	95.8	
SPI01	Q1423038	A607480	CARBON TETRACHLORIDE	0	10		12.3	ug/L	123	
SPI01	Q1423038	A607480	1,2-DICHLOROETHANE	0	10		11.4	ug/L	114	
SPI01	Q1423038	A607480	1,1-DICHLOROETHENE	0	10		10.3	ug/L	103	
SPI01	Q1423038	A607480	1,1,1-TRICHLOROETHANE	0	10		11.3	ug/L	113	
SPI01	Q1423038	A607480	TRICHLOROETHENE	0	10		10.4	ug/L	104	
SPI01	Q1423038	A607480	VINYL CHLORIDE	0	10		12.1	ug/L	121	
SPI01	Q1423038	A607480	BROMODICHLOROMETHANE	0	10		11.3	ug/L	113	
SPI01	Q1423038	A607480	BROMOFORM	0	10		11	ug/L	110	
SPI01	Q1423038	A607480	BROMOMETHANE	0	10		12	ug/L	120	
SPI01	Q1423038	A607480	CHLOROBENZENE	0	10		9.83	ug/L	98.3	
SPI01	Q1423038	A607480	DIBROMOCHLOROMETHANE	0	10		10.3	ug/L	103	
SPI01	Q1423038	A607480	CHLOROETHANE	0	10		11.7	ug/L	117	
SPI01	Q1423038	A607480	CHLOROFORM	0	10		11.2	ug/L	112	
SPI01	Q1423038	A607480	CHLOROMETHANE	0	10		9.81	ug/L	98.1	
SPI01	Q1423038	A607480	DICHLOROMETHANE (METHYLENE CHLORIDE	0	10		10.9	ug/L	109	
SPI01	Q1423038	A607480	1,1-DICHLOROETHANE	0	10		10.9	ug/L	109	
SPI01	Q1423038	A607480	1,2-DICHLOROPROPANE	0	10		9.82	ug/L	98.2	
SPI01	Q1423038	A607480	CIS-1,3-DICHLOROPROPENE	0	10		9.71	ug/L	97.1	
SPI01	Q1423038	A607480	TRANS-1,3-DICHLOROPROPENE	0	10		9.98	ug/L	99.8	
SPI01	Q1423038	A607480	ETHYL BENZENE	0	10		9.82	ug/L	98.2	
SPI01	Q1423038	A607480	STYRENE	0	10		9.18	ug/L	91.8	
SPI01	Q1423038	A607480	1,1,2-TRICHLOROETHANE	0	10		9.46	ug/L	94.6	
SPI01	Q1423038	A607480	1,1,2,2-TETRACHLOROETHANE	0	10		8.95	ug/L	89.5	
SPI01	Q1423038	A607480	TETRACHLOROETHENE	0	10		10.7	ug/L	107	
SPI01	Q1423038	A607480	TOLUENE	0	10		9.73	ug/L	97.3	
SPI01	Q1423038	A607480	DICHLORODIFLUOROMETHANE	0	10		12.5	ug/L	125	
SPI01	Q1423038	A607480	TRICHLOROFLUOROMETHANE	0	10		13.6	ug/L	136	
SPI01	Q1423038	A607480	ACROLEIN	0	50		31.7	ug/L	63.4	
SPI01	Q1423038	A607480	ACETONE (2-PROPANONE)	0	50		56.1	ug/L	112.2	
SPI01	Q1423038	A607480	ACRYLONITRILE	0	50		34.4	ug/L	68.8	

HERITAGE ENVIRONMENTAL SERVICES, LLC

VOLATILE ORGANICS SW846-8240B **O510.3** (cont.)

R440662 Analyst: H WILLIAMS Run Date: 02-Oct-02 Instrument: GC/MS VOA (cont.)
Analytical Reviewer: R SHAMP Review Date: 03-Oct-02

QCType	Lab ID	Source	Parameter	True/Sampl	Spike Val	RQL	Observed	Units	% Rec	RPD
SPI01	Q1423038	A607480	CARBON DISULFIDE	0	10		11.1	ug/L	111	
SPI01	Q1423038	A607480	VINYL ACETATE	0	10		8.88	ug/L	88.8	
SPI01	Q1423038	A607480	4-METHYL-2-PENTANONE	0	50		50.5	ug/L	101	
SPI01	Q1423038	A607480	2-HEXANONE	0	50		47.9	ug/L	95.8	
DPS01	Q1423039	A607480	Analysis Date/Time: 02-Oct-02 13:25							
DPS01	Q1423039	A607480	BENZENE	0	10		10.1	ug/L	101	5.3
DPS01	Q1423039	A607480	CARBON TETRACHLORIDE	0	10		11.8	ug/L	118	4.1
DPS01	Q1423039	A607480	1,2-DICHLOROETHANE	0	10		11.4	ug/L	114	0.4
DPS01	Q1423039	A607480	1,1-DICHLOROETHENE	0	10		10.5	ug/L	105	1.7
DPS01	Q1423039	A607480	1,1,1-TRICHLOROETHANE	0	10		11.3	ug/L	113	0.1
DPS01	Q1423039	A607480	TRICHLOROETHENE	0	10		10.5	ug/L	105	0.6
DPS01	Q1423039	A607480	VINYL CHLORIDE	0	10		12.4	ug/L	124	2.4
DPS01	Q1423039	A607480	BROMODICHLOROMETHANE	0	10		11.4	ug/L	114	0.6
DPS01	Q1423039	A607480	BROMOFORM	0	10		11.1	ug/L	111	0.5
DPS01	Q1423039	A607480	BROMOMETHANE	0	10		12.9	ug/L	129	7.2
DPS01	Q1423039	A607480	CHLOROBENZENE	0	10		9.89	ug/L	98.9	0.6
DPS01	Q1423039	A607480	DIBROMOCHLOROMETHANE	0	10		10.6	ug/L	106	2.5
DPS01	Q1423039	A607480	CHLOROETHANE	0	10		11.8	ug/L	118	0.5
DPS01	Q1423039	A607480	CHLOROFORM	0	10		11.4	ug/L	114	2
DPS01	Q1423039	A607480	CHLOROMETHANE	0	10		9.97	ug/L	99.7	1.6
DPS01	Q1423039	A607480	DICHLOROMETHANE (METHYLENE CHLORIDE	0	10		10.4	ug/L	104	4.7
DPS01	Q1423039	A607480	1,1-DICHLOROETHANE	0	10		11.1	ug/L	111	2.2
DPS01	Q1423039	A607480	1,2-DICHLOROPROPANE	0	10		9.52	ug/L	95.2	3.1
DPS01	Q1423039	A607480	CIS-1,3-DICHLOROPROPENE	0	10		9.83	ug/L	98.3	1.2
DPS01	Q1423039	A607480	TRANS-1,3-DICHLOROPROPENE	0	10		10.4	ug/L	104	4.1
DPS01	Q1423039	A607480	ETHYL BENZENE	0	10		10.1	ug/L	101	2.8
DPS01	Q1423039	A607480	STYRENE	0	10		9.99	ug/L	99.9	8.5
DPS01	Q1423039	A607480	1,1,2-TRICHLOROETHANE	0	10		10	ug/L	100	5.5
DPS01	Q1423039	A607480	1,1,2,2-TETRACHLOROETHANE	0	10		8.78	ug/L	87.8	1.9
DPS01	Q1423039	A607480	TETRACHLOROETHENE	0	10		10.6	ug/L	106	1.2
DPS01	Q1423039	A607480	TOLUENE	0	10		10.4	ug/L	104	6.7
DPS01	Q1423039	A607480	DICHLORODIFLUOROMETHANE	0	10		12.7	ug/L	127	1.7
DPS01	Q1423039	A607480	TRICHLOROFLUOROMETHANE	0	10		13.7	ug/L	137	0.4
DPS01	Q1423039	A607480	ACROLEIN	0	50		26.9	ug/L	53.8	16.4
DPS01	Q1423039	A607480	ACETONE (2-PROPANONE)	0	50		57.7	ug/L	115.4	2.8
DPS01	Q1423039	A607480	ACRYLONITRILE	0	50		33.8	ug/L	67.6	1.6
DPS01	Q1423039	A607480	CARBON DISULFIDE	0	10		10.7	ug/L	107	3.4
DPS01	Q1423039	A607480	VINYL ACETATE	0	10		9.42	ug/L	94.2	5.9
DPS01	Q1423039	A607480	4-METHYL-2-PENTANONE	0	50		51.6	ug/L	103.2	2.3
DPS01	Q1423039	A607480	2-HEXANONE	0	50		45	ug/L	90	6.2

Q1423033	Analytes present greater than 1/2 of the detection limit are reported.
Q1423038	2-Chloroethyl vinyl ether degrades under acidic conditions. No recovery
Q1423038	possible. Unacidified sample not available.
Q1423039	2-Chloroethyl vinyl ether degrades under acidic conditions. No recovery
Q1423039	possible. Unacidified sample not available.

Qualifiers

! *Outside Lab Generated Control Limits*
BDL Below Detection Limit

Approved : R.K. Spence QA