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August 31, 2012 Reference No. 019190

Dr. Bhooma Sundar
Project Coordinator
U.S. Environmental Protection Agency Region 5
Mail Code: DE-9J
77 West Jackson Boulevard
Chicago, Illinois 60604-3507

VIA ELECTRONIC MAIL

Dear Dr. Sundar:

Re: Response to Technical Comments on the RCRA Facility Investigation Report and Phase IIB RFI Addendum
Radio Materials Corporation Facility, Attica Indiana
U.S. EPA ID No. IND005477021

On behalf of Kraft Foods Global, Inc., this letter provides responses to the comments forwarded on July 10, 2012 by the U.S. Environmental Protection Agency (U.S. EPA or Agency) on Phase IIB RCRA Facility Investigation (RFI) Report for the Radio Materials Corporation (RMC) Facility located in Attica, Indiana dated May 2012. As the comment letter stated, no revision of the RFI Report is necessary based on those U.S. EPA comments, though the comments may be taken into consideration prior to the selection of the final corrective measures for the RMC Facility.

U.S. EPA's comments are restated below followed by the response to each on behalf of Kraft Foods Global, Inc.

GENERAL COMMENTS

1. **U.S. EPA Comment**

The risk-based vapor intrusion action levels for trichloroethylene (TCE) should be updated to reflect the November 2011 update to the TCE toxicity values in the Integrated Risk Information System (IRIS) database. Going forward, future documents and resulting actions should be based on risk reflecting the new TCE toxicity values. EPA has not changed the Vapor Intrusion guidance since 2002 (which contains screening levels rather than action levels) but they did publish an update to the TCE inhalation reference concentration (RfC) on IRIS in September 2011 (http://epa.gov/iris/subst/0199.htm#refinhal). EPA also updated the Regional Screening

Levels which can be found at: (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm)

Response

U.S. EPA's comment is acknowledged. Although U.S. EPA's comment focused on TCE, we believe the substance is relevant to both TCE and PCE and therefore, this response addresses both compounds. The current action levels that U.S. EPA approved prior to their application at the RMC Site were based on the applicable toxicity values for the analytes of concern at the time of the criteria were developed, as well as the Indiana Department of Environmental Quality's (IDEM's) 1E-05 target cancer risk levels. Applying the same procedure used initially with the recent updates to the PCE and TCE toxicity values published by U.S. EPA, IDEM's vapor intrusion action levels are provided below.

Analyte	*1E-05 Cancer Risk Screening Level (µg/m³)*	*Non-Cancer Risk(µg/m³)*	*Applicable Screening Level (µg/m³)*
PCE	94[a]	42[b]	42
TCE	4.3[a]	2.1	2.1

[a] Based on an extrapolation from the U.S. EPA SSL tables at a 10^{-5} target cancer risk.

[b] Based on the July 31, 2012 IDEM tetrachloroethene Screening Level Announcement

Based on these updated calculations, the resultant action levels for cancer risk are higher than the action levels currently approved for the Site. Therefore, the action levels for the RMC Site default to the U.S. EPA-published hazard indices for PCE and TCE.

2. **U.S. EPA Comment**

Based on historical data presented in the report, the groundwater plumes in the southern portion of the site appear to have reached steady-state conditions. Future reports for the facility such as the Corrective Measures Study (CMS) should include concentration trend data for those monitoring wells for which sufficient data have been collected to date. Statistical analysis of trend data should be conducted to evaluate and verify plume stability going forward.

Response

U.S. EPA's comment is acknowledged.

3. **U.S. EPA Comment**

Off-site downgradient monitoring wells installed since 2006 have verified that the groundwater plume in the overburden from the RMC facility has migrated near the Wabash River. Future plans and reports for the CMS should address any possible impact of the groundwater plumes discharging to the Wabash River.

Response

U.S EPA's comment is acknowledged. However, as the Agency is aware, the potential off-Site sources of TCE to the groundwater unrelated to the Site in and around Attica have not been investigated. Therefore, while the former RMC facility may be considered one potential source for TCE, it is unclear what, if any, of the downgradient TCE concentrations are attributable to RMC as opposed to other off-Site sources. Given the ubiquitous nature of TCE as a groundwater contaminant, the potential for there to be other thus far uninvestigated off-Site sources is significant. Nonetheless, rather than opting for conducting further investigations of the various potential TCE sources in and around downtown Attica, Kraft Foods took the extraordinary step of proceeding directly to the design and installation of the City water treatment system, which has been operating effectively for over 2 years thereby addressing any potential risk from a drinking water use scenario. With respect to potential risk relating to discharge of groundwater to the Wabash River, see the response to Specific Comment 3 on the ecological risk assessment.

4. **U.S. EPA Comment**

The Risk Assessment presented in Chapter 9 was limited to the area that was delineated through 2005; the risk assessment should be expanded to cover the entire area of contamination extending to the Wabash River to support the decision making process for the facility going forward.

Response

We do not agree with U.S EPA's comment regarding the risk assessment. As discussed in Section 9 of the May 21, 2010 draft of the RFI Report, the risk assessment included a number of potential exposure areas that extended all the way to the Wabash River northwest of the Site (Northwest Residential Area). That risk assessment used the analytical data that were available at that time and did not simply rely on data generated during 2005 and earlier.

5. **U.S. EPA Comment**

An effective monitoring plan for evaluating the effectiveness of the groundwater Interim Control Measures (ICMs) should be developed, including locations of proposed new wells. The current monitoring network is not sufficient to verify capture of the groundwater plumes by the extraction wells.

Response

The document entitled Groundwater Interim Corrective Measures Design Plans and Specifications (CRA, October 2010) was approved by the Agency and contains a monitoring plan for the groundwater ICMs. We are unclear why U.S. EPA apparently now believes that the current monitoring network is not sufficient to verify capture of the groundwater plumes by the extraction wells.

6. **U.S. EPA Comment**

The report concludes that groundwater analytical data from bedrock monitoring wells indicate that the parent compounds tetrachloroethylene (PCE) and TCE are undergoing reductive dechlorination with depth and distance from the source, suggesting that biological activity is occurring in the bedrock groundwater. Evaluation of monitored natural attenuation (MNA) of the off-site groundwater plume through the analyses of groundwater geochemical data has not been performed as recommended in the review of the 2005 RFI Phase IIB Report. An adequate evaluation of MNA including biodegradation should be conducted to support the numerical model and the possible selection of MNA as the final remedy for the off-site plumes downgradient of the extraction well network.

Response

As summarized in Section 7.0 of the Hydrogeological Modeling Report (CRA, April 2012), the groundwater modeling included estimates of attenuation mechanisms including advection, dispersion, dilution, sorption, and biodegradation. Future monitoring efforts may be implemented to ensure that the biodegradation mechanisms were reasonably estimated by the model, and the model may then be adjusted accordingly, if necessary.

7. **U.S. EPA Comment**

The vertical gradient amounts and direction are not uniform across the site, as shown in Table 5.2. However, some well pairings such as OB-34 and BW-14 have a significant amount of vertical gradients. The effect of such upward gradients from bedrock to overburden on the ICMs, installed to mitigate the overburden groundwater contamination, should be evaluated by the facility.

Response

The upward gradient noted from the bedrock to the overburden at OB-34/BW-14 is no more or less remarkable in terms of magnitude than the vertical gradients noted at other locations. The generally upward gradients from the bedrock to the overburden in the vicinity of the groundwater ICMs are not expected to have any significant effect on the ICMs given the fact that the bedrock contains considerably lower concentrations of VOCs than the overburden, and less groundwater, in general.

8. **U.S. EPA Comment**

The figures in the May 2010 RFI Phase IIB Report do not show the completely delineated groundwater plumes and monitoring wells that are included in the April 2012 Hydrologic Modeling Report. The current network now sufficiently delineates the downgradient extent of the overburden plume extending to the Wabash River. However, the monitoring data collected since 2006 have shown the plume to be significantly more dispersed as it migrate downgradient than inferred in the May 2010 Phase IIB Report. The monitoring well network is not adequate to delineate and monitor the lateral expansion of the plume. Additional monitoring wells may be needed to properly evaluate the effectiveness of the extraction system in the cross-gradient direction for the southern overburden plume.

Response

The plumes shown in the April 2012 Hydrogeologic Modeling Report depict simulated and observed plumes using the October 2010 data. The observed plumes are not any more disperse or any less delineated than the data in the May 2010 RFI Report indicated so we disagree with the Agency's statement in this comment. Please be specific as to where the Agency believes additional monitoring wells may be required to delineate the overburden plume so that we are in a better position to address any remaining questions more directly.

9. **U.S. EPA Comment**

In order to characterize the metals and VOC contamination in overburden and bedrock groundwater, RMC should include the following wells in the April 2012 ground water monitoring event. These wells should be sampled to analyze current conditions to be reported in the CA 750 report and to wrap the RFI investigations for the site.

Response

U.S. EPA's comment is acknowledged and this groundwater sampling was completed consistent with the procedures approved by U.S. EPA by email dated April 18, 2012.

10. **U.S. EPA Comment**

The following wells were sampled for metals in 2003 and found to exceed the IDEM RDCLs per figure 5.12 of the Phase IIB RFI report submitted in 2010. OB-1, OB-2, OB-4, OB-6, OB-7, OB-8, OB-10, OB-12, OB-15, PZ-16, and BW-06. BW-15, 17, 18, 26 and 23 should be sampled for VOCs. The fate and transport of metal contamination in these wells should be characterized per current conditions.

Response

U.S. EPA's comment is acknowledged and this groundwater sampling was completed consistent with the procedures approved by U.S. EPA by email dated April 18, 2012.

COMMENTS ON ECOLOGICAL RISK ASSESSMENT (SLERA)

GENERAL COMMENTS

1. **U.S. EPA Comment**

The SLERA includes a 2008 information request of the U.S. Fish and Wildlife Service (USFWS) regarding the presence of critical habitat and/or Federally endangered and threatened species in the area. In a response letter, the USFWS expressed concern regarding the possibility of contamination from the site migrating to the Wabash River and its associated wetlands. In addition, the 2008 response letter specifically expressed concern regarding an unidentified wetland on-site. The SLERA, as presented, does not address the potential for contaminated groundwater to migrate to the Wabash River. In addition, it is not clear if the unidentified wetland detailed by USFWS has been

evaluated as part of this SLERA. Given these concerns were specifically identified by the USFWS, they need to be more clearly addressed in the SLERA.

Response

A review of the National Wetlands Inventory (NWI) map in Attachment A indicates that the unidentified wetland on-Site is Riley Lake. The Screening Level Ecological Risk Assessment (SLERA) evaluated the surface water and sediment of Riley Lake. Consequently, the unidentified wetland referenced in the U.S. Fish and Wildlife Service (USFWS) letter has been addressed. With respect to potential risk relating to discharge of groundwater to the Wabash River, see the response to Specific Comment 3 on the ecological risk assessment.

SPECIFIC COMMENTS

1. **U.S. EPA Comment**

Page T-5, Section 2.1.6: EPA is unclear if the wetlands in the vicinity of the artesian well are the unidentified wetlands identified by the USFWS. Please clarify.

Response

The unidentified wetland is Riley Lake. There are no wetlands identified on the NWI maps near the former artesian well, which CRA closed in April 2005 in accordance with Indiana Department of Natural Resources regulations, as reported in the Phase IIB RFI Report.

2. **U.S. EPA Comment**

Page T-7, Section 2.4: The SLERA indicates that a wetland is located approximately 2,400 feet northwest of the facility within the Wabash River floodplain. The possible migration of on-site contaminates to this wetland and furthermore to the Wabash River was not discussed any further in the SLERA. The potential groundwater to surface water pathway needs to be discussed in more detail, particularly given it was an expressed concern of the USFWS.

Response

The NWI map identifies a large area of palustrine emergent and forested wetlands and riparian open waters associated with the Wabash River. These wetlands are approximately 2,400 feet northwest of the facility, as referenced in USFWS letter. All of the wetlands are on the northwest side across the River from the RMC property. Given the locations of the wetlands relative to the Wabash River, it is unlikely that groundwater that flows beneath the Site discharges to these wetlands.

3. **U.S. EPA Comment**

Page T-10, Section 5.0: Please see Specific Comment #3 above regarding the need to include the groundwater to surface water pathway as a potentially complete exposure pathway.

Response

Based upon numerous rounds of groundwater monitoring completed to date, the only constituent of potential ecological concern (COPEC) in groundwater near the Wabash River (OB-49, OB-52, and OB-53) is TCE, although trace concentrations of naphthalene, chloroform, and cis-1,2-DCE were also detected in certain wells . IDEM's chronic aquatic life criterion for TCE is 260 µg/L, which is on the order of 10 to 20 times higher than the TCE concentrations observed in the groundwater at OB-49, OB-52, and OB-53. Similarly, observed concentrations of naphthalene, chloroform, and cis-1,2-DCE in these wells are also well below applicable chronic aquatic life criteria for surface water (26 µg/L, 170 µg/L, and 620 µg/L, respectively). Even discounting the considerable dilution that would occur upon discharge to the Wabash River, the VOC concentrations are not of concern relative to potential ecological risk in this surface water.

4. **U.S. EPA Comment**

Page T-16, Section 7.2.4: The Indiana Department of Environmental Management has developed aquatic life criteria that can be used to screen the surface waters in the State of Indiana. These values should be used as the second tier source of ecological screening values (ESVs) for surface water. These values can be found at: http://www.in.gov/idem/5513.htm

Response

We are familiar with the cited IDEM guidance document and it was taken into consideration as appropriate for the RMC project. However, the process of selecting Ecological Screening Values (ESVs) for surface water relating to the RMC project advanced beyond first tier sources for only a limited number of constituents. For constituents detected in surface water, only calcium, manganese, and sodium required consultation of sources other than the first tier sources. For two of those detected constituents, calcium and sodium, the IDEM aquatic life criteria cited in the Comment are not available. In addition, the IDEM aquatic life criteria for manganese is a function of hardness. Conservatively assuming a hardness of 500 mg/L, the IDEM aquatic life criteria for manganese would then be 619 µg/L, which slightly lower than the ESV of 647 µg/L. Use of the IDEM aquatic life criteria therefore does not change the results of the screening for manganese – the screening quotient still exceeds unity.

For constituents that were not detected in surface water, detection limits were compared the ESVs to determine if the constituents could potentially be present in surface water. The selection of ESVs for 13 VOCs and five metals advanced to consultation of second tier sources. Consideration of the IDEM aquatic life criteria does not change the results of the evaluation of those constituents not detected in surface water. For those constituents with aquatic life criteria lower than the ESVs used in the SLERA (bromoform, cis-1,2-dichloropropene, and cobalt), the detection limits are below the aquatic life criteria. Since these constituents were not detected at these detection limits below the ESVs, none would represent a potential ecological risk in surface water.

Table 1, which is provided in Attachment B, provides a comparison of the ESVs selected from Tier 2 sources and chronic aquatic life criteria identified by IDEM.

5. **U.S. EPA Comment**

Page T-17, Section 8.1: Table 4-2 found within the February 2000 EPA document Bioaccumulation Testing and Interpretation for the Purpose of Sediment Quality Assessment is the preferred source for determining bioaccumulative constituents of concern.

Response

The reference identified in this comment is specific to sediment. Table 2, which is provided in Attachment B, identifies the bioaccumulation constituents of concern (BCOCs) identified by Texas Commission on Environmental Quality, the U.S. EPA Great Lakes Water Quality Initiative, and the document referenced in this comment for constituents detected in soil, surface water, and sediment. Constituents identified by any of the sources in Table 2 are considered BCOCs.

6. **U.S. EPA Comment**

Page T-24, Section 10.0: It is not clear why soils from area AOC 3A were not analyzed for metals and soils from AOC 3B were not analyzed for VOCs or SVOCs. Please clarify.

Response

Analytes of concern were identified for each Solid Waste Management Unit (SWMU) based upon the wastes managed in the SWMU and the results of previous investigations, as discussed in detail in the U.S. EPA-approved Phase IIB RFI Work Plan (CRA, June 2003).

7. **U.S. EPA Comment**

Page T-26, Section 10.0: EPA would like to provide input on the proposed background concentrations. Please provide EPA with a map with the proposed locations of the background samples to prior to any additional analysis taking place. In addition, EPA would like to have input into the alternative ESVs that are chosen to further evaluate risk. Please provide a list of the proposed alternative ESVs keeping in mind that EPA would like to see the risk bracketed between a no effect level toxicity reference value (TRV) and a low effect TRV. These requested documents can be submitted as part of a Baseline Ecological Risk Assessment (BERA) Workplan or as separate submittals based on the project manager's preference.

Response

No additional sampling of soil, surface water, or sediment is proposed. For background concentrations for soil, the use of mean statewide background concentrations for Indiana identified in Guidance for Developing Ecological Soil Screening Levels (U.S. EPA 2005)

or Site-specific background concentrations developed during the Phase IIB RFI are proposed.

The ecological risk assessment presented in the Phase IIB report is a conservative SLERA completed consistent with U.S. EPA guidance. As required, in order to prevent underestimation of the potential for risk to ecological receptors, the SLERA used conservative screening benchmarks (lowest value within a tier) and exposure assumptions (maximum concentration, 100 percent bioavailability) to identify analytes of potential concern relative to ecological risk. Although this approach minimizes potential underestimation of ecological risk, due to the conservative assumptions used, the approach identifies constituents as being COPECs even though these are not present at concentrations that pose risk to ecological receptors. In addition, corrective actions have been completed in some areas of the Site that likely have eliminated or significantly reduced potential ecological exposure to Site-related chemicals.

The next step in the ecological risk assessment process is an evaluation of the screening benchmarks and exposure assumptions used in the SLERA to determine if they are appropriate for Site-specific conditions. Using existing data, a refinement of the COPECs identified in the SLERA based on Step 3a of the U.S. EPA 8-step process is proposed. Factors considered in the refinement process include receptor-specific ecological benchmarks (e.g., ECO-SSLs for avian and mammalian receptors), frequency of detection, background concentrations, and reasonable maximum exposure (RME) exposure concentration (e.g., 95 percent upper confidence limits [UCLs]). Activities that have eliminated or reduced potential exposure will also be considered.

Prior to initiating the refinement process, a Technical Memorandum that identifies the proposed approach, including alternative ecological benchmarks and rationale for their selection will be submitted to U.S. EPA for review and approval.

COMMENTS ON HUMAN HEALTH RISK ASSESSMENT

1. **U.S. EPA Comment**

Since the risk associated with soil contamination and groundwater contamination is addressed through interim measures, it is not required to update the human health risk assessment in relation to the updated toxicity values for TCE and PCE. However, the CMS should consider the revised toxicity values during performance evaluation of the current interim measures on-site and off-site.

Response

U.S. EPA's comment is acknowledged.

2. **U.S. EPA Comment**

The surface water at the following locations should be sampled to address the contamination at seeps or springs in and around the facility to evaluate human health risk and ecological risk: Please include locations such as Intersection of East Taylor and Kentucky streets and eastern end of North Street for human health risk scenario. Identify relevant locations to evaluate ecological risk. The surface water should be analyzed for metals, VOCs and SVOCs.

Response

CRA collected three surface water samples from the locations depicted on the figure in Attachment C. The specific pathway of concern is groundwater seeps that emerge on the sloping ground located on the Riley land northwest of the Site. Because VOCs are the only Site-related groundwater concern, collected surface water samples were analyzed for VOCs. The analytical data for these samples indicate low level detections of TCE at one location, and cis-1,2-DCE, TCE, and PCE at a second location.

With regard to any potential ecological risk, the analytical results indicate that the concentrations of all detected compounds are below the conservative ESVs used in the SLERA to identify COPECs. The two detected concentrations of TCE in the surface water samples are 0.31 µg/L (estimated concentration) and 1.1 µg/L. These concentrations are one to two orders of magnitude below the ESV of 47 µg/L. The detected concentrations of cis-1,2-DCE and PCE are 0.69 µg/L and 1.8 µg/L, respectively. The concentration of cis-1,2-DCE is three orders of magnitude below its ESV of 970 µg/L. The concentration of PCE is three times lower than its ESV of 60 µg/L, which is the IDEM chronic aquatic life criterion. Based on these results, the detected concentrations of TCE, cis-1,2-DCE, and PCE in surface water do not pose potential risk to ecological receptors above the threshold of concern.

With regard to any potential human health risk, the analytical results for TCE, cis-1,2-DCE and PCE are well below the IDEM's 2012 Remediation Closure Guide (RCG) residential screening levels of 5 µg/L, 70 µg/L and 5 µg/L, respectively. The RCG residential screening levels for TCE, cis-1,2-DCE and PCE are based on the conservative U.S. EPA MCLs for drinking water. Based on these results, the low-level detections of

TCE (1.1 µg/L), cis-1,2-DCE (0.69 µg/L), and PCE (1.8 µg/L) in surface water do not pose potential risk to human health above the threshold for concern.

Attachment D provides the analytical results for the surface water samples.

3. **U.S. EPA Comment**

The risk assessment report does not evaluate the risk associated with indoor air contaminants through vapor intrusion at the RMC main building. This deficiency should be addressed through indoor air sample analysis and risk evaluation.

Response

There are still numerous pieces of equipment, machines, and stored chemicals, including Site COCs, present within the building. All of these would likely contribute VOCs to the background air that could not reasonably be distinguished from potential vapor intrusion. The only regular occupant of the structure, other than the occasional visitor that comes on Site to add or remove items from storage, is the Site owner, Mr. Joe Riley, Jr. Furthermore, there are currently two soil ICMs operating that draw vapors from beneath the floor of the structure.

We trust these responses adequately address the comments provided by U.S. EPA. Please contact me with any questions or comments.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

Steven J. Wanner, L.P.G.

SJW/br/148
Attachments

ATTACHMENT A

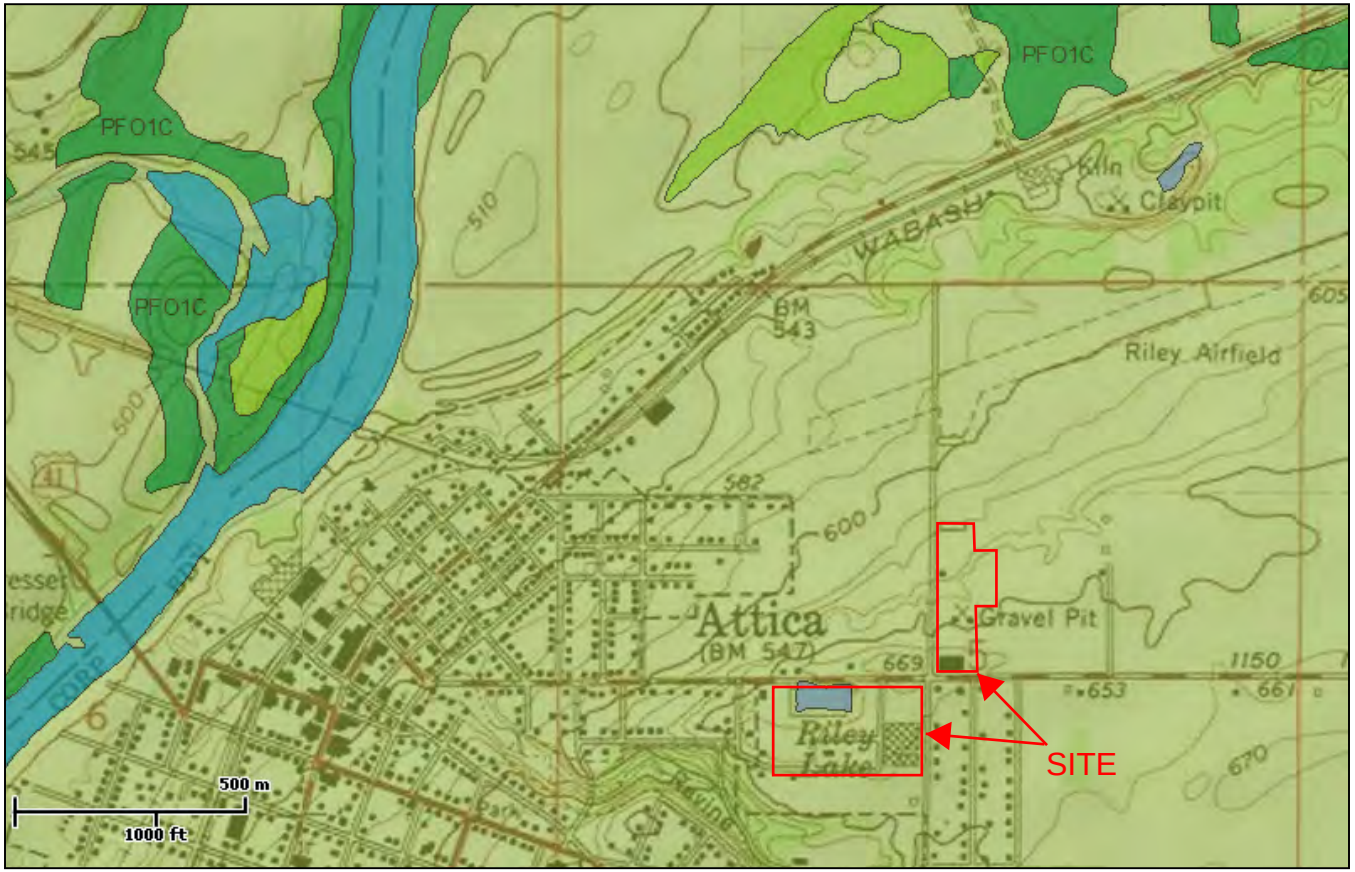
NATIONAL WETLANDS INVENTORY (NWI) MAP

U.S. Fish and Wildlife Service

National Wetlands Inventory

Attica Wetland Map

Aug 21, 2012



Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

Riparian

- Herbaceous
- Forested/Shrub

Status

- Digital
- Scan
- Non-Digital
- No Data

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

User Remarks:

ATTACHMENT B

ECOLOGICAL SCREENING VALUES AND BIOACCUMULATIVE EFFECTS TABLES

TABLE 1

COMPARISON OF INDIANA AQUATIC LIFE CRITERIA TO ECOLOGICAL SCREENING VALUES FROM TIER 2 SOURCES

Constituent	*Units*	*$ESV_{Tier\ 2}$*		*Indiana Aquatic Life Criteria*	*Comments*
		Value	*Source*		
Volatile Organic Compounds					
1,2,3-Trichlorobenzene	µg/L	8.0	Canadian WQG	n/a	---
1,2-Dichlorobenzene	µg/L	14	EPA R6	14	IALC same as EPA R6
1,2,4-Trimethylbenzene	µg/L	77	EPA R6	n/a	---
1,3,5-Trimethylbenzene	µg/L	71	EPA R6	n/a	---
2-Phenylbutane	µg/L	82	EPA R6	n/a	---
Bromodichloromethane	µg/L	4,320	EPA R6	n/a	---
Bromoform	µg/L	230	EPA R6	61	Not Detected. Max. LOD = 0.5 µg/L
Chloromethane	µg/L	5,500	EPA R4	n/a	---
cis-1,3-Dichloropropene	µg/L	20	EPA R4	1.9	Not Detected. Max. LOD = 0.5 µg/L
Cymene	µg/L	85	EPA R4	n/a	---
Dichlorodifluoromethane	µg/L	1,960	EPA R6	n/a	---
Tetrachloroethene	µg/L	45	EPA R6	60	IALC > $ESV_{Tier\ 2}$
m&p-Xylene	µg/L	1.8	EPA R6	n/a	IALC for Total Xylenes = 35 µg/L
Metals					
Aluminum	µg/L	80	EPA R4	n/a	---
Calcium	µg/L	116,000	$LCV_{Daphnids}$	n/a	---
Chromium, Total	µg/L	10	EPA R4	n/a	IALC available for CrIII and CrVI only
Cobalt	µg/L	24	ERA R6	19	Not Detected. Max. LOD = 10 µg/L
Iron	µg/L	1,000	EPA R4	n/a	---
Manganese	µg/L	647	ERA R6	619	Assumes hardness of 50 mg/L
Potassium	µg/L	53000	LCVDaphnids	n/a	---
Sodium	µg/L	680,000	$LCV_{Daphnids}$	n/a	---

Notes:

Canadian WQG - Canadium Water Quality Guideline

EPA R4 - USEPA Region 4 screening value

EPA R6 - USEPA Region 6 screening value

$ESV_{Tier\ 2}$ - Ecological screening value selected from Tier 2 sources of ecological benchmarks

IALC - Indiana Aquatic Life Criteria (chronic)

$LCV_{Daphnids}$ - Oak Ridge lowest chronic value for daphnids

n/a - Criteria not available

TABLE 2

BIOACCUMULATIVE CHEMICALS OF CONCERN DETECTED IN SOIL, SURFACE WATER, AND SEDIMENT

Constituent	*Soil*	*Surface Water*		*Sediment*	
	TCEQ	*TCEQ*	*Great Lakes*	*TCEQ*	*EPA 2000*
Metals					
Arsenic					•
Cadmium	•				
Chromium, Total	•				
Copper	•			•	•
Lead	•				•
Mercury	•	•	•	•	•
Nickel	•			•	•
Selenium	•			•	•
Zinc	•			•	•

Notes:

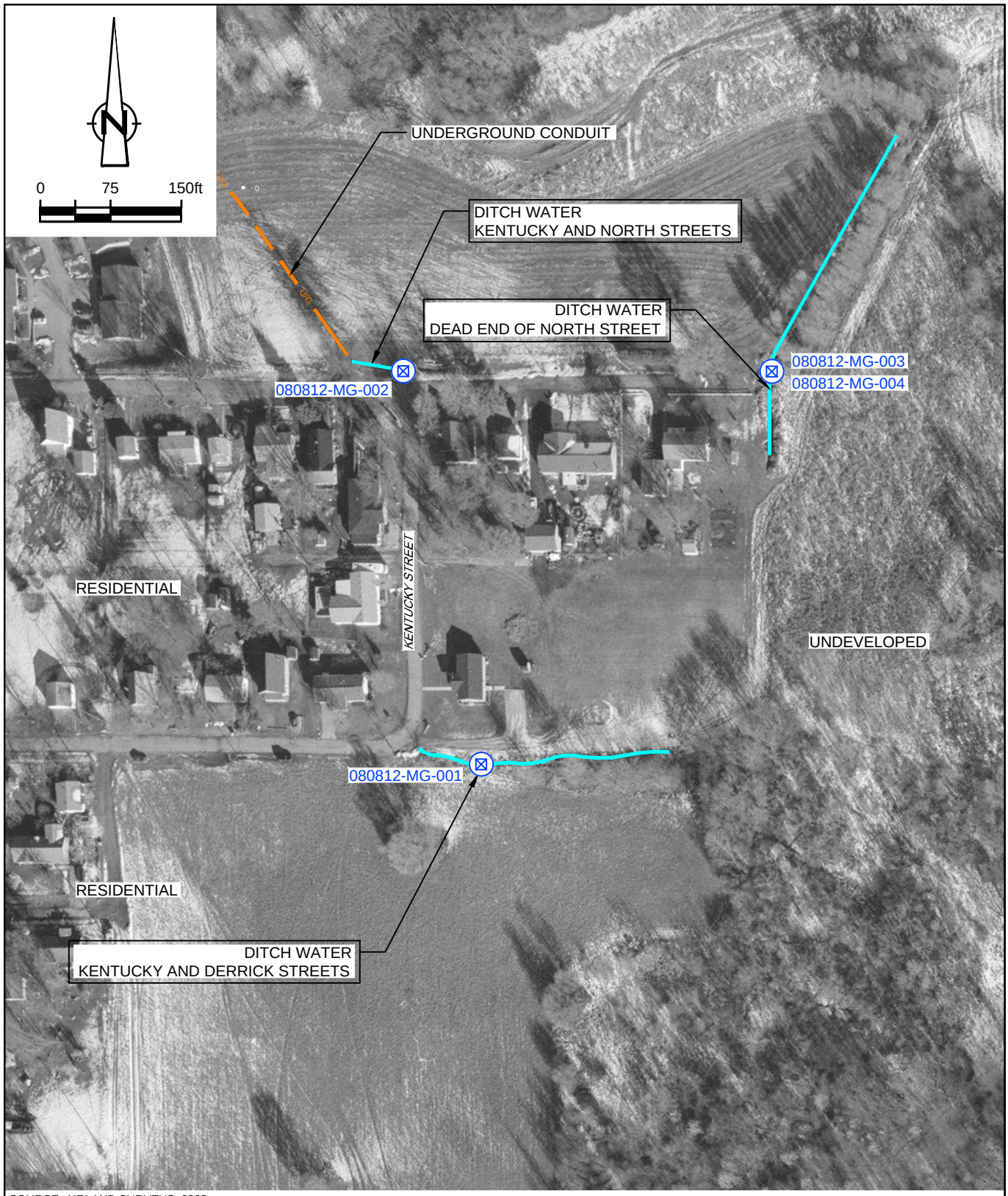
EPA 2000 - EPA-823-R-00-001

Great Lakes - USEPA 1995

TCEQ - Texas Commission on Environmental Qualtiy (2006)

ATTACHMENT C

2012 SURFACE WATER SAMPLING LOCATIONS



SOURCE: AIRLAND SURVEYS, 2003.

LEGEND

⊠ DITCH WATER SAMPLING LOCATION

DITCH

figure 1

2012 SURFACE WATER SAMPLING LOCATIONS
RADIO MATERIALS CORPORATION
Attica, Indiana

CRA

19190-10(SUND147)GN-WA002 AUG 21/2012

ATTACHMENT D

ANALYTICAL RESULTS FOR SURFACE WATER SAMPLES

August 17, 2012 Analytical Report for Service Request No: K1207811

Michael Richardson
Conestoga-Rovers & Associates, Incorporated
6520 Corporate Drive
Indianapolis, IN 46278

RE: RMC - Attica In/19190-02

Dear Michael:

Enclosed are the results of the rush samples submitted to our laboratory on August 09, 2012. For your reference, these analyses have been assigned our service request number K1207811.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.caslab.com. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3364. You may also contact me via Email at Howard.Holmes@alsglobal.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Howard Holmes
Project Manager

HH/lg

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Environmental www.caslab.com ▪ www.alsglobal.com
RIGHT SOLUTIONS RIGHT PARTNER

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition*: Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition*: Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition*: Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

Columbia Analytical Services, Inc. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2286
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L12-28
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Georgia DNR	http://www.gaepd.org/Documents/techguide_pcb.html#cel	881
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
Indiana DOH	http://www.in.gov/isdh/24859.htm	C-WA-01
ISO 17025	http://www.pjlabs.com/	L12-27
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	3016
Louisiana DHH	Not available	LA110003
Maine DHS	Not available	WA0035
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-368
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA35
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
New Mexico ED	http://www.nmenv.state.nm.us/dwb/Index.htm	-
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA200001
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	704427-08-TX
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C1203
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.caslab.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.caslab.com or at the accreditation bodies web site

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS ENVIRONMENTAL

Client:	Conestoga-Rovers & Associates, Incorporated	**Service Request No.:**	K1207811
Project:	RMC - Attica In/19190-02	**Date Received:**	08/09/12
Sample Matrix:	Water		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Four water samples and one trip blank were received for analysis at ALS Environmental on 08/09/12. The samples were received in good condition and consistent with the accompanying chain of custody form, except as noted on the cooler receipt form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Volatile Organic Compounds by EPA Method 8260

Calibration Verification Exceptions:
Chloromethane was flagged as outside the lower control criterion for Continuing Calibration Verification (CCV) J:\MS18\0814F003.D. In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The CAS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Sample Notes and Discussion:
The Trip Blank analyzed with this sample contained low levels of Toluene above the Method Reporting Limit (MRL). The associated samples did not contain Toluene above the method reporting limits. No further corrective action was required.

Sample SW-080812-MG-001 had a small air bubble prior to analysis.

No other anomalies associated with the analysis of these samples were observed.

Approved by_____ **Date** 08/17/12

Chain of Custody

K1207811

CONESTOGA-ROVERS & ASSOCIATES
6520 Corporate Drive
Indianapolis, Indiana 46278
(317) 291-7007 phone
(317) 328-2666 fax

SHIPPED TO (Laboratory Name): ALS / CAS

REFERENCE NUMBER: 19190-02

PROJECT NAME: RMC - Attica, IN

CHAIN-OF-CUSTODY RECORD

SAMPLER'S SIGNATURE: [signature] **PRINTED NAME:** Matt Grover

SEQ. No.	DATE	TIME	SAMPLE IDENTIFICATION No.	SAMPLE MATRIX	No. OF CONTAINERS	PARAMETERS: VOC										REMARKS
	8/8/12	900	SW-080812-MG-001	water	9	X										MS/MSD
	↓	915	↓ ↓ -002	↓	3	X										
		930	↓ ↓ -003		3	X										
	↓	935	SW-080812-MG-004		3	X										
	8/8/12	950	TB-080812-MG-002	water	2	X										
																1 WEEK TAT
			TOTAL NUMBER OF CONTAINERS		20											

RELINQUISHED BY: ① [signature]	DATE: 8/8/12 TIME: 1700	RECEIVED BY: ② [signature]	DATE: 8/9/12 TIME: 930
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: FedEx **TRACKING No.**

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldenrod -Sampler Copy

SAMPLE TEAM: M. Grover

RECEIVED FOR LABORATORY BY: 2802

DATE: TIME:

400001-00(SOURCE)GN-CO007

PC 1/2

Cooler Receipt and Preservation Form

Client / Project: Conestoga Rovers Service Request K12 7811

Received: 8/9/12 Opened: 8/9/12 By: KT Unloaded: 8/9/12 By: KT

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? 1 front

   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Cooler Temp °C	Temp Blank °C	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
0.2	1.2	307	2802		X

7. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* _____
8. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
9. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA Y N
10. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
11. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y N
12. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
13. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y N
14. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
15. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time
SW-080812-MG-001	7 x 40mL		X							
" " -002	2 x 40mL		X							

Notes, Discrepancies, & Resolutions: _____

RUSH

Volatile Organic Compounds

Organic Analysis:
Volatile Organic Compounds

Summary Package

Sample and QC Results

Client: Conestoga-Rovers & Associates, Incorpora
Project: RMC - Attica In/19190-02

Service Request: K1207811

Cover Page - Organic Analysis Data Package
Volatile Organic Compounds

Sample Name	Lab Code	Date Collected	Date Received
SW-080812-MG-001	K1207811-001	08/08/2012	08/09/2012
SW-080812-MG-002	K1207811-002	08/08/2012	08/09/2012
SW-080812-MG-003	K1207811-003	08/08/2012	08/09/2012
SW-080812-MG-004	K1207811-004	08/08/2012	08/09/2012
TB-080812-MG-002	K1207811-005	08/08/2012	08/09/2012
SW-080812-MG-001MS	KWG1209148-1	08/08/2012	08/09/2012
SW-080812-MG-001DMS	KWG1209148-2	08/08/2012	08/09/2012

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: KReasoner

Name: KReasoner

Date: 8/16/12

Title: Standard

Client: Conestoga-Rovers & Associates, Incorpora
Project: RMC - Attica In/19190-02
Sample Matrix: Water

Service Request: K1207811
Date Collected: 08/08/2012
Date Received: 08/09/2012

Volatile Organic Compounds

Sample Name: SW-080812-MG-001
Lab Code: K1207811-001

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.13	1	08/14/12	08/14/12	KWG1209148	
Chloromethane	ND	U	0.50	0.068	1	08/14/12	08/14/12	KWG1209148	*
Vinyl Chloride	ND	U	0.50	0.075	1	08/14/12	08/14/12	KWG1209148	
Bromomethane	ND	U	0.50	0.10	1	08/14/12	08/14/12	KWG1209148	
Chloroethane	ND	U	0.50	0.16	1	08/14/12	08/14/12	KWG1209148	
Trichlorofluoromethane	ND	U	0.50	0.12	1	08/14/12	08/14/12	KWG1209148	
1,1-Dichloroethene	ND	U	0.50	0.080	1	08/14/12	08/14/12	KWG1209148	
Acetone	ND	U	20	3.3	1	08/14/12	08/14/12	KWG1209148	
Carbon Disulfide	ND	U	0.50	0.069	1	08/14/12	08/14/12	KWG1209148	
Methylene Chloride	ND	U	2.0	0.10	1	08/14/12	08/14/12	KWG1209148	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	08/14/12	08/14/12	KWG1209148	
1,1-Dichloroethane	ND	U	0.50	0.077	1	08/14/12	08/14/12	KWG1209148	
2,2-Dichloropropane	ND	U	0.50	0.060	1	08/14/12	08/14/12	KWG1209148	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	08/14/12	08/14/12	KWG1209148	
2-Butanone (MEK)	ND	U	20	1.9	1	08/14/12	08/14/12	KWG1209148	
Bromochloromethane	ND	U	0.50	0.16	1	08/14/12	08/14/12	KWG1209148	
Chloroform	ND	U	0.50	0.072	1	08/14/12	08/14/12	KWG1209148	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	08/14/12	08/14/12	KWG1209148	
Carbon Tetrachloride	ND	U	0.50	0.096	1	08/14/12	08/14/12	KWG1209148	
1,1-Dichloropropene	ND	U	0.50	0.089	1	08/14/12	08/14/12	KWG1209148	
Benzene	ND	U	0.50	0.062	1	08/14/12	08/14/12	KWG1209148	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	08/14/12	08/14/12	KWG1209148	
Trichloroethene (TCE)	**0.31**	J	0.50	0.10	1	08/14/12	08/14/12	KWG1209148	
1,2-Dichloropropane	ND	U	0.50	0.095	1	08/14/12	08/14/12	KWG1209148	
Dibromomethane	ND	U	0.50	0.15	1	08/14/12	08/14/12	KWG1209148	
Bromodichloromethane	ND	U	0.50	0.091	1	08/14/12	08/14/12	KWG1209148	
cis-1,3-Dichloropropene	ND	U	0.50	0.18	1	08/14/12	08/14/12	KWG1209148	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	08/14/12	08/14/12	KWG1209148	
Toluene	ND	U	0.50	0.054	1	08/14/12	08/14/12	KWG1209148	
trans-1,3-Dichloropropene	ND	U	0.50	0.068	1	08/14/12	08/14/12	KWG1209148	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	08/14/12	08/14/12	KWG1209148	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	08/14/12	08/14/12	KWG1209148	
2-Hexanone	ND	U	20	2.7	1	08/14/12	08/14/12	KWG1209148	

Comments:

Client: Conestoga-Rovers & Associates, Incorpora
Project: RMC - Attica In/19190-02
Sample Matrix: Water

Service Request: K1207811
Date Collected: 08/08/2012
Date Received: 08/09/2012

Volatile Organic Compounds

Sample Name: SW-080812-MG-001
Lab Code: K1207811-001

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,3-Dichloropropane	ND	U	0.50	0.14	1	08/14/12	08/14/12	KWG1209148	
Dibromochloromethane	ND	U	0.50	0.14	1	08/14/12	08/14/12	KWG1209148	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.10	1	08/14/12	08/14/12	KWG1209148	
Chlorobenzene	ND	U	0.50	0.11	1	08/14/12	08/14/12	KWG1209148	
Ethylbenzene	ND	U	0.50	0.050	1	08/14/12	08/14/12	KWG1209148	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.11	1	08/14/12	08/14/12	KWG1209148	
m,p-Xylenes	ND	U	0.50	0.11	1	08/14/12	08/14/12	KWG1209148	
o-Xylene	ND	U	0.50	0.074	1	08/14/12	08/14/12	KWG1209148	
Styrene	ND	U	0.50	0.089	1	08/14/12	08/14/12	KWG1209148	
Bromoform	ND	U	0.50	0.16	1	08/14/12	08/14/12	KWG1209148	
Isopropylbenzene	ND	U	2.0	0.051	1	08/14/12	08/14/12	KWG1209148	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.16	1	08/14/12	08/14/12	KWG1209148	
Bromobenzene	ND	U	2.0	0.12	1	08/14/12	08/14/12	KWG1209148	
n-Propylbenzene	ND	U	2.0	0.054	1	08/14/12	08/14/12	KWG1209148	
1,2,3-Trichloropropane	ND	U	0.50	0.20	1	08/14/12	08/14/12	KWG1209148	
2-Chlorotoluene	ND	U	2.0	0.10	1	08/14/12	08/14/12	KWG1209148	
1,3,5-Trimethylbenzene	ND	U	2.0	0.089	1	08/14/12	08/14/12	KWG1209148	
4-Chlorotoluene	ND	U	2.0	0.13	1	08/14/12	08/14/12	KWG1209148	
tert-Butylbenzene	ND	U	2.0	0.059	1	08/14/12	08/14/12	KWG1209148	
1,2,4-Trimethylbenzene	ND	U	2.0	0.069	1	08/14/12	08/14/12	KWG1209148	
sec-Butylbenzene	ND	U	2.0	0.062	1	08/14/12	08/14/12	KWG1209148	
4-Isopropyltoluene	ND	U	2.0	0.060	1	08/14/12	08/14/12	KWG1209148	
1,3-Dichlorobenzene	ND	U	0.50	0.10	1	08/14/12	08/14/12	KWG1209148	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	08/14/12	08/14/12	KWG1209148	
n-Butylbenzene	ND	U	2.0	0.054	1	08/14/12	08/14/12	KWG1209148	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	08/14/12	08/14/12	KWG1209148	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.20	1	08/14/12	08/14/12	KWG1209148	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	08/14/12	08/14/12	KWG1209148	
Hexachlorobutadiene	ND	U	2.0	0.11	1	08/14/12	08/14/12	KWG1209148	
Naphthalene	ND	U	2.0	0.088	1	08/14/12	08/14/12	KWG1209148	
1,2,3-Trichlorobenzene	ND	U	2.0	0.11	1	08/14/12	08/14/12	KWG1209148	

* See Case Narrative

Comments:

Client: Conestoga-Rovers & Associates, Incorpora
Project: RMC - Attica In/19190-02
Sample Matrix: Water

Service Request: K1207811
Date Collected: 08/08/2012
Date Received: 08/09/2012

Volatile Organic Compounds

Sample Name: SW-080812-MG-001
Lab Code: K1207811-001

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	86	73-122	08/14/12	Acceptable
Toluene-d8	91	65-144	08/14/12	Acceptable
4-Bromofluorobenzene	80	68-117	08/14/12	Acceptable

Comments:

Client: Conestoga-Rovers & Associates, Incorpora
Project: RMC - Attica In/19190-02
Sample Matrix: Water

Service Request: K1207811
Date Collected: 08/08/2012
Date Received: 08/09/2012

Volatile Organic Compounds

Sample Name: SW-080812-MG-002
Lab Code: K1207811-002

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.13	1	08/14/12	08/14/12	KWG1209148	
Chloromethane	ND	U	0.50	0.068	1	08/14/12	08/14/12	KWG1209148	*
Vinyl Chloride	ND	U	0.50	0.075	1	08/14/12	08/14/12	KWG1209148	
Bromomethane	ND	U	0.50	0.10	1	08/14/12	08/14/12	KWG1209148	
Chloroethane	ND	U	0.50	0.16	1	08/14/12	08/14/12	KWG1209148	
Trichlorofluoromethane	ND	U	0.50	0.12	1	08/14/12	08/14/12	KWG1209148	
1,1-Dichloroethene	ND	U	0.50	0.080	1	08/14/12	08/14/12	KWG1209148	
Acetone	ND	U	20	3.3	1	08/14/12	08/14/12	KWG1209148	
Carbon Disulfide	ND	U	0.50	0.069	1	08/14/12	08/14/12	KWG1209148	
Methylene Chloride	ND	U	2.0	0.10	1	08/14/12	08/14/12	KWG1209148	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	08/14/12	08/14/12	KWG1209148	
1,1-Dichloroethane	ND	U	0.50	0.077	1	08/14/12	08/14/12	KWG1209148	
2,2-Dichloropropane	ND	U	0.50	0.060	1	08/14/12	08/14/12	KWG1209148	
cis-1,2-Dichloroethene	ND	U	0.50	0.067	1	08/14/12	08/14/12	KWG1209148	
2-Butanone (MEK)	ND	U	20	1.9	1	08/14/12	08/14/12	KWG1209148	
Bromochloromethane	ND	U	0.50	0.16	1	08/14/12	08/14/12	KWG1209148	
Chloroform	ND	U	0.50	0.072	1	08/14/12	08/14/12	KWG1209148	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	08/14/12	08/14/12	KWG1209148	
Carbon Tetrachloride	ND	U	0.50	0.096	1	08/14/12	08/14/12	KWG1209148	
1,1-Dichloropropene	ND	U	0.50	0.089	1	08/14/12	08/14/12	KWG1209148	
Benzene	ND	U	0.50	0.062	1	08/14/12	08/14/12	KWG1209148	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	08/14/12	08/14/12	KWG1209148	
Trichloroethene (TCE)	ND	U	0.50	0.10	1	08/14/12	08/14/12	KWG1209148	
1,2-Dichloropropane	ND	U	0.50	0.095	1	08/14/12	08/14/12	KWG1209148	
Dibromomethane	ND	U	0.50	0.15	1	08/14/12	08/14/12	KWG1209148	
Bromodichloromethane	ND	U	0.50	0.091	1	08/14/12	08/14/12	KWG1209148	
cis-1,3-Dichloropropene	ND	U	0.50	0.18	1	08/14/12	08/14/12	KWG1209148	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	08/14/12	08/14/12	KWG1209148	
Toluene	ND	U	0.50	0.054	1	08/14/12	08/14/12	KWG1209148	
trans-1,3-Dichloropropene	ND	U	0.50	0.068	1	08/14/12	08/14/12	KWG1209148	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	08/14/12	08/14/12	KWG1209148	
Tetrachloroethene (PCE)	ND	U	0.50	0.099	1	08/14/12	08/14/12	KWG1209148	
2-Hexanone	ND	U	20	2.7	1	08/14/12	08/14/12	KWG1209148	

Comments:

Client: Conestoga-Rovers & Associates, Incorpora
Project: RMC - Attica In/19190-02
Sample Matrix: Water

Service Request: K1207811
Date Collected: 08/08/2012
Date Received: 08/09/2012

Volatile Organic Compounds

Sample Name: SW-080812-MG-002
Lab Code: K1207811-002

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,3-Dichloropropane	ND	U	0.50	0.14	1	08/14/12	08/14/12	KWG1209148	
Dibromochloromethane	ND	U	0.50	0.14	1	08/14/12	08/14/12	KWG1209148	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.10	1	08/14/12	08/14/12	KWG1209148	
Chlorobenzene	ND	U	0.50	0.11	1	08/14/12	08/14/12	KWG1209148	
Ethylbenzene	ND	U	0.50	0.050	1	08/14/12	08/14/12	KWG1209148	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.11	1	08/14/12	08/14/12	KWG1209148	
m,p-Xylenes	ND	U	0.50	0.11	1	08/14/12	08/14/12	KWG1209148	
o-Xylene	ND	U	0.50	0.074	1	08/14/12	08/14/12	KWG1209148	
Styrene	ND	U	0.50	0.089	1	08/14/12	08/14/12	KWG1209148	
Bromoform	ND	U	0.50	0.16	1	08/14/12	08/14/12	KWG1209148	
Isopropylbenzene	ND	U	2.0	0.051	1	08/14/12	08/14/12	KWG1209148	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.16	1	08/14/12	08/14/12	KWG1209148	
Bromobenzene	ND	U	2.0	0.12	1	08/14/12	08/14/12	KWG1209148	
n-Propylbenzene	ND	U	2.0	0.054	1	08/14/12	08/14/12	KWG1209148	
1,2,3-Trichloropropane	ND	U	0.50	0.20	1	08/14/12	08/14/12	KWG1209148	
2-Chlorotoluene	ND	U	2.0	0.10	1	08/14/12	08/14/12	KWG1209148	
1,3,5-Trimethylbenzene	ND	U	2.0	0.089	1	08/14/12	08/14/12	KWG1209148	
4-Chlorotoluene	ND	U	2.0	0.13	1	08/14/12	08/14/12	KWG1209148	
tert-Butylbenzene	ND	U	2.0	0.059	1	08/14/12	08/14/12	KWG1209148	
1,2,4-Trimethylbenzene	ND	U	2.0	0.069	1	08/14/12	08/14/12	KWG1209148	
sec-Butylbenzene	ND	U	2.0	0.062	1	08/14/12	08/14/12	KWG1209148	
4-Isopropyltoluene	ND	U	2.0	0.060	1	08/14/12	08/14/12	KWG1209148	
1,3-Dichlorobenzene	ND	U	0.50	0.10	1	08/14/12	08/14/12	KWG1209148	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	08/14/12	08/14/12	KWG1209148	
n-Butylbenzene	ND	U	2.0	0.054	1	08/14/12	08/14/12	KWG1209148	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	08/14/12	08/14/12	KWG1209148	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.20	1	08/14/12	08/14/12	KWG1209148	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	08/14/12	08/14/12	KWG1209148	
Hexachlorobutadiene	ND	U	2.0	0.11	1	08/14/12	08/14/12	KWG1209148	
Naphthalene	ND	U	2.0	0.088	1	08/14/12	08/14/12	KWG1209148	
1,2,3-Trichlorobenzene	ND	U	2.0	0.11	1	08/14/12	08/14/12	KWG1209148	

* See Case Narrative

Comments:

Client: Conestoga-Rovers & Associates, Incorpora
Project: RMC - Attica In/19190-02
Sample Matrix: Water

Service Request: K1207811
Date Collected: 08/08/2012
Date Received: 08/09/2012

Volatile Organic Compounds

Sample Name: SW-080812-MG-002
Lab Code: K1207811-002

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	86	73-122	08/14/12	Acceptable
Toluene-d8	92	65-144	08/14/12	Acceptable
4-Bromofluorobenzene	78	68-117	08/14/12	Acceptable

Comments:

Client: Conestoga-Rovers & Associates, Incorpora
Project: RMC - Attica In/19190-02
Sample Matrix: Water

Service Request: K1207811
Date Collected: 08/08/2012
Date Received: 08/09/2012

Volatile Organic Compounds

Sample Name: SW-080812-MG-003
Lab Code: K1207811-003

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.13	1	08/14/12	08/14/12	KWG1209148	
Chloromethane	ND	U	0.50	0.068	1	08/14/12	08/14/12	KWG1209148	*
Vinyl Chloride	ND	U	0.50	0.075	1	08/14/12	08/14/12	KWG1209148	
Bromomethane	ND	U	0.50	0.10	1	08/14/12	08/14/12	KWG1209148	
Chloroethane	ND	U	0.50	0.16	1	08/14/12	08/14/12	KWG1209148	
Trichlorofluoromethane	ND	U	0.50	0.12	1	08/14/12	08/14/12	KWG1209148	
1,1-Dichloroethene	ND	U	0.50	0.080	1	08/14/12	08/14/12	KWG1209148	
Acetone	ND	U	20	3.3	1	08/14/12	08/14/12	KWG1209148	
Carbon Disulfide	ND	U	0.50	0.069	1	08/14/12	08/14/12	KWG1209148	
Methylene Chloride	ND	U	2.0	0.10	1	08/14/12	08/14/12	KWG1209148	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	08/14/12	08/14/12	KWG1209148	
1,1-Dichloroethane	ND	U	0.50	0.077	1	08/14/12	08/14/12	KWG1209148	
2,2-Dichloropropane	ND	U	0.50	0.060	1	08/14/12	08/14/12	KWG1209148	
cis-1,2-Dichloroethene	**0.69**		0.50	0.067	1	08/14/12	08/14/12	KWG1209148	
2-Butanone (MEK)	ND	U	20	1.9	1	08/14/12	08/14/12	KWG1209148	
Bromochloromethane	ND	U	0.50	0.16	1	08/14/12	08/14/12	KWG1209148	
Chloroform	ND	U	0.50	0.072	1	08/14/12	08/14/12	KWG1209148	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	08/14/12	08/14/12	KWG1209148	
Carbon Tetrachloride	ND	U	0.50	0.096	1	08/14/12	08/14/12	KWG1209148	
1,1-Dichloropropene	ND	U	0.50	0.089	1	08/14/12	08/14/12	KWG1209148	
Benzene	ND	U	0.50	0.062	1	08/14/12	08/14/12	KWG1209148	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	08/14/12	08/14/12	KWG1209148	
Trichloroethene (TCE)	**1.1**		0.50	0.10	1	08/14/12	08/14/12	KWG1209148	
1,2-Dichloropropane	ND	U	0.50	0.095	1	08/14/12	08/14/12	KWG1209148	
Dibromomethane	ND	U	0.50	0.15	1	08/14/12	08/14/12	KWG1209148	
Bromodichloromethane	ND	U	0.50	0.091	1	08/14/12	08/14/12	KWG1209148	
cis-1,3-Dichloropropene	ND	U	0.50	0.18	1	08/14/12	08/14/12	KWG1209148	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	08/14/12	08/14/12	KWG1209148	
Toluene	ND	U	0.50	0.054	1	08/14/12	08/14/12	KWG1209148	
trans-1,3-Dichloropropene	ND	U	0.50	0.068	1	08/14/12	08/14/12	KWG1209148	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	08/14/12	08/14/12	KWG1209148	
Tetrachloroethene (PCE)	**1.8**		0.50	0.099	1	08/14/12	08/14/12	KWG1209148	
2-Hexanone	ND	U	20	2.7	1	08/14/12	08/14/12	KWG1209148	

Comments:

Client: Conestoga-Rovers & Associates, Incorpora
Project: RMC - Attica In/19190-02
Sample Matrix: Water

Service Request: K1207811
Date Collected: 08/08/2012
Date Received: 08/09/2012

Volatile Organic Compounds

Sample Name: SW-080812-MG-003
Lab Code: K1207811-003

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,3-Dichloropropane	ND	U	0.50	0.14	1	08/14/12	08/14/12	KWG1209148	
Dibromochloromethane	ND	U	0.50	0.14	1	08/14/12	08/14/12	KWG1209148	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.10	1	08/14/12	08/14/12	KWG1209148	
Chlorobenzene	ND	U	0.50	0.11	1	08/14/12	08/14/12	KWG1209148	
Ethylbenzene	ND	U	0.50	0.050	1	08/14/12	08/14/12	KWG1209148	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.11	1	08/14/12	08/14/12	KWG1209148	
m,p-Xylenes	ND	U	0.50	0.11	1	08/14/12	08/14/12	KWG1209148	
o-Xylene	ND	U	0.50	0.074	1	08/14/12	08/14/12	KWG1209148	
Styrene	ND	U	0.50	0.089	1	08/14/12	08/14/12	KWG1209148	
Bromoform	ND	U	0.50	0.16	1	08/14/12	08/14/12	KWG1209148	
Isopropylbenzene	ND	U	2.0	0.051	1	08/14/12	08/14/12	KWG1209148	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.16	1	08/14/12	08/14/12	KWG1209148	
Bromobenzene	ND	U	2.0	0.12	1	08/14/12	08/14/12	KWG1209148	
n-Propylbenzene	ND	U	2.0	0.054	1	08/14/12	08/14/12	KWG1209148	
1,2,3-Trichloropropane	ND	U	0.50	0.20	1	08/14/12	08/14/12	KWG1209148	
2-Chlorotoluene	ND	U	2.0	0.10	1	08/14/12	08/14/12	KWG1209148	
1,3,5-Trimethylbenzene	ND	U	2.0	0.089	1	08/14/12	08/14/12	KWG1209148	
4-Chlorotoluene	ND	U	2.0	0.13	1	08/14/12	08/14/12	KWG1209148	
tert-Butylbenzene	ND	U	2.0	0.059	1	08/14/12	08/14/12	KWG1209148	
1,2,4-Trimethylbenzene	ND	U	2.0	0.069	1	08/14/12	08/14/12	KWG1209148	
sec-Butylbenzene	ND	U	2.0	0.062	1	08/14/12	08/14/12	KWG1209148	
4-Isopropyltoluene	ND	U	2.0	0.060	1	08/14/12	08/14/12	KWG1209148	
1,3-Dichlorobenzene	ND	U	0.50	0.10	1	08/14/12	08/14/12	KWG1209148	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	08/14/12	08/14/12	KWG1209148	
n-Butylbenzene	ND	U	2.0	0.054	1	08/14/12	08/14/12	KWG1209148	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	08/14/12	08/14/12	KWG1209148	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.20	1	08/14/12	08/14/12	KWG1209148	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	08/14/12	08/14/12	KWG1209148	
Hexachlorobutadiene	ND	U	2.0	0.11	1	08/14/12	08/14/12	KWG1209148	
Naphthalene	ND	U	2.0	0.088	1	08/14/12	08/14/12	KWG1209148	
1,2,3-Trichlorobenzene	ND	U	2.0	0.11	1	08/14/12	08/14/12	KWG1209148	

* See Case Narrative

Comments:

Client: Conestoga-Rovers & Associates, Incorpora
Project: RMC - Attica In/19190-02
Sample Matrix: Water

Service Request: K1207811
Date Collected: 08/08/2012
Date Received: 08/09/2012

Volatile Organic Compounds

Sample Name: SW-080812-MG-003
Lab Code: K1207811-003

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	87	73-122	08/14/12	Acceptable
Toluene-d8	93	65-144	08/14/12	Acceptable
4-Bromofluorobenzene	78	68-117	08/14/12	Acceptable

Comments:

Client: Conestoga-Rovers & Associates, Incorpora
Project: RMC - Attica In/19190-02
Sample Matrix: Water

Service Request: K1207811
Date Collected: 08/08/2012
Date Received: 08/09/2012

Volatile Organic Compounds

Sample Name: SW-080812-MG-004
Lab Code: K1207811-004

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.13	1	08/14/12	08/14/12	KWG1209148	
Chloromethane	ND	U	0.50	0.068	1	08/14/12	08/14/12	KWG1209148	*
Vinyl Chloride	ND	U	0.50	0.075	1	08/14/12	08/14/12	KWG1209148	
Bromomethane	ND	U	0.50	0.10	1	08/14/12	08/14/12	KWG1209148	
Chloroethane	ND	U	0.50	0.16	1	08/14/12	08/14/12	KWG1209148	
Trichlorofluoromethane	ND	U	0.50	0.12	1	08/14/12	08/14/12	KWG1209148	
1,1-Dichloroethene	ND	U	0.50	0.080	1	08/14/12	08/14/12	KWG1209148	
Acetone	ND	U	20	3.3	1	08/14/12	08/14/12	KWG1209148	
Carbon Disulfide	ND	U	0.50	0.069	1	08/14/12	08/14/12	KWG1209148	
Methylene Chloride	ND	U	2.0	0.10	1	08/14/12	08/14/12	KWG1209148	
trans-1,2-Dichloroethene	ND	U	0.50	0.072	1	08/14/12	08/14/12	KWG1209148	
1,1-Dichloroethane	ND	U	0.50	0.077	1	08/14/12	08/14/12	KWG1209148	
2,2-Dichloropropane	ND	U	0.50	0.060	1	08/14/12	08/14/12	KWG1209148	
cis-1,2-Dichloroethene	**0.69**		0.50	0.067	1	08/14/12	08/14/12	KWG1209148	
2-Butanone (MEK)	ND	U	20	1.9	1	08/14/12	08/14/12	KWG1209148	
Bromochloromethane	ND	U	0.50	0.16	1	08/14/12	08/14/12	KWG1209148	
Chloroform	ND	U	0.50	0.072	1	08/14/12	08/14/12	KWG1209148	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.075	1	08/14/12	08/14/12	KWG1209148	
Carbon Tetrachloride	ND	U	0.50	0.096	1	08/14/12	08/14/12	KWG1209148	
1,1-Dichloropropene	ND	U	0.50	0.089	1	08/14/12	08/14/12	KWG1209148	
Benzene	ND	U	0.50	0.062	1	08/14/12	08/14/12	KWG1209148	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.080	1	08/14/12	08/14/12	KWG1209148	
Trichloroethene (TCE)	**1.1**		0.50	0.10	1	08/14/12	08/14/12	KWG1209148	
1,2-Dichloropropane	ND	U	0.50	0.095	1	08/14/12	08/14/12	KWG1209148	
Dibromomethane	ND	U	0.50	0.15	1	08/14/12	08/14/12	KWG1209148	
Bromodichloromethane	ND	U	0.50	0.091	1	08/14/12	08/14/12	KWG1209148	
cis-1,3-Dichloropropene	ND	U	0.50	0.18	1	08/14/12	08/14/12	KWG1209148	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.6	1	08/14/12	08/14/12	KWG1209148	
Toluene	ND	U	0.50	0.054	1	08/14/12	08/14/12	KWG1209148	
trans-1,3-Dichloropropene	ND	U	0.50	0.068	1	08/14/12	08/14/12	KWG1209148	
1,1,2-Trichloroethane	ND	U	0.50	0.14	1	08/14/12	08/14/12	KWG1209148	
Tetrachloroethene (PCE)	**1.8**		0.50	0.099	1	08/14/12	08/14/12	KWG1209148	
2-Hexanone	ND	U	20	2.7	1	08/14/12	08/14/12	KWG1209148	

Comments:

Client: Conestoga-Rovers & Associates, Incorpora
Project: RMC - Attica In/19190-02
Sample Matrix: Water

Service Request: K1207811
Date Collected: 08/08/2012
Date Received: 08/09/2012

Volatile Organic Compounds

Sample Name: SW-080812-MG-004
Lab Code: K1207811-004

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,3-Dichloropropane	ND	U	0.50	0.14	1	08/14/12	08/14/12	KWG1209148	
Dibromochloromethane	ND	U	0.50	0.14	1	08/14/12	08/14/12	KWG1209148	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.10	1	08/14/12	08/14/12	KWG1209148	
Chlorobenzene	ND	U	0.50	0.11	1	08/14/12	08/14/12	KWG1209148	
Ethylbenzene	ND	U	0.50	0.050	1	08/14/12	08/14/12	KWG1209148	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.11	1	08/14/12	08/14/12	KWG1209148	
m,p-Xylenes	ND	U	0.50	0.11	1	08/14/12	08/14/12	KWG1209148	
o-Xylene	ND	U	0.50	0.074	1	08/14/12	08/14/12	KWG1209148	
Styrene	ND	U	0.50	0.089	1	08/14/12	08/14/12	KWG1209148	
Bromoform	ND	U	0.50	0.16	1	08/14/12	08/14/12	KWG1209148	
Isopropylbenzene	ND	U	2.0	0.051	1	08/14/12	08/14/12	KWG1209148	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.16	1	08/14/12	08/14/12	KWG1209148	
Bromobenzene	ND	U	2.0	0.12	1	08/14/12	08/14/12	KWG1209148	
n-Propylbenzene	ND	U	2.0	0.054	1	08/14/12	08/14/12	KWG1209148	
1,2,3-Trichloropropane	ND	U	0.50	0.20	1	08/14/12	08/14/12	KWG1209148	
2-Chlorotoluene	ND	U	2.0	0.10	1	08/14/12	08/14/12	KWG1209148	
1,3,5-Trimethylbenzene	ND	U	2.0	0.089	1	08/14/12	08/14/12	KWG1209148	
4-Chlorotoluene	ND	U	2.0	0.13	1	08/14/12	08/14/12	KWG1209148	
tert-Butylbenzene	ND	U	2.0	0.059	1	08/14/12	08/14/12	KWG1209148	
1,2,4-Trimethylbenzene	ND	U	2.0	0.069	1	08/14/12	08/14/12	KWG1209148	
sec-Butylbenzene	ND	U	2.0	0.062	1	08/14/12	08/14/12	KWG1209148	
4-Isopropyltoluene	ND	U	2.0	0.060	1	08/14/12	08/14/12	KWG1209148	
1,3-Dichlorobenzene	ND	U	0.50	0.10	1	08/14/12	08/14/12	KWG1209148	
1,4-Dichlorobenzene	ND	U	0.50	0.12	1	08/14/12	08/14/12	KWG1209148	
n-Butylbenzene	ND	U	2.0	0.054	1	08/14/12	08/14/12	KWG1209148	
1,2-Dichlorobenzene	ND	U	0.50	0.12	1	08/14/12	08/14/12	KWG1209148	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.20	1	08/14/12	08/14/12	KWG1209148	
1,2,4-Trichlorobenzene	ND	U	2.0	0.096	1	08/14/12	08/14/12	KWG1209148	
Hexachlorobutadiene	ND	U	2.0	0.11	1	08/14/12	08/14/12	KWG1209148	
Naphthalene	ND	U	2.0	0.088	1	08/14/12	08/14/12	KWG1209148	
1,2,3-Trichlorobenzene	ND	U	2.0	0.11	1	08/14/12	08/14/12	KWG1209148	

* See Case Narrative

Comments:

Client: Conestoga-Rovers & Associates, Incorpora
Project: RMC - Attica In/19190-02
Sample Matrix: Water

Service Request: K1207811
Date Collected: 08/08/2012
Date Received: 08/09/2012

Volatile Organic Compounds

Sample Name: SW-080812-MG-004
Lab Code: K1207811-004

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	87	73-122	08/14/12	Acceptable
Toluene-d8	93	65-144	08/14/12	Acceptable
4-Bromofluorobenzene	78	68-117	08/14/12	Acceptable

Comments: