August 31, 2012

Mr. Glenn D. Warren
Environmental Health and Safety Specialist
Charlotte-Mecklenburg Schools
Building Services
3301 Stafford Drive
Charlotte, North Carolina 28208

Subject: **Third Groundwater Monitoring Report**
Former Rusak Property
Military and Global Leadership Academy at Marie G. Davis
3004 Bank Street and 3331 Griffith Street
Charlotte, Mecklenburg County, North Carolina
Brownfields Project No. 07020-03-60
AMEC Project 6228-12-0065

Dear Mr. Warren:

AMEC Environment & Infrastructure, Inc. (AMEC) is pleased to present this *Third Groundwater Monitoring Report* for the subject property located at the intersection of Griffith and Bank Street in Charlotte, North Carolina. This report details the activities conducted at your request and approved by you through AMEC Proposal Prop12chlt05 dated July 23, 2012.

PROJECT INFORMATION

The subject property is comprised of approximately 0.24 acres and was formerly occupied by a metal-plating business. On August 12, 2004, Charlotte-Mecklenburg Board of Education (CMBE), as the Prospective Developer of the Rusak Property entered into a Brownfields Agreement ("Agreement") with the North Carolina Department of Environment and Natural Resources (NCDENR) pursuant to the Brownfields Property Reuse Act of 1997, N.C.G.S. 130A-310.30. In 2004, CMBE demolished the old structures on the property and AMEC (as MACTEC) performed soil remediation at the site. The Soil Cleanup Report (dated September 23, 2005) was submitted to the North

Correspondence:
AMEC Environment & Infrastructure, Inc.
2801 Yorkmont Road, Suite 100
Charlotte, North Carolina 28208 www.amec.com
Tel 704-357-8600
Fax 704-357-8638
Licensures: NC Engineering F-1253, Geology C-247

Carolina Brownfields Program (NCBP) in 2005. CMBE redeveloped the property for a new school replacing the existing Marie G. Davis Middle School on the adjacent parcel.

In accordance with the Agreement, upon completion of the new building and prior to the occupation of the new school building, a permanent groundwater monitoring well was to be installed downgradient (southwest) of the excavation area. The monitoring well was to be screened across the water table, and sampled for VOCs, by EPA Method 8260, every other year for a minimum of five sampling events, with the first event to occur within two weeks after installation.

GROUNDWATER MONITORING ACTIVITIES

On August 20, 2012 AMEC personnel measured the water level with an electric water level indicator to determine depth to the water surface from the top of the PVC riser pipe. The measured water depth was used in conjunction with the total casing depth to determine the height of the water column and the volume of water in the monitoring well.

Prior to sampling, AMEC personnel purged the well by bailing at least three casing volumes of water while collecting groundwater quality data. A groundwater sample was collected from MW-1 using a dedicated disposable bailer. After sampling, AMEC placed the sample on ice in laboratory-provided containers for delivery to Pace Analytical Services, Inc. (Pace) in Huntersville, North Carolina. AMEC maintained appropriate chain-of-custody records for the sample. A well sampling record is included as **Attachment A** to this report.

LABORATORY ANALYTICAL RESULTS

The laboratory analytical report is included as **Attachment B** to this report. The results of the groundwater analysis identified the following:

Detected VOCs (EPA Method 8260)				
Constituent	**July 2008**	**December 2010**	**August 2012**	**NC 2L Standard**
Chloroform	17.6	21.2	17.9	70
cis-1,2-Dichloroethene	1.4	1.4	1.7	70
Tetrachloroethene	**8.9**	**8.4**	**7.9**	0.7
Trichloroethene	**20.0**	**18.7**	**20.5**	3.0

Notes:
1. All results shown in micrograms per liter (µg/L)
2. Bold values exceeded NC 2L Standards
3. VOCs = Volatile Organic Compounds
4. NC 2L Standards = North Carolina Administrative Code 15A Subchapter 2L – Groundwater Classifications and Standards, updated January 2010

Prepared By/Date: AJF 8-28-12
Checked By/Date: RCF 8-29-12

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of this assessment, AMEC concludes the following:

- Tetrachloroethene (PCE) and Trichloroethene (TCE) were detected in the groundwater at concentrations which exceeded their respective NC 2L Standards. No other constituents were detected above their respective NC 2L Standards.

Based on the data obtained from this assessment, AMEC recommends sampling of the groundwater in accordance with the Agreement, every other year for a minimum of five sampling events for VOCs, by EPA Method 8260. The next sampling event should be performed in 2014.

Please call the undersigned at (704) 357-8600 if you have questions regarding this report.

Sincerely,

AMEC ENVIRONMENT & INFRASTRUCUTRE, INC.

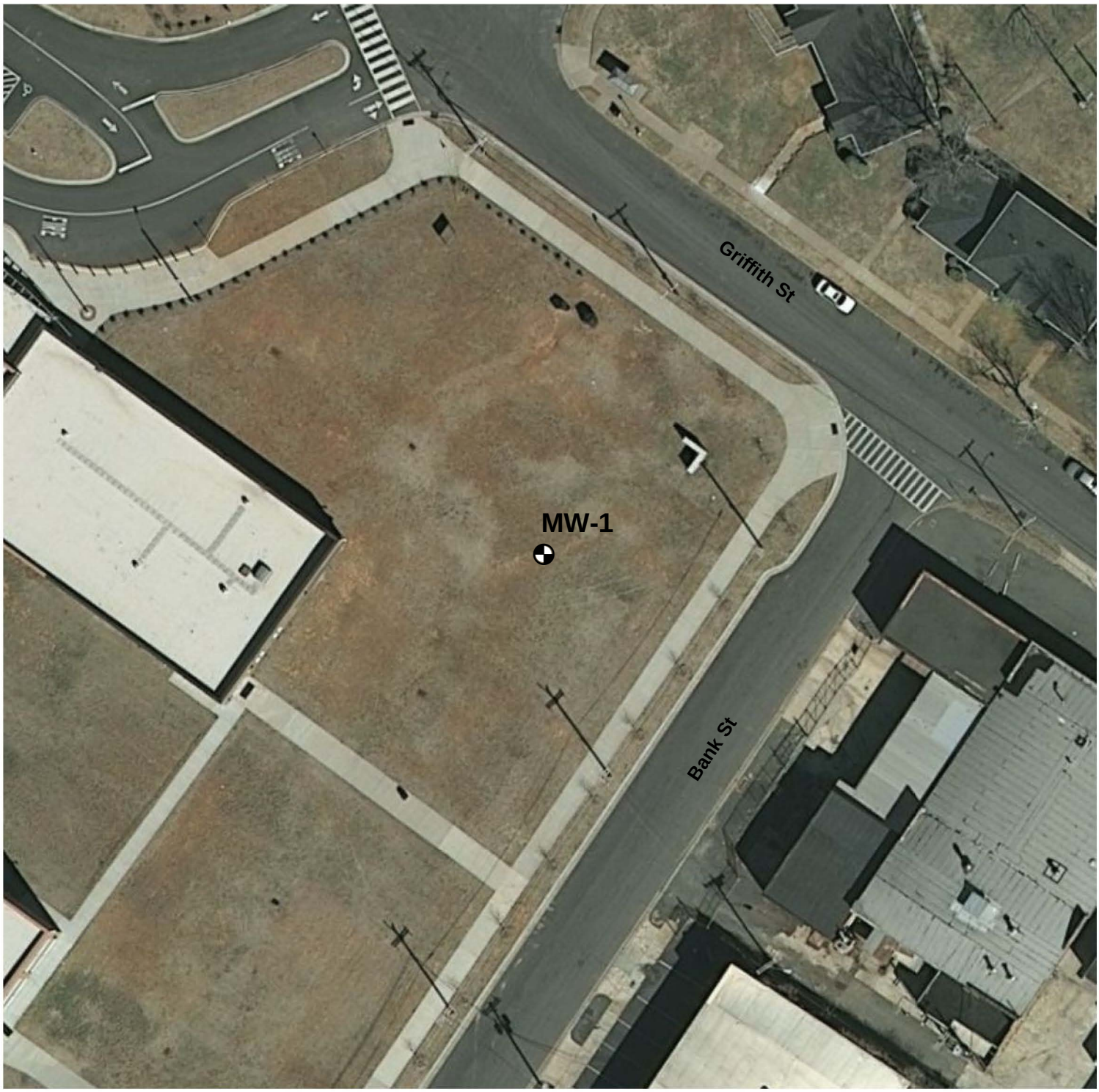
Andrew J. Frantz, AEP
Staff Environmental Scientist

Robert C. Foster, L.G.
Principal Geologist
Registered, NC#1335

Attachments

Cc: Ms. Carolyn Minnich, NCDENR, Brownfields Program

FIGURE



Source: http://imagery.nconemap.com/arcgis/services/2010_Orthoimagery/ImageServer

Parcel Boundary Lines Monitoring Well Location

N

0 25 50 100 150 200
Feet

amec

SITE MAP
FORMER RUSAK PROPERTY
GRIFFITH AND BANK STREETS
CHARLOTTE, NORTH CAROLINA

PREPARED BY	SJM	DATE	8/21/12	CHECKED BY	AJF	DATE	8/21/12	JOB NUMBER	6228-12-0065	FIGURE	1

ATTACHMENT A
WELL SAMPLING RECORD

AMEC E&I, INC.

MONITORING WELL SAMPLING FIELD DATA WORKSHEET

AMEC PROJECT NUMBER 6228-12-00065 MONITORING WELL NUMBER MW-1

SITE NAME Former Rusak DATE 8-20-12 TIME OF SAMPLE 1130

FIELD PERSONNEL ASF WEATHER CONDITIONS Cloudy, warm

TOTAL WELL DEPTH (TWD) ~~MW-1~~ 33 FT. (measured / well tag / drillers log/ previous report – **circle one**)

SCREENED INTERVAL 23-33 MEASURING POINT FOR DEPTH TOC

DEPTH TO GROUNDWATER (DGW) 26.14

LENGTH OF WATER COLUMN (LWC) = TWD – DGW = 6.86

CASING DIAMETER 2 IN.

ONE STANDING WELL VOLUME = 1.12 gal.

(NOTE ½" = 0.0102G/FT: ¾" = 0.023 G/FT: 1"= 0.041G/FT: 2" = 0.163 G/FT: 4" = 0.653 G/FT: 6" = 1.46 G/FT)

THREE STANDING WELL VOLUMES = 3.35 FIVE STANDING WELL VOLUMES = _____

METHOD OF WELL EVACUATION: (BAILER) / PUMP / OTHER: TYPE Disposable PVC

TOTAL VOLUME OF WATER REMOVED: 3.5 GAL.

WELL TYPE: FLUSH MOUNT / ABOVE GRADE COMMENTS _____

LOCKING CAP YES X NO _____

PROTECTIVE POST/ABUTMENT YES _____ NO X

NONPOTABLE LABEL YES X NO _____

ID PLATE YES X NO _____

WELL INTEGRITY SATISFACTORY YES X NO _____

WELL YIELD LOW _____ MODERATE X HIGH _____

Well Volume Removed	pH	Cond. (µS/cm)	Turbidity (NTU)	Dis. O_2 (mg/L)	Temp (°C)	ORP (mV)	Notes
Initial Reading	5.99	0.453	25.3	10.68	19.57	241	
1	6.04	0.258	—	10.98	18.67	238	
2	6.10	0.247	—	10.79	18.57	252	
3	6.12	0.249	—	10.74	18.51	258	

ATTACHMENT B
LABORATORY ANALYTICAL REPORT

Pace Analytical Services, Inc.
205 East Meadow Road - Suite A
Eden, NC 27288
(336)623-8921

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

August 28, 2012

Mr. Andrew Frantz
AMEC-Charlotte
2801 Yorkmont Road
Suite 100
Charlotte, NC 28208

Received and reviewed by AJF 8-28-12

RE: Project: FORMER RUSAK 6228-12-0065
Pace Project No.: 92128470

Dear Mr. Frantz:
Enclosed are the analytical results for sample(s) received by the laboratory on August 20, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

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

Sincerely,

Kevin Godwin

kevin.godwin@pacelabs.com
Project Manager

Enclosures

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Huntersville, NC 28078
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CERTIFICATIONS

Project: FORMER RUSAK 6228-12-0065
Pace Project No.: 92128470

Charlotte Certification IDs
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

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SAMPLE ANALYTE COUNT

Project: FORMER RUSAK 6228-12-0065
Pace Project No.: 92128470

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92128470001	**MW-1**	EPA 8260	KJM	63	PASI-C

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ANALYTICAL RESULTS

Project: FORMER RUSAK 6228-12-0065
Pace Project No.: 92128470

Sample: MW-1 **Lab ID: 92128470001** Collected: 08/20/12 11:30 Received: 08/20/12 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
Acetone	ND	ug/L	25.0	1		08/24/12 00:19	67-64-1	
Benzene	ND	ug/L	1.0	1		08/24/12 00:19	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		08/24/12 00:19	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		08/24/12 00:19	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		08/24/12 00:19	75-27-4	
Bromoform	ND	ug/L	1.0	1		08/24/12 00:19	75-25-2	
Bromomethane	ND	ug/L	2.0	1		08/24/12 00:19	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		08/24/12 00:19	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	1		08/24/12 00:19	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		08/24/12 00:19	108-90-7	
Chloroethane	ND	ug/L	1.0	1		08/24/12 00:19	75-00-3	
Chloroform	**17.9**	ug/L	1.0	1		08/24/12 00:19	67-66-3	
Chloromethane	ND	ug/L	1.0	1		08/24/12 00:19	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		08/24/12 00:19	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		08/24/12 00:19	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		08/24/12 00:19	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		08/24/12 00:19	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		08/24/12 00:19	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		08/24/12 00:19	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		08/24/12 00:19	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		08/24/12 00:19	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		08/24/12 00:19	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		08/24/12 00:19	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/24/12 00:19	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/24/12 00:19	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/24/12 00:19	75-35-4	
cis-1,2-Dichloroethene	**1.7**	ug/L	1.0	1		08/24/12 00:19	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/24/12 00:19	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		08/24/12 00:19	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		08/24/12 00:19	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		08/24/12 00:19	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		08/24/12 00:19	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		08/24/12 00:19	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		08/24/12 00:19	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	1		08/24/12 00:19	108-20-3	
Ethylbenzene	ND	ug/L	1.0	1		08/24/12 00:19	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		08/24/12 00:19	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		08/24/12 00:19	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	1		08/24/12 00:19	99-87-6	
Methylene Chloride	ND	ug/L	2.0	1		08/24/12 00:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		08/24/12 00:19	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		08/24/12 00:19	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		08/24/12 00:19	91-20-3	
Styrene	ND	ug/L	1.0	1		08/24/12 00:19	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		08/24/12 00:19	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		08/24/12 00:19	79-34-5	
Tetrachloroethene	**7.9**	ug/L	1.0	1		08/24/12 00:19	127-18-4	

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ANALYTICAL RESULTS

Project: FORMER RUSAK 6228-12-0065
Pace Project No.: 92128470

Sample: MW-1 **Lab ID: 92128470001** Collected: 08/20/12 11:30 Received: 08/20/12 12:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 8260							
Toluene	ND	ug/L	1.0	1		08/24/12 00:19	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		08/24/12 00:19	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		08/24/12 00:19	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/24/12 00:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		08/24/12 00:19	79-00-5	
Trichloroethene	**20.5**	ug/L	1.0	1		08/24/12 00:19	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		08/24/12 00:19	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		08/24/12 00:19	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1		08/24/12 00:19	108-05-4	
Vinyl chloride	ND	ug/L	1.0	1		08/24/12 00:19	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		08/24/12 00:19	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		08/24/12 00:19	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	98	%	70-130	1		08/24/12 00:19	460-00-4	
Dibromofluoromethane (S)	116	%	70-130	1		08/24/12 00:19	1868-53-7	
1,2-Dichloroethane-d4 (S)	124	%	70-130	1		08/24/12 00:19	17060-07-0	
Toluene-d8 (S)	103	%	70-130	1		08/24/12 00:19	2037-26-5	

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QUALITY CONTROL DATA

Project: FORMER RUSAK 6228-12-0065
Pace Project No.: 92128470

QC Batch: MSV/20169
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 92128470001

METHOD BLANK: 820140
Matrix: Water
Associated Lab Samples: 92128470001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	08/23/12 22:29	
1,1,1-Trichloroethane	ug/L	ND	1.0	08/23/12 22:29	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	08/23/12 22:29	
1,1,2-Trichloroethane	ug/L	ND	1.0	08/23/12 22:29	
1,1-Dichloroethane	ug/L	ND	1.0	08/23/12 22:29	
1,1-Dichloroethene	ug/L	ND	1.0	08/23/12 22:29	
1,1-Dichloropropene	ug/L	ND	1.0	08/23/12 22:29	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	08/23/12 22:29	
1,2,3-Trichloropropane	ug/L	ND	1.0	08/23/12 22:29	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	08/23/12 22:29	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	08/23/12 22:29	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	08/23/12 22:29	
1,2-Dichlorobenzene	ug/L	ND	1.0	08/23/12 22:29	
1,2-Dichloroethane	ug/L	ND	1.0	08/23/12 22:29	
1,2-Dichloropropane	ug/L	ND	1.0	08/23/12 22:29	
1,3-Dichlorobenzene	ug/L	ND	1.0	08/23/12 22:29	
1,3-Dichloropropane	ug/L	ND	1.0	08/23/12 22:29	
1,4-Dichlorobenzene	ug/L	ND	1.0	08/23/12 22:29	
2,2-Dichloropropane	ug/L	ND	1.0	08/23/12 22:29	
2-Butanone (MEK)	ug/L	ND	5.0	08/23/12 22:29	
2-Chlorotoluene	ug/L	ND	1.0	08/23/12 22:29	
2-Hexanone	ug/L	ND	5.0	08/23/12 22:29	
4-Chlorotoluene	ug/L	ND	1.0	08/23/12 22:29	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	08/23/12 22:29	
Acetone	ug/L	ND	25.0	08/23/12 22:29	
Benzene	ug/L	ND	1.0	08/23/12 22:29	
Bromobenzene	ug/L	ND	1.0	08/23/12 22:29	
Bromochloromethane	ug/L	ND	1.0	08/23/12 22:29	
Bromodichloromethane	ug/L	ND	1.0	08/23/12 22:29	
Bromoform	ug/L	ND	1.0	08/23/12 22:29	
Bromomethane	ug/L	ND	2.0	08/23/12 22:29	
Carbon tetrachloride	ug/L	ND	1.0	08/23/12 22:29	
Chlorobenzene	ug/L	ND	1.0	08/23/12 22:29	
Chloroethane	ug/L	ND	1.0	08/23/12 22:29	
Chloroform	ug/L	ND	1.0	08/23/12 22:29	
Chloromethane	ug/L	ND	1.0	08/23/12 22:29	
cis-1,2-Dichloroethene	ug/L	ND	1.0	08/23/12 22:29	
cis-1,3-Dichloropropene	ug/L	ND	1.0	08/23/12 22:29	
Dibromochloromethane	ug/L	ND	1.0	08/23/12 22:29	
Dibromomethane	ug/L	ND	1.0	08/23/12 22:29	
Dichlorodifluoromethane	ug/L	ND	1.0	08/23/12 22:29	
Diisopropyl ether	ug/L	ND	1.0	08/23/12 22:29	
Ethylbenzene	ug/L	ND	1.0	08/23/12 22:29	

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QUALITY CONTROL DATA

Project: FORMER RUSAK 6228-12-0065
Pace Project No.: 92128470

METHOD BLANK: 820140 Matrix: Water

Associated Lab Samples: 92128470001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	ND	1.0	08/23/12 22:29	
m&p-Xylene	ug/L	ND	2.0	08/23/12 22:29	
Methyl-tert-butyl ether	ug/L	ND	1.0	08/23/12 22:29	
Methylene Chloride	ug/L	ND	2.0	08/23/12 22:29	
Naphthalene	ug/L	ND	1.0	08/23/12 22:29	
o-Xylene	ug/L	ND	1.0	08/23/12 22:29	
p-Isopropyltoluene	ug/L	ND	1.0	08/23/12 22:29	
Styrene	ug/L	ND	1.0	08/23/12 22:29	
Tetrachloroethene	ug/L	ND	1.0	08/23/12 22:29	
Toluene	ug/L	ND	1.0	08/23/12 22:29	
trans-1,2-Dichloroethene	ug/L	ND	1.0	08/23/12 22:29	
trans-1,3-Dichloropropene	ug/L	ND	1.0	08/23/12 22:29	
Trichloroethene	ug/L	ND	1.0	08/23/12 22:29	
Trichlorofluoromethane	ug/L	ND	1.0	08/23/12 22:29	
Vinyl acetate	ug/L	ND	2.0	08/23/12 22:29	
Vinyl chloride	ug/L	ND	1.0	08/23/12 22:29	
1,2-Dichloroethane-d4 (S)	%	118	70-130	08/23/12 22:29	
4-Bromofluorobenzene (S)	%	104	70-130	08/23/12 22:29	
Dibromofluoromethane (S)	%	114	70-130	08/23/12 22:29	
Toluene-d8 (S)	%	100	70-130	08/23/12 22:29	

LABORATORY CONTROL SAMPLE: 820141

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	50.5	101	70-130	
1,1,1-Trichloroethane	ug/L	50	52.4	105	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	47.0	94	70-130	
1,1,2-Trichloroethane	ug/L	50	48.8	98	70-130	
1,1-Dichloroethane	ug/L	50	51.9	104	70-130	
1,1-Dichloroethene	ug/L	50	46.1	92	70-132	
1,1-Dichloropropene	ug/L	50	54.4	109	70-130	
1,2,3-Trichlorobenzene	ug/L	50	47.8	96	70-135	
1,2,3-Trichloropropane	ug/L	50	48.5	97	70-130	
1,2,4-Trichlorobenzene	ug/L	50	47.8	96	70-134	
1,2-Dibromo-3-chloropropane	ug/L	50	50.0	100	70-130	
1,2-Dibromoethane (EDB)	ug/L	50	52.2	104	70-130	
1,2-Dichlorobenzene	ug/L	50	47.2	94	70-130	
1,2-Dichloroethane	ug/L	50	48.0	96	70-130	
1,2-Dichloropropane	ug/L	50	50.3	101	70-130	
1,3-Dichlorobenzene	ug/L	50	47.8	96	70-130	
1,3-Dichloropropane	ug/L	50	51.6	103	70-130	
1,4-Dichlorobenzene	ug/L	50	46.8	94	70-130	
2,2-Dichloropropane	ug/L	50	42.8	86	58-145	
2-Butanone (MEK)	ug/L	100	97.5	98	70-145	
2-Chlorotoluene	ug/L	50	47.7	95	70-130	

Pace Analytical Services, Inc.
205 East Meadow Road - Suite A
Eden, NC 27288
(336)623-8921

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: FORMER RUSAK 6228-12-0065
Pace Project No.: 92128470

LABORATORY CONTROL SAMPLE: 820141

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2-Hexanone	ug/L	100	106	106	70-144	
4-Chlorotoluene	ug/L	50	50.4	101	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	101	101	70-140	
Acetone	ug/L	100	88.0	88	50-175	
Benzene	ug/L	50	53.4	107	70-130	
Bromobenzene	ug/L	50	49.7	99	70-130	
Bromochloromethane	ug/L	50	46.8	94	70-130	
Bromodichloromethane	ug/L	50	50.4	101	70-130	
Bromoform	ug/L	50	52.6	105	70-130	
Bromomethane	ug/L	50	45.8	92	54-130	
Carbon tetrachloride	ug/L	50	52.5	105	70-132	
Chlorobenzene	ug/L	50	50.0	100	70-130	
Chloroethane	ug/L	50	58.6	117	64-134	
Chloroform	ug/L	50	47.9	96	70-130	
Chloromethane	ug/L	50	46.1	92	64-130	
cis-1,2-Dichloroethene	ug/L	50	50.4	101	70-131	
cis-1,3-Dichloropropene	ug/L	50	49.3	99	70-130	
Dibromochloromethane	ug/L	50	50.4	101	70-130	
Dibromomethane	ug/L	50	48.4	97	70-131	
Dichlorodifluoromethane	ug/L	50	44.6	89	56-130	
Diisopropyl ether	ug/L	50	48.0	96	70-130	
Ethylbenzene	ug/L	50	51.5	103	70-130	
Hexachloro-1,3-butadiene	ug/L	50	47.3	95	70-130	
m&p-Xylene	ug/L	100	104	104	70-130	
Methyl-tert-butyl ether	ug/L	50	51.2	102	70-130	
Methylene Chloride	ug/L	50	42.7	85	63-130	
Naphthalene	ug/L	50	49.3	99	70-138	
o-Xylene	ug/L	50	48.3	97	70-130	
p-Isopropyltoluene	ug/L	50	49.8	100	70-130	
Styrene	ug/L	50	51.7	103	70-130	
Tetrachloroethene	ug/L	50	50.6	101	70-130	
Toluene	ug/L	50	50.1	100	70-130	
trans-1,2-Dichloroethene	ug/L	50	49.3	99	70-130	
trans-1,3-Dichloropropene	ug/L	50	49.7	99	70-132	
Trichloroethene	ug/L	50	51.1	102	70-130	
Trichlorofluoromethane	ug/L	50	44.2	88	62-133	
Vinyl acetate	ug/L	100	95.5	95	66-157	
Vinyl chloride	ug/L	50	44.6	89	69-130	
1,2-Dichloroethane-d4 (S)	%			94	70-130	
4-Bromofluorobenzene (S)	%			103	70-130	
Dibromofluoromethane (S)	%			99	70-130	
Toluene-d8 (S)	%			96	70-130	

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QUALITY CONTROL DATA

Project: FORMER RUSAK 6228-12-0065
Pace Project No.: 92128470

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 820142 820143

Parameter	Units	92128360001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,1-Dichloroethene	ug/L	ND	50	50	59.9	56.7	120	113	70-166	6	
Benzene	ug/L	ND	50	50	59.1	56.6	118	113	70-148	4	
Chlorobenzene	ug/L	ND	50	50	62.3	58.5	125	117	70-146	6	
Toluene	ug/L	ND	50	50	64.3	63.6	129	127	70-155	1	
Trichloroethene	ug/L	ND	50	50	66.2	63.6	132	127	69-151	4	
1,2-Dichloroethane-d4 (S)	%						112	115	70-130		
4-Bromofluorobenzene (S)	%						98	96	70-130		
Dibromofluoromethane (S)	%						115	104	70-130		
Toluene-d8 (S)	%						99	102	70-130		

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QUALIFIERS

Project: FORMER RUSAK 6228-12-0065
Pace Project No.: 92128470

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-C Pace Analytical Services - Charlotte

Pace Analytical Services, Inc.
205 East Meadow Road - Suite A
Eden, NC 27288
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FORMER RUSAK 6228-12-0065
Pace Project No.: 92128470

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92128470001	**MW-1**	EPA 8260	MSV/20169		

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

1452082

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: AMEC	Report To: Andrew Frantz	Attention:
Address: 2801 Yorkmont Rd Charlotte, NC 28208	Copy To:	Company Name:
Email To:	Purchase Order No.:	Address:
Phone: Fax:	Project Name: Former Rusak	Pace Quote Reference:
Requested Due Date/TAT: Normal	Project Number: 6228-12-0065	Pace Project Manager:
		Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: NC

Requested Analysis Filtered (Y/N)

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Analysis Test: EPA 8260	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-1	WT	G			8/20/12	1130		3				3						X		92128470 001
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Andrew Frantz AMEC	8/20/12	1230		8/20/12	12:30	9.5	Yes	no	Yes

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Andrew Frantz

SIGNATURE of SAMPLER: Andrew Frantz

DATE Signed (MM/DD/YY): 8/20/12

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Pace Analytical	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: May 7, 2012 Page 1 of 2
	Document Number: **F-CHR-CS-03-rev.07**	Issuing Authority: Pace Huntersville Quality Office

Client Name: Amec Project # 92128470

Where Received: ☑ Huntersville ☐ Asheville ☐ Eden

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other_____

Custody Seal on Cooler/Box Present: ☐ yes ☐ no Seals intact: ☐ yes ☐ no

Optional
Proj. Due Date:
Proj. Name:

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other_____

Thermometer Used: IR Gun T1101 T1102 **Type of Ice:** Wet Blue None ☑ Samples on ice, cooling process has begun

Temp Correction Factor **T1101**: No Correction **T1102**: No Correction

Corrected Cooler Temp.: 9.9 C **Biological Tissue is Frozen:** Yes No N/A

Temp should be above freezing to 6°C

Date and Initials of person examining contents: Vbm- 8/20/12

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix:_____		
All containers needing preservation have been checked.	☐Yes ☐No ☑N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased):_____		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted:_____ Date/Time:_____

Comments/ Resolution:_____

SCURF Review: JH Date: 8/20/12 **SRF Review:** EW Date: 8/20/12

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)