CONESTOGA-ROVERS & ASSOCIATES

200 W. Allegan Street, Suite 300
Plainwell, Michigan 49080-1397
Telephone: (269) 685-5181 Fax: (269) 685-5223
www.CRAworld.com

MEMORANDUM

TO:	Darlene Stringer, MDEQ Matt Gamble, MDEQ	REF. NO.:	017360-T12Y14
FROM:	Jeni Quigley/eb/75/Pwl.	DATE:	October 24, 2014
CC:	David Favero, RACER		
RE:	**No Further Action Report – 3838 Clay Ave SW Supplemental Investigation – Former Skimmed Oil AST Kendall Electric, Inc. Property Wyoming, Michigan**		

Conestoga-Rovers & Associates (CRA), on behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust, conducted additional investigation activities at the Kendall Electric, Inc. property located at 3838 Clay Avenue SW in Wyoming, Michigan (Site) in September 2014. This memorandum (Memorandum) presents a summary of the activities and results thereof.

Based on discussions with the Michigan Department of Environmental Quality (MDEQ), additional sampling at the Site was completed in support of the No Further Action (NFA) Report submitted to, and reviewed by, the MDEQ in March 2014. The NFA Report did not address potential impacts present in the area of a former skimmed oil aboveground storage tank (AST) present on the northern corner of the Site. The former skimmed oil AST was utilized during the operation of the adjacent stormwater retention basin during a portion of the timeframe that manufacturing activities were conducted at the former Grand Rapids Metal Plant; however, the AST had not been used in several years and had been emptied prior to the cessation of activities at the former Grand Rapids Metal Plant. Kendall Electric, Inc. purchased the property and as part of redevelopment activities removed the skimmed oil AST and the concrete secondary containment associated with the AST. No staining or significant cracks were observed during the development of a Current Conditions Report (CCR) for the Site, and based on discussions with representatives from Kendall Electric, Inc., no staining was observed during the removal of the AST and associated secondary containment area. No staining or indication of a release was noted by CRA during the subsequent sampling activities described below. Photographs of the area taken during the development of the CCR and during sampling activities are presented in Attachment A.

Investigation Activites

The supplemental investigation scope of work (SOW) consisted of soil boring advancement and soil sampling in the area of the former AST. Two soil borings were advanced (SB324-14 and SB325-14) in the approximate area of the former skimmed oil AST to investigate potential subsurface impacts in this area. The soil borings were advanced to 2 feet below ground surface (bgs) with a hand auger and the soil was examined by a CRA field technician for visual/olfactory evidence of impact. No visual or olfactory evidence

of impact was observed in the soil borings or in any of the surface soils in the area of the former skimmed oil AST. Sample locations in relation to the former AST are presented on Figure 1. Stratigraphic boring logs are presented in Attachment B.

At each boring location, soil samples were collected for chemical analysis from the 0 to 2-foot interval. Soil samples, including Quality Assurance/Quality Control (QA/QC) samples, were collected from the soil boring locations for laboratory analysis. Collected soil samples were placed in laboratory-supplied containers, placed on ice, and delivered under standard chain-of-custody (COC) protocol to the analytical laboratory for analysis of Target Compound List (TCL) volatile organic compounds (VOCs), TCL semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and Site-specific Target Analyte List (TAL) metals.

Analytical Results

Analytical results for the soil samples were evaluated against the Generic Residential and Non-Residential Cleanup Criteria and Screening Levels established in Part 7 of Administrative Rules, effective December 30, 2013, pursuant to Part 201, Environmental Remediation, 1994 PA 451, as amended.

Based on the review of the analytical results, no TCL VOCs, TCL SVOCs, PCBs, or Site-specific TAL metals were detected at concentrations above the Part 201 Generic Residential and Non-Residential Cleanup Criteria. Analytical results for soil samples compared to the aforementioned criteria are presented in Table 1.

A QA/QC data validation was conducted on the analytical data. Copies of analytical data and data validation memorandum summarizing the results of the data validation are presented in Attachment C and Attachment D, respectively. Estimated concentrations and rejected data are identified in the tables of the memo which include qualifications due to contamination in the laboratory method blank, matrix spike/matrix spike duplicate percent recovery and relative percent difference, and field duplicate variability. Based on the review of the data validation memorandum, the data produced by ALS-MI were found to exhibit acceptable levels of accuracy and precision and may be used with the qualifications noted in the tables in the data validation memoranda. Data was qualified for mercury, selenium, and methyl acetate for the soil samples collected from SB324-14 and SB325-14 due to the detection of these analytes in the method blank. Data was qualified for barium and zinc for the soil samples collected from SB324-14 and SB325-14, and for benzo(a)anthracene for the soil sample collected from SB325-14 due to the outlying matrix spike/matrix spike duplicate percent recovery and relative percent difference. Data was qualified for dibenz(a,h)anthracene for the soil sample collected from SB324-14 due to variability in the field duplicate sample.

The results of the investigation presented in this Memorandum will be included in the revised NFA Report and submitted to the MDEQ for formal review and approval.

Please contact David Favero at (217) 741-6235 or Jeni Quigley at (269) 685-5181 with any questions regarding this Memorandum or the enclosed information.

List of Figures

List of Tables

List of Attachments

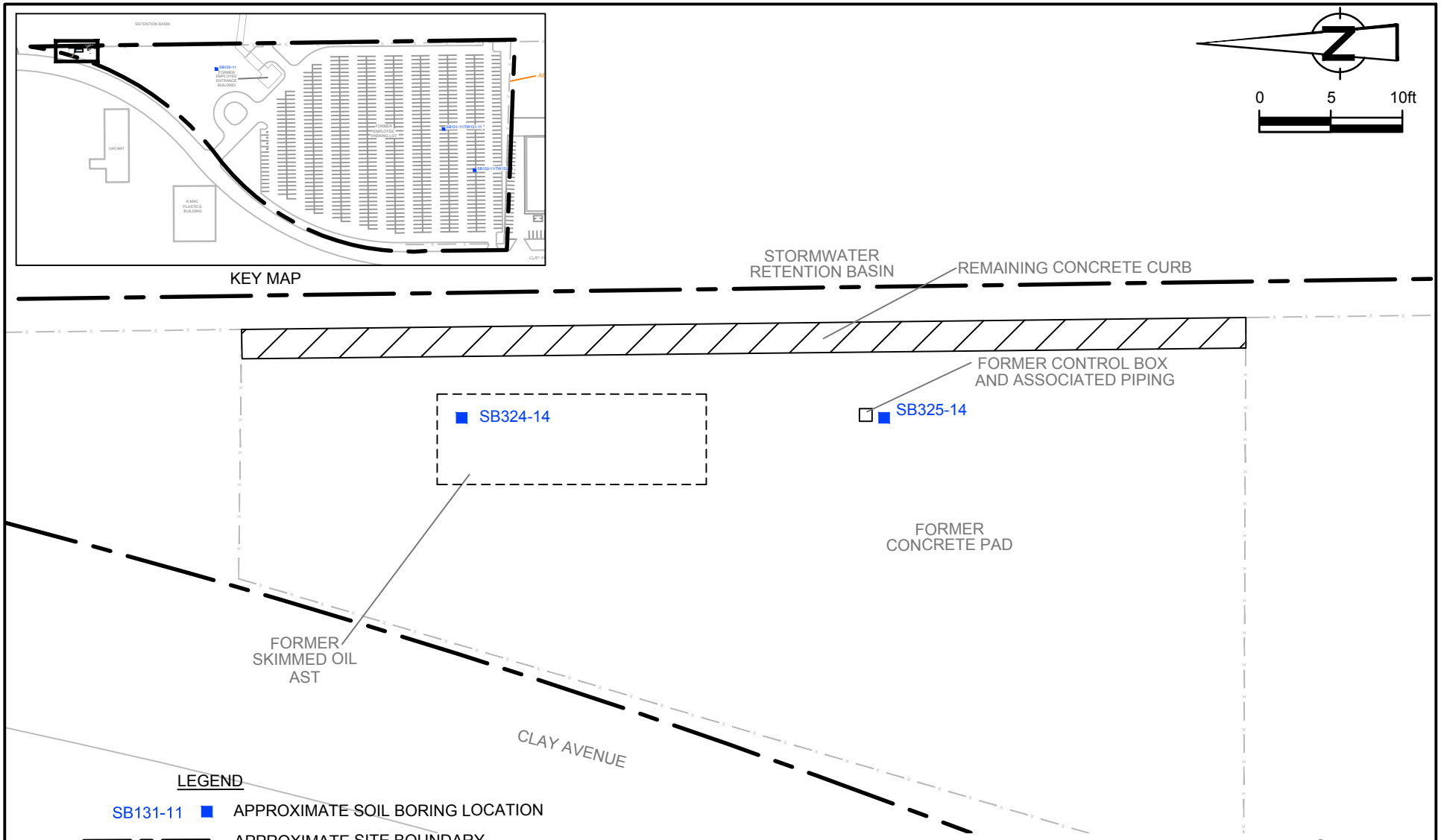

figure 1

SOIL BORING LOCATIONS
KENDALL ELECTRIC INC. PROPERTY
Wyoming, Michigan

017360-T12(MEMO075)GN-DE001 OCT 20/2014

SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
SUPPLEMENTAL INVESTIGATION - FORMER SKIMMED OIL AST
KENDALL ELECTRIC, INC. PROPERTY
WYOMING, MICHIGAN

Sample Location:			***MDEQ Generic Cleanup Criteria: Residential and Nonresidential*** [1]									
Sample Identification:		Statewide Default Background	Drinking Water Protection	Nonresidential Drinking Water Protection	Groundwater Surface Water Interface Protection	Soil Volatilization to Indoor Air Inhalation	Nonresidential Soil Volatilization to Indoor Air Inhalation	Infinite Source Volatile Soil Inhalation	Nonresidential Infinite Source Volatile Soil Inhalation	Finite VSIC for 5 Meter Source Thickness	Nonresidential Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness
Sample Date:												
Soil Depth:												
Sample Type:												
	Units	a	b	c	d	e	f	g	h	i	j	k
Volatile Organic Compounds (VOCs)												
1,1,1-Trichloroethane	ug/kg	NA	4000	4000	1800	250000	460000	3800000	4500000	12000000	15000000	28000000
1,1,2,2-Tetrachloroethane	ug/kg	NA	170	700	1600	4300	23000	10000	34000	10000	34000	14000
1,1,2-Trichloroethane	ug/kg	NA	100	100	6600	4600	24000	17000	57000	21000	57000	44000
1,1-Dichloroethane	ug/kg	NA	18000	50000	15000	230000	430000	2100000	2500000	5900000	6000000	14000000
1,1-Dichloroethene	ug/kg	NA	140	140	2600	62	330	1100	3700	5300	15000	13000
1,2,4-Trichlorobenzene	ug/kg	NA	4200	4200	5900	9600000	18000000	28000000	34000000	28000000	34000000	28000000
1,2-Dibromo-3-chloropropane (DBCP)	ug/kg	NA	10	10	ID	220	1200	260	900	260	900	260
1,2-Dibromoethane [3]	ug/kg	NA	20	20	110	670	3600	1700	5800	1700	5800	3300
1,2-Dichlorobenzene	ug/kg	NA	14000	14000	280	11000000	20000000	39000000	46000000	39000000	46000000	52000000
1,2-Dichloroethane	ug/kg	NA	100	100	7200	2100	11000	6200	21000	11000	33000	26000
1,2-Dichloropropane	ug/kg	NA	100	100	4600	4000	7400	25000	30000	50000	51000	110000
1,3-Dichlorobenzene	ug/kg	NA	170	480	680	26000	48000	79000	94000	79000	94000	110000
1,4-Dichlorobenzene	ug/kg	NA	1700	1700	360	19000	100000	77000	260000	77000	260000	110000
2-Butanone [4]	ug/kg	NA	260000	760000	44000	54000000	99000000	29000000	35000000	29000000	35000000	35000000
2-Hexanone	ug/kg	NA	20000	58000	ID	990000	1800000	1100000	1300000	1100000	1300000	1400000
4-Methyl-2-pentanone [5]	ug/kg	NA	36000	100000	ID	37000000	69000000	45000000	53000000	45000000	53000000	67000000
Acetone	ug/kg	NA	15000	42000	34000	290000000	540000000	130000000	160000000	130000000	160000000	190000000
Benzene	ug/kg	NA	100	100	4000	1600	8400	13000	45000	34000	99000	79000
Bromodichloromethane	ug/kg	NA	1600	1600	ID	1200	6400	9100	31000	9700	31000	19000
Bromoform	ug/kg	NA	1600	1600	ID	150000	770000	900000	3100000	900000	3100000	900000
Bromomethane (Methyl bromide)	ug/kg	NA	200	580	700	860	1600	11000	13000	57000	57000	140000
Carbon disulfide	ug/kg	NA	16000	46000	ID	76000	140000	1300000	1600000	7900000	8000000	19000000
Carbon tetrachloride	ug/kg	NA	100	100	900	190	990	3500	12000	12000	34000	28000
Chlorobenzene	ug/kg	NA	2000	2000	500	120000	220000	770000	920000	990000	1100000	2100000
Chloroethane	ug/kg	NA	8600	34000	22000	2900000	5300000	30000000	36000000	120000000	120000000	280000000
Chloroform (Trichloromethane)	ug/kg	NA	1600	1600	7000	7200	38000	45000	150000	120000	340000	270000
Chloromethane (Methyl chloride)	ug/kg	NA	5200	22000	ID	2300	10000	40000	120000	410000	1000000	1000000
cis-1,2-Dichloroethene	ug/kg	NA	1400	1400	12000	22000	41000	180000	210000	420000	430000	990000
cis-1,3-Dichloropropene	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyclohexane	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane	ug/kg	NA	1600	1600	ID	3900	21000	24000	80000	24000	80000	33000
Dichlorodifluoromethane (CFC-12)	ug/kg	NA	95000	270000	ID	900000	1700000	53000000	63000000	550000000	550000000	1400000000
Ethylbenzene	ug/kg	NA	1500	1500	360	87000	460000	720000	2400000	1000000	3100000	2200000
Isopropyl benzene	ug/kg	NA	91000	260000	3200	400000	730000	1700000	2000000	1700000	2000000	2800000
Methyl acetate	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl cyclohexane	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert butyl ether (MTBE)	ug/kg	NA	800	800	140000	9900000	18000000	25000000	30000000	39000000	41000000	87000000
Methylene chloride	ug/kg	NA	100	100	30000	45000	240000	210000	700000	590000	1700000	1400000
Styrene	ug/kg	NA	2700	2700	2100	250000	1300000	970000	3300000	970000	3300000	1400000
Tetrachloroethene	ug/kg	NA	100	100	1200	11000	21000	170000	210000	480000	490000	1100000
Toluene	ug/kg	NA	16000	16000	5400	330000	610000	2800000	3300000	5100000	36000000	12000000
trans-1,2-Dichloroethene	ug/kg	NA	2000	2000	30000	23000	43000	280000	330000	830000	840000	2000000
trans-1,3-Dichloropropene	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene	ug/kg	NA	100	100	4000	1000	1900	11000	14000	25000	25000	57000
Trichlorofluoromethane (CFC-11)	ug/kg	NA	52000	150000		2800000	5100000	92000000	110000000	630000000	1400000000000	1500000000
Trifluorotrichloroethane (Freon 113)	ug/kg	NA	9000000	9000000	1700	5100000	9300000	180000000	210000000	880000000	890000000	2100000000
Vinyl chloride	ug/kg	NA	40	40	260	270	2800	4200	29000	30000	170000	73000
Xylenes (total)	ug/kg	NA	5600	5600	820	6300000	12000000	46000000	54000000	61000000	65000000	130000000

SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
SUPPLEMENTAL INVESTIGATION - FORMER SKIMMED OIL AST
KENDALL ELECTRIC, INC. PROPERTY
WYOMING, MICHIGAN

Sample Location:			***MDEQ Generic Cleanup Criteria: Residential and Nonresidential*** [1]									
Sample Identification:		Statewide Default Background	Drinking Water Protection	Nonresidential Drinking Water Protection	Groundwater Surface Water Interface Protection	Soil Volatilization to Indoor Air Inhalation	Nonresidential Soil Volatilization to Indoor Air Inhalation	Infinite Source Volatile Soil Inhalation	Nonresidential Infinite Source Volatile Soil Inhalation	Finite VSIC for 5 Meter Source Thickness	Nonresidential Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness
Sample Date:												
Soil Depth:												
Sample Type:												
	Units	a	b	c	d	e	f	g	h	i	j	k
Semi-Volatile Organic Compounds (SVOCs)												
2,2'-Oxybis(1-chloropropane) [6]	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol	ug/kg	NA	39000	110000	NA	NLV	NLV	NLV	NLV	NLV	NLV	NLV
2,4,6-Trichlorophenol	ug/kg	NA	2400	9400	330	NLV	NLV	NLV	NLV	NLV	NLV	NLV
2,4-Dichlorophenol	ug/kg	NA	1500	4200	330	NLV	NLV	NLV	NLV	NLV	NLV	NLV
2,4-Dimethylphenol	ug/kg	NA	7400	20000	7600	NLV	NLV	NLV	NLV	NLV	NLV	NLV
2,4-Dinitrophenol	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	ug/kg	NA	430	640	NA	NLV	NLV	NLV	NLV	NLV	NLV	NLV
2,6-Dinitrotoluene	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene	ug/kg	NA	620000	1800000	NA	ID	ID	ID	ID	ID	ID	ID
2-Chlorophenol	ug/kg	NA	900	2600	360	430000	800000	960000	1100000	960000	1100000	960000
2-Methylnaphthalene	ug/kg	NA	57000	170000	4200	2700000	4900000	1500000	1800000	1500000	1800000	1500000
2-Methylphenol	ug/kg	NA	7400	20000	1000	NLV	NLV	NLV	NLV	NLV	NLV	NLV
2-Nitroaniline	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol	ug/kg	NA	400	1200	ID	NLV	NLV	NLV	NLV	NLV	NLV	NLV
3,3'-Dichlorobenzidine	ug/kg	NA	2000	2000	2000	NLV	NLV	NLV	NLV	NLV	NLV	NLV
3-Nitroaniline	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-methylphenol	ug/kg	NA	830	830	NA	NLV	NLV	NLV	NLV	NLV	NLV	NLV
4-Bromophenyl phenyl ether	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloro-3-methylphenol	ug/kg	NA	5800	16000	280	NLV	NLV	NLV	NLV	NLV	NLV	NLV
4-Chloroaniline	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	ug/kg	NA	7400	20000	1000	NLV	NLV	NLV	NLV	NLV	NLV	NLV
4-Nitroaniline	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	ug/kg	NA	300000	880000	8700	190000000	350000000	81000000	97000000	81000000	97000000	81000000
Acenaphthylene	ug/kg	NA	5900	17000	ID	1600000	3000000	2200000	2700000	2200000	2700000	2200000
Acetophenone	ug/kg	NA	30000	88000	ID	120000000	210000000	44000000	52000000	44000000	52000000	44000000
Anthracene	ug/kg	NA	41000	41000	ID	1000000000	1000000000	1400000000	1600000000	1400000000	1600000000	1400000000
Atrazine	ug/kg	NA	60	60	150	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Benzaldehyde	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	ug/kg	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Benzo(a)pyrene	ug/kg	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Benzo(b)fluoranthene	ug/kg	NA	NLL	NLL	NLL	ID	ID	ID	ID	ID	ID	ID
Benzo(g,h,i)perylene	ug/kg	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Benzo(k)fluoranthene	ug/kg	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Biphenyl (1,1-Biphenyl)	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethoxy)methane	ug/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
bis(2-Chloroethyl)ether	ug/kg	NA	100	170	100	8300	44000	3800	13000	3800	13000	3800
bis(2-Ethylhexyl)phthalate (DEHP)	ug/kg	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Butyl benzylphthalate (BBP)	ug/kg	NA	2200000	5600000	120000	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Caprolactam	ug/kg	NA	120000	340000		NLV	NLV	NLV	NLV	NLV	NLV	NLV
Carbazole	ug/kg	NA	9400	39000	1100	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Chrysene	ug/kg	NA	NLL	NLL	NLL	ID	ID	ID	ID	ID	ID	ID
Dibenz(a,h)anthracene	ug/kg	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Dibenzofuran	ug/kg	NA	ID	ID	1700	2000000	3600000	130000	160000	130000	160000	130000
Diethyl phthalate	ug/kg	NA	110000	320000	2200	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Dimethyl phthalate	ug/kg	NA	1500000	4200000	NA	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Di-n-butylphthalate (DBP)	ug/kg	NA	960000	2700000	11000	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Di-n-octyl phthalate (DnOP)	ug/kg	NA	100000000	290000000	ID	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Fluoranthene	ug/kg	NA	730000	730000	5500	1000000000	1000000000	740000000	890000000	740000000	880000000	740000000
Fluorene	ug/kg	NA	390000	890000	5300	580000000	1000000000	130000000	150000000	130000000	150000000	130000000
Hexachlorobenzene	ug/kg	NA	1800	1800	350	41000	220000	17000	56000	17000	56000	17000
Hexachlorobutadiene	ug/kg	NA	26000	72000	91	130000	710000	130000	460000	130000	460000	130000
Hexachlorocyclopentadiene	ug/kg	NA	320000	320000	ID	30000	56000	50000	60000	50000	60000	50000

SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
SUPPLEMENTAL INVESTIGATION - FORMER SKIMMED OIL AST
KENDALL ELECTRIC, INC. PROPERTY
WYOMING, MICHIGAN

Sample Location:		***MDEQ Generic Cleanup Criteria: Residential and Nonresidential*** [1]										
Sample Identification:		Statewide Default Background	Drinking Water Protection	Nonresidential Drinking Water Protection	Groundwater Surface Water Interface Protection	Soil Volatilization to Indoor Air Inhalation	Nonresidential Soil Volatilization to Indoor Air Inhalation	Infinite Source Volatile Soil Inhalation	Nonresidential Infinite Source Volatile Soil Inhalation	Finite VSIC for 5 Meter Source Thickness	Nonresidential Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness
Sample Date:												
Soil Depth:												
Sample Type:												
	Units	a	b	c	d	e	f	g	h	i	j	k
SVOCs (continued)												
Hexachloroethane	ug/kg	NA	430	1200	1800	40000	79000	550000	660000	930000	1400000	930000
Indeno(1,2,3-cd)pyrene	ug/kg	NA	NLL	NLL	NLL	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Isophorone	ug/kg	NA	15000	62000	26000	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Naphthalene	ug/kg	NA	35000	100000	730	250000	470000	300000	350000	300000	350000	300000
Nitrobenzene	ug/kg	NA	330	330	3600	91000	170000	54000	64000	54000	64000	54000
N-Nitrosodi-n-propylamine	ug/kg	NA	330	330	NA	NLV	NLV	NLV	NLV	NLV	NLV	NLV
N-Nitrosodiphenylamine	ug/kg	NA	5400	22000	NA	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Pentachlorophenol	ug/kg	NA	22	22	27000	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Phenanthrene	ug/kg	NA	56000	160000	2100	2800000	5100000	160000	190000	160000	190000	160000
Phenol	ug/kg	NA	88000	260000	9000	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Pyrene	ug/kg	NA	480000	480000	ID	1000000000	1000000000	650000000	780000000	650000000	780000000	650000000
Metals												
Antimony	ug/kg	NA	4300	4300	94000	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Arsenic	ug/kg	5800	4600	4600	4600	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Barium	ug/kg	75000	1300000	1300000	1000000	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Beryllium	ug/kg	NA	51000	51000	680000	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Cadmium	ug/kg	1200	6000	6000	6700	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Chromium	ug/kg	18000	30000	30000	3300	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Cobalt	ug/kg	6800	800	2000	2000	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Copper	ug/kg	32000	5800000	5800000	150000	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Iron	ug/kg	12000000	6000	6000	NA	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Lead	ug/kg	21000	700000	700000	9500000	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Manganese	ug/kg	440000	1000	1000	120000	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Mercury	ug/kg	130	1700	1700	50	48000	89000	52000	62000	52000	62000	52000
Molybdenum	ug/kg	NA	1500	4200	64000	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Nickel	ug/kg	20000	100000	100000	160000	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Selenium	ug/kg	410	4000	4000	400	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Silver	ug/kg	1000	4500	13000	100	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Thallium	ug/kg	NA	2300	2300	4200	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Vanadium	ug/kg	NA	72000	990000	430000	NLV	NLV	NLV	NLV	NLV	NLV	NLV
Zinc	ug/kg	47000	2400000	5000000	340000	NLV	NLV	NLV	NLV	NLV	NLV	NLV
PCBs												
Aroclor-1016 (PCB-1016)	ug/kg	NA	NLL	NLL	NLL	3000000	16000000	240000	810000	7900000	28000000	7900000
Aroclor-1221 (PCB-1221)	ug/kg	NA	NLL	NLL	NLL	3000000	16000000	240000	810000	7900000	28000000	7900000
Aroclor-1232 (PCB-1232)	ug/kg	NA	NLL	NLL	NLL	3000000	16000000	240000	810000	7900000	28000000	7900000
Aroclor-1242 (PCB-1242)	ug/kg	NA	NLL	NLL	NLL	3000000	16000000	240000	810000	7900000	28000000	7900000
Aroclor-1248 (PCB-1248)	ug/kg	NA	NLL	NLL	NLL	3000000	16000000	240000	810000	7900000	28000000	7900000
Aroclor-1254 (PCB-1254)	ug/kg	NA	NLL	NLL	NLL	3000000	16000000	240000	810000	7900000	28000000	7900000
Aroclor-1260 (PCB-1260)	ug/kg	NA	NLL	NLL	NLL	3000000	16000000	240000	810000	7900000	28000000	7900000

Notes:

[1] Cleanup Criteria Requirements for Response Activity, Administrative Rules R299.1 to R299.50 effective December 30, 2013 pursuant to 1994 PA 451 as amended.

[2] Carbonate Hardness of 344 mg/L was used to calculate Groundwater-Surface Water Interface Protection Criteria.

[3] 1,2-Dibromoethane also known as Ethylene dibromide.

[4] 2-Butanone also known as Methyl ethyl ketone (MEK).

SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
SUPPLEMENTAL INVESTIGATION - FORMER SKIMMED OIL AST
KENDALL ELECTRIC, INC. PROPERTY
WYOMING, MICHIGAN

Sample Location:		***MDEQ Generic Cleanup Criteria: Residential and Nonresidential*** [1]										
Sample Identification:		Statewide Default Background	Drinking Water Protection	Nonresidential Drinking Water Protection	Groundwater Surface Water Interface Protection	Soil Volatilization to Indoor Air Inhalation	Nonresidential Soil Volatilization to Indoor Air Inhalation	Infinite Source Volatile Soil Inhalation	Nonresidential Infinite Source Volatile Soil Inhalation	Finite VSIC for 5 Meter Source Thickness	Nonresidential Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness
Sample Date:												
Soil Depth:												
Sample Type:												
	Units	a	b	c	d	e	f	g	h	i	j	k

[5] 4-Methyl-2-pentanone also known as Methyl isobutyl ketone (MIBK).
[6] 2,2'-Oxybis(1-chloropropane) also known as (bis(2-Chloroisopropyl) ether).
J - Estimated concentration.
ID - Insufficient data to develop criterion.
NA - A criterion or value is not available or, in the case of background numbers, not applicable.
NLL - Hazardous substance is not likely to leach under most soil conditions.
NLV - Hazardous substance is not likely to volatilize under most conditions.
-- Parameter was not analyzed.
[ ] - Exceeds Generic Cleanup Criteria.
Superscript letter notes the criterion exceeded.

SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
SUPPLEMENTAL INVESTIGATION - FORMER SKIMMED OIL AST
KENDALL ELECTRIC, INC. PROPERTY
WYOMING, MICHIGAN

Sample Location:		*MDEQ Generic Cleanup Criteria: Residential and Nonresidential* [1]						*SB324-14*	*SB324-14*	*SB325-14*
Sample Identification:		Nonresidential	Particulate	Nonresidential	Direct	Nonresidential	Soil Saturation	*SO-17360-091514-EB-001*	*SO-17360-091514-EB-002*	*SO-17360-091514-EB-003*
Sample Date:		Finite VSIC for	Soil Inhalation	Particulate	Contact	Direct	Concentration	*9/15/2014*	*9/15/2014*	*9/15/2014*
Soil Depth:		2 Meter Source		Soil Inhalation		Contact	Screening	*(0-2) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*
Sample Type:		Thickness					Levels		*Duplicate*	
	Units	l	m	n	o	p	q			
Volatile Organic Compounds (VOCs)										
1,1,1-Trichloroethane	ug/kg	31000000	67000000000	29000000000	500000000	1000000000	460000	38 U	37 U	37 U
1,1,2,2-Tetrachloroethane	ug/kg	34000	54000000	68000000	53000	240000	870000	38 U	37 U	37 U
1,1,2-Trichloroethane	ug/kg	120000	190000000	250000000	180000	840000	920000	38 U	37 U	37 U
1,1-Dichloroethane	ug/kg	14000000	33000000000	15000000000	27000000	87000000	890000	38 U	37 U	37 U
1,1-Dichloroethene	ug/kg	37000	62000000	78000000	200000	660000	570000	38 U	37 U	37 U
1,2,4-Trichlorobenzene	ug/kg	34000000	25000000000	11000000000	990000	5800000	1100000	38 U	37 U	37 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/kg	900	560000	700000	4400000	20000	1200	38 U	37 U	37 U
1,2-Dibromoethane [3]	ug/kg	9800	14000000	18000000	92	430	890000	38 U	37 U	37 U
1,2-Dichlorobenzene	ug/kg	55000000	100000000000	44000000000	19000000	63000000	210000	38 U	37 U	37 U
1,2-Dichloroethane	ug/kg	74000	120000000	150000000	91000	420000	1200000	38 U	37 U	37 U
1,2-Dichloropropane	ug/kg	120000	270000000	120000000	140000	660000	550000	38 U	37 U	37 U
1,3-Dichlorobenzene	ug/kg	110000	200000000	88000000	200000	660000	170000	38 U	37 U	37 U
1,4-Dichlorobenzene	ug/kg	340000	450000000	570000000	400000	1900000		38 U	37 U	37 U
2-Butanone [4]	ug/kg	36000000	67000000000	29000000000	120000000	700000000	27000000	260 U	250 U	250 U
2-Hexanone	ug/kg	1500000	2700000000	1200000000	32000000	100000000	2500000	38 U	37 U	37 U
4-Methyl-2-pentanone [5]	ug/kg	70000000	140000000000	60000000000	56000000	180000000	2700000	38 U	37 U	37 U
Acetone	ug/kg	200000000	390000000000	170000000000	23000000	73000000	110000000	130 U	120 U	120 U
Benzene	ug/kg	230000	380000000	470000000	180000	840000	400000	38 U	37 U	37 U
Bromodichloromethane	ug/kg	57000	84000000	110000000	110000	490000	1500000	38 U	37 U	37 U
Bromoform	ug/kg	3100000	2800000000	3600000000	820000	3800000	870000	38 U	37 U	37 U
Bromomethane (Methyl bromide)	ug/kg	140000	330000000	150000000	320000	1000000	2200000	96 U	93 U	93 U
Carbon disulfide	ug/kg	19000000	47000000000	21000000000	7200000	43000000	280000	240 J	37 U	37 U
Carbon tetrachloride	ug/kg	79000	130000000	170000000	96000	440000	390000	38 U	37 U	37 U
Chlorobenzene	ug/kg	2100000	4700000000	2100000000	4300000	14000000	260000	38 U	37 U	37 U
Chloroethane	ug/kg	280000000	670000000000	290000000000	2600000	12000000	950000	130 U	120 U	120 U
Chloroform (Trichloromethane)	ug/kg	790000	1300000000	1600000000	1200000	5500000	1500000	38 U	37 U	37 U
Chloromethane (Methyl chloride)	ug/kg	2500000	4900000000	2600000000	1600000	7400000	1100000	130 U	120 U	120 U
cis-1,2-Dichloroethene	ug/kg	1000000	2300000000	1000000000	2500000	8000000	640000	38 U	37 U	37 U
cis-1,3-Dichloropropene	ug/kg	NA	NA	NA	NA	NA	NA	38 U	37 U	37 U
Cyclohexane	ug/kg	NA	NA	NA	NA	NA	NA	38 U	37 U	37 U
Dibromochloromethane	ug/kg	98000	130000000	160000000	110000	500000	610000	38 U	37 U	37 U
Dichlorodifluoromethane (CFC-12)	ug/kg	1400000000	3300000000000	1500000000000	52000000	170000000	1000000	38 U	37 U	37 U
Ethylbenzene	ug/kg	6500000	10000000000	13000000000	22000000	71000000	140000	38 U	37 U	37 U
Isopropyl benzene	ug/kg	3000000	5800000000	2600000000	25000000	80000000	390000	38 U	37 U	37 U
Methyl acetate	ug/kg	NA	NA	NA	NA	NA	NA	1700 U	2100 U	1800 U
Methyl cyclohexane	ug/kg	NA	NA	NA	NA	NA	NA	38 U	37 U	37 U
Methyl tert butyl ether (MTBE)	ug/kg	89000000	200000000000	88000000000	1500000	7100000	5900000	38 U	37 U	37 U
Methylene chloride	ug/kg	4000000	6600000000	8300000000	1300000	5800000	2300000	38 U	37 U	37 U
Styrene	ug/kg	4200000	5500000000	6900000000	400000	1900000	520000	38 U	37 U	37 U
Tetrachloroethene	ug/kg	1100000	2700000000	1200000000	200000	930000	88000	38 U	37 U	37 U
Toluene	ug/kg	36000000	27000000000	12000000000	50000000	160000000	250000	38 U	37 U	37 U
trans-1,2-Dichloroethene	ug/kg	2000000	4700000000	2100000000	3800000	12000000	1400000	38 U	37 U	37 U
trans-1,3-Dichloropropene	ug/kg	NA	NA	NA	NA	NA	NA	38 U	37 U	37 U
Trichloroethene	ug/kg	58000	130000000	59000000	110000	660000	500000	38 U	37 U	37 U
Trichlorofluoromethane (CFC-11)	ug/kg	1400000000000	3800000000000	1700000000000	79000000	260000000	560000	38 U	37 U	37 U
Trifluorotrichloroethane (Freon 113)	ug/kg	2100000000	5100000000000	2300000000000	1000000000	1000000000	550000	38 U	37 U	37 U
Vinyl chloride	ug/kg	420000	350000000	890000000	3800	34000	490000	38 U	37 U	37 U
Xylenes (total)	ug/kg	130000000	290000000000	130000000000	410000000	1000000000	150000	120 U	110 U	110 U

SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
SUPPLEMENTAL INVESTIGATION - FORMER SKIMMED OIL AST
KENDALL ELECTRIC, INC. PROPERTY
WYOMING, MICHIGAN

Sample Location:		***MDEQ Generic Cleanup Criteria: Residential and Nonresidential*** [1]						***SB324-14***	***SB324-14***	***SB325-14***
Sample Identification:		Nonresidential	Particulate	Nonresidential	Direct	Nonresidential	Soil Saturation	***SO-17360-091514-EB-001***	***SO-17360-091514-EB-002***	***SO-17360-091514-EB-003***
Sample Date:		Finite VSIC for	Soil Inhalation	Particulate	Contact	Direct	Concentration	***9/15/2014***	***9/15/2014***	***9/15/2014***
Soil Depth:		2 Meter Source		Soil Inhalation		Contact	Screening	***(0-2) ft BGS***	***(0-2) ft BGS***	***(0-2) ft BGS***
Sample Type:		Thickness					Levels		***Duplicate***	
	Units	l	m	n	o	p	q			
Semi-Volatile Organic Compounds (SVOCs)										
2,2'-Oxybis(1-chloropropane) [6]	ug/kg	NA	NA	NA	NA	NA	NA	170 U	160 U	170 U
2,4,5-Trichlorophenol	ug/kg	NLV	23000000000	10000000000	23000000	73000000	NA	170 U	160 U	170 U
2,4,6-Trichlorophenol	ug/kg	NLV	1000000000	1300000000	710000	3300000	NA	170 U	160 U	170 U
2,4-Dichlorophenol	ug/kg	NLV	5100000000	2300000000	660000	3900000	1800000	170 U	160 U	170 U
2,4-Dimethylphenol	ug/kg	NLV	4700000000	2100000000	11000000	36000000	NA	350 U	340 U	350 U
2,4-Dinitrophenol	ug/kg	NA	NA	NA	NA	NA	NA	700 U	680 U	700 U
2,4-Dinitrotoluene	ug/kg	NLV	16000000	20000000	48000	220000	NA	170 U	160 U	170 U
2,6-Dinitrotoluene	ug/kg	NA	NA	NA	NA	NA	NA	170 U	160 U	170 U
2-Chloronaphthalene	ug/kg	ID	ID	ID	56000000	180000000	NA	7.1 U	6.9 U	7.1 U
2-Chlorophenol	ug/kg	1100000	1200000000	530000000	1400000	4500000	19000000	170 U	160 U	170 U
2-Methylnaphthalene	ug/kg	1800000	670000000	290000000	8100000	26000000	NA	7.1 U	6.9 U	7.1 U
2-Methylphenol	ug/kg	NLV	6700000000	2900000000	11000000	36000000	NA	170 U	160 U	170 U
2-Nitroaniline	ug/kg	NA	NA	NA	NA	NA	NA	700 U	680 U	700 U
2-Nitrophenol	ug/kg	NLV	ID	ID	630000	2000000	NA	170 U	160 U	170 U
3,3'-Dichlorobenzidine	ug/kg	NLV	6500000	8200000	6600	30000	NA	700 U	680 U	700 U
3-Nitroaniline	ug/kg	NA	NA	NA	NA	NA	NA	700 U	680 U	700 U
4,6-Dinitro-2-methylphenol	ug/kg	NLV	130000000	59000000	79000	260000	NA	350 U	340 U	350 U
4-Bromophenyl phenyl ether	ug/kg	NA	NA	NA	NA	NA	NA	170 U	160 U	170 U
4-Chloro-3-methylphenol	ug/kg	NLV	ID	ID	4500000	15000000	NA	170 U	160 U	170 U
4-Chloroaniline	ug/kg	NA	NA	NA	NA	NA	NA	700 U	680 U	700 U
4-Chlorophenyl phenyl ether	ug/kg	NA	NA	NA	NA	NA	NA	170 U	160 U	170 U
4-Methylphenol	ug/kg	NLV	6700000000	2900000000	11000000	36000000	NA	170 U	160 U	170 U
4-Nitroaniline	ug/kg	NA	NA	NA	NA	NA	NA	700 U	680 U	700 U
4-Nitrophenol	ug/kg	NA	NA	NA	NA	NA	NA	700 U	680 U	700 U
Acenaphthene	ug/kg	97000000	14000000000	6200000000	41000000	130000000	NA	7.1 U	6.9 U	7.1 U
Acenaphthylene	ug/kg	2700000	2300000000	1000000000	1600000	5200000	NA	4.3 J	6.9 U	30
Acetophenone	ug/kg	52000000	33000000000	14000000000	47000000	150000000	1100000	350 U	340 U	350 U
Anthracene	ug/kg	1600000000	67000000000	29000000000	230000000	730000000	NA	7.1 U	6.9 U	36
Atrazine	ug/kg	NLV	ID	ID	71000	330000	NA	350 U	340 U	350 U
Benzaldehyde	ug/kg	NA	NA	NA	NA	NA	NA	350 U	340 U	350 U
Benzo(a)anthracene	ug/kg	NLV	ID	ID	20000	80000	NA	17	12	240 J
Benzo(a)pyrene	ug/kg	NLV	1500000	1900000	2000	8000	NA	35	31	240
Benzo(b)fluoranthene	ug/kg	ID	ID	ID	20000	80000	NA	35	29	340
Benzo(g,h,i)perylene	ug/kg	NLV	800000000	350000000	2500000	7000000	NA	13	10	160
Benzo(k)fluoranthene	ug/kg	NLV	ID	ID	200000	800000	NA	8.5	6.2 J	130
Biphenyl (1,1-Biphenyl)	ug/kg	NA	NA	NA	NA	NA	NA	350 U	340 U	350 U
bis(2-Chloroethoxy)methane	ug/kg	NA	NA	NA	NA	NA	NA	170 U	160 U	170 U
bis(2-Chloroethyl)ether	ug/kg	13000	9400000	12000000	13000	58000	2200000	170 U	160 U	170 U
bis(2-Ethylhexyl)phthalate (DEHP)	ug/kg	NLV	700000000	890000000	2800000	12000000	10000000	350 U	340 U	350 U
Butyl benzylphthalate (BBP)	ug/kg	NLV	47000000000	21000000000	36000000	120000000	310000	170 U	160 U	170 U
Caprolactam	ug/kg	NLV	670000000	290000000	53000000	310000000	NA	350 U	340 U	350 U
Carbazole	ug/kg	NLV	62000000	78000000	530000	2400000	NA	170 U	160 U	76 J
Chrysene	ug/kg	ID	ID	ID	2000000	8000000	NA	14	11	260
Dibenz(a,h)anthracene	ug/kg	NLV	ID	ID	2000	8000	NA	22 J	6.9 UJ	44
Dibenzofuran	ug/kg	160000	6700000	2900000	ID	ID	NA	170 U	160 U	170 U
Diethyl phthalate	ug/kg	NLV	3300000000	1500000000	170000000	550000000	740000	350 U	340 U	350 U
Dimethyl phthalate	ug/kg	NLV	3300000000	1500000000	1000000000	1000000000	790000	350 U	340 U	350 U
Di-n-butylphthalate (DBP)	ug/kg	NLV	3300000000	1500000000	27000000	87000000	760000	350 U	340 U	350 U
Di-n-octyl phthalate (DnOP)	ug/kg	NLV	31000000000	14000000000	6900000	20000000	140000000	170 U	160 U	170 U
Fluoranthene	ug/kg	880000000	9300000000	4100000000	46000000	130000000	NA	27	19	490
Fluorene	ug/kg	150000000	9300000000	4100000000	27000000	87000000	NA	7.1 U	6.9 U	9.9
Hexachlorobenzene	ug/kg	56000	6800000	8500000	8900	37000	NA	170 U	160 U	170 U
Hexachlorobutadiene	ug/kg	460000	140000000	180000000	100000	470000	350000	170 U	160 U	170 U
Hexachlorocyclopentadiene	ug/kg	60000	13000000	5900000	2300000	6700000	720000	350 U	340 U	350 U

SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
SUPPLEMENTAL INVESTIGATION - FORMER SKIMMED OIL AST
KENDALL ELECTRIC, INC. PROPERTY
WYOMING, MICHIGAN

Sample Location:		***MDEQ Generic Cleanup Criteria: Residential and Nonresidential*** [1]						***SB324-14***	***SB324-14***	***SB325-14***
Sample Identification:		Nonresidential	Particulate	Nonresidential	Direct	Nonresidential	Soil Saturation	***SO-17360-091514-EB-001***	***SO-17360-091514-EB-002***	***SO-17360-091514-EB-003***
Sample Date:		Finite VSIC for	Soil Inhalation	Particulate	Contact	Direct	Concentration	***9/15/2014***	***9/15/2014***	***9/15/2014***
Soil Depth:		2 Meter Source		Soil Inhalation		Contact	Screening	***(0-2) ft BGS***	***(0-2) ft BGS***	***(0-2) ft BGS***
Sample Type:		Thickness					Levels		***Duplicate***	
	Units	l	m	n	o	p	q			
SVOCs (continued)										
Hexachloroethane	ug/kg	1400000	230000000	100000000	230000	730000	NA	170 U	160 U	170 U
Indeno(1,2,3-cd)pyrene	ug/kg	NLV	ID	ID	20000	80000	NA	43	38	180
Isophorone	ug/kg	NLV	12000000000	8200000000	4800000	22000000	2400000	170 U	160 U	170 U
Naphthalene	ug/kg	350000	200000000	88000000	16000000	52000000	NA	7.1 U	6.9 U	7.1 U
Nitrobenzene	ug/kg	64000	47000000	21000000	100000	340000	490000	170 U	160 U	170 U
N-Nitrosodi-n-propylamine	ug/kg	NLV	1600000	2000000	1200	5400	1500000	170 U	160 U	170 U
N-Nitrosodiphenylamine	ug/kg	NLV	2200000000	2800000000	1700000	7800000	NA	170 U	160 U	170 U
Pentachlorophenol	ug/kg	NLV	100000000	130000000	90000	320000	NA	350 U	340 U	350 U
Phenanthrene	ug/kg	190000	6700000	2900000	1600000	5200000	NA	12	7.6	130
Phenol	ug/kg	NLV	40000000000	18000000000	40000000	230000000	12000000	170 U	160 U	170 U
Pyrene	ug/kg	780000000	6700000000	2900000000	29000000	84000000	NA	27	17	460
Metals										
Antimony	ug/kg	NLV	13000000	5900000	180000	670000	NA	39 J	25 J	77 J
Arsenic	ug/kg	NLV	720000	910000	7600	37000	NA	670	650	1400
Barium	ug/kg	NLV	330000000	150000000	37000000	130000000	NA	6700 J	5700 J	30000 J
Beryllium	ug/kg	NLV	1300000	590000	410000	1600000	NA	60 J	60 J	180
Cadmium	ug/kg	NLV	1700000	2200000	550000	2100000	NA	33 J	25 J	97 J
Chromium	ug/kg	NLV	260000	240000	2500000	9200000	NA	2400	2400	4700
Cobalt	ug/kg	NLV	13000000	5900000	2600000	9000000	NA	760	770	1700
Copper	ug/kg	NLV	130000000	59000000	20000000	73000000	NA	1800	1800	3900
Iron	ug/kg	NLV	ID	ID	160000000	580000000	NA	2000000	2100000	4600000
Lead	ug/kg	NLV	100000000	44000000	400000	900000	NA	2800	1700	15000
Manganese	ug/kg	NLV	3300000	1500000	25000000	90000000	NA	42000	35000	170000
Mercury	ug/kg	62000	20000000	8800000	160000	580000	NA	37 U	34 U	35 U
Molybdenum	ug/kg	NLV	ID	ID	2600000	9600000	NA	120 J	53 J	280 J
Nickel	ug/kg	NLV	13000000	16000000	40000000	150000000	NA	1900	1800	4200
Selenium	ug/kg	NLV	130000000	59000000	2600000	9600000	NA	390 U	400 U	380 U
Silver	ug/kg	NLV	6700000	2900000	2500000	9000000	NA	4 J	7.5 J	7.4 J
Thallium	ug/kg	NLV	13000000	5900000	35000	130000	NA	15 J	15 J	38 J
Vanadium	ug/kg	NLV	ID	ID	750000	5500000	NA	4000	4200	7700
Zinc	ug/kg	NLV	ID	ID	170000000	630000000	NA	8000 J	5400 J	18000 J
PCBs										
Aroclor-1016 (PCB-1016)	ug/kg	28000000	5200000	6500000	4000	16000	NA	87 U	85 U	90 U
Aroclor-1221 (PCB-1221)	ug/kg	28000000	5200000	6500000	4000	16000	NA	87 U	85 U	90 U
Aroclor-1232 (PCB-1232)	ug/kg	28000000	5200000	6500000	4000	16000	NA	87 U	85 U	90 U
Aroclor-1242 (PCB-1242)	ug/kg	28000000	5200000	6500000	4000	16000	NA	87 U	85 U	90 U
Aroclor-1248 (PCB-1248)	ug/kg	28000000	5200000	6500000	4000	16000	NA	87 U	85 U	90 U
Aroclor-1254 (PCB-1254)	ug/kg	28000000	5200000	6500000	4000	16000	NA	87 U	85 U	90 U
Aroclor-1260 (PCB-1260)	ug/kg	28000000	5200000	6500000	4000	16000	NA	87 U	85 U	90 U

Notes:

[1] Cleanup Criteria Requirements for Response Activity, Administrative Rules R299.1 to R299.50 effective December 30, 2013 pursuant to 1994 PA 451 as amended.

[2] Carbonate Hardness of 344 mg/L was used to calculate Groundwater-Surface Water Interface Protection Criteria.

[3] 1,2-Dibromoethane also known as Ethylene dibromide.

[4] 2-Butanone also known as Methyl ethyl ketone (MEK).

SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS
SUPPLEMENTAL INVESTIGATION - FORMER SKIMMED OIL AST
KENDALL ELECTRIC, INC. PROPERTY
WYOMING, MICHIGAN

Sample Location:		***MDEQ Generic Cleanup Criteria: Residential and Nonresidential*** [1]						***SB324-14***	***SB324-14***	***SB325-14***
Sample Identification:		Nonresidential	Particulate	Nonresidential	Direct	Nonresidential	Soil Saturation	***SO-17360-091514-EB-001***	***SO-17360-091514-EB-002***	***SO-17360-091514-EB-003***
Sample Date:		Finite VSIC for	Soil Inhalation	Particulate	Contact	Direct	Concentration	***9/15/2014***	***9/15/2014***	***9/15/2014***
Soil Depth:		2 Meter Source		Soil Inhalation		Contact	Screening	***(0-2) ft BGS***	***(0-2) ft BGS***	***(0-2) ft BGS***
Sample Type:		Thickness					Levels		***Duplicate***	
	Units	l	m	n	o	p	q			

[5] 4-Methyl-2-pentanone also known as Methyl isobutyl ketone (MIBK).
[6] 2,2'-Oxybis(1-chloropropane) also known as (bis(2-Chloroisopropyl) ether).
J - Estimated concentration.
ID - Insufficient data to develop criterion.
NA - A criterion or value is not available or, in the case of background numbers, not applicable.
NLL - Hazardous substance is not likely to leach under most soil conditions.
NLV - Hazardous substance is not likely to volatilize under most conditions.
-- Parameter was not analyzed.
[ ] - Exceeds Generic Cleanup Criteria.
Superscript letter notes the criterion exceeded.

Attachment A

Photo Log

Photo 1 – View of former skimmed oil AST on concrete pad

Photo 2 – View of former skimmed oil AST area subsequent to tank and concrete removal

Photo 3 – View of SB324-14 boring and soil cuttings.

Photo 3 – View of SB325-14 boring and soil cuttings.

Attachment B

Stratigraphic Boring Logs

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB324-14
DATE COMPLETED: September 15, 2014
DRILLING METHOD: HAND AUGER
FIELD PERSONNEL: E. BATENBURG

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
0	SP-SAND, trace fine gravel, loose, fine grained, poorly graded, light brown, dry		BACKFILLED WITH SOIL CUTTINGS	1HA 0-2' -001/ 002		100	
2	END OF BOREHOLE @ 2.0ft BGS	2.00					
4							
6							
8							
10							
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS ( )

OVERBURDEN LOG 017360-T05-WI.GPJ CRA_CORP.GDT 10/7/14

STRATIGRAPHIC AND INSTRUMENTATION LOG (OVERBURDEN)

PROJECT NAME: FORMER GRAND RAPIDS METAL PLANT
PROJECT NUMBER: 017360
CLIENT: RACER TRUST
LOCATION: WYOMING, MI

HOLE DESIGNATION: SB325-14
DATE COMPLETED: September 15, 2014
DRILLING METHOD: HAND AUGER
FIELD PERSONNEL: E. BATENBURG

DEPTH ft BGS	STRATIGRAPHIC DESCRIPTION & REMARKS	DEPTH ft BGS	BOREHOLE	SAMPLE NUMBER	SAMPLE INTERVAL	SAMPLE REC (%)	SAMPLE 'N' VALUE
0	SP-SAND, trace fine gravel, loose, fine grained, poorly graded, dark brown, dry						
2	- with fine gravel, brown at 0.25ft BGS	2.00	BACKFILLED WITH SOIL CUTTINGS	1HA-0-2'-003		100	
	END OF BOREHOLE @ 2.0ft BGS						
4							
6							
8							
10							
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							

NOTES: MEASURING POINT ELEVATIONS MAY CHANGE; REFER TO CURRENT ELEVATION TABLE

CHEMICAL ANALYSIS (1HA)

OVERBURDEN LOG 017360-T05-WI.GPJ CRA_CORP.GDT 10/7/14

Attachment C

Analytical Laboratory Report

24-Sep-2014

Rawa Fleisher
Conestoga-Rovers & Associates
14496 Sheldon Road
Suite 200
Plymouth, MI 48170

Re: **Former GRMP (17360-T12Y14-03Y14)** Work Order: **1409698**

Dear Rawa,

ALS Environmental received 4 samples on 15-Sep-2014 02:00 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

Sample results are compliant with NELAP standard requirements and QC results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 45.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Chad Whelton

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager

Certificate No: MN 532786

ADDRESS 3352 128th Avenue Holland, Michigan 49424-9263 | PHONE (616) 399-6070 | FAX (616) 399-6185
ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

ALS Group USA, Corp

Date: 24-Sep-14

Client: Conestoga-Rovers & Associates
Project: Former GRMP (17360-T12Y14-03Y14)
Work Order: **1409698**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1409698-01	SO-17360-091514-EB-001	Soil		9/15/2014 12:35	9/15/2014 14:00	☐
1409698-02	SO-17360-091514-EB-002	Soil		9/15/2014 12:40	9/15/2014 14:00	☐
1409698-03	SO-17360-091514-EB-003	Soil		9/15/2014 12:45	9/15/2014 14:00	☐
1409698-04	Trip Blank	Soil		9/15/2014	9/15/2014 14:00	☐

Client: Conestoga-Rovers & Associates
Project: Former GRMP (17360-T12Y14-03Y14)
Work Order: 1409698

Case Narrative

Batch 62881, Method ICP_6020_S, Sample 1409698-03B MS: The MS recovery for Manganese was outside of the control; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required.

Batch 62881, Method ICP_6020_S, Sample 1409698-03B MS/MSD: The MS and MSD recoveries for Barium and Zinc were above the upper control limits. The corresponding results in the parent sample may be biased high.

Batch 62881, Method ICP_6020_S, Sample 1409698-03B MSD: The MSD recovery for Iron was outside of the control; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required.

Batch 62881, Method ICP_6020_S, Sample 1409698-03B MSD: The MSD recovery for Lead was below the lower control limit. However, the MS recovery and RPD were within control limits. No qualification is required.

Batch 62960, Method SVO_8270_S, Sample SLCSS1-62960: The LCS recoveries for Di-n-butyl phthalate and Di-n-octyl phthalate were above the upper control limits. All sample results in the batch were non-detect. No qualification is required.

Batch 62960, Method SVO_8270_S, Sample 1409698-03B MS/MSD: The MS and MSD recoveries for multiple compounds were above the upper control limits. The corresponding results in the parent sample may be biased high.

ALS Group USA, Corp

Date: 24-Sep-14

Client: Conestoga-Rovers & Associates
Project: Former GRMP (17360-T12Y14-03Y14)
WorkOrder: **1409698**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
% of sample	Percent of Sample
µg/Kg	Micrograms per Kilogram
µg/Kg-dry	Micrograms per Kilogram Dry Weight
mg/Kg-dry	Milligrams per Kilogram Dry Weight

ALS Group USA, Corp

Date: *24-Sep-14*

Client: Conestoga-Rovers & Associates
Project: Former GRMP (17360-T12Y14-03Y14)
Sample ID: SO-17360-091514-EB-001
Collection Date: 9/15/2014 12:35 PM

Work Order: 1409698
Lab ID: 1409698-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**		Prep: SW3541 / 9/17/14		Analyst: **JG**
BatchID: 62859							
Aroclor 1016	U		28	87	µg/Kg-dry	1	9/18/2014 02:44
Aroclor 1221	U		28	87	µg/Kg-dry	1	9/18/2014 02:44
Aroclor 1232	U		28	87	µg/Kg-dry	1	9/18/2014 02:44
Aroclor 1242	U		28	87	µg/Kg-dry	1	9/18/2014 02:44
Aroclor 1248	U		28	87	µg/Kg-dry	1	9/18/2014 02:44
Aroclor 1254	U		33	87	µg/Kg-dry	1	9/18/2014 02:44
Aroclor 1260	U		33	87	µg/Kg-dry	1	9/18/2014 02:44
Surr: Decachlorobiphenyl	*95.1*			*40-140*	*%REC*	1	9/18/2014 02:44
MERCURY BY CVAA			**SW7471**		Prep: SW7471 / 9/18/14		Analyst: **LR**
BatchID: 62944							
Mercury	**0.0053**	J	**0.00090**	**0.037**	**mg/Kg-dry**	1	9/18/2014 18:00
METALS BY ICP-MS			**SW6020A**		Prep: SW3050B / 9/17/14		Analyst: **ML**
BatchID: 62881							
Antimony	**0.039**	J	**0.0015**	**0.36**	**mg/Kg-dry**	1	9/18/2014 11:40
Arsenic	**0.67**		**0.049**	**0.36**	**mg/Kg-dry**	1	9/18/2014 11:40
Barium	**6.7**		**0.010**	**0.36**	**mg/Kg-dry**	1	9/18/2014 11:40
Beryllium	**0.060**	J	**0.0029**	**0.15**	**mg/Kg-dry**	1	9/18/2014 11:40
Cadmium	**0.033**	J	**0.0015**	**0.15**	**mg/Kg-dry**	1	9/18/2014 11:40
Chromium	**2.4**		**0.060**	**0.36**	**mg/Kg-dry**	1	9/18/2014 11:40
Cobalt	**0.76**		**0.0015**	**0.36**	**mg/Kg-dry**	1	9/18/2014 11:40
Copper	**1.8**		**0.071**	**0.36**	**mg/Kg-dry**	1	9/18/2014 11:40
Iron	**2,000**		**1.2**	**5.8**	**mg/Kg-dry**	1	9/18/2014 11:40
Lead	**2.8**		**0.0015**	**0.36**	**mg/Kg-dry**	1	9/18/2014 11:40
Manganese	**42**		**0.032**	**0.36**	**mg/Kg-dry**	1	9/18/2014 11:40
Molybdenum	**0.12**	J	**0.016**	**0.36**	**mg/Kg-dry**	1	9/18/2014 11:40
Nickel	**1.9**		**0.036**	**0.36**	**mg/Kg-dry**	1	9/18/2014 11:40
Selenium	**0.39**		**0.046**	**0.36**	**mg/Kg-dry**	1	9/18/2014 11:40
Silver	**0.0040**	J	**0.0015**	**0.36**	**mg/Kg-dry**	1	9/18/2014 11:40
Thallium	**0.015**	J	**0.0087**	**0.36**	**mg/Kg-dry**	1	9/18/2014 11:40
Vanadium	**4.0**		**0.022**	**0.36**	**mg/Kg-dry**	1	9/18/2014 11:40
Zinc	**8.0**		**0.031**	**0.73**	**mg/Kg-dry**	1	9/18/2014 11:40
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW846 8270D**		Prep: SW3541 / 9/19/14		Analyst: **RM**
BatchID: 62960							
1,1`-Biphenyl	U		5.3	350	µg/Kg-dry	1	9/20/2014 20:07
2,4,5-Trichlorophenol	U		8.9	170	µg/Kg-dry	1	9/20/2014 20:07
2,4,6-Trichlorophenol	U		6.0	170	µg/Kg-dry	1	9/20/2014 20:07

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *24-Sep-14*

Client: Conestoga-Rovers & Associates
Project: Former GRMP (17360-T12Y14-03Y14)
Sample ID: SO-17360-091514-EB-001
Collection Date: 9/15/2014 12:35 PM

Work Order: 1409698
Lab ID: 1409698-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2,4-Dichlorophenol	U		10	170	µg/Kg-dry	1	9/20/2014 20:07
2,4-Dimethylphenol	U		57	350	µg/Kg-dry	1	9/20/2014 20:07
2,4-Dinitrophenol	U		32	700	µg/Kg-dry	1	9/20/2014 20:07
2,4-Dinitrotoluene	U		11	170	µg/Kg-dry	1	9/20/2014 20:07
2,6-Dinitrotoluene	U		18	170	µg/Kg-dry	1	9/20/2014 20:07
2-Chloronaphthalene	U		1.7	7.1	µg/Kg-dry	1	9/20/2014 20:07
2-Chlorophenol	U		11	170	µg/Kg-dry	1	9/20/2014 20:07
2-Methylnaphthalene	U		2.9	7.1	µg/Kg-dry	1	9/20/2014 20:07
2-Methylphenol	U		14	170	µg/Kg-dry	1	9/20/2014 20:07
2-Nitroaniline	U		14	700	µg/Kg-dry	1	9/20/2014 20:07
2-Nitrophenol	U		12	170	µg/Kg-dry	1	9/20/2014 20:07
3,3´-Dichlorobenzidine	U		440	700	µg/Kg-dry	1	9/20/2014 20:07
3-Nitroaniline	U		12	700	µg/Kg-dry	1	9/20/2014 20:07
4,6-Dinitro-2-methylphenol	U		29	350	µg/Kg-dry	1	9/20/2014 20:07
4-Bromophenyl phenyl ether	U		9.6	170	µg/Kg-dry	1	9/20/2014 20:07
4-Chloro-3-methylphenol	U		8.2	170	µg/Kg-dry	1	9/20/2014 20:07
4-Chloroaniline	U		11	700	µg/Kg-dry	1	9/20/2014 20:07
4-Chlorophenyl phenyl ether	U		10	170	µg/Kg-dry	1	9/20/2014 20:07
4-Methylphenol	U		**0**	**170**	**µg/Kg-dry**	1	9/20/2014 20:07
4-Nitroaniline	U		9.8	700	µg/Kg-dry	1	9/20/2014 20:07
4-Nitrophenol	U		7.0	700	µg/Kg-dry	1	9/20/2014 20:07
Acenaphthene	U		1.1	7.1	µg/Kg-dry	1	9/20/2014 20:07
Acenaphthylene	**4.3**	J	**1.3**	**7.1**	**µg/Kg-dry**	1	9/20/2014 20:07
Acetophenone	U		5.3	350	µg/Kg-dry	1	9/20/2014 20:07
Anthracene	U		1.4	7.1	µg/Kg-dry	1	9/20/2014 20:07
Atrazine	U		11	350	µg/Kg-dry	1	9/20/2014 20:07
Benzaldehyde	U		14	350	µg/Kg-dry	1	9/20/2014 20:07
Benzo(a)anthracene	**17**		**1.4**	**7.1**	**µg/Kg-dry**	1	9/20/2014 20:07
Benzo(a)pyrene	**35**		**2.3**	**7.1**	**µg/Kg-dry**	1	9/20/2014 20:07
Benzo(b)fluoranthene	**35**		**2.1**	**7.1**	**µg/Kg-dry**	1	9/20/2014 20:07
Benzo(g,h,i)perylene	**13**		**2.8**	**7.1**	**µg/Kg-dry**	1	9/20/2014 20:07
Benzo(k)fluoranthene	**8.5**		**1.5**	**7.1**	**µg/Kg-dry**	1	9/20/2014 20:07
Bis(2-chloroethoxy)methane	U		11	170	µg/Kg-dry	1	9/20/2014 20:07
Bis(2-chloroethyl)ether	U		11	170	µg/Kg-dry	1	9/20/2014 20:07
Bis(2-chloroisopropyl)ether	U		15	170	µg/Kg-dry	1	9/20/2014 20:07
Bis(2-ethylhexyl)phthalate	U		12	350	µg/Kg-dry	1	9/20/2014 20:07
Butyl benzyl phthalate	U		13	170	µg/Kg-dry	1	9/20/2014 20:07
Caprolactam	U		15	350	µg/Kg-dry	1	9/20/2014 20:07
Carbazole	U		11	170	µg/Kg-dry	1	9/20/2014 20:07
Chrysene	**14**		**1.7**	**7.1**	**µg/Kg-dry**	1	9/20/2014 20:07

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *24-Sep-14*

Client: Conestoga-Rovers & Associates
Project: Former GRMP (17360-T12Y14-03Y14)
Sample ID: SO-17360-091514-EB-001
Collection Date: 9/15/2014 12:35 PM

Work Order: 1409698
Lab ID: 1409698-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	**22**		**2.6**	**7.1**	**µg/Kg-dry**	1	9/20/2014 20:07
Dibenzofuran	U		11	170	µg/Kg-dry	1	9/20/2014 20:07
Diethyl phthalate	U		11	350	µg/Kg-dry	1	9/20/2014 20:07
Dimethyl phthalate	U		12	350	µg/Kg-dry	1	9/20/2014 20:07
Di-n-butyl phthalate	U		5.1	350	µg/Kg-dry	1	9/20/2014 20:07
Di-n-octyl phthalate	U		11	170	µg/Kg-dry	1	9/20/2014 20:07
Fluoranthene	**27**		**2.5**	**7.1**	**µg/Kg-dry**	1	9/20/2014 20:07
Fluorene	U		2.4	7.1	µg/Kg-dry	1	9/20/2014 20:07
Hexachlorobenzene	U		9.9	170	µg/Kg-dry	1	9/20/2014 20:07
Hexachlorobutadiene	U		12	170	µg/Kg-dry	1	9/20/2014 20:07
Hexachlorocyclopentadiene	U		11	350	µg/Kg-dry	1	9/20/2014 20:07
Hexachloroethane	U		17	170	µg/Kg-dry	1	9/20/2014 20:07
Indeno(1,2,3-cd)pyrene	**43**		**2.4**	**7.1**	**µg/Kg-dry**	1	9/20/2014 20:07
Isophorone	U		12	170	µg/Kg-dry	1	9/20/2014 20:07
Naphthalene	U		2.6	7.1	µg/Kg-dry	1	9/20/2014 20:07
Nitrobenzene	U		14	170	µg/Kg-dry	1	9/20/2014 20:07
N-Nitrosodi-n-propylamine	U		14	170	µg/Kg-dry	1	9/20/2014 20:07
N-Nitrosodiphenylamine	U		63	170	µg/Kg-dry	1	9/20/2014 20:07
Pentachlorophenol	U		6.8	350	µg/Kg-dry	1	9/20/2014 20:07
Phenanthrene	**12**		**1.4**	**7.1**	**µg/Kg-dry**	1	9/20/2014 20:07
Phenol	U		12	170	µg/Kg-dry	1	9/20/2014 20:07
Pyrene	**27**		**2.4**	**7.1**	**µg/Kg-dry**	1	9/20/2014 20:07
Surr: 2,4,6-Tribromophenol	*69.5*			*34-140*	*%REC*	1	9/20/2014 20:07
Surr: 2-Fluorobiphenyl	*62.8*			*12-100*	*%REC*	1	9/20/2014 20:07
Surr: 2-Fluorophenol	*90.1*			*33-117*	*%REC*	1	9/20/2014 20:07
Surr: 4-Terphenyl-d14	*87.8*			*25-137*	*%REC*	1	9/20/2014 20:07
Surr: Nitrobenzene-d5	*64.4*			*37-107*	*%REC*	1	9/20/2014 20:07
Surr: Phenol-d6	*86.0*			*40-106*	*%REC*	1	9/20/2014 20:07
VOLATILE ORGANIC COMPOUNDS			**SW8260B**		Prep: SW5035 / 9/16/14		Analyst: **BG**
BatchID: 62817							
1,1,1-Trichloroethane	U		15	38	µg/Kg-dry	1	9/21/2014 17:58
1,1,2,2-Tetrachloroethane	U		17	38	µg/Kg-dry	1	9/21/2014 17:58
1,1,2-Trichloroethane	U		14	38	µg/Kg-dry	1	9/21/2014 17:58
1,1,2-Trichlorotrifluoroethane	U		14	38	µg/Kg-dry	1	9/21/2014 17:58
1,1-Dichloroethane	U		14	38	µg/Kg-dry	1	9/21/2014 17:58
1,1-Dichloroethene	U		16	38	µg/Kg-dry	1	9/21/2014 17:58
1,2,4-Trichlorobenzene	U		20	38	µg/Kg-dry	1	9/21/2014 17:58
1,2-Dibromo-3-chloropropane	U		19	38	µg/Kg-dry	1	9/21/2014 17:58
1,2-Dibromoethane	U		15	38	µg/Kg-dry	1	9/21/2014 17:58

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *24-Sep-14*

Client: Conestoga-Rovers & Associates
Project: Former GRMP (17360-T12Y14-03Y14)
Sample ID: SO-17360-091514-EB-001
Collection Date: 9/15/2014 12:35 PM

Work Order: 1409698
Lab ID: 1409698-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,2-Dichlorobenzene	U		15	38	µg/Kg-dry	1	9/21/2014 17:58
1,2-Dichloroethane	U		18	38	µg/Kg-dry	1	9/21/2014 17:58
1,2-Dichloropropane	U		13	38	µg/Kg-dry	1	9/21/2014 17:58
1,3-Dichlorobenzene	U		15	38	µg/Kg-dry	1	9/21/2014 17:58
1,4-Dichlorobenzene	U		15	38	µg/Kg-dry	1	9/21/2014 17:58
2-Butanone	U		95	260	µg/Kg-dry	1	9/21/2014 17:58
2-Hexanone	U		9.4	38	µg/Kg-dry	1	9/21/2014 17:58
4-Methyl-2-pentanone	U		13	38	µg/Kg-dry	1	9/21/2014 17:58
Acetone	U		81	130	µg/Kg-dry	1	9/21/2014 17:58
Benzene	U		15	38	µg/Kg-dry	1	9/21/2014 17:58
Bromodichloromethane	U		8.6	38	µg/Kg-dry	1	9/21/2014 17:58
Bromoform	U		7.6	38	µg/Kg-dry	1	9/21/2014 17:58
Bromomethane	U		15	96	µg/Kg-dry	1	9/21/2014 17:58
Carbon disulfide	**240**	J	**19**	**260**	**µg/Kg-dry**	1	9/21/2014 17:58
Carbon tetrachloride	U		11	38	µg/Kg-dry	1	9/21/2014 17:58
Chlorobenzene	U		16	38	µg/Kg-dry	1	9/21/2014 17:58
Chloroethane	U		81	130	µg/Kg-dry	1	9/21/2014 17:58
Chloroform	U		16	38	µg/Kg-dry	1	9/21/2014 17:58
Chloromethane	U		21	130	µg/Kg-dry	1	9/21/2014 17:58
cis-1,2-Dichloroethene	U		16	38	µg/Kg-dry	1	9/21/2014 17:58
cis-1,3-Dichloropropene	U		13	38	µg/Kg-dry	1	9/21/2014 17:58
Cyclohexane	U		17	38	µg/Kg-dry	1	9/21/2014 17:58
Dibromochloromethane	U		7.1	38	µg/Kg-dry	1	9/21/2014 17:58
Dichlorodifluoromethane	U		17	38	µg/Kg-dry	1	9/21/2014 17:58
Ethylbenzene	U		14	38	µg/Kg-dry	1	9/21/2014 17:58
Isopropylbenzene	U		17	38	µg/Kg-dry	1	9/21/2014 17:58
Methyl acetate	**1,600**	J	**51**	**1,700**	**µg/Kg-dry**	1	9/21/2014 17:58
Methyl tert-butyl ether	U		16	38	µg/Kg-dry	1	9/21/2014 17:58
Methylcyclohexane	U		18	38	µg/Kg-dry	1	9/21/2014 17:58
Methylene chloride	U		15	38	µg/Kg-dry	1	9/21/2014 17:58
Styrene	U		14	38	µg/Kg-dry	1	9/21/2014 17:58
Tetrachloroethene	U		17	38	µg/Kg-dry	1	9/21/2014 17:58
Toluene	U		14	38	µg/Kg-dry	1	9/21/2014 17:58
trans-1,2-Dichloroethene	U		12	38	µg/Kg-dry	1	9/21/2014 17:58
trans-1,3-Dichloropropene	U		13	38	µg/Kg-dry	1	9/21/2014 17:58
Trichloroethene	U		18	38	µg/Kg-dry	1	9/21/2014 17:58
Trichlorofluoromethane	U		11	38	µg/Kg-dry	1	9/21/2014 17:58
Vinyl chloride	U		17	38	µg/Kg-dry	1	9/21/2014 17:58
Xylenes, Total	U		45	120	µg/Kg-dry	1	9/21/2014 17:58
Surr: 1,2-Dichloroethane-d4	*104*			*70-130*	*%REC*	1	9/21/2014 17:58

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Conestoga-Rovers & Associates
Project: Former GRMP (17360-T12Y14-03Y14)
Sample ID: SO-17360-091514-EB-001
Collection Date: 9/15/2014 12:35 PM

Work Order: 1409698
Lab ID: 1409698-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 4-Bromofluorobenzene	*97.6*			*70-130*	*%REC*	1	9/21/2014 17:58
Surr: Dibromofluoromethane	*104*			*70-130*	*%REC*	1	9/21/2014 17:58
Surr: Toluene-d8	*97.6*			*70-130*	*%REC*	1	9/21/2014 17:58
MOISTURE			**A2540 G**				Analyst: **RLM**
BatchID: R148387							
Moisture	**6.2**		**0.025**	**0.050**	**% of sample**	1	9/17/2014 14:45

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *24-Sep-14*

Client: Conestoga-Rovers & Associates
Project: Former GRMP (17360-T12Y14-03Y14)
Sample ID: SO-17360-091514-EB-002
Collection Date: 9/15/2014 12:40 PM

Work Order: 1409698
Lab ID: 1409698-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**		Prep: SW3541 / 9/17/14		Analyst: **JG**
BatchID: 62859							
Aroclor 1016	U		27	85	µg/Kg-dry	1	9/18/2014 03:16
Aroclor 1221	U		27	85	µg/Kg-dry	1	9/18/2014 03:16
Aroclor 1232	U		27	85	µg/Kg-dry	1	9/18/2014 03:16
Aroclor 1242	U		27	85	µg/Kg-dry	1	9/18/2014 03:16
Aroclor 1248	U		27	85	µg/Kg-dry	1	9/18/2014 03:16
Aroclor 1254	U		32	85	µg/Kg-dry	1	9/18/2014 03:16
Aroclor 1260	U		32	85	µg/Kg-dry	1	9/18/2014 03:16
Surr: Decachlorobiphenyl	*98.1*			*40-140*	*%REC*	1	9/18/2014 03:16
MERCURY BY CVAA			**SW7471**		Prep: SW7471 / 9/18/14		Analyst: **LR**
BatchID: 62944							
Mercury	**0.0039**	J	**0.00083**	**0.034**	**mg/Kg-dry**	1	9/18/2014 18:02
METALS BY ICP-MS			**SW6020A**		Prep: SW3050B / 9/17/14		Analyst: **ML**
BatchID: 62881							
Antimony	**0.025**	J	**0.0014**	**0.36**	**mg/Kg-dry**	1	9/18/2014 11:47
Arsenic	**0.65**		**0.049**	**0.36**	**mg/Kg-dry**	1	9/18/2014 11:47
Barium	**5.7**		**0.010**	**0.36**	**mg/Kg-dry**	1	9/18/2014 11:47
Beryllium	**0.060**	J	**0.0029**	**0.14**	**mg/Kg-dry**	1	9/18/2014 11:47
Cadmium	**0.025**	J	**0.0014**	**0.14**	**mg/Kg-dry**	1	9/18/2014 11:47
Chromium	**2.4**		**0.059**	**0.36**	**mg/Kg-dry**	1	9/18/2014 11:47
Cobalt	**0.77**		**0.0014**	**0.36**	**mg/Kg-dry**	1	9/18/2014 11:47
Copper	**1.8**		**0.071**	**0.36**	**mg/Kg-dry**	1	9/18/2014 11:47
Iron	**2,100**		**1.2**	**5.8**	**mg/Kg-dry**	1	9/18/2014 11:47
Lead	**1.7**		**0.0014**	**0.36**	**mg/Kg-dry**	1	9/18/2014 11:47
Manganese	**35**		**0.032**	**0.36**	**mg/Kg-dry**	1	9/18/2014 11:47
Molybdenum	**0.053**	J	**0.016**	**0.36**	**mg/Kg-dry**	1	9/18/2014 11:47
Nickel	**1.8**		**0.036**	**0.36**	**mg/Kg-dry**	1	9/18/2014 11:47
Selenium	**0.40**		**0.046**	**0.36**	**mg/Kg-dry**	1	9/18/2014 11:47
Silver	**0.0075**	J	**0.0014**	**0.36**	**mg/Kg-dry**	1	9/18/2014 11:47
Thallium	**0.015**	J	**0.0087**	**0.36**	**mg/Kg-dry**	1	9/18/2014 11:47
Vanadium	**4.2**		**0.022**	**0.36**	**mg/Kg-dry**	1	9/18/2014 11:47
Zinc	**5.4**		**0.030**	**0.72**	**mg/Kg-dry**	1	9/18/2014 11:47
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW846 8270D**		Prep: SW3541 / 9/19/14		Analyst: **RM**
BatchID: 62960							
1,1`-Biphenyl	U		5.1	340	µg/Kg-dry	1	9/20/2014 20:28
2,4,5-Trichlorophenol	U		8.6	160	µg/Kg-dry	1	9/20/2014 20:28
2,4,6-Trichlorophenol	U		5.8	160	µg/Kg-dry	1	9/20/2014 20:28

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *24-Sep-14*

Client: Conestoga-Rovers & Associates
Project: Former GRMP (17360-T12Y14-03Y14)
Sample ID: SO-17360-091514-EB-002
Collection Date: 9/15/2014 12:40 PM

Work Order: 1409698
Lab ID: 1409698-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2,4-Dichlorophenol	U		10	160	µg/Kg-dry	1	9/20/2014 20:28
2,4-Dimethylphenol	U		55	340	µg/Kg-dry	1	9/20/2014 20:28
2,4-Dinitrophenol	U		31	680	µg/Kg-dry	1	9/20/2014 20:28
2,4-Dinitrotoluene	U		11	160	µg/Kg-dry	1	9/20/2014 20:28
2,6-Dinitrotoluene	U		18	160	µg/Kg-dry	1	9/20/2014 20:28
2-Chloronaphthalene	U		1.6	6.9	µg/Kg-dry	1	9/20/2014 20:28
2-Chlorophenol	U		10	160	µg/Kg-dry	1	9/20/2014 20:28
2-Methylnaphthalene	U		2.8	6.9	µg/Kg-dry	1	9/20/2014 20:28
2-Methylphenol	U		14	160	µg/Kg-dry	1	9/20/2014 20:28
2-Nitroaniline	U		13	680	µg/Kg-dry	1	9/20/2014 20:28
2-Nitrophenol	U		12	160	µg/Kg-dry	1	9/20/2014 20:28
3,3´-Dichlorobenzidine	U		430	680	µg/Kg-dry	1	9/20/2014 20:28
3-Nitroaniline	U		12	680	µg/Kg-dry	1	9/20/2014 20:28
4,6-Dinitro-2-methylphenol	U		28	340	µg/Kg-dry	1	9/20/2014 20:28
4-Bromophenyl phenyl ether	U		9.3	160	µg/Kg-dry	1	9/20/2014 20:28
4-Chloro-3-methylphenol	U		7.9	160	µg/Kg-dry	1	9/20/2014 20:28
4-Chloroaniline	U		10	680	µg/Kg-dry	1	9/20/2014 20:28
4-Chlorophenyl phenyl ether	U		10	160	µg/Kg-dry	1	9/20/2014 20:28
4-Methylphenol	U		**0**	**160**	**µg/Kg-dry**	1	9/20/2014 20:28
4-Nitroaniline	U		9.5	680	µg/Kg-dry	1	9/20/2014 20:28
4-Nitrophenol	U		6.8	680	µg/Kg-dry	1	9/20/2014 20:28
Acenaphthene	U		1.0	6.9	µg/Kg-dry	1	9/20/2014 20:28
Acenaphthylene	U		1.2	6.9	µg/Kg-dry	1	9/20/2014 20:28
Acetophenone	U		5.1	340	µg/Kg-dry	1	9/20/2014 20:28
Anthracene	U		1.4	6.9	µg/Kg-dry	1	9/20/2014 20:28
Atrazine	U		10	340	µg/Kg-dry	1	9/20/2014 20:28
Benzaldehyde	U		13	340	µg/Kg-dry	1	9/20/2014 20:28
Benzo(a)anthracene	**12**		**1.4**	**6.9**	**µg/Kg-dry**	1	9/20/2014 20:28
Benzo(a)pyrene	**31**		**2.2**	**6.9**	**µg/Kg-dry**	1	9/20/2014 20:28
Benzo(b)fluoranthene	**29**		**2.0**	**6.9**	**µg/Kg-dry**	1	9/20/2014 20:28
Benzo(g,h,i)perylene	**10**		**2.7**	**6.9**	**µg/Kg-dry**	1	9/20/2014 20:28
Benzo(k)fluoranthene	**6.2**	J	**1.5**	**6.9**	**µg/Kg-dry**	1	9/20/2014 20:28
Bis(2-chloroethoxy)methane	U		11	160	µg/Kg-dry	1	9/20/2014 20:28
Bis(2-chloroethyl)ether	U		11	160	µg/Kg-dry	1	9/20/2014 20:28
Bis(2-chloroisopropyl)ether	U		14	160	µg/Kg-dry	1	9/20/2014 20:28
Bis(2-ethylhexyl)phthalate	U		11	340	µg/Kg-dry	1	9/20/2014 20:28
Butyl benzyl phthalate	U		13	160	µg/Kg-dry	1	9/20/2014 20:28
Caprolactam	U		15	340	µg/Kg-dry	1	9/20/2014 20:28
Carbazole	U		10	160	µg/Kg-dry	1	9/20/2014 20:28
Chrysene	**11**		**1.6**	**6.9**	**µg/Kg-dry**	1	9/20/2014 20:28

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Conestoga-Rovers & Associates
Project: Former GRMP (17360-T12Y14-03Y14)
Sample ID: SO-17360-091514-EB-002
Collection Date: 9/15/2014 12:40 PM

Work Order: 1409698
Lab ID: 1409698-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	U		2.6	6.9	µg/Kg-dry	1	9/20/2014 20:28
Dibenzofuran	U		11	160	µg/Kg-dry	1	9/20/2014 20:28
Diethyl phthalate	U		11	340	µg/Kg-dry	1	9/20/2014 20:28
Dimethyl phthalate	U		12	340	µg/Kg-dry	1	9/20/2014 20:28
Di-n-butyl phthalate	U		5.0	340	µg/Kg-dry	1	9/20/2014 20:28
Di-n-octyl phthalate	U		11	160	µg/Kg-dry	1	9/20/2014 20:28
Fluoranthene	**19**		**2.4**	**6.9**	**µg/Kg-dry**	1	9/20/2014 20:28
Fluorene	U		2.3	6.9	µg/Kg-dry	1	9/20/2014 20:28
Hexachlorobenzene	U		9.6	160	µg/Kg-dry	1	9/20/2014 20:28
Hexachlorobutadiene	U		12	160	µg/Kg-dry	1	9/20/2014 20:28
Hexachlorocyclopentadiene	U		11	340	µg/Kg-dry	1	9/20/2014 20:28
Hexachloroethane	U		16	160	µg/Kg-dry	1	9/20/2014 20:28
Indeno(1,2,3-cd)pyrene	**38**		**2.3**	**6.9**	**µg/Kg-dry**	1	9/20/2014 20:28
Isophorone	U		11	160	µg/Kg-dry	1	9/20/2014 20:28
Naphthalene	U		2.5	6.9	µg/Kg-dry	1	9/20/2014 20:28
Nitrobenzene	U		13	160	µg/Kg-dry	1	9/20/2014 20:28
N-Nitrosodi-n-propylamine	U		13	160	µg/Kg-dry	1	9/20/2014 20:28
N-Nitrosodiphenylamine	U		61	160	µg/Kg-dry	1	9/20/2014 20:28
Pentachlorophenol	U		6.6	340	µg/Kg-dry	1	9/20/2014 20:28
Phenanthrene	**7.6**		**1.4**	**6.9**	**µg/Kg-dry**	1	9/20/2014 20:28
Phenol	U		12	160	µg/Kg-dry	1	9/20/2014 20:28
Pyrene	**17**		**2.3**	**6.9**	**µg/Kg-dry**	1	9/20/2014 20:28
Surr: 2,4,6-Tribromophenol	*89.2*			*34-140*	*%REC*	1	9/20/2014 20:28
Surr: 2-Fluorobiphenyl	*71.5*			*12-100*	*%REC*	1	9/20/2014 20:28
Surr: 2-Fluorophenol	*104*			*33-117*	*%REC*	1	9/20/2014 20:28
Surr: 4-Terphenyl-d14	*106*			*25-137*	*%REC*	1	9/20/2014 20:28
Surr: Nitrobenzene-d5	*72.7*			*37-107*	*%REC*	1	9/20/2014 20:28
Surr: Phenol-d6	*99.8*			*40-106*	*%REC*	1	9/20/2014 20:28
VOLATILE ORGANIC COMPOUNDS			**SW8260B**		Prep: SW5035 / 9/16/14		Analyst: **BG**
BatchID: 62817							
1,1,1-Trichloroethane	U		14	37	µg/Kg-dry	1	9/21/2014 18:24
1,1,2,2-Tetrachloroethane	U		16	37	µg/Kg-dry	1	9/21/2014 18:24
1,1,2-Trichloroethane	U		13	37	µg/Kg-dry	1	9/21/2014 18:24
1,1,2-Trichlorotrifluoroethane	U		14	37	µg/Kg-dry	1	9/21/2014 18:24
1,1-Dichloroethane	U		14	37	µg/Kg-dry	1	9/21/2014 18:24
1,1-Dichloroethene	U		16	37	µg/Kg-dry	1	9/21/2014 18:24
1,2,4-Trichlorobenzene	U		19	37	µg/Kg-dry	1	9/21/2014 18:24
1,2-Dibromo-3-chloropropane	U		18	37	µg/Kg-dry	1	9/21/2014 18:24
1,2-Dibromoethane	U		15	37	µg/Kg-dry	1	9/21/2014 18:24

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *24-Sep-14*

Client: Conestoga-Rovers & Associates
Project: Former GRMP (17360-T12Y14-03Y14)
Sample ID: SO-17360-091514-EB-002
Collection Date: 9/15/2014 12:40 PM

Work Order: 1409698
Lab ID: 1409698-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,2-Dichlorobenzene	U		15	37	µg/Kg-dry	1	9/21/2014 18:24
1,2-Dichloroethane	U		18	37	µg/Kg-dry	1	9/21/2014 18:24
1,2-Dichloropropane	U		12	37	µg/Kg-dry	1	9/21/2014 18:24
1,3-Dichlorobenzene	U		15	37	µg/Kg-dry	1	9/21/2014 18:24
1,4-Dichlorobenzene	U		14	37	µg/Kg-dry	1	9/21/2014 18:24
2-Butanone	U		92	250	µg/Kg-dry	1	9/21/2014 18:24
2-Hexanone	U		9.1	37	µg/Kg-dry	1	9/21/2014 18:24
4-Methyl-2-pentanone	U		13	37	µg/Kg-dry	1	9/21/2014 18:24
Acetone	U		78	120	µg/Kg-dry	1	9/21/2014 18:24
Benzene	U		15	37	µg/Kg-dry	1	9/21/2014 18:24
Bromodichloromethane	U		8.3	37	µg/Kg-dry	1	9/21/2014 18:24
Bromoform	U		7.3	37	µg/Kg-dry	1	9/21/2014 18:24
Bromomethane	U		14	93	µg/Kg-dry	1	9/21/2014 18:24
Carbon disulfide	U		18	37	µg/Kg-dry	1	9/21/2014 18:24
Carbon tetrachloride	U		11	37	µg/Kg-dry	1	9/21/2014 18:24
Chlorobenzene	U		15	37	µg/Kg-dry	1	9/21/2014 18:24
Chloroethane	U		79	120	µg/Kg-dry	1	9/21/2014 18:24
Chloroform	U		15	37	µg/Kg-dry	1	9/21/2014 18:24
Chloromethane	U		21	120	µg/Kg-dry	1	9/21/2014 18:24
cis-1,2-Dichloroethene	U		15	37	µg/Kg-dry	1	9/21/2014 18:24
cis-1,3-Dichloropropene	U		13	37	µg/Kg-dry	1	9/21/2014 18:24
Cyclohexane	U		17	37	µg/Kg-dry	1	9/21/2014 18:24
Dibromochloromethane	U		6.8	37	µg/Kg-dry	1	9/21/2014 18:24
Dichlorodifluoromethane	U		17	37	µg/Kg-dry	1	9/21/2014 18:24
Ethylbenzene	U		14	37	µg/Kg-dry	1	9/21/2014 18:24
Isopropylbenzene	U		16	37	µg/Kg-dry	1	9/21/2014 18:24
Methyl acetate	**2,000**	J	**50**	**2,100**	**µg/Kg-dry**	1	9/21/2014 18:24
Methyl tert-butyl ether	U		16	37	µg/Kg-dry	1	9/21/2014 18:24
Methylcyclohexane	U		17	37	µg/Kg-dry	1	9/21/2014 18:24
Methylene chloride	U		15	37	µg/Kg-dry	1	9/21/2014 18:24
Styrene	U		14	37	µg/Kg-dry	1	9/21/2014 18:24
Tetrachloroethene	U		16	37	µg/Kg-dry	1	9/21/2014 18:24
Toluene	U		14	37	µg/Kg-dry	1	9/21/2014 18:24
trans-1,2-Dichloroethene	U		11	37	µg/Kg-dry	1	9/21/2014 18:24
trans-1,3-Dichloropropene	U		12	37	µg/Kg-dry	1	9/21/2014 18:24
Trichloroethene	U		17	37	µg/Kg-dry	1	9/21/2014 18:24
Trichlorofluoromethane	U		10	37	µg/Kg-dry	1	9/21/2014 18:24
Vinyl chloride	U		17	37	µg/Kg-dry	1	9/21/2014 18:24
Xylenes, Total	U		44	110	µg/Kg-dry	1	9/21/2014 18:24
Surr: 1,2-Dichloroethane-d4	*99.7*			*70-130*	*%REC*	1	9/21/2014 18:24

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Conestoga-Rovers & Associates
Project: Former GRMP (17360-T12Y14-03Y14)
Sample ID: SO-17360-091514-EB-002
Collection Date: 9/15/2014 12:40 PM

Work Order: 1409698
Lab ID: 1409698-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 4-Bromofluorobenzene	*98.1*			*70-130*	*%REC*	1	9/21/2014 18:24
Surr: Dibromofluoromethane	*97.2*			*70-130*	*%REC*	1	9/21/2014 18:24
Surr: Toluene-d8	*98.9*			*70-130*	*%REC*	1	9/21/2014 18:24
MOISTURE			**A2540 G**				Analyst: **RLM**
BatchID: R148387							
Moisture	**6.1**		**0.025**	**0.050**	**% of sample**	1	9/17/2014 14:45

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *24-Sep-14*

Client: Conestoga-Rovers & Associates
Project: Former GRMP (17360-T12Y14-03Y14)
Sample ID: SO-17360-091514-EB-003
Collection Date: 9/15/2014 12:45 PM

Work Order: 1409698
Lab ID: 1409698-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**		Prep: SW3541 / 9/17/14		Analyst: **JG**
BatchID: 62859							
Aroclor 1016	U		29	90	µg/Kg-dry	1	9/18/2014 00:51
Aroclor 1221	U		29	90	µg/Kg-dry	1	9/18/2014 00:51
Aroclor 1232	U		29	90	µg/Kg-dry	1	9/18/2014 00:51
Aroclor 1242	U		29	90	µg/Kg-dry	1	9/18/2014 00:51
Aroclor 1248	U		29	90	µg/Kg-dry	1	9/18/2014 00:51
Aroclor 1254	U		34	90	µg/Kg-dry	1	9/18/2014 00:51
Aroclor 1260	U		34	90	µg/Kg-dry	1	9/18/2014 00:51
Surr: Decachlorobiphenyl	*101*			*40-140*	*%REC*	1	9/18/2014 00:51
MERCURY BY CVAA			**SW7471**		Prep: SW7471 / 9/18/14		Analyst: **LR**
BatchID: 62944							
Mercury	**0.013**	J	**0.00086**	**0.035**	**mg/Kg-dry**	1	9/18/2014 18:11
METALS BY ICP-MS			**SW6020A**		Prep: SW3050B / 9/17/14		Analyst: **ML**
BatchID: 62881							
Antimony	**0.077**	J	**0.0015**	**0.38**	**mg/Kg-dry**	1	9/18/2014 11:53
Arsenic	**1.4**		**0.051**	**0.38**	**mg/Kg-dry**	1	9/18/2014 11:53
Barium	**30**		**0.011**	**0.38**	**mg/Kg-dry**	1	9/18/2014 11:53
Beryllium	**0.18**		**0.0030**	**0.15**	**mg/Kg-dry**	1	9/18/2014 11:53
Cadmium	**0.097**	J	**0.0015**	**0.15**	**mg/Kg-dry**	1	9/18/2014 11:53
Chromium	**4.7**		**0.062**	**0.38**	**mg/Kg-dry**	1	9/18/2014 11:53
Cobalt	**1.7**		**0.0015**	**0.38**	**mg/Kg-dry**	1	9/18/2014 11:53
Copper	**3.9**		**0.074**	**0.38**	**mg/Kg-dry**	1	9/18/2014 11:53
Iron	**4,600**		**1.2**	**6.0**	**mg/Kg-dry**	1	9/18/2014 11:53
Lead	**15**		**0.0015**	**0.38**	**mg/Kg-dry**	1	9/18/2014 11:53
Molybdenum	**0.28**	J	**0.017**	**0.38**	**mg/Kg-dry**	1	9/18/2014 11:53
Nickel	**4.2**		**0.038**	**0.38**	**mg/Kg-dry**	1	9/18/2014 11:53
Selenium	**0.38**		**0.048**	**0.38**	**mg/Kg-dry**	1	9/18/2014 11:53
Silver	**0.0074**	J	**0.0015**	**0.38**	**mg/Kg-dry**	1	9/18/2014 11:53
Thallium	**0.038**	J	**0.0090**	**0.38**	**mg/Kg-dry**	1	9/18/2014 11:53
Vanadium	**7.7**		**0.023**	**0.38**	**mg/Kg-dry**	1	9/18/2014 11:53
Zinc	**18**		**0.032**	**0.75**	**mg/Kg-dry**	1	9/18/2014 11:53
BatchID: 62881							
Manganese	**170**		**0.13**	**1.5**	**mg/Kg-dry**	4	9/18/2014 08:28
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW846 8270D**		Prep: SW3541 / 9/19/14		Analyst: **RM**
BatchID: 62960							
1,1`-Biphenyl	U		5.3	350	µg/Kg-dry	1	9/20/2014 19:45
2,4,5-Trichlorophenol	U		8.8	170	µg/Kg-dry	1	9/20/2014 19:45

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *24-Sep-14*

Client: Conestoga-Rovers & Associates
Project: Former GRMP (17360-T12Y14-03Y14)
Sample ID: SO-17360-091514-EB-003
Collection Date: 9/15/2014 12:45 PM

Work Order: 1409698
Lab ID: 1409698-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2,4,6-Trichlorophenol	U		5.9	170	µg/Kg-dry	1	9/20/2014 19:45
2,4-Dichlorophenol	U		10	170	µg/Kg-dry	1	9/20/2014 19:45
2,4-Dimethylphenol	U		57	350	µg/Kg-dry	1	9/20/2014 19:45
2,4-Dinitrophenol	U		32	700	µg/Kg-dry	1	9/20/2014 19:45
2,4-Dinitrotoluene	U		11	170	µg/Kg-dry	1	9/20/2014 19:45
2,6-Dinitrotoluene	U		18	170	µg/Kg-dry	1	9/20/2014 19:45
2-Chloronaphthalene	U		1.7	7.1	µg/Kg-dry	1	9/20/2014 19:45
2-Chlorophenol	U		11	170	µg/Kg-dry	1	9/20/2014 19:45
2-Methylnaphthalene	U		2.9	7.1	µg/Kg-dry	1	9/20/2014 19:45
2-Methylphenol	U		14	170	µg/Kg-dry	1	9/20/2014 19:45
2-Nitroaniline	U		14	700	µg/Kg-dry	1	9/20/2014 19:45
2-Nitrophenol	U		12	170	µg/Kg-dry	1	9/20/2014 19:45
3,3´-Dichlorobenzidine	U		440	700	µg/Kg-dry	1	9/20/2014 19:45
3-Nitroaniline	U		12	700	µg/Kg-dry	1	9/20/2014 19:45
4,6-Dinitro-2-methylphenol	U		29	350	µg/Kg-dry	1	9/20/2014 19:45
4-Bromophenyl phenyl ether	U		9.6	170	µg/Kg-dry	1	9/20/2014 19:45
4-Chloro-3-methylphenol	U		8.2	170	µg/Kg-dry	1	9/20/2014 19:45
4-Chloroaniline	U		11	700	µg/Kg-dry	1	9/20/2014 19:45
4-Chlorophenyl phenyl ether	U		10	170	µg/Kg-dry	1	9/20/2014 19:45
4-Methylphenol	U		**0**	**170**	**µg/Kg-dry**	1	9/20/2014 19:45
4-Nitroaniline	U		9.7	700	µg/Kg-dry	1	9/20/2014 19:45
4-Nitrophenol	U		7.0	700	µg/Kg-dry	1	9/20/2014 19:45
Acenaphthene	U		1.1	7.1	µg/Kg-dry	1	9/20/2014 19:45
Acenaphthylene	**30**		**1.3**	**7.1**	**µg/Kg-dry**	1	9/20/2014 19:45
Acetophenone	U		5.3	350	µg/Kg-dry	1	9/20/2014 19:45
Anthracene	**36**		**1.4**	**7.1**	**µg/Kg-dry**	1	9/20/2014 19:45
Atrazine	U		11	350	µg/Kg-dry	1	9/20/2014 19:45
Benzaldehyde	U		13	350	µg/Kg-dry	1	9/20/2014 19:45
Benzo(a)anthracene	**240**		**1.4**	**7.1**	**µg/Kg-dry**	1	9/20/2014 19:45
Benzo(a)pyrene	**240**		**2.3**	**7.1**	**µg/Kg-dry**	1	9/20/2014 19:45
Benzo(b)fluoranthene	**340**		**2.1**	**7.1**	**µg/Kg-dry**	1	9/20/2014 19:45
Benzo(g,h,i)perylene	**160**		**2.8**	**7.1**	**µg/Kg-dry**	1	9/20/2014 19:45
Benzo(k)fluoranthene	**130**		**1.5**	**7.1**	**µg/Kg-dry**	1	9/20/2014 19:45
Bis(2-chloroethoxy)methane	U		11	170	µg/Kg-dry	1	9/20/2014 19:45
Bis(2-chloroethyl)ether	U		11	170	µg/Kg-dry	1	9/20/2014 19:45
Bis(2-chloroisopropyl)ether	U		15	170	µg/Kg-dry	1	9/20/2014 19:45
Bis(2-ethylhexyl)phthalate	U		12	350	µg/Kg-dry	1	9/20/2014 19:45
Butyl benzyl phthalate	U		13	170	µg/Kg-dry	1	9/20/2014 19:45
Caprolactam	U		15	350	µg/Kg-dry	1	9/20/2014 19:45
Carbazole	**76**	J	**10**	**170**	**µg/Kg-dry**	1	9/20/2014 19:45

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *24-Sep-14*

Client: Conestoga-Rovers & Associates
Project: Former GRMP (17360-T12Y14-03Y14)
Sample ID: SO-17360-091514-EB-003
Collection Date: 9/15/2014 12:45 PM

Work Order: 1409698
Lab ID: 1409698-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Chrysene	**260**		**1.7**	**7.1**	**µg/Kg-dry**	1	9/20/2014 19:45
Dibenzo(a,h)anthracene	**44**		**2.6**	**7.1**	**µg/Kg-dry**	1	9/20/2014 19:45
Dibenzofuran	U		11	170	µg/Kg-dry	1	9/20/2014 19:45
Diethyl phthalate	U		11	350	µg/Kg-dry	1	9/20/2014 19:45
Dimethyl phthalate	U		12	350	µg/Kg-dry	1	9/20/2014 19:45
Di-n-butyl phthalate	U		5.1	350	µg/Kg-dry	1	9/20/2014 19:45
Di-n-octyl phthalate	U		11	170	µg/Kg-dry	1	9/20/2014 19:45
Fluoranthene	**490**		**2.5**	**7.1**	**µg/Kg-dry**	1	9/20/2014 19:45
Fluorene	**9.9**		**2.4**	**7.1**	**µg/Kg-dry**	1	9/20/2014 19:45
Hexachlorobenzene	U		9.9	170	µg/Kg-dry	1	9/20/2014 19:45
Hexachlorobutadiene	U		12	170	µg/Kg-dry	1	9/20/2014 19:45
Hexachlorocyclopentadiene	U		11	350	µg/Kg-dry	1	9/20/2014 19:45
Hexachloroethane	U		16	170	µg/Kg-dry	1	9/20/2014 19:45
Indeno(1,2,3-cd)pyrene	**180**		**2.3**	**7.1**	**µg/Kg-dry**	1	9/20/2014 19:45
Isophorone	U		12	170	µg/Kg-dry	1	9/20/2014 19:45
Naphthalene	U		2.6	7.1	µg/Kg-dry	1	9/20/2014 19:45
Nitrobenzene	U		14	170	µg/Kg-dry	1	9/20/2014 19:45
N-Nitrosodi-n-propylamine	U		13	170	µg/Kg-dry	1	9/20/2014 19:45
N-Nitrosodiphenylamine	U		63	170	µg/Kg-dry	1	9/20/2014 19:45
Pentachlorophenol	U		6.8	350	µg/Kg-dry	1	9/20/2014 19:45
Phenanthrene	**130**		**1.4**	**7.1**	**µg/Kg-dry**	1	9/20/2014 19:45
Phenol	U		12	170	µg/Kg-dry	1	9/20/2014 19:45
Pyrene	**460**		**2.4**	**7.1**	**µg/Kg-dry**	1	9/20/2014 19:45
Surr: 2,4,6-Tribromophenol	*74.3*			*34-140*	*%REC*	1	9/20/2014 19:45
Surr: 2-Fluorobiphenyl	*69.7*			*12-100*	*%REC*	1	9/20/2014 19:45
Surr: 2-Fluorophenol	*95.5*			*33-117*	*%REC*	1	9/20/2014 19:45
Surr: 4-Terphenyl-d14	*92.3*			*25-137*	*%REC*	1	9/20/2014 19:45
Surr: Nitrobenzene-d5	*70.6*			*37-107*	*%REC*	1	9/20/2014 19:45
Surr: Phenol-d6	*96.2*			*40-106*	*%REC*	1	9/20/2014 19:45
VOLATILE ORGANIC COMPOUNDS			**SW8260B**		Prep: SW5035 / 9/16/14		Analyst: **BG**
BatchID: 62817							
1,1,1-Trichloroethane	U		14	37	µg/Kg-dry	1	9/21/2014 18:50
1,1,2,2-Tetrachloroethane	U		16	37	µg/Kg-dry	1	9/21/2014 18:50
1,1,2-Trichloroethane	U		13	37	µg/Kg-dry	1	9/21/2014 18:50
1,1,2-Trichlorotrifluoroethane	U		14	37	µg/Kg-dry	1	9/21/2014 18:50
1,1-Dichloroethane	U		14	37	µg/Kg-dry	1	9/21/2014 18:50
1,1-Dichloroethene	U		16	37	µg/Kg-dry	1	9/21/2014 18:50
1,2,4-Trichlorobenzene	U		19	37	µg/Kg-dry	1	9/21/2014 18:50
1,2-Dibromo-3-chloropropane	U		18	37	µg/Kg-dry	1	9/21/2014 18:50

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *24-Sep-14*

Client: Conestoga-Rovers & Associates
Project: Former GRMP (17360-T12Y14-03Y14)
Sample ID: SO-17360-091514-EB-003
Collection Date: 9/15/2014 12:45 PM

Work Order: 1409698
Lab ID: 1409698-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,2-Dibromoethane	U		15	37	µg/Kg-dry	1	9/21/2014 18:50
1,2-Dichlorobenzene	U		15	37	µg/Kg-dry	1	9/21/2014 18:50
1,2-Dichloroethane	U		18	37	µg/Kg-dry	1	9/21/2014 18:50
1,2-Dichloropropane	U		12	37	µg/Kg-dry	1	9/21/2014 18:50
1,3-Dichlorobenzene	U		15	37	µg/Kg-dry	1	9/21/2014 18:50
1,4-Dichlorobenzene	U		14	37	µg/Kg-dry	1	9/21/2014 18:50
2-Butanone	U		92	250	µg/Kg-dry	1	9/21/2014 18:50
2-Hexanone	U		9.1	37	µg/Kg-dry	1	9/21/2014 18:50
4-Methyl-2-pentanone	U		13	37	µg/Kg-dry	1	9/21/2014 18:50
Acetone	U		79	120	µg/Kg-dry	1	9/21/2014 18:50
Benzene	U		15	37	µg/Kg-dry	1	9/21/2014 18:50
Bromodichloromethane	U		8.3	37	µg/Kg-dry	1	9/21/2014 18:50
Bromoform	U		7.3	37	µg/Kg-dry	1	9/21/2014 18:50
Bromomethane	U		14	93	µg/Kg-dry	1	9/21/2014 18:50
Carbon disulfide	U		18	37	µg/Kg-dry	1	9/21/2014 18:50
Carbon tetrachloride	U		11	37	µg/Kg-dry	1	9/21/2014 18:50
Chlorobenzene	U		15	37	µg/Kg-dry	1	9/21/2014 18:50
Chloroethane	U		79	120	µg/Kg-dry	1	9/21/2014 18:50
Chloroform	U		15	37	µg/Kg-dry	1	9/21/2014 18:50
Chloromethane	U		21	120	µg/Kg-dry	1	9/21/2014 18:50
cis-1,2-Dichloroethene	U		15	37	µg/Kg-dry	1	9/21/2014 18:50
cis-1,3-Dichloropropene	U		13	37	µg/Kg-dry	1	9/21/2014 18:50
Cyclohexane	U		17	37	µg/Kg-dry	1	9/21/2014 18:50
Dibromochloromethane	U		6.9	37	µg/Kg-dry	1	9/21/2014 18:50
Dichlorodifluoromethane	U		17	37	µg/Kg-dry	1	9/21/2014 18:50
Ethylbenzene	U		14	37	µg/Kg-dry	1	9/21/2014 18:50
Isopropylbenzene	U		16	37	µg/Kg-dry	1	9/21/2014 18:50
Methyl acetate	**1,800**	J	**50**	**1,800**	**µg/Kg-dry**	1	9/21/2014 18:50
Methyl tert-butyl ether	U		16	37	µg/Kg-dry	1	9/21/2014 18:50
Methylcyclohexane	U		17	37	µg/Kg-dry	1	9/21/2014 18:50
Methylene chloride	U		15	37	µg/Kg-dry	1	9/21/2014 18:50
Styrene	U		14	37	µg/Kg-dry	1	9/21/2014 18:50
Tetrachloroethene	U		17	37	µg/Kg-dry	1	9/21/2014 18:50
Toluene	U		14	37	µg/Kg-dry	1	9/21/2014 18:50
trans-1,2-Dichloroethene	U		11	37	µg/Kg-dry	1	9/21/2014 18:50
trans-1,3-Dichloropropene	U		12	37	µg/Kg-dry	1	9/21/2014 18:50
Trichloroethene	U		17	37	µg/Kg-dry	1	9/21/2014 18:50
Trichlorofluoromethane	U		10	37	µg/Kg-dry	1	9/21/2014 18:50
Vinyl chloride	U		17	37	µg/Kg-dry	1	9/21/2014 18:50
Xylenes, Total	U		44	110	µg/Kg-dry	1	9/21/2014 18:50

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *24-Sep-14*

Client: Conestoga-Rovers & Associates
Project: Former GRMP (17360-T12Y14-03Y14)
Sample ID: SO-17360-091514-EB-003
Collection Date: 9/15/2014 12:45 PM

Work Order: 1409698
Lab ID: 1409698-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 1,2-Dichloroethane-d4	*101*			*70-130*	*%REC*	1	9/21/2014 18:50
Surr: 4-Bromofluorobenzene	*98.3*			*70-130*	*%REC*	1	9/21/2014 18:50
Surr: Dibromofluoromethane	*95.0*			*70-130*	*%REC*	1	9/21/2014 18:50
Surr: Toluene-d8	*94.2*			*70-130*	*%REC*	1	9/21/2014 18:50
MOISTURE			**A2540 G**				Analyst: **RLM**
BatchID: R148387							
Moisture	**8.0**		**0.025**	**0.050**	**% of sample**	1	9/17/2014 14:45

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *24-Sep-14*

Client: Conestoga-Rovers & Associates
Project: Former GRMP (17360-T12Y14-03Y14)
Sample ID: Trip Blank
Collection Date: 9/15/2014

Work Order: 1409698
Lab ID: 1409698-04
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**		Prep: SW5035 / 9/16/14		Analyst: **AK**
BatchID: 62817							
1,1,1-Trichloroethane	U		11	30	µg/Kg	1	9/22/2014 15:48
1,1,2,2-Tetrachloroethane	U		13	30	µg/Kg	1	9/22/2014 15:48
1,1,2-Trichloroethane	U		11	30	µg/Kg	1	9/22/2014 15:48
1,1,2-Trichlorotrifluoroethane	U		11	30	µg/Kg	1	9/22/2014 15:48
1,1-Dichloroethane	U		11	30	µg/Kg	1	9/22/2014 15:48
1,1-Dichloroethene	U		13	30	µg/Kg	1	9/22/2014 15:48
1,2,4-Trichlorobenzene	U		16	30	µg/Kg	1	9/22/2014 15:48
1,2-Dibromo-3-chloropropane	U		15	30	µg/Kg	1	9/22/2014 15:48
1,2-Dibromoethane	U		12	30	µg/Kg	1	9/22/2014 15:48
1,2-Dichlorobenzene	U		12	30	µg/Kg	1	9/22/2014 15:48
1,2-Dichloroethane	U		14	30	µg/Kg	1	9/22/2014 15:48
1,2-Dichloropropane	U		9.9	30	µg/Kg	1	9/22/2014 15:48
1,3-Dichlorobenzene	U		12	30	µg/Kg	1	9/22/2014 15:48
1,4-Dichlorobenzene	U		11	30	µg/Kg	1	9/22/2014 15:48
2-Butanone	U		74	200	µg/Kg	1	9/22/2014 15:48
2-Hexanone	U		7.4	30	µg/Kg	1	9/22/2014 15:48
4-Methyl-2-pentanone	U		10	30	µg/Kg	1	9/22/2014 15:48
Acetone	U		64	100	µg/Kg	1	9/22/2014 15:48
Benzene	U		12	30	µg/Kg	1	9/22/2014 15:48
Bromodichloromethane	U		6.7	30	µg/Kg	1	9/22/2014 15:48
Bromoform	U		5.9	30	µg/Kg	1	9/22/2014 15:48
Bromomethane	U		11	75	µg/Kg	1	9/22/2014 15:48
Carbon disulfide	U		15	30	µg/Kg	1	9/22/2014 15:48
Carbon tetrachloride	U		8.5	30	µg/Kg	1	9/22/2014 15:48
Chlorobenzene	U		12	30	µg/Kg	1	9/22/2014 15:48
Chloroethane	U		64	100	µg/Kg	1	9/22/2014 15:48
Chloroform	U		12	30	µg/Kg	1	9/22/2014 15:48
Chloromethane	U		17	100	µg/Kg	1	9/22/2014 15:48
cis-1,2-Dichloroethene	U		12	30	µg/Kg	1	9/22/2014 15:48
cis-1,3-Dichloropropene	U		10	30	µg/Kg	1	9/22/2014 15:48
Cyclohexane	U		13	30	µg/Kg	1	9/22/2014 15:48
Dibromochloromethane	U		5.6	30	µg/Kg	1	9/22/2014 15:48
Dichlorodifluoromethane	U		14	30	µg/Kg	1	9/22/2014 15:48
Ethylbenzene	U		11	30	µg/Kg	1	9/22/2014 15:48
Isopropylbenzene	U		13	30	µg/Kg	1	9/22/2014 15:48
Methyl acetate	U		40	200	µg/Kg	1	9/22/2014 15:48
Methyl tert-butyl ether	U		13	30	µg/Kg	1	9/22/2014 15:48

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *24-Sep-14*

Client: Conestoga-Rovers & Associates
Project: Former GRMP (17360-T12Y14-03Y14)
Sample ID: Trip Blank
Collection Date: 9/15/2014

Work Order: 1409698
Lab ID: 1409698-04
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylcyclohexane	U		14	30	µg/Kg	1	9/22/2014 15:48
Methylene chloride	U		12	30	µg/Kg	1	9/22/2014 15:48
Styrene	U		11	30	µg/Kg	1	9/22/2014 15:48
Tetrachloroethene	U		13	30	µg/Kg	1	9/22/2014 15:48
Toluene	U		11	30	µg/Kg	1	9/22/2014 15:48
trans-1,2-Dichloroethene	U		9.2	30	µg/Kg	1	9/22/2014 15:48
trans-1,3-Dichloropropene	U		10	30	µg/Kg	1	9/22/2014 15:48
Trichloroethene	U		14	30	µg/Kg	1	9/22/2014 15:48
Trichlorofluoromethane	U		8.3	30	µg/Kg	1	9/22/2014 15:48
Vinyl chloride	U		14	30	µg/Kg	1	9/22/2014 15:48
Xylenes, Total	U		35	90	µg/Kg	1	9/22/2014 15:48
Surr: 1,2-Dichloroethane-d4	*90.8*			*70-130*	*%REC*	1	9/22/2014 15:48
Surr: 4-Bromofluorobenzene	*95.4*			*70-130*	*%REC*	1	9/22/2014 15:48
Surr: Dibromofluoromethane	*96.4*			*70-130*	*%REC*	1	9/22/2014 15:48
Surr: Toluene-d8	*85.0*			*70-130*	*%REC*	1	9/22/2014 15:48

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 24-Sep-14

Client: Conestoga-Rovers & Associates

Work Order: 1409698

Project: Former GRMP (17360-T12Y14-03Y14)

QC BATCH REPORT

Batch ID: **62859** Instrument ID **GC14** Method: **SW8082**

MBLK Sample ID: **PBLKS1-62859-62859** Units: **µg/Kg** Analysis Date: **9/17/2014 09:19 PM**

Client ID: Run ID: **GC14_140917A** SeqNo: **2943221** Prep Date: **9/17/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	U	83								
Aroclor 1221	U	83								
Aroclor 1232	U	83								
Aroclor 1242	U	83								
Aroclor 1248	U	83								
Aroclor 1254	U	83								
Aroclor 1260	U	83								
Surr: Decachlorobiphenyl	*32.67*	0	*33.3*	0	*98.1*	*40-140*	0			

LCS Sample ID: **PLCSS1-62859-62859** Units: **µg/Kg** Analysis Date: **9/17/2014 09:35 PM**

Client ID: Run ID: **GC14_140917A** SeqNo: **2943222** Prep Date: **9/17/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	793	83	833	0	95.2	50-130	0			
Aroclor 1260	841.7	83	833	0	101	50-130	0			
Surr: Decachlorobiphenyl	*33.67*	0	*33.3*	0	*101*	*40-140*	0			

MS Sample ID: **1409698-03B MS** Units: **µg/Kg** Analysis Date: **9/18/2014 12:19 AM**

Client ID: **SO-17360-091514-EB-003** Run ID: **GC14_140917A** SeqNo: **2943225** Prep Date: **9/17/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	780.6	82	819.9	0	95.2	40-140	0			
Aroclor 1260	835	82	819.9	0	102	40-140	0			
Surr: Decachlorobiphenyl	*31.5*	0	*32.78*	0	*96.1*	*40-140*	0			

MSD Sample ID: **1409698-03B MSD** Units: **µg/Kg** Analysis Date: **9/18/2014 12:35 AM**

Client ID: **SO-17360-091514-EB-003** Run ID: **GC14_140917A** SeqNo: **2943226** Prep Date: **9/17/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	797.9	82	823.6	0	96.9	40-140	780.6	2.19	50	
Aroclor 1260	856.2	82	823.6	0	104	40-140	835	2.5	50	
Surr: Decachlorobiphenyl	*31.31*	0	*32.92*	0	*95.1*	*40-140*	31.5	*0.606*	*50*	

The following samples were analyzed in this batch: 1409698-01B 1409698-02B 1409698-03B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1409698
Project: Former GRMP (17360-T12Y14-03Y14)

QC BATCH REPORT

Batch ID: **62944** Instrument ID **HG1** Method: **SW7471**

MBLK Sample ID: **MBLK-62944-62944** Units: **mg/Kg** Analysis Date: **9/18/2014 05:43 PM**
Client ID: Run ID: **HG1_140918A** SeqNo: **2942059** Prep Date: **9/18/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.001833	0.020								J

LCS Sample ID: **LCS-62944-62944** Units: **mg/Kg** Analysis Date: **9/18/2014 05:45 PM**
Client ID: Run ID: **HG1_140918A** SeqNo: **2942060** Prep Date: **9/18/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1872	0.020	0.1665	0	112	80-120	0			

MS Sample ID: **1409698-03BMS** Units: **mg/Kg** Analysis Date: **9/18/2014 06:14 PM**
Client ID: **SO-17360-091514-EB-003** Run ID: **HG1_140918A** SeqNo: **2942071** Prep Date: **9/18/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1259	0.013	0.1054	0.01173	108	75-125	0			

MSD Sample ID: **1409698-03BMSD** Units: **mg/Kg** Analysis Date: **9/18/2014 06:16 PM**
Client ID: **SO-17360-091514-EB-003** Run ID: **HG1_140918A** SeqNo: **2942072** Prep Date: **9/18/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1272	0.013	0.1052	0.01173	110	75-125	0.1259	0.955	35	

The following samples were analyzed in this batch: 1409698-01B 1409698-02B 1409698-03B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1409698
Project: Former GRMP (17360-T12Y14-03Y14)

QC BATCH REPORT

Batch ID: **62881** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK Sample ID: **MBLK-62881-62881** Units: **mg/Kg** Analysis Date: **9/18/2014 07:13 AM**
Client ID: Run ID: **ICPMS1_140917A** SeqNo: **2940295** Prep Date: **9/17/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	U	0.25								
Arsenic	U	0.25								
Barium	U	0.25								
Beryllium	U	0.10								
Cadmium	U	0.10								
Chromium	U	0.25								
Cobalt	U	0.25								
Copper	U	0.25								
Iron	U	4.0								
Lead	U	0.25								
Manganese	U	0.25								
Molybdenum	U	0.25								
Nickel	U	0.25								
Selenium	0.0692	0.25								J
Silver	U	0.25								
Thallium	U	0.25								
Vanadium	U	0.25								
Zinc	0.0867	0.50								J

LCS Sample ID: **LCS-62881-62881** Units: **mg/Kg** Analysis Date: **9/18/2014 07:19 AM**
Client ID: Run ID: **ICPMS1_140917A** SeqNo: **2940296** Prep Date: **9/17/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	4.893	0.25	5	0	97.9	80-120	0			
Arsenic	4.58	0.25	5	0	91.6	80-120	0			
Barium	4.762	0.25	5	0	95.2	80-120	0			
Beryllium	4.725	0.10	5	0	94.5	80-120	0			
Cadmium	4.781	0.10	5	0	95.6	80-120	0			
Chromium	5.035	0.25	5	0	101	80-120	0			
Cobalt	4.84	0.25	5	0	96.8	80-120	0			
Copper	4.827	0.25	5	0	96.5	80-120	0			
Iron	498.2	4.0	500	0	99.6	80-120	0			
Lead	4.756	0.25	5	0	95.1	80-120	0			
Manganese	5.11	0.25	5	0	102	80-120	0			
Molybdenum	4.875	0.25	5	0	97.5	80-120	0			
Nickel	5.02	0.25	5	0	100	80-120	0			
Selenium	4.56	0.25	5	0	91.2	80-120	0			
Silver	4.889	0.25	5	0	97.8	80-120	0			
Thallium	4.57	0.25	5	0	91.4	80-120	0			
Vanadium	4.991	0.25	5	0	99.8	80-120	0			
Zinc	4.738	0.50	5	0	94.8	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1409698
Project: Former GRMP (17360-T12Y14-03Y14)

QC BATCH REPORT

Batch ID: **62881** Instrument ID **ICPMS1** Method: **SW6020A**

MS Sample ID: **1409698-03BMS** Units: **mg/Kg** Analysis Date: **9/18/2014 08:34 AM**
Client ID: **SO-17360-091514-EB-003** Run ID: **ICPMS1_140917A** SeqNo: **2940308** Prep Date: **9/17/2014** DF: **4**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Manganese	179.2	1.4	6.906	159.1	291	75-125	0			SO

MS Sample ID: **1409698-03BMS** Units: **mg/Kg** Analysis Date: **9/18/2014 11:59 AM**
Client ID: **SO-17360-091514-EB-003** Run ID: **ICPMS1_140917A** SeqNo: **2940882** Prep Date: **9/17/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	6.187	0.35	6.906	0.07113	88.6	75-125	0			
Arsenic	7.452	0.35	6.906	1.281	89.4	75-125	0			
Barium	36.35	0.35	6.906	27.41	129	75-125	0			S
Beryllium	5.882	0.14	6.906	0.1631	82.8	75-125	0			
Cadmium	6.622	0.14	6.906	0.08936	94.6	75-125	0			
Chromium	11.82	0.35	6.906	4.349	108	75-125	0			
Cobalt	7.673	0.35	6.906	1.553	88.6	75-125	0			
Copper	11.01	0.35	6.906	3.607	107	75-125	0			
Iron	4853	5.5	690.6	4258	86.2	75-125	0			O
Lead	21.71	0.35	6.906	13.98	112	75-125	0			
Molybdenum	6.662	0.35	6.906	0.2621	92.7	75-125	0			
Nickel	11.47	0.35	6.906	3.86	110	75-125	0			
Selenium	6.041	0.35	6.906	0.3531	82.4	75-125	0			
Silver	6.127	0.35	6.906	0.006834	88.6	75-125	0			
Thallium	6.191	0.35	6.906	0.03473	89.1	75-125	0			
Vanadium	15.41	0.35	6.906	7.086	121	75-125	0			
Zinc	39.93	0.69	6.906	16.86	334	75-125	0			S

MSD Sample ID: **1409698-03BMSD** Units: **mg/Kg** Analysis Date: **9/18/2014 08:40 AM**
Client ID: **SO-17360-091514-EB-003** Run ID: **ICPMS1_140917A** SeqNo: **2940309** Prep Date: **9/17/2014** DF: **4**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Manganese	164.8	1.4	6.944	159.1	82.3	75-125	179.2	8.37	25	O

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1409698
Project: Former GRMP (17360-T12Y14-03Y14)

QC BATCH REPORT

Batch ID: **62881** Instrument ID **ICPMS1** Method: **SW6020A**

MSD Sample ID: **1409698-03BMSD** Units: **mg/Kg** Analysis Date: **9/18/2014 12:05 PM**
Client ID: **SO-17360-091514-EB-003** Run ID: **ICPMS1_140917A** SeqNo: **2940883** Prep Date: **9/17/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	6.238	0.35	6.944	0.07113	88.8	75-125	6.187	0.822	25	
Arsenic	7.542	0.35	6.944	1.281	90.2	75-125	7.452	1.2	25	
Barium	36.17	0.35	6.944	27.41	126	75-125	36.35	0.497	25	S
Beryllium	5.979	0.14	6.944	0.1631	83.8	75-125	5.882	1.64	25	
Cadmium	6.708	0.14	6.944	0.08936	95.3	75-125	6.622	1.29	25	
Chromium	11.47	0.35	6.944	4.349	102	75-125	11.82	3.07	25	
Cobalt	7.792	0.35	6.944	1.553	89.8	75-125	7.673	1.54	25	
Copper	9.285	0.35	6.944	3.607	81.8	75-125	11.01	17	25	
Iron	4568	5.6	694.4	4258	44.7	75-125	4853	6.05	25	SO
Lead	18.97	0.35	6.944	13.98	71.8	75-125	21.71	13.5	25	S
Molybdenum	6.691	0.35	6.944	0.2621	92.6	75-125	6.662	0.43	25	
Nickel	10.34	0.35	6.944	3.86	93.3	75-125	11.47	10.4	25	
Selenium	6.05	0.35	6.944	0.3531	82	75-125	6.041	0.142	25	
Silver	6.281	0.35	6.944	0.006834	90.4	75-125	6.127	2.49	25	
Thallium	6.334	0.35	6.944	0.03473	90.7	75-125	6.191	2.28	25	
Vanadium	14.85	0.35	6.944	7.086	112	75-125	15.41	3.7	25	
Zinc	27.19	0.69	6.944	16.86	149	75-125	39.93	38	25	SR

The following samples were analyzed in this batch: 1409698-01B 1409698-02B 1409698-03B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **62960** Instrument ID **SVMS5** Method: **SW846 8270D**

MBLK Sample ID: **SBLKS1-62960-62960** Units: **µg/Kg** Analysis Date: **9/20/2014 01:45 PM**
Client ID: Run ID: **SVMS5_140920A** SeqNo: **2946208** Prep Date: **9/19/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1`-Biphenyl	U	330								
2,4,5-Trichlorophenol	U	160								
2,4,6-Trichlorophenol	U	160								
2,4-Dichlorophenol	U	160								
2,4-Dimethylphenol	U	330								
2,4-Dinitrophenol	U	660								
2,4-Dinitrotoluene	U	160								
2,6-Dinitrotoluene	U	160								
2-Chloronaphthalene	U	6.7								
2-Chlorophenol	U	160								
2-Methylnaphthalene	U	6.7								
2-Methylphenol	U	160								
2-Nitroaniline	U	660								
2-Nitrophenol	U	160								
3,3´-Dichlorobenzidine	U	660								
3-Nitroaniline	U	660								
4,6-Dinitro-2-methylphenol	U	330								
4-Bromophenyl phenyl ether	U	160								
4-Chloro-3-methylphenol	U	160								
4-Chloroaniline	U	660								
4-Chlorophenyl phenyl ether	U	160								
4-Methylphenol	U	160								
4-Nitroaniline	U	660								
4-Nitrophenol	U	660								
Acenaphthene	U	6.7								
Acenaphthylene	U	6.7								
Acetophenone	U	330								
Anthracene	U	6.7								
Atrazine	U	330								
Benzaldehyde	U	330								
Benzo(a)anthracene	U	6.7								
Benzo(a)pyrene	U	6.7								
Benzo(b)fluoranthene	U	6.7								
Benzo(g,h,i)perylene	U	6.7								
Benzo(k)fluoranthene	U	6.7								
Bis(2-chloroethoxy)methane	U	160								
Bis(2-chloroethyl)ether	U	160								
Bis(2-chloroisopropyl)ether	U	160								
Bis(2-ethylhexyl)phthalate	U	330								
Butyl benzyl phthalate	U	160								
Caprolactam	U	330								
Carbazole	U	160								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **62960** Instrument ID **SVMS5** Method: **SW846 8270D**

Chrysene	U	6.7					
Dibenzo(a,h)anthracene	U	6.7					
Dibenzofuran	U	160					
Diethyl phthalate	U	330					
Dimethyl phthalate	U	330					
Di-n-butyl phthalate	U	330					
Di-n-octyl phthalate	U	160					
Fluoranthene	U	6.7					
Fluorene	U	6.7					
Hexachlorobenzene	U	160					
Hexachlorobutadiene	U	160					
Hexachlorocyclopentadiene	U	330					
Hexachloroethane	U	160					
Indeno(1,2,3-cd)pyrene	U	6.7					
Isophorone	U	160					
Naphthalene	U	6.7					
Nitrobenzene	U	160					
N-Nitrosodi-n-propylamine	U	160					
N-Nitrosodiphenylamine	U	160					
Pentachlorophenol	U	330					
Phenanthrene	U	6.7					
Phenol	U	160					
Pyrene	U	6.7					
Surr: 2,4,6-Tribromophenol	*1303*	0	*1667*	0	*78.2*	*34-140*	0
Surr: 2-Fluorobiphenyl	*1408*	0	*1667*	0	*84.5*	*12-100*	0
Surr: 2-Fluorophenol	*1664*	0	*1667*	0	*99.8*	*33-117*	0
Surr: 4-Terphenyl-d14	*2048*	0	*1667*	0	*123*	*25-137*	0
Surr: Nitrobenzene-d5	*1352*	0	*1667*	0	*81.1*	*37-107*	0
Surr: Phenol-d6	*1508*	0	*1667*	0	*90.5*	*40-106*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1409698
Project: Former GRMP (17360-T12Y14-03Y14)

QC BATCH REPORT

Batch ID: **62960** Instrument ID **SVMS5** Method: **SW846 8270D**

LCS Sample ID: **SLCSS1-62960-62960** Units: **µg/Kg** Analysis Date: **9/20/2014 02:07 PM**
Client ID: Run ID: **SVMS5_140920A** SeqNo: **2946211** Prep Date: **9/19/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	689.3	160	666.7	0	103	50-110	0			
2,4,6-Trichlorophenol	705	160	666.7	0	106	45-110	0			
2,4-Dichlorophenol	717	160	666.7	0	108	45-110	0			
2,4-Dimethylphenol	685.7	330	666.7	0	103	30-105	0			
2,4-Dinitrophenol	513	660	666.7	0	76.9	15-130	0			J
2,4-Dinitrotoluene	757	160	666.7	0	114	50-115	0			
2,6-Dinitrotoluene	683.3	160	666.7	0	102	50-110	0			
2-Chloronaphthalene	687	6.7	666.7	0	103	45-105	0			
2-Chlorophenol	671.7	160	666.7	0	101	45-105	0			
2-Methylnaphthalene	679	6.7	666.7	0	102	45-105	0			
2-Methylphenol	667	160	666.7	0	100	40-105	0			
2-Nitroaniline	676.3	660	666.7	0	101	45-120	0			
2-Nitrophenol	620.7	160	666.7	0	93.1	40-110	0			
3-Nitroaniline	601.3	660	666.7	0	90.2	25-150	0			J
4-Bromophenyl phenyl ether	758.3	160	666.7	0	114	45-115	0			
4-Chloro-3-methylphenol	721.7	160	666.7	0	108	45-115	0			
4-Chloroaniline	350	660	666.7	0	52.5	15-110	0			J
4-Chlorophenyl phenyl ether	712	160	666.7	0	107	45-110	0			
4-Methylphenol	672	160	666.7	0	101	40-105	0			
4-Nitroaniline	601.3	660	666.7	0	90.2	35-150	0			J
4-Nitrophenol	701	660	666.7	0	105	15-140	0			
Acenaphthene	674.3	6.7	666.7	0	101	45-110	0			
Acenaphthylene	666	6.7	666.7	0	99.9	45-105	0			
Anthracene	676.7	6.7	666.7	0	101	55-105	0			
Benzo(a)anthracene	718	6.7	666.7	0	108	50-110	0			
Benzo(a)pyrene	731.7	6.7	666.7	0	110	50-110	0			
Benzo(b)fluoranthene	727	6.7	666.7	0	109	45-115	0			
Benzo(g,h,i)perylene	746.3	6.7	666.7	0	112	40-125	0			
Benzo(k)fluoranthene	731	6.7	666.7	0	110	45-115	0			
Bis(2-chloroethoxy)methane	730	160	666.7	0	109	45-110	0			
Bis(2-chloroethyl)ether	534.3	160	666.7	0	80.1	40-105	0			
Bis(2-chloroisopropyl)ether	739.3	160	666.7	0	111	20-115	0			
Bis(2-ethylhexyl)phthalate	823	330	666.7	0	123	45-125	0			
Butyl benzyl phthalate	766.7	160	666.7	0	115	50-125	0			
Carbazole	667.3	160	666.7	0	100	50-150	0			
Chrysene	732.7	6.7	666.7	0	110	55-110	0			
Dibenzo(a,h)anthracene	621	6.7	666.7	0	93.1	40-125	0			
Dibenzofuran	683.3	160	666.7	0	102	50-105	0			
Diethyl phthalate	744	330	666.7	0	112	50-115	0			
Dimethyl phthalate	706.3	330	666.7	0	106	50-110	0			
Di-n-butyl phthalate	816	330	666.7	0	122	55-110	0			S
Di-n-octyl phthalate	901	160	666.7	0	135	40-130	0			S

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **62960** Instrument ID **SVMS5** Method: **SW846 8270D**

Fluoranthene	732.7	6.7	666.7	0	110	55-115	0
Fluorene	694.7	6.7	666.7	0	104	50-110	0
Hexachlorobenzene	764.7	160	666.7	0	115	45-120	0
Hexachlorobutadiene	626.3	160	666.7	0	93.9	40-115	0
Hexachlorocyclopentadiene	549	330	666.7	0	82.3	40-115	0
Hexachloroethane	615.3	160	666.7	0	92.3	35-110	0
Indeno(1,2,3-cd)pyrene	639	6.7	666.7	0	95.8	40-120	0
Isophorone	715	160	666.7	0	107	45-110	0
Naphthalene	665.3	6.7	666.7	0	99.8	40-105	0
Nitrobenzene	684.3	160	666.7	0	103	40-115	0
N-Nitrosodi-n-propylamine	724.3	160	666.7	0	109	40-115	0
N-Nitrosodiphenylamine	737	160	666.7	0	111	50-115	0
Pentachlorophenol	759	330	666.7	0	114	25-120	0
Phenanthrene	653.7	6.7	666.7	0	98	50-110	0
Phenol	663	160	666.7	0	99.4	40-100	0
Pyrene	779.3	6.7	666.7	0	117	45-125	0
Surr: 2,4,6-Tribromophenol	*1539*	0	*1667*	0	*92.4*	*34-140*	0
Surr: 2-Fluorobiphenyl	*1368*	0	*1667*	0	*82.1*	*12-100*	0
Surr: 2-Fluorophenol	*1494*	0	*1667*	0	*89.6*	*33-117*	0
Surr: 4-Terphenyl-d14	*1823*	0	*1667*	0	*109*	*25-137*	0
Surr: Nitrobenzene-d5	*1373*	0	*1667*	0	*82.4*	*37-107*	0
Surr: Phenol-d6	*1494*	0	*1667*	0	*89.6*	*40-106*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1409698
Project: Former GRMP (17360-T12Y14-03Y14)

QC BATCH REPORT

Batch ID: **62960** Instrument ID **SVMS5** Method: **SW846 8270D**

MS Sample ID: **1409698-03B MS** Units: **µg/Kg** Analysis Date: **9/20/2014 07:02 PM**

Client ID: **SO-17360-091514-EB-003** Run ID: **SVMS5_140920A** SeqNo: **2946213** Prep Date: **9/19/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	1333	310	1291	0	103	50-110	0			
2,4,6-Trichlorophenol	1337	310	1291	0	104	45-110	0			
2,4-Dichlorophenol	1282	310	1291	0	99.3	45-110	0			
2,4-Dimethylphenol	1206	640	1291	0	93.4	30-105	0			
2,4-Dinitrophenol	1086	1,300	1291	0	84.1	15-130	0			J
2,4-Dinitrotoluene	1379	310	1291	0	107	50-115	0			
2,6-Dinitrotoluene	1266	310	1291	0	98	50-110	0			
2-Chloronaphthalene	1195	13	1291	0	92.6	45-105	0			
2-Chlorophenol	1249	310	1291	0	96.7	45-105	0			
2-Methylnaphthalene	1135	13	1291	0	87.9	45-105	0			
2-Methylphenol	1328	310	1291	0	103	40-105	0			
2-Nitroaniline	1339	1,300	1291	0	104	45-120	0			
2-Nitrophenol	971.9	310	1291	0	75.3	40-110	0			
3-Nitroaniline	1056	1,300	1291	0	81.8	25-110	0			J
4-Bromophenyl phenyl ether	1508	310	1291	0	117	45-115	0			S
4-Chloro-3-methylphenol	1434	310	1291	0	111	45-115	0			
4-Chloroaniline	705.4	1,300	1291	0	54.6	15-110	0			J
4-Chlorophenyl phenyl ether	1351	310	1291	0	105	45-110	0			
4-Methylphenol	1346	310	1291	0	104	40-105	0			
4-Nitroaniline	1056	1,300	1291	0	81.8	35-150	0			J
4-Nitrophenol	1136	1,300	1291	0	88	15-140	0			J
Acenaphthene	1185	13	1291	0	91.8	45-110	0			
Acenaphthylene	1328	13	1291	0	103	45-105	0			
Anthracene	1464	13	1291	0	113	55-105	0			S
Benzo(a)anthracene	1731	13	1291	221.2	117	50-110	0			S
Benzo(a)pyrene	1633	13	1291	0	126	50-110	0			S
Benzo(b)fluoranthene	1767	13	1291	0	137	45-115	0			S
Benzo(g,h,i)perylene	1723	13	1291	0	133	40-125	0			S
Benzo(k)fluoranthene	1757	13	1291	0	136	45-115	0			S
Bis(2-chloroethoxy)methane	1249	310	1291	0	96.7	45-110	0			
Bis(2-chloroethyl)ether	1036	310	1291	0	80.3	40-105	0			
Bis(2-chloroisopropyl)ether	1517	310	1291	0	118	20-115	0			S
Bis(2-ethylhexyl)phthalate	1592	640	1291	0	123	45-125	0			
Butyl benzyl phthalate	1568	310	1291	0	121	50-125	0			
Carbazole	1102	310	1291	0	85.3	50-150	0			
Chrysene	1790	13	1291	0	139	55-110	0			S
Dibenzo(a,h)anthracene	1375	13	1291	40.28	103	40-125	0			
Dibenzofuran	1295	310	1291	0	100	50-105	0			
Diethyl phthalate	1411	640	1291	0	109	50-115	0			
Dimethyl phthalate	1353	640	1291	0	105	50-110	0			
Di-n-butyl phthalate	1480	640	1291	0	115	55-110	0			S
Di-n-octyl phthalate	1496	310	1291	0	116	40-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **62960** Instrument ID **SVMS5** Method: **SW846 8270D**

Fluoranthene	1784	13	1291	0	138	55-115	0	S
Fluorene	1355	13	1291	0	105	50-110	0	
Hexachlorobenzene	1475	310	1291	0	114	45-120	0	
Hexachlorobutadiene	948	310	1291	0	73.4	40-115	0	
Hexachlorocyclopentadiene	793.8	640	1291	0	61.5	40-115	0	
Hexachloroethane	1020	310	1291	0	79	35-110	0	
Indeno(1,2,3-cd)pyrene	1468	13	1291	166.6	101	40-120	0	
Isophorone	1314	310	1291	0	102	45-110	0	
Naphthalene	1105	13	1291	0	85.6	40-105	0	
Nitrobenzene	1075	310	1291	0	83.2	40-115	0	
N-Nitrosodi-n-propylamine	1288	310	1291	0	99.7	40-115	0	
N-Nitrosodiphenylamine	1389	310	1291	0	108	50-115	0	
Pentachlorophenol	1511	640	1291	0	117	25-120	0	
Phenanthrene	1506	13	1291	0	117	50-110	0	S
Phenol	1187	310	1291	0	91.9	40-100	0	
Pyrene	2137	13	1291	0	166	45-125	0	S
Surr: 2,4,6-Tribromophenol	*3060*	0	*3227*	0	*94.8*	*34-140*	0	
Surr: 2-Fluorobiphenyl	*2327*	0	*3227*	0	*72.1*	*12-100*	0	
Surr: 2-Fluorophenol	*2610*	0	*3227*	0	*80.9*	*33-117*	0	
Surr: 4-Terphenyl-d14	*3762*	0	*3227*	0	*117*	*25-137*	0	
Surr: Nitrobenzene-d5	*2339*	0	*3227*	0	*72.5*	*37-107*	0	
Surr: Phenol-d6	*2714*	0	*3227*	0	*84.1*	*40-106*	0	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1409698
Project: Former GRMP (17360-T12Y14-03Y14)

QC BATCH REPORT

Batch ID: **62960** Instrument ID **SVMS5** Method: **SW846 8270D**

MSD Sample ID: **1409698-03B MSD** Units: **µg/Kg** Analysis Date: **9/20/2014 07:23 PM**

Client ID: **SO-17360-091514-EB-003** Run ID: **SVMS5_140920A** SeqNo: **2946216** Prep Date: **9/19/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	1473	310	1299	0	113	50-110	1333	9.94	30	S
2,4,6-Trichlorophenol	1446	310	1299	0	111	45-110	1337	7.84	30	S
2,4-Dichlorophenol	1412	310	1299	0	109	45-110	1282	9.61	30	
2,4-Dimethylphenol	1357	640	1299	0	104	30-105	1206	11.8	30	
2,4-Dinitrophenol	1151	1,300	1299	0	88.6	15-130	1086	0	30	J
2,4-Dinitrotoluene	1524	310	1299	0	117	50-115	1379	10	30	S
2,6-Dinitrotoluene	1374	310	1299	0	106	50-110	1266	8.22	30	
2-Chloronaphthalene	1323	13	1299	0	102	45-105	1195	10.2	30	
2-Chlorophenol	1395	310	1299	0	107	45-105	1249	11.1	30	S
2-Methylnaphthalene	1286	13	1299	0	99	45-105	1135	12.5	30	
2-Methylphenol	1446	310	1299	0	111	40-105	1328	8.56	30	S
2-Nitroaniline	1468	1,300	1299	0	113	45-120	1339	9.16	30	
2-Nitrophenol	1145	310	1299	0	88.1	40-110	971.9	16.3	30	
3-Nitroaniline	1185	1,300	1299	0	91.2	25-110	1056	0	30	J
4-Bromophenyl phenyl ether	1544	310	1299	0	119	45-115	1508	2.41	30	S
4-Chloro-3-methylphenol	1518	310	1299	0	117	45-115	1434	5.71	30	S
4-Chloroaniline	792.6	1,300	1299	0	61	15-110	705.4	0	30	J
4-Chlorophenyl phenyl ether	1479	310	1299	0	114	45-110	1351	9.04	30	S
4-Methylphenol	1527	310	1299	0	118	40-105	1346	12.6	30	S
4-Nitroaniline	1185	1,300	1299	0	91.2	35-150	1056	0	30	J
4-Nitrophenol	1194	1,300	1299	0	91.9	15-140	1136	0	30	J
Acenaphthene	1323	13	1299	0	102	45-110	1185	11	30	
Acenaphthylene	1448	13	1299	0	111	45-105	1328	8.6	30	S
Anthracene	1568	13	1299	0	121	55-105	1464	6.9	30	S
Benzo(a)anthracene	1820	13	1299	221.2	123	50-110	1731	5.04	30	S
Benzo(a)pyrene	1720	13	1299	0	132	50-110	1633	5.22	30	S
Benzo(b)fluoranthene	1881	13	1299	0	145	45-115	1767	6.28	30	S
Benzo(g,h,i)perylene	1728	13	1299	0	133	40-125	1723	0.254	30	S
Benzo(k)fluoranthene	1794	13	1299	0	138	45-115	1757	2.05	30	S
Bis(2-chloroethoxy)methane	1434	310	1299	0	110	45-110	1249	13.8	30	S
Bis(2-chloroethyl)ether	1186	310	1299	0	91.2	40-105	1036	13.4	30	
Bis(2-chloroisopropyl)ether	1670	310	1299	0	129	20-115	1517	9.6	30	S
Bis(2-ethylhexyl)phthalate	1794	640	1299	0	138	45-125	1592	11.9	30	S
Butyl benzyl phthalate	1690	310	1299	0	130	50-125	1568	7.54	30	S
Carbazole	1377	310	1299	0	106	50-150	1102	22.2	30	
Chrysene	1875	13	1299	0	144	55-110	1790	4.66	30	S
Dibenzo(a,h)anthracene	1448	13	1299	40.28	108	40-125	1375	5.12	30	
Dibenzofuran	1397	310	1299	0	107	50-105	1295	7.55	30	S
Diethyl phthalate	1531	640	1299	0	118	50-115	1411	8.15	30	S
Dimethyl phthalate	1458	640	1299	0	112	50-110	1353	7.49	30	S
Di-n-butyl phthalate	1596	640	1299	0	123	55-110	1480	7.57	30	S
Di-n-octyl phthalate	1761	310	1299	0	136	40-130	1496	16.3	30	S

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **62960** Instrument ID **SVMS5** Method: **SW846 8270D**

Fluoranthene	1904	13	1299	0	146	55-115	1784	6.46	30	S
Fluorene	1462	13	1299	0	112	50-110	1355	7.61	30	S
Hexachlorobenzene	1556	310	1299	0	120	45-120	1475	5.37	30	
Hexachlorobutadiene	1130	310	1299	0	87	40-115	948	17.6	30	
Hexachlorocyclopentadiene	678.3	640	1299	0	52.2	40-115	793.8	15.7	30	
Hexachloroethane	1149	310	1299	0	88.4	35-110	1020	12	30	
Indeno(1,2,3-cd)pyrene	1582	13	1299	166.6	109	40-120	1468	7.46	30	
Isophorone	1545	310	1299	0	119	45-110	1314	16.2	30	S
Naphthalene	1277	13	1299	0	98.2	40-105	1105	14.4	30	
Nitrobenzene	1281	310	1299	0	98.6	40-115	1075	17.5	30	
N-Nitrosodi-n-propylamine	1506	310	1299	0	116	40-115	1288	15.6	30	S
N-Nitrosodiphenylamine	1448	310	1299	0	111	50-115	1389	4.14	30	
Pentachlorophenol	1644	640	1299	0	127	25-120	1511	8.47	30	S
Phenanthrene	1572	13	1299	0	121	50-110	1506	4.33	30	S
Phenol	1297	310	1299	0	99.8	40-100	1187	8.85	30	
Pyrene	2116	13	1299	0	163	45-125	2137	0.977	30	S
Surr: 2,4,6-Tribromophenol	*3280*	0	*3249*	0	*101*	*34-140*	3060	*6.96*	*40*	
Surr: 2-Fluorobiphenyl	*2659*	0	*3249*	0	*81.8*	*12-100*	2327	*13.3*	*40*	
Surr: 2-Fluorophenol	*2905*	0	*3249*	0	*89.4*	*33-117*	2610	*10.7*	*40*	
Surr: 4-Terphenyl-d14	*3825*	0	*3249*	0	*118*	*25-137*	3762	*1.66*	*40*	
Surr: Nitrobenzene-d5	*2706*	0	*3249*	0	*83.3*	*37-107*	2339	*14.6*	*40*	
Surr: Phenol-d6	*3083*	0	*3249*	0	*94.9*	*40-106*	2714	*12.7*	*40*	

The following samples were analyzed in this batch: 1409698-01B 1409698-02B 1409698-03B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1409698
Project: Former GRMP (17360-T12Y14-03Y14)

QC BATCH REPORT

Batch ID: **62817** Instrument ID **VMS6** Method: **SW8260B**

MBLK Sample ID: **MBLK-62817-62817** Units: **µg/Kg** Analysis Date: **9/17/2014 04:17 PM**
Client ID: Run ID: **VMS6_140917A** SeqNo: **2940092** Prep Date: **9/16/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	U	30								
1,1,2,2-Tetrachloroethane	U	30								
1,1,2-Trichloroethane	U	30								
1,1,2-Trichlorotrifluoroethane	U	30								
1,1-Dichloroethane	U	30								
1,1-Dichloroethene	U	30								
1,2,4-Trichlorobenzene	U	30								
1,2-Dibromo-3-chloropropane	U	30								
1,2-Dibromoethane	U	30								
1,2-Dichlorobenzene	U	30								
1,2-Dichloroethane	U	30								
1,2-Dichloropropane	U	30								
1,3-Dichlorobenzene	U	30								
1,4-Dichlorobenzene	U	30								
2-Butanone	U	200								
2-Hexanone	U	30								
4-Methyl-2-pentanone	U	30								
Acetone	U	100								
Benzene	U	30								
Bromodichloromethane	U	30								
Bromoform	U	30								
Bromomethane	U	75								
Carbon disulfide	U	30								
Carbon tetrachloride	U	30								
Chlorobenzene	U	30								
Chloroethane	U	100								
Chloroform	U	30								
Chloromethane	U	100								
cis-1,2-Dichloroethene	U	30								
cis-1,3-Dichloropropene	U	30								
Cyclohexane	U	30								
Dibromochloromethane	U	30								
Dichlorodifluoromethane	U	30								
Ethylbenzene	U	30								
Isopropylbenzene	U	30								
Methyl acetate	234.5	200								
Methyl tert-butyl ether	U	30								
Methylcyclohexane	U	30								
Methylene chloride	U	30								
Styrene	U	30								
Tetrachloroethene	U	30								
Toluene	U	30								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **62817** Instrument ID **VMS6** Method: **SW8260B**

trans-1,2-Dichloroethene	U	30					
trans-1,3-Dichloropropene	U	30					
Trichloroethene	U	30					
Trichlorofluoromethane	U	30					
Vinyl chloride	U	30					
Xylenes, Total	U	90					
Surr: 1,2-Dichloroethane-d4	*949*	0	*1000*	0	*94.9*	*70-130*	0
Surr: 4-Bromofluorobenzene	*967*	0	*1000*	0	*96.7*	*70-130*	0
Surr: Dibromofluoromethane	*952*	0	*1000*	0	*95.2*	*70-130*	0
Surr: Toluene-d8	*912.5*	0	*1000*	0	*91.2*	*70-130*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1409698
Project: Former GRMP (17360-T12Y14-03Y14)

QC BATCH REPORT

Batch ID: **62817** Instrument ID **VMS6** Method: **SW8260B**

LCS Sample ID: **LCS-62817-62817** Units: **µg/Kg** Analysis Date: **9/17/2014 03:00 PM**
Client ID: Run ID: **VMS6_140917A** SeqNo: **2940091** Prep Date: **9/16/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	1086	30	1000	0	109	70-135	0			
1,1,2,2-Tetrachloroethane	994	30	1000	0	99.4	55-130	0			
1,1,2-Trichloroethane	1040	30	1000	0	104	60-125	0			
1,1-Dichloroethane	967.5	30	1000	0	96.8	75-125	0			
1,1-Dichloroethene	1015	30	1000	0	102	65-135	0			
1,2,4-Trichlorobenzene	1068	30	1000	0	107	65-130	0			
1,2-Dibromo-3-chloropropane	1028	30	1000	0	103	40-135	0			
1,2-Dibromoethane	1156	30	1000	0	116	75-125	0			
1,2-Dichlorobenzene	1018	30	1000	0	102	75-120	0			
1,2-Dichloroethane	988.5	30	1000	0	98.8	70-135	0			
1,2-Dichloropropane	929	30	1000	0	92.9	70-120	0			
1,3-Dichlorobenzene	1044	30	1000	0	104	70-125	0			
1,4-Dichlorobenzene	1023	30	1000	0	102	70-125	0			
2-Butanone	1036	200	1000	0	104	30-160	0			
2-Hexanone	913.5	30	1000	0	91.4	45-145	0			
4-Methyl-2-pentanone	1168	30	1000	0	117	96-168	0			
Acetone	960.5	100	1000	0	96	20-160	0			
Benzene	999	30	1000	0	99.9	75-125	0			
Bromodichloromethane	958	30	1000	0	95.8	70-130	0			
Bromoform	1052	30	1000	0	105	55-135	0			
Bromomethane	840	75	1000	0	84	30-160	0			
Carbon disulfide	1178	30	1000	0	118	45-160	0			
Carbon tetrachloride	973.5	30	1000	0	97.4	65-135	0			
Chlorobenzene	1005	30	1000	0	100	75-125	0			
Chloroethane	938	100	1000	0	93.8	40-155	0			
Chloroform	980	30	1000	0	98	70-125	0			
Chloromethane	894	100	1000	0	89.4	50-130	0			
cis-1,2-Dichloroethene	935.5	30	1000	0	93.6	65-125	0			
cis-1,3-Dichloropropene	1004	30	1000	0	100	70-125	0			
Dibromochloromethane	827.5	30	1000	0	82.8	65-135	0			
Dichlorodifluoromethane	840.5	30	1000	0	84	35-135	0			
Ethylbenzene	995	30	1000	0	99.5	75-125	0			
Isopropylbenzene	1021	30	1000	0	102	75-130	0			
Methyl tert-butyl ether	1054	30	1000	0	105	75-125	0			
Methylene chloride	871.5	30	1000	0	87.2	55-145	0			
Styrene	1066	30	1000	0	107	75-125	0			
Tetrachloroethene	1122	30	1000	0	112	64-140	0			
Toluene	982.5	30	1000	0	98.2	70-125	0			
trans-1,2-Dichloroethene	1002	30	1000	0	100	65-135	0			
trans-1,3-Dichloropropene	959.5	30	1000	0	96	65-125	0			
Trichloroethene	1078	30	1000	0	108	75-125	0			
Trichlorofluoromethane	1030	30	1000	0	103	25-185	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **62817** Instrument ID **VMS6** Method: **SW8260B**

Vinyl chloride	1000	30	1000	0	100	60-125	0
Xylenes, Total	3012	90	3000	0	100	75-125	0
Surr: 1,2-Dichloroethane-d4	*947.5*	0	*1000*	0	*94.8*	*70-130*	0
Surr: 4-Bromofluorobenzene	*995.5*	0	*1000*	0	*99.6*	*70-130*	0
Surr: Dibromofluoromethane	*1012*	0	*1000*	0	*101*	*70-130*	0
Surr: Toluene-d8	*936.5*	0	*1000*	0	*93.6*	*70-130*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1409698
Project: Former GRMP (17360-T12Y14-03Y14)

QC BATCH REPORT

Batch ID: **62817** Instrument ID **VMS6** Method: **SW8260B**

MS Sample ID: **1409698-03A MS** Units: **µg/Kg** Analysis Date: **9/21/2014 08:33 PM**
Client ID: **SO-17360-091514-EB-003** Run ID: **VMS5_140921A** SeqNo: **2945973** Prep Date: **9/16/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	1035	30	1000	0	104	70-135	0			
1,1,2,2-Tetrachloroethane	940.5	30	1000	0	94	55-130	0			
1,1,2-Trichloroethane	1000	30	1000	0	100	60-125	0			
1,1-Dichloroethane	1024	30	1000	0	102	75-125	0			
1,1-Dichloroethene	1036	30	1000	0	104	65-135	0			
1,2,4-Trichlorobenzene	988	30	1000	0	98.8	65-130	0			
1,2-Dibromo-3-chloropropane	817	30	1000	0	81.7	40-135	0			
1,2-Dibromoethane	1025	30	1000	0	102	75-125	0			
1,2-Dichlorobenzene	989	30	1000	0	98.9	75-120	0			
1,2-Dichloroethane	1095	30	1000	0	110	70-135	0			
1,2-Dichloropropane	1024	30	1000	0	102	70-120	0			
1,3-Dichlorobenzene	973	30	1000	0	97.3	70-125	0			
1,4-Dichlorobenzene	950	30	1000	0	95	70-125	0			
2-Butanone	985.5	200	1000	0	98.6	30-160	0			
2-Hexanone	894	30	1000	0	89.4	45-145	0			
4-Methyl-2-pentanone	1132	30	1000	0	113	89-161	0			
Acetone	1020	100	1000	0	102	20-160	0			
Benzene	1076	30	1000	0	108	75-125	0			
Bromodichloromethane	1034	30	1000	0	103	70-130	0			
Bromoform	909	30	1000	0	90.9	55-135	0			
Bromomethane	427.5	75	1000	0	42.8	30-160	0			
Carbon disulfide	1013	30	1000	0	101	45-160	0			
Carbon tetrachloride	989.5	30	1000	0	99	65-135	0			
Chlorobenzene	977	30	1000	0	97.7	75-125	0			
Chloroethane	844.5	100	1000	0	84.4	40-155	0			
Chloroform	955.5	30	1000	0	95.6	70-125	0			
Chloromethane	998.5	100	1000	0	99.8	50-130	0			
cis-1,2-Dichloroethene	916.5	30	1000	0	91.6	65-125	0			
cis-1,3-Dichloropropene	1020	30	1000	0	102	70-125	0			
Dibromochloromethane	803	30	1000	0	80.3	65-135	0			
Dichlorodifluoromethane	704.5	30	1000	0	70.4	35-135	0			
Ethylbenzene	982	30	1000	0	98.2	75-125	0			
Isopropylbenzene	939	30	1000	0	93.9	75-130	0			
Methyl tert-butyl ether	1081	30	1000	0	108	75-125	0			
Methylene chloride	957	30	1000	0	95.7	55-145	0			
Styrene	1022	30	1000	0	102	75-125	0			
Tetrachloroethene	960.5	30	1000	0	96	64-140	0			
Toluene	959.5	30	1000	0	96	70-125	0			
trans-1,2-Dichloroethene	984	30	1000	0	98.4	65-135	0			
trans-1,3-Dichloropropene	950	30	1000	0	95	65-125	0			
Trichloroethene	995.5	30	1000	0	99.6	75-125	0			
Trichlorofluoromethane	837	30	1000	0	83.7	25-185	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **62817** Instrument ID **VMS6** Method: **SW8260B**

Vinyl chloride	949.5	30	1000	0	95	60-125	0
Xylenes, Total	2962	90	3000	0	98.7	75-125	0
Surr: 1,2-Dichloroethane-d4	*1080*	0	*1000*	0	*108*	*70-130*	0
Surr: 4-Bromofluorobenzene	*928.5*	0	*1000*	0	*92.8*	*70-130*	0
Surr: Dibromofluoromethane	*1057*	0	*1000*	0	*106*	*70-130*	0
Surr: Toluene-d8	*939.5*	0	*1000*	0	*94*	*70-130*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1409698
Project: Former GRMP (17360-T12Y14-03Y14)

QC BATCH REPORT

Batch ID: **62817** Instrument ID **VMS6** Method: **SW8260B**

MSD Sample ID: **1409698-03A MSD** Units: **µg/Kg** Analysis Date: **9/21/2014 08:58 PM**

Client ID: **SO-17360-091514-EB-003** Run ID: **VMS5_140921A** SeqNo: **2945974** Prep Date: **9/16/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	905	30	1000	0	90.5	70-135	1035	13.4	30	
1,1,2,2-Tetrachloroethane	958	30	1000	0	95.8	55-130	940.5	1.84	30	
1,1,2-Trichloroethane	951.5	30	1000	0	95.2	60-125	1000	4.97	30	
1,1-Dichloroethane	948	30	1000	0	94.8	75-125	1024	7.71	30	
1,1-Dichloroethene	974	30	1000	0	97.4	65-135	1036	6.12	30	
1,2,4-Trichlorobenzene	1054	30	1000	0	105	65-130	988	6.46	30	
1,2-Dibromo-3-chloropropane	881.5	30	1000	0	88.2	40-135	817	7.59	30	
1,2-Dibromoethane	1092	30	1000	0	109	75-125	1025	6.38	30	
1,2-Dichlorobenzene	1036	30	1000	0	104	75-120	989	4.69	30	
1,2-Dichloroethane	947.5	30	1000	0	94.8	70-135	1095	14.4	30	
1,2-Dichloropropane	901.5	30	1000	0	90.2	70-120	1024	12.7	30	
1,3-Dichlorobenzene	1007	30	1000	0	101	70-125	973	3.43	30	
1,4-Dichlorobenzene	987	30	1000	0	98.7	70-125	950	3.82	30	
2-Butanone	967	200	1000	0	96.7	30-160	985.5	1.9	30	
2-Hexanone	1054	30	1000	0	105	45-145	894	16.5	30	
4-Methyl-2-pentanone	1289	30	1000	0	129	89-161	1132	13	30	
Acetone	1011	100	1000	0	101	20-160	1020	0.935	30	
Benzene	954.5	30	1000	0	95.4	75-125	1076	12	30	
Bromodichloromethane	1000	30	1000	0	100	70-130	1034	3.29	30	
Bromoform	841.5	30	1000	0	84.2	55-135	909	7.71	30	
Bromomethane	384	75	1000	0	38.4	30-160	427.5	10.7	30	
Carbon disulfide	925.5	30	1000	0	92.6	45-160	1013	9.03	30	
Carbon tetrachloride	902.5	30	1000	0	90.2	65-135	989.5	9.2	30	
Chlorobenzene	976.5	30	1000	0	97.6	75-125	977	0.0512	30	
Chloroethane	646.5	100	1000	0	64.6	40-155	844.5	26.6	30	
Chloroform	906	30	1000	0	90.6	70-125	955.5	5.32	30	
Chloromethane	925	100	1000	0	92.5	50-130	998.5	7.64	30	
cis-1,2-Dichloroethene	870	30	1000	0	87	65-125	916.5	5.21	30	
cis-1,3-Dichloropropene	976	30	1000	0	97.6	70-125	1020	4.46	30	
Dibromochloromethane	837	30	1000	0	83.7	65-135	803	4.15	30	
Dichlorodifluoromethane	649.5	30	1000	0	65	35-135	704.5	8.12	30	
Ethylbenzene	998	30	1000	0	99.8	75-125	982	1.62	30	
Isopropylbenzene	1030	30	1000	0	103	75-130	939	9.29	30	
Methyl tert-butyl ether	1017	30	1000	0	102	75-125	1081	6.1	30	
Methylene chloride	884.5	30	1000	0	88.4	55-145	957	7.87	30	
Styrene	1022	30	1000	0	102	75-125	1022	0.0489	30	
Tetrachloroethene	943	30	1000	0	94.3	64-140	960.5	1.84	30	
Toluene	945.5	30	1000	0	94.6	70-125	959.5	1.47	30	
trans-1,2-Dichloroethene	923	30	1000	0	92.3	65-135	984	6.4	30	
trans-1,3-Dichloropropene	941.5	30	1000	0	94.2	65-125	950	0.899	30	
Trichloroethene	973	30	1000	0	97.3	75-125	995.5	2.29	30	
Trichlorofluoromethane	777.5	30	1000	0	77.8	25-185	837	7.37	30	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **62817** Instrument ID **VMS6** Method: **SW8260B**

Vinyl chloride	866	30	1000	0	86.6	60-125	949.5	9.2	30
Xylenes, Total	2957	90	3000	0	98.6	75-125	2962	0.152	30
Surr: 1,2-Dichloroethane-d4	*981*	0	*1000*	0	*98.1*	*70-130*	1080	*9.56*	*30*
Surr: 4-Bromofluorobenzene	*1018*	0	*1000*	0	*102*	*70-130*	928.5	*9.24*	*30*
Surr: Dibromofluoromethane	*968*	0	*1000*	0	*96.8*	*70-130*	1057	*8.79*	*30*
Surr: Toluene-d8	*996*	0	*1000*	0	*99.6*	*70-130*	939.5	*5.84*	*30*

The following samples were analyzed in this batch: 1409698-01A 1409698-02A 1409698-03A 1409698-04A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1409698
Project: Former GRMP (17360-T12Y14-03Y14)

QC BATCH REPORT

Batch ID: **R148387** Instrument ID **MOIST** Method: **A2540 G**

MBLK Sample ID: **WBLKS-R148387** Units: **% of sample** Analysis Date: **9/17/2014 02:45 PM**
Client ID: Run ID: **MOIST_140917C** SeqNo: **2941836** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.050								

LCS Sample ID: **LCS-R148387** Units: **% of sample** Analysis Date: **9/17/2014 02:45 PM**
Client ID: Run ID: **MOIST_140917C** SeqNo: **2941835** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.050	100	0	100	99.5-100.5	0			

DUP Sample ID: **1409643-10B DUP** Units: **% of sample** Analysis Date: **9/17/2014 02:45 PM**
Client ID: Run ID: **MOIST_140917C** SeqNo: **2941814** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	21.87	0.050	0	0	0	0-0	21.75	0.55	20	

DUP Sample ID: **1409698-03B DUP** Units: **% of sample** Analysis Date: **9/17/2014 02:45 PM**
Client ID: **SO-17360-091514-EB-003** Run ID: **MOIST_140917C** SeqNo: **2941825** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	8.59	0.050	0	0	0	0-0	7.97	7.49	20	

The following samples were analyzed in this batch: 1409698-01B 1409698-02B 1409698-03B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

CHAIN OF CUSTODY RECORD

COC NO.: PL- 12315

PAGE 1 OF 1

(See Reverse Side for Instructions)

CONESTOGA-ROVERS & ASSOCIATES

14496 Sheldon Road, Suite #200, Plymouth, Michigan 48170

Phone: (734) 453-5123 Fax: (734) 453-5201

Project No/ Phase/Task Code: 017360-T12Y14-03Y14	Laboratory Name: ALS	Lab Location: Holland MI	SSOW ID: 17380-T12
Project Name: Former GRMP	Lab Contact: T. Beamish	Lab Quote No:	Cooler No:
Project Location: Wyoming, MI			Carrier:
Chemistry Contact: R. Fleisher			Airbill No:
Sampler(s): E. Batenburg			Date Shipped: NA - drop @ lab

Item	Sample Identification (Containers for each sample may be combined on one line)	Date (mm/dd/yy)	Time (hh:mm)	Sample Type: Matrix Code (see back of COC)	Sample Type: Grab (G) or Comp (C)	Container Quantity & Preservation: Unpreserved	HCl	HNO_3	H_2SO_4	NaOH	Methanol/Water (Soil VOC)	EnCores 3x5-g/1x25-g	Other:	Total Containers/Sample	TCL VOCs	TCL SVOCs	PCBs	Metals		MS/MSD Request	Comments/ Special Instructions:
1	SO-17360-091514-EB-001	9/15/14	1035	SO	G	1					2			3	X	X	X	X			
2	-002		1040			1					2				X	X	X	X			
3	-003		1045			2					2 (EB)			6	X	X	X	X		X	MS/MSD
4	Trip Blank	—	—								1			1	X						
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15							1*														

9-15-14

TAT Required in business days (use separate COCs for different TATs):

☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☒ 2 Week ☐ Other:

Total Number of Containers: 10

All Samples in Cooler must be on COC

Notes/ Special Requirements: 4.6 C

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
1.	CRA	9-15-14	1400	1.	ALS	9/15/14	1400
2.				2.			
3.				3.			

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT—ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE—Fully Executed Copy (CRA) YELLOW—Receiving Laboratory Copy PINK—Shipper GOLDENROD—Sampling Crew

CRA Form: COC-10A (2010804)

ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **CRA - PLYMOUTH** Date/Time Received: **15-Sep-14 14:00**

Work Order: **1409698** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 15-Sep-14 (Date) Reviewed by: (eSignature) (Date)

Matrices: Soil

Carrier name: Client

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.6 c		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	9/15/2014 3:42:36 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Attachment D

Data Validation Memorandum

CONESTOGA-ROVERS
& ASSOCIATES

14496 Sheldon Road, Suite #200
Plymouth, Michigan 48170
Telephone: (734) 453-5123 Fax: (734) 453-5201
www.CRAworld.com

MEMORANDUM

TO:	Jennifer Quigley	REF. NO.:	017360-T12Y14
FROM:	Ruth Mickle/ma/72/Det	DATE:	October 13, 2014

RE: Analytical Results and Reduced Validation
Soil Sampling Event
Racer Grand Rapids Stamping Site
Wyoming, Michigan
September 2014

1.0 Introduction

The following document details a reduced validation of analytical results for soil samples collected in support of the soil sampling event at the Racer Grand Rapids Stamping Site during September 2014. Samples were submitted to ALS Environmental, located in Holland, Michigan (ALS-MI). A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Standard Conestoga-Rovers & Associates (CRA) report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, recovery data from surrogate spikes, laboratory control samples (LCS), matrix spikes (MS), and field QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 3 and applicable guidance from the documents entitled:

i) "Former Grand Rapids Metal Plant Quality Assurance Project Plan (QAPP)", Revision 1, January 6, 2011

ii) "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review", USEPA 540-R-99-008, October 1999

iii) "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review", USEPA 540-R-94-013, February 1994

Items ii) and iii) will subsequently be referred to as the "Guidelines" in this Memorandum.

2.0 Sample Holding Time and Preservation

The sample holding time criteria and sample preservation requirements for the analyses are summarized in Table 3. The sample chain of custody document and analytical report were used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

All samples were properly preserved, delivered on ice, and stored by the laboratory at the required temperature (0-6°C).

3.0 Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

Table 4 presents the data qualified due to analyte concentrations in the method blanks. All remaining method blank results were non-detect or the sample results exceeded acceptance criteria, indicating that laboratory contamination was not a factor.

4.0 Surrogate Spike Recoveries - Organic Analyses

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction and/or analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

Surrogate recoveries were assessed against laboratory control limits. All surrogate recoveries met the above criteria.

5.0 Laboratory Control Sample Analyses

LCS are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects. For this study, LCS were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

Organic Analyses

The LCS contained all compounds of interest. All LCS were within the laboratory control limits criteria, demonstrating acceptable analytical accuracy, or the non-conformances did not warrant qualification of associated samples.

Inorganic Analyses

The LCS contained all analytes of interest. LCS recoveries were assessed per the "Guidelines". All LCS were within the laboratory control limits, demonstrating acceptable analytical accuracy.

6.0 Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

To evaluate the effects of sample matrices on the extraction or digestion process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as MS/MSD samples. The RPD between the MS and MSD is used to assess analytical precision. If the original sample concentration is significantly greater than the spike concentration, the recovery is not assessed.

MS/MSD analyses were performed as specified in Table 1.

Organic Analyses

The MS/MSD samples are spiked with the compounds specified in the method. The majority pf percent recoveries and RPD values were within the control limits, demonstrating acceptable analytical accuracy and precision. Table 5 presents qualified data based on outlying matrix spike results from semi-volatile organic compound (SVOC) analyses. There were additional high bias outlying SVOC data. However, since the associated samples results were nondetect, no data qualification was required.

Inorganic Analyses

The MS/MSD samples were spiked with the analytes of interest, and the results were evaluated using the "Guidelines". The majority pf percent recoveries and RPD values were within the control limits, demonstrating acceptable analytical accuracy and precision. Table 5 presents the outlying matrix spike results for barium and zinc. The associated sample data were qualified estimated, as noted in the table.

7.0 Field QA/QC Samples

The field QA/QC samples associated with the sampling event consisted of one trip blank and field duplicate sample set.

Trip Blank Sample Analysis

To evaluate contamination from sample collection, transportation, storage, and analytical activities, one trip blank was submitted to the laboratory for volatile organic compound (VOC) analysis. All results were non-detect for the compounds of interest.

Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, one field duplicate sample was collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with these duplicate samples must be less than 100 percent for soil samples. If the reported concentration in either the investigative sample or its duplicate is less than five times the reporting limit (RL), the evaluation criteria is two times the RL value for soil samples.

With one exception, the field duplicate results were within acceptable agreement. The field duplicate set yielded noncomparable dibenzo(a,h)anthracene results from SVOC analyses as detailed in Table 6. The remaining field duplicate data were within criteria, demonstrating acceptable sampling and analytical precision.

8.0 Analyte Reporting

The laboratory reported detected results down to the laboratory's method detection limit (MDL) for each analyte. Positive analyte detections less than the RL but greater than the MDL were qualified as estimated (J) in Table 2 unless qualified otherwise in this memorandum. Non-detect results were presented as non-detect at the RL in Table 2.

9.0 Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable with the specific qualifications noted herein.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SOIL SAMPLING EVENT
RACER GRAND RAPIDS STAMPING SITE
WYOMING, MICHIGAN
SEPTEMBER 2014

Sample Identification	*Location*	*Matrix*	*Initial Sample Depth (ft. bgs.)*	*Final Sample Depth (ft. bgs.)*	*Collection Date (mm/dd/yyyy)*	*Collection Time (hr:min)*	*Analysis/Parameters*				*Comments*
							TCL VOCS	*TCL SVOCS*	*PCB*	*Site Metals*	
ALS-MI SDG No.: 1409698											
SO-17360-091514-EB-001	SB324-14	soil	0	2	9/15/2014	12:35	x	x	x	x	
SO-17360-091514-EB-002	SB324-14	soil	0	2	9/15/2014	12:40	x	x	x	x	Field duplicate of EB-001
SO-17360-091514-EB-003	SB325-14	soil	0	2	9/15/2014	12:45	x				MS/MSD
Trip blank	--	soil	--	--	9/15/2014	--	x				

Notes:

ft. bgs. - Feet below ground surface
MS/MSD - Matrix spike/matrix spike duplicate
PCB - Polychlorinated biphenyls
SDG - Sample delivery group
SVOCs - Semi-volatile organic compounds
TCL - Target compound list
VOCs - Volatile organic compounds

TABLE 2

ANALYTICAL RESULTS SUMMARY SAMPLING
SOIL SAMPLING EVENT
RACER GRAND RAPIDS STAMPLING SITE
WYOMING, MICHIGAN
SEPTEMBER 2014

Sample Location:		*SB324-14*	*SB324-14*	*SB325-14*	*Trip Blank*
Sample Identification:		*SO-17360-091514-EB-001*	*SO-17360-091514-EB-002*	*SO-17360-091514-EB-003*	*TRIP BLANK*
Sample Date:		*9/15/2014*	*9/15/2014*	*9/15/2014*	*9/15/2014*
Soil Depth:		*(0-2) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*-*
Sample Type:			*Duplicate*		
	Units				
Volatile Organic Compounds (VOCs)					
1,1,1-Trichloroethane	µg/Kg	38 U	37 U	37 U	30 U
1,1,2,2-Tetrachloroethane	µg/Kg	38 U	37 U	37 U	30 U
1,1,2-Trichloroethane	µg/Kg	38 U	37 U	37 U	30 U
1,1-Dichloroethane	µg/Kg	38 U	37 U	37 U	30 U
1,1-Dichloroethene	µg/Kg	38 U	37 U	37 U	30 U
1,2,4-Trichlorobenzene	µg/Kg	38 U	37 U	37 U	30 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/Kg	38 U	37 U	37 U	30 U
1,2-Dibromoethane (Ethylene dibromide)	µg/Kg	38 U	37 U	37 U	30 U
1,2-Dichlorobenzene	µg/Kg	38 U	37 U	37 U	30 U
1,2-Dichloroethane	µg/Kg	38 U	37 U	37 U	30 U
1,2-Dichloropropane	µg/Kg	38 U	37 U	37 U	30 U
1,3-Dichlorobenzene	µg/Kg	38 U	37 U	37 U	30 U
1,4-Dichlorobenzene	µg/Kg	38 U	37 U	37 U	30 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/Kg	260 U	250 U	250 U	200 U
2-Hexanone	µg/Kg	38 U	37 U	37 U	30 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/Kg	38 U	37 U	37 U	30 U
Acetone	µg/Kg	130 U	120 U	120 U	100 U
Benzene	µg/Kg	38 U	37 U	37 U	30 U
Bromodichloromethane	µg/Kg	38 U	37 U	37 U	30 U
Bromoform	µg/Kg	38 U	37 U	37 U	30 U
Bromomethane (Methyl bromide)	µg/Kg	96 U	93 U	93 U	75 U
Carbon disulfide	µg/Kg	240 J	37 U	37 U	30 U
Carbon tetrachloride	µg/Kg	38 U	37 U	37 U	30 U
Chlorobenzene	µg/Kg	38 U	37 U	37 U	30 U
Chloroethane	µg/Kg	130 U	120 U	120 U	100 U
Chloroform (Trichloromethane)	µg/Kg	38 U	37 U	37 U	30 U
Chloromethane (Methyl chloride)	µg/Kg	130 U	120 U	120 U	100 U
cis-1,2-Dichloroethene	µg/Kg	38 U	37 U	37 U	30 U
cis-1,3-Dichloropropene	µg/Kg	38 U	37 U	37 U	30 U
Cyclohexane	µg/Kg	38 U	37 U	37 U	30 U
Dibromochloromethane	µg/Kg	38 U	37 U	37 U	30 U
Dichlorodifluoromethane (CFC-12)	µg/Kg	38 U	37 U	37 U	30 U
Ethylbenzene	µg/Kg	38 U	37 U	37 U	30 U
Isopropyl benzene	µg/Kg	38 U	37 U	37 U	30 U

TABLE 2

ANALYTICAL RESULTS SUMMARY SAMPLING
SOIL SAMPLING EVENT
RACER GRAND RAPIDS STAMPLING SITE
WYOMING, MICHIGAN
SEPTEMBER 2014

Sample Location:		*SB324-14*	*SB324-14*	*SB325-14*	*Trip Blank*
Sample Identification:		*SO-17360-091514-EB-001*	*SO-17360-091514-EB-002*	*SO-17360-091514-EB-003*	*TRIP BLANK*
Sample Date:		*9/15/2014*	*9/15/2014*	*9/15/2014*	*9/15/2014*
Soil Depth:		*(0-2) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*-*
Sample Type:			*Duplicate*		
	Units				
Volatile Organic Compounds (VOCs) (continued)					
Methyl acetate	µg/Kg	1700 U	2100 U	1800 U	200 U
Methyl cyclohexane	µg/Kg	38 U	37 U	37 U	30 U
Methyl tert butyl ether (MTBE)	µg/Kg	38 U	37 U	37 U	30 U
Methylene chloride	µg/Kg	38 U	37 U	37 U	30 U
Styrene	µg/Kg	38 U	37 U	37 U	30 U
Tetrachloroethene	µg/Kg	38 U	37 U	37 U	30 U
Toluene	µg/Kg	38 U	37 U	37 U	30 U
trans-1,2-Dichloroethene	µg/Kg	38 U	37 U	37 U	30 U
trans-1,3-Dichloropropene	µg/Kg	38 U	37 U	37 U	30 U
Trichloroethene	µg/Kg	38 U	37 U	37 U	30 U
Trichlorofluoromethane (CFC-11)	µg/Kg	38 U	37 U	37 U	30 U
Trifluorotrichloroethane (Freon 113)	µg/Kg	38 U	37 U	37 U	30 U
Vinyl chloride	µg/Kg	38 U	37 U	37 U	30 U
Xylenes (total)	µg/Kg	120 U	110 U	110 U	90 U
Semi-Volatile Organic Compounds (SVOCs)					
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/Kg	170 U	160 U	170 U	--
2,4,5-Trichlorophenol	µg/Kg	170 U	160 U	170 U	--
2,4,6-Trichlorophenol	µg/Kg	170 U	160 U	170 U	--
2,4-Dichlorophenol	µg/Kg	170 U	160 U	170 U	--
2,4-Dimethylphenol	µg/Kg	350 U	340 U	350 U	--
2,4-Dinitrophenol	µg/Kg	700 U	680 U	700 U	--
2,4-Dinitrotoluene	µg/Kg	170 U	160 U	170 U	--
2,6-Dinitrotoluene	µg/Kg	170 U	160 U	170 U	--
2-Chloronaphthalene	µg/Kg	7.1 U	6.9 U	7.1 U	--
2-Chlorophenol	µg/Kg	170 U	160 U	170 U	--
2-Methylnaphthalene	µg/Kg	7.1 U	6.9 U	7.1 U	--
2-Methylphenol	µg/Kg	170 U	160 U	170 U	--
2-Nitroaniline	µg/Kg	700 U	680 U	700 U	--
2-Nitrophenol	µg/Kg	170 U	160 U	170 U	--
3,3'-Dichlorobenzidine	µg/Kg	700 U	680 U	700 U	--
3-Nitroaniline	µg/Kg	700 U	680 U	700 U	--
4,6-Dinitro-2-methylphenol	µg/Kg	350 U	340 U	350 U	--

TABLE 2

ANALYTICAL RESULTS SUMMARY SAMPLING
SOIL SAMPLING EVENT
RACER GRAND RAPIDS STAMPLING SITE
WYOMING, MICHIGAN
SEPTEMBER 2014

Sample Location:		*SB324-14*	*SB324-14*	*SB325-14*	*Trip Blank*
Sample Identification:		*SO-17360-091514-EB-001*	*SO-17360-091514-EB-002*	*SO-17360-091514-EB-003*	*TRIP BLANK*
Sample Date:		*9/15/2014*	*9/15/2014*	*9/15/2014*	*9/15/2014*
Soil Depth:		*(0-2) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	-
Sample Type:			*Duplicate*		
	Units				
Semi-Volatile Organic Compounds (SVOCs) (continued)					
4-Bromophenyl phenyl ether	µg/Kg	170 U	160 U	170 U	--
4-Chloro-3-methylphenol	µg/Kg	170 U	160 U	170 U	--
4-Chloroaniline	µg/Kg	700 U	680 U	700 U	--
4-Chlorophenyl phenyl ether	µg/Kg	170 U	160 U	170 U	--
4-Methylphenol	µg/Kg	170 U	160 U	170 U	--
4-Nitroaniline	µg/Kg	700 U	680 U	700 U	--
4-Nitrophenol	µg/Kg	700 U	680 U	700 U	--
Acenaphthene	µg/Kg	7.1 U	6.9 U	7.1 U	--
Acenaphthylene	µg/Kg	4.3 J	6.9 U	30	--
Acetophenone	µg/Kg	350 U	340 U	350 U	--
Anthracene	µg/Kg	7.1 U	6.9 U	36	--
Atrazine	µg/Kg	350 U	340 U	350 U	--
Benzaldehyde	µg/Kg	350 U	340 U	350 U	--
Benzo(a)anthracene	µg/Kg	17	12	240 J	--
Benzo(a)pyrene	µg/Kg	35	31	240	--
Benzo(b)fluoranthene	µg/Kg	35	29	340	--
Benzo(g,h,i)perylene	µg/Kg	13	10	160	--
Benzo(k)fluoranthene	µg/Kg	8.5	6.2 J	130	--
Biphenyl (1,1-Biphenyl)	µg/Kg	350 U	340 U	350 U	--
bis(2-Chloroethoxy)methane	µg/Kg	170 U	160 U	170 U	--
bis(2-Chloroethyl)ether	µg/Kg	170 U	160 U	170 U	--
bis(2-Ethylhexyl)phthalate (DEHP)	µg/Kg	350 U	340 U	350 U	--
Butyl benzylphthalate (BBP)	µg/Kg	170 U	160 U	170 U	--
Caprolactam	µg/Kg	350 U	340 U	350 U	--
Carbazole	µg/Kg	170 U	160 U	76 J	--
Chrysene	µg/Kg	14	11	260	--
Dibenz(a,h)anthracene	µg/Kg	22 J	6.9 UJ	44	--
Dibenzofuran	µg/Kg	170 U	160 U	170 U	--
Diethyl phthalate	µg/Kg	350 U	340 U	350 U	--
Dimethyl phthalate	µg/Kg	350 U	340 U	350 U	--
Di-n-butylphthalate (DBP)	µg/Kg	350 U	340 U	350 U	--
Di-n-octyl phthalate (DnOP)	µg/Kg	170 U	160 U	170 U	--
Fluoranthene	µg/Kg	27	19	490	--
Fluorene	µg/Kg	7.1 U	6.9 U	9.9	--

TABLE 2

ANALYTICAL RESULTS SUMMARY SAMPLING
SOIL SAMPLING EVENT
RACER GRAND RAPIDS STAMPLING SITE
WYOMING, MICHIGAN
SEPTEMBER 2014

Sample Location:		*SB324-14*	*SB324-14*	*SB325-14*	*Trip Blank*
Sample Identification:		*SO-17360-091514-EB-001*	*SO-17360-091514-EB-002*	*SO-17360-091514-EB-003*	*TRIP BLANK*
Sample Date:		*9/15/2014*	*9/15/2014*	*9/15/2014*	*9/15/2014*
Soil Depth:		*(0-2) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	*-*
Sample Type:			*Duplicate*		
	Units				
Semi-Volatile Organic Compounds (SVOCs) (continued)					
Hexachlorobenzene	µg/Kg	170 U	160 U	170 U	--
Hexachlorobutadiene	µg/Kg	170 U	160 U	170 U	--
Hexachlorocyclopentadiene	µg/Kg	350 U	340 U	350 U	--
Hexachloroethane	µg/Kg	170 U	160 U	170 U	--
Indeno(1,2,3-cd)pyrene	µg/Kg	43	38	180	--
Isophorone	µg/Kg	170 U	160 U	170 U	--
Naphthalene	µg/Kg	7.1 U	6.9 U	7.1 U	--
Nitrobenzene	µg/Kg	170 U	160 U	170 U	--
N-Nitrosodi-n-propylamine	µg/Kg	170 U	160 U	170 U	--
N-Nitrosodiphenylamine	µg/Kg	170 U	160 U	170 U	--
Pentachlorophenol	µg/Kg	350 U	340 U	350 U	--
Phenanthrene	µg/Kg	12	7.6	130	--
Phenol	µg/Kg	170 U	160 U	170 U	--
Pyrene	µg/Kg	27	17	460	--
Metals					
Antimony	µg/Kg	39 J	25 J	77 J	--
Arsenic	µg/Kg	670	650	1400	--
Barium	µg/Kg	6700 J	5700 J	30000 J	--
Beryllium	µg/Kg	60 J	60 J	180	--
Cadmium	µg/Kg	33 J	25 J	97 J	--
Chromium	µg/Kg	2400	2400	4700	--
Cobalt	µg/Kg	760	770	1700	--
Copper	µg/Kg	1800	1800	3900	--
Iron	µg/Kg	2000000	2100000	4600000	--
Lead	µg/Kg	2800	1700	15000	--
Manganese	µg/Kg	42000	35000	170000	--
Mercury	µg/Kg	37 U	34 U	35 U	--
Molybdenum	µg/Kg	120 J	53 J	280 J	--
Nickel	µg/Kg	1900	1800	4200	--
Selenium	µg/Kg	390 U	400 U	380 U	--
Silver	µg/Kg	4 J	7.5 J	7.4 J	--

TABLE 2

ANALYTICAL RESULTS SUMMARY SAMPLING
SOIL SAMPLING EVENT
RACER GRAND RAPIDS STAMPLING SITE
WYOMING, MICHIGAN
SEPTEMBER 2014

Sample Location:		*SB324-14*	*SB324-14*	*SB325-14*	*Trip Blank*
Sample Identification:		*SO-17360-091514-EB-001*	*SO-17360-091514-EB-002*	*SO-17360-091514-EB-003*	*TRIP BLANK*
Sample Date:		*9/15/2014*	*9/15/2014*	*9/15/2014*	*9/15/2014*
Soil Depth:		*(0-2) ft BGS*	*(0-2) ft BGS*	*(0-2) ft BGS*	-
Sample Type:			*Duplicate*		
	Units				
Metals (continued)					
Thallium	µg/Kg	15 J	15 J	38 J	--
Vanadium	µg/Kg	4000	4200	7700	--
Zinc	µg/Kg	8000 J	5400 J	18000 J	--
PCBs					
Aroclor-1016 (PCB-1016)	µg/Kg	87 U	85 U	90 U	--
Aroclor-1221 (PCB-1221)	µg/Kg	87 U	85 U	90 U	--
Aroclor-1232 (PCB-1232)	µg/Kg	87 U	85 U	90 U	--
Aroclor-1242 (PCB-1242)	µg/Kg	87 U	85 U	90 U	--
Aroclor-1248 (PCB-1248)	µg/Kg	87 U	85 U	90 U	--
Aroclor-1254 (PCB-1254)	µg/Kg	87 U	85 U	90 U	--
Aroclor-1260 (PCB-1260)	µg/Kg	87 U	85 U	90 U	--
General Chemistry					
Moisture content (dry weight)	%	6.2	6.1	8.0	--

Notes:
U - Not detected at the associated reporting limit
J - Estimated concentration
UJ - Not detected; associated reporting limit is estimated

TABLE 3

ANALYTICAL METHODS AND HOLDING TIME CRITERIA
SOIL SAMPLING EVENT
RACER GRAND RAPIDS STAMPING SITE
WYOMING, MICHIGAN
SEPTEMBER 2014

Parameter	*Method*	*Matrix*	*Preservation*	*Holding Time*	
				Collection to Extraction (Days)	*Collection or Extraction to Analysis (Days)*
TCL VOCs	SW-846 8260B	Water	pH<2, Iced, 0-6° C	-	14
TCL SVOCs	SW-846 8270C	Water	Iced, 0-6° C	7	40
PCB	SW-846 8082	Water	Iced, 0-6° C	7	40
Site Specific Metals (except Mercury)	SW-846 6020A	Water	Iced, 0-6° C	-	180
Mercury	SW-846 7471A	Water	Iced, 0-6° C	-	28

Notes

SW-846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions.
TCL - Target Compound List
PCB - Polychlorinated biphenyls
SVOCs - Semi-Volatile Organic Compounds
VOCs - Volatile Organic Compounds

TABLE 4

QUALIFIED SAMPLE RESULTS DUE TO ANALYTE CONCENTRATIONS IN THE METHOD BLANKS
SOIL SAMPLING EVENT
RACER GRAND RAPIDS STAMPING SITE
WYOMING, MICHIGAN
SEPTEMBER 2014

Parameter	*Analyte*	*Analysis Date*	*Blank Result*	*Sample ID*	*Original Result*	*Qualified Result*	*Units*
Site Specific Metals	Mercury	09/18/14	0.001833J	SO-17360-091514-EB-001	0.0053 J	0.037 U	mg/Kg
				SO-17360-091514-EB-002	0.0039 J	0.034 U	mg/Kg
				SO-17360-091514-EB-003	0.013 J	0.035 U	mg/Kg
Site Specific Metals	Selenium	09/18/14	0.0692	SO-17360-091514-EB-001	0.39	0.39 U	µg/Kg
				SO-17360-091514-EB-002	0.40	0.40 U	µg/Kg
				SO-17360-091514-EB-003	0.38	0.38 U	µg/Kg
TCL VOCs	Methyl acetate	09/07/14	234.5	SO-17360-091514-EB-001	1600 J	1700 U	µg/Kg
				SO-17360-091514-EB-002	2000 J	2100 U	µg/Kg
				SO-17360-091514-EB-003	1800 J	1800 U	µg/Kg

Notes:

J - Estimated concentration
U - Not detected at the associated reporting limit
TCL - Target compound list
VOCs - Volatile organic compounds

TABLE 5

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE/MATRIX SPIKE DUPLICATE RESULTS
SOIL SAMPLING EVENT
RACER GRAND RAPIDS STAMPING SITE
SEPTEMBER 2014

Parameter	*Spike Sample ID*	*Analyte*	*MS % Recovery*	*MSD % Recovery*	*RPD (percent)*	*Control Limits*		*Sample ID*	*Qualified Result*	*Units*
						% Recovery	*RPD*			
TCL SVOCs	SO-17360-091514-EB-003	Benzo(a)anthracene	117	123	5.0	50-110	30	SO-17360-091514-EB-003	240 J	µg/Kg
Site Specific Metals	SO-17360-091514-EB-003	Barium	129	126	0.50	75-125	25	SO-17360-091514-EB-001	6.7 J	mg/Kg
								SO-17360-091514-EB-002	5.7 J	mg/Kg
								SO-17360-091514-EB-003	30 J	mg/Kg
Site Specific Metals	SO-17360-091514-EB-003	Zinc	149	334	38	75-125	25	SO-17360-091514-EB-001	8.0 J	mg/Kg
								SO-17360-091514-EB-002	5.4 J	mg/Kg
								SO-17360-091514-EB-003	18 J	mg/Kg

Notes:

MS - Matrix spike
MSD - Matrix spike duplicate
RPD - Relative percent difference
TCL - Target compound list
SVOCs - Semi-Volatile organic compounds

TABLE 6

QUALIFIED SAMPLE DATA DUE TO VARIABILITY IN FIELD DUPLICATE RESULTS
SOIL SAMPLING EVENT
RACER GRAND RAPIDS STAMPING SITE
WYOMING, MICHIGAN
SEPTEMBER 2014

Parameter	*Analyte*	*Diff*	*Sample ID*	*Qualified Result*	*Field Duplicate Sample ID*	*Qualified Result*	*Units*
TCL SVOCs	Dibenz(a,h)anthracene	15.1 Diff	SO-17360-091514-EB-001	22 J	SO-17360-091514-EB-002	6.9 UJ	ug/Kg

Notes:

Diff - Difference (i.e., >2XRL for soils)
TCL - Target compound list
SVOCs - Semi-Volatile organic compounds