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October 25, 2013

Mr. Eric Smith
NC Department of Environment and Natural Resources
Water Quality, Aquifer Protection Section
512 N. Salisbury Street
Raleigh, North Carolina 27604

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Reference: **FINAL PROJECT EVALUATION REPORT**
PIKE ELECTRIC, INC.
418 SMITH STREET, MT. AIRY, NC
IHSB SITE ID NO.: NONCD0002865

Dear Mr. Smith:

On behalf of Pike Electric, Inc. (Pike Electric), AMEC Environment & Infrastructure, Inc. (AMEC) is pleased to submit the Final Project Evaluation (FPE) Report for the former Pike Electric facility located at 418 Smith Street in Mount Airy, North Carolina. This report provides a summary of the injection activities performed at the subject site and the subsequent groundwater monitoring results to assess the effectiveness of the injection activities.

BACKGROUND

The subject site is a former property owned by Pike Electric, Inc. located on 418 Smith Street, in Mount Airy, Surry County, North Carolina (Figure 1). The groundwater at the site has historically been impacted by petroleum constituents and chlorinated volatile organic compounds (VOCs). The source of petroleum constituents likely resulted from the use of underground storage tanks (USTs) to store fuel. After closure of the site with groundwater restrictions documented in a Notice of Residual Petroleum (NORP), the site was transferred to the North Carolina Department of Environment and Natural Resources (NCDENR), Division of Water Quality (DWQ), Aquifer Protection Section (APS) to address the presence of VOCs still present in the groundwater. The remaining contaminants of concern (COCs) include tetrachloroethene (PCE) and its daughter products. To remediate the chlorinated solvent plume, Pike Electric injected a sodium lactate solution to enhance degradation by reductive dechlorination. An injection of sodium lactate was performed in March 2003 and quarterly monitoring was subsequently conducted to evaluate the effectiveness of the injection activities. After four quarters of groundwater monitoring were completed, the sampling schedule was decreased to annual monitoring which began in March 2004. AMEC continued annual groundwater monitoring in February 2005, April 2008, August 2009, April 2011 and July 2012.

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PROJECT EVALUATION

In accordance with the Underground Injection Control (UIC) Program Injection Permit (WI04000029), a Final Project Evaluation (FPE) Report is required which summarizes the injection activities and subsequent groundwater monitoring results. The *Summary of Remediation Activities* report was prepared and submitted to Pike Electric in October 2003; however, it does not appear that the report was submitted to the UIC Program. The report is attached to this letter as an Appendix to provide a summary of the injection activities and subsequent groundwater monitoring events.

In summary, a sodium lactate solution was injected into six monitoring wells (MW-4 through MW-8 and MW-10) as shown on Figure 2. Approximately five gallons of sodium lactate mixed with 25 gallons of water was injected into each of the six monitoring wells. A total of four injection events were performed from March 7 – 28, 2003 on a weekly basis. Monitoring wells MW-10A, MW-11, MW-11A and MW-12 were reserved for groundwater monitoring purposes.

Based on the monitoring results and an analysis of natural attenuation parameters including pH, temperature, dissolved oxygen (DO), carbon dioxide (CO_2), nitrate-nitrogen, dissolved iron and manganese, chloride ion concentrations and oxidation reduction potential (ORP), it was concluded that biodegradation was taking place in the aquifer. Post injection groundwater monitoring also showed that the injection did not adversely affect the groundwater.

GROUNDWATER MONITORING RESULTS

The most recent annual groundwater monitoring event was performed in July 2012 to address a Notice of Regulatory Requirements (NORR) issued on June 18, 2012 by the NCDENR DWQ Inactive Hazardous Sites Branch (IHSB). AMEC performed the annual groundwater monitoring event in July 2012 and reported the results in the *Report of Annual Groundwater Monitoring* submitted on August 15, 2012. The following sections summarizes the information and conclusions in the August 2012 Report.

Groundwater samples were collected from wells MW-9 through MW-12 as shown on Figure 2 using low flow sampling procedures. Prior to sampling the wells, the water level of each well was measured and recorded. Table 1 presents a summary of the well construction details and relative groundwater elevation.

Twelve VOCs were detected in groundwater samples from the four monitoring wells sampled: MW-9, MW-10, MW-11, and MW-12. The results of the annual monitoring event are provided in Table 2. These detections included both petroleum fuel-related compounds and PCE and its daughter products. The presence of petroleum related compounds may be contributing to the natural attenuation of COCs, primarily near MW-10. The petroleum constituents could provide the electron donors necessary for reductive dechlorination of VOCs such as PCE, trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), and vinyl chloride.

Of the COCs at the site, two groundwater exceedances were observed: 1) PCE in MW-9 and 2) vinyl chloride in MW-11. PCE was detected in the groundwater sample from monitoring well MW-9 at a concentration of 5.6 micrograms per liter (µg/l) which exceeds its NC 2L Groundwater Standard (2L Standard) of 0.7 µg/l. The PCE concentration detected in the sample from monitoring well MW-9 is slightly higher than the previous two sampling events. Vinyl chloride was present in well MW-11 at a concentration of 1.7 µg/L, exceeding its 2L Standard of 0.03 µg/L. There were no COCs present in downgradient well MW-12 at concentrations exceeding their respective 2L Standards. Figure 3 shows the concentrations detected across the site.

In order for reductive dechlorination to occur, DO should be below 0.5 milligrams per liter (mg/l). The DO measurements as presented in the August 2012 report ranged from 0.29 mg/l in the sample from MW-10 to 0.74 mg/l in the sample from MW-12 suggesting that anaerobic conditions are generally present in the groundwater monitored at the site. The optimal pH range for reductive dechlorination is near neutral (pH 6 to 8). The pH of the groundwater at the site is generally near neutral (5.46 at MW-11 to 6.77 at MW-10) and potentially supportive of reductive dechlorination. Although the pH at MW-11 is less than the optimal, the presence of vinyl chloride suggests that biodegradation may be occurring.

During previous groundwater sampling events, groundwater samples were also analyzed for parameters including total organic carbon (TOC), iron, manganese, nitrate and sulfate to monitor the aquifer conditions and degradation. Acids including lactic acid, pyruvic acid, acetic acid, propionic acid and butyric acid were also analyzed to determine the presence and effectiveness of the sodium lactate injected. The sampling parameters have been provided in Table 2. Additionally, field parameters including DO, ORP, pH and temperature were measured during each monitoring even to evaluate aquifer conditions and presented in the annual groundwater monitoring reports.

Current laboratory results suggest that VOCs have attenuated to below detectable concentrations in two of the four wells (MW-10 and MW-12). PCE remains in monitoring well MW-9 at a concentration that exceeds its 2L Standard, and vinyl chloride was also detected at a concentration exceeding its 2L Standard in monitoring well MW-11. Note that the presence of petroleum fuel-related compounds in MW-10 can act as an electron donor and decrease overall DO concentrations providing groundwater conditions conducive to reductive dechlorination and the attenuation to residual COCs.

PERMIT CLOSURE REQUEST

Due to current site conditions and the current restrictions on groundwater use at the site, further groundwater injections are warranted. This FPE Report is being submitted to provide final documentation pertaining to the injection activities and subsequent groundwater monitoring results. With this submittal, we request closure of the UIC Permit on behalf of Pike Electric for the subject property.

Please review the enclosed information. If you have any questions or comments regarding this report, please do not hesitate to contact the undersigned at (919) 381-9900.

Sincerely,
AMEC Environment & Infrastructure, Inc.

Bonani Langan

Bonani Langan, PE
Project Manager

Sheri Knox, PE
Senior Remediation Engineer

Table
Figures
Appendix

Cc: Mr. Audie Simmons, Pike Electric, Inc.
Mr. Mickey Hodges, Pike Electric, Inc.

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TABLES

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Table 1
Well Construction Details and Relative Groundwater Elevations
Former Pike Electric
418 Smith Street
Mt Airy, North Carolina

Well ID	Top of Pipe Reference Elevation (ft)	Well Depth (ft TOC)	Screened Interval (ft TOC)	Depth to Groundwater (ft TOC)	Relative Groundwater Elevation (ft)
MW-9*	NM	19	4-19	9.93	NM
MW-10	98.55	18	3-18	2.91	95.64
MW-11	98.36	18	3-18	6.53	91.83
MW-12	97.15	18.5	3.5-18.5	6.90	90.25

Notes:
(1) TOC = Top of Casing. Established the top-of-casing elevation of each well relative to a benchmark with an assumed elevation of 100 feet (precision of 0.01 foot). The benchmark was established as the top-of-casing elevation of well MW-5 in 1999.
(2) Relative Groundwater Elevation = Assumed 100 ft elevation minus Depth to Groundwater
NA = Not applicable
NM = Not Measured
*Well was not accessible and elevation could not be measured.

Table 2
Summary of Historical Groundwater Analytical Results
Former Pike Electric
418 Smith Street
Mt Airy, North Carolina

Parameter	NC 2L Groundwater Quality Standards	Analytical Results																																			
Well ID		MW-9						MW-10						MW-10A				MW-11								MW-11A				MW-12							
Date Collected		3/18/2004	2/17/2006	8/16/2006	7/8/2009	4/22/2011	7/19/2012	3/18/2004	2/17/2006	8/16/2006	7/8/2009	4/22/2011	7/19/2012	4/26/2003	6/26/2003	3/18/2004	3/17/2006	4/26/2003	6/26/2003	3/18/2004	2/17/2006	8/16/2006	7/8/2009	4/22/2011	7/19/2012	4/26/2003	6/26/2003	3/18/2004	3/17/2006	4/26/2003	6/26/2003	3/18/2004	2/17/2006	8/16/2006	7/8/2009	4/22/2011	7/19/2012
Volatile Organic Compounds (ug/L)																																					
Acetone	6,000	NS	25	<25	<25	<25	<5.0	NS	BQL	<25	<25	NS	1,600	<50	<50	BQL	BQL	<50	<50	BDL	BQL	<25	<25	2.86J	6.4H	<50	<50	BQL	BQL	<50	<50	BQL	BQL	<25	<25	2.12J	4.1J
Benzene	1	NS	BQL	<0.5	<0.5	0.20J	<0.50	NS	BQL	<0.5	<0.5	NS	<50	<1.0	<1.0	BQL	BQL	**2.6**	**3.4**	1.9	**3.2**	**1.85**	**1.71**	0.45J	<0.50	<1.0	<1.0	BQL	BQL	<1.0	<1.0	BQL	BQL	<0.5	<0.5	0.13J	<0.50
Chloroethane	3,000	NS	BQL	<1.0	<1.0	<1.0	<0.50	NS	BQL	<1.0	<1.0	NS	<50	<1.0	<1.0	BQL	BQL	<1.0	<1.0	BQL	BQL	<1.0	<1.0	<1.0	<0.50	<1.0	<1.0	BQL	BQL	<1.0	<1.0	BQL	BQL	<1.0	<1.0	0.26J	0.75
cis-1,2,-Dichloroethene	70	NS	BQL	<0.5	<0.5	<0.5	<0.50	NS	BQL	<0.5	<0.5	NS	<50	<1.0	<1.0	BQL	BQL	<1.0	2.3	35	34	3.62	<0.5	1.92	0.89	<1.0	<1.0	BQL	BQL	<1.0	<1.0	BQL	BQL	<0.5	<0.5	<0.5	<0.50
Ethylbenzene	600	NS	BQL	<0.5	<0.5	<0.5	<0.50	NS	BQL	<0.5	<0.5	NS	270	<1.0	<1.0	BQL	BQL	<1.0	<1.0	BQL	BQL	<0.5	<0.5	<0.5	<0.50	<1.0	<1.0	BQL	BQL	<1.0	<1.0	BQL	BQL	<0.5	<0.5	<0.5	<0.50
Isopropyl ether (IPE)	70	NS	BQL	<0.5	<0.5	<0.5	<0.50	NS	BQL	<0.5	<0.5	NS	<50	<1.0	<1.0	BQL	BQL	<1.0	<1.0	BQL	BQL	<0.5	<0.5	0.35J	<0.50	<1.0	<1.0	BQL	BQL	<1.0	<1.0	BQL	BQL	<0.5	<0.5	<0.5	<0.50
Isopropylbenzene	70	NS	BQL	<0.5	<0.5	<0.5	<0.50	NS	BQL	<0.5	<0.5	NS	57	<1.0	<1.0	BQL	BQL	<1.0	<1.0	BQL	BQL	<0.5	<0.5	<0.5	<0.50	<1.0	<1.0	BQL	BQL	<1.0	<1.0	BQL	BQL	<0.5	<0.5	<0.5	<0.50
Naphthalene	6	NS	BQL	<0.5	<0.5	<0.5	<1.0	NS	BQL	<0.5	<0.5	NS	**130**	<5.0	<5.0	BQL	BQL	<5.0	<5.0	BQL	BQL	<0.5	<0.5	<0.5	<1.0	<5.0	<5.0	BQL	BQL	<5.0	<5.0	BQL	BQL	<0.5	<0.5	<0.5	<1.0
n-Propylbenzene	70	NS	BQL	<0.5	<0.5	<0.5	<0.50	NS	BQL	<0.5	<0.5	NS	**91**	<1.0	<1.0	BQL	BQL	<1.0	<1.0	BQL	BQL	<0.5	<0.5	<0.5	<0.50	<1.0	<1.0	BQL	BQL	<1.0	<1.0	BQL	BQL	<0.5	<0.5	<0.5	<0.50
Tetrachloroethene	0.7	NS	**2.6**	**2.60**	**1.30**	**1.81**	**5.8**	NS	BQL	<0.5	<0.5	NS	<50	<1.0	<1.0	BQL	BQL	<1.0	<1.0	BQL	BQL	<0.5	<0.5	<0.5	<0.50	<1.0	<1.0	BQL	BQL	<1.0	<1.0	BQL	BQL	<0.5	<0.5	<0.5	<0.50
Toluene	600	NS	BQL	<0.5	<0.5	<0.5	<0.50	NS	BQL	<0.5	<0.5	NS	**710**	<5.0	<5.0	BQL	BQL	<5.0	<5.0	BQL	BQL	<0.5	<0.5	<0.5	<0.50	<5.0	<5.0	BQL	BQL	<5.0	<5.0	BQL	BQL	<0.5	<0.5	<0.5	<0.50
trans-1,2-Dichloroethene	100	NS	BQL	<0.5	<0.5	<0.5	<0.50	NS	BQL	<0.5	<0.5	NS	<50	<1.0	<1.0	BQL	BQL	3.6	3.6	1.1	1.2	<0.5	<0.5	<0.5	<0.50	<1.0	<1.0	BQL	BQL	<1.0	<1.0	BQL	BQL	<0.5	<0.5	<0.5	<0.50
1,2,4-Trimethylbenzene	400	NS	BQL	<0.5	<0.5	<0.5	<0.50	NS	BQL	<0.5	<0.5	NS	**1,500**	<1.0	<1.0	BQL	BQL	<1.0	<1.0	BQL	BQL	<0.5	<0.5	<0.5	<0.50	<1.0	<1.0	BQL	BQL	<1.0	<1.0	BQL	BQL	<0.5	<0.5	<0.5	<0.50
1,3,5-Trimethylbenzene	400	NS	BQL	<0.5	<0.5	<0.5	<0.50	NS	BQL	<0.5	<0.5	NS	**550**	<1.0	<1.0	BQL	BQL	<1.0	<1.0	BQL	BQL	<0.5	<0.5	<0.5	<0.50	<1.0	<1.0	BQL	BQL	<1.0	<1.0	BQL	BQL	<0.5	<0.5	<0.5	<0.50
Vinyl Chloride	0.03	NS	BQL	<0.5	<0.5	<0.5	<0.50	NS	BQL	<0.5	<0.5	NS	<50	<1.0	<1.0	BQL	BQL	**42**	<1.0	**11**	**12**	**3.32**	<0.5	1.17	1.7	<1.0	<1.0	BQL	BQL	<1.0	<1.0	BQL	BQL	<0.5	<0.5	<0.5	<0.50
Xylenes, total mixed	500	NS	BQL	<1.0	<1.0	<1.0	<1.0	NS	BQL	<1.0	<1.0	NS	**3,100**	<3.0	<3.0	BQL	BQL	<3.0	<3.0	BQL	BQL	<1.0	<1.0	<1.0	<1.0	<3.0	<3.0	BQL	BQL	<3.0	<3.0	BQL	BQL	<1.0	<1.0	<1.0	<1.0
Natural Attenuation Parameters (ug/L)																																					
Nitrate	10,000	NS	NS	979	2,320	1,740	NA	NS	NS	<50.0	<50.0	NS	NA	1,900	2,200	NS	NS	<100	<100	BDL	NS	60.0	<50.0	59	NA	2,200	2,400	NS	NS	<100	<100	BDL	NS	<50.0	<50.0	341	NS
Total Iron	300	NS	NS	**6,940**	**1,980**	**4,210**	NA	NS	NS	**19,400**	**13,300**	NS	NA	NA	NA	NS	NS	NA	NA	NA	NS	**72,500**	**68,300**	**68,200**	NA	NA	NA	NS	NS	NA	NA	NA	NS	**19,400**	**30,900**	**36,300**	NS
Ferric Iron (III)	NE	NS	NS	NA	NA	4,210	NA	NS	NS	NA	NA	NS	NA	NA	NA	NS	NS	NA	NA	NA	NS	NA	NA	39,800	NA	NA	NA	NS	NS	NA	NA	NA	NS	NA	NA	27,400	NS
Ferrous Iron (II)	NE	NS	NS	<100	<100	<100	NA	NS	NS	<100	<100	NS	NA	NA	NA	NS	NS	NA	NA	NA	NS	<100	379	28,400	NA	NA	NA	NS	NS	NA	NA	<100	NS	<100	<100	8,950	NS
Sulfate	250,000	NS	NS	54,900	55,600	72,900	NA	NS	NS	61,200	245,000	NS	NA	<5,000	<5,000	NS	NS	18,000	26,000	20,000	NS	26,100	32,500	70,100	NA	<5,000	<5,000	NS	NS	62,000	53,000	51,000	NS	**914,000**	39,700	50,800	NS
Sulfide	NE	NS	NS	1,440	570	<50	NA	NS	NS	<200	1,140	NS	NA	<50	<50	NS	NS	<50	<50	BDL	NS	3,240	950	<50	NA	<50	<50	NS	NS	<50	<50	<200	NS	**1,800**	<200	<50	NS
Chloride	250,000	NS	NS	7,000	2,960	7,790	NA	NS	NS	2,000	1,480	NS	NA	9,300	8,600	NS	NS	4,200	3,600	2,800	NS	4,000	1,970	4,140	NA	8,500	9,500	NS	NS	1,300	1,300	<1,000	NS	2,000	<1,000	5,690	NS
Alkalinity	NE	NS	NS	88,000	108,000	86,000	NA	NS	NS	189,000	264,000	NS	NA	440,000	28,000	NS	NS	160,000	280,000	180,000	NS	220,000	192,000	17,200	NA	19,000	28,000	NS	NS	180,000	280,000	150,000	NS	275,000	220,000	180,000	NS
Dissolved Iron	NE	NS	NS	<100	NA	**135**	NA	NS	NS	<100	NA	NS	NA	<50	<50	NS	NS	7,800	19,000	18,000	NS	<100	NA	3,040	NA	<50	<50	NS	NS	3,200	3,300	8,700	NS	<100	NA	620	NS
Free Carbon Dioxide	NE	NS	NS	NA	194,000	76,200	NA	NS	NS	NA	81,000	NS	NA	54,000	280,000	NS	NS	240,000	870,000	170,000	NS	NA	201,000	215,000	NA	48,000	150,000	NS	NS	101,000	520,000	95,000	NS	NA	130,000	9,040	NS
Manganese	50	NS	NS	**270**	**88**	**107**	NA	NS	NS	**5,190**	**733**	NS	NA	**53**	<10	NS	NS	**18,000**	**16,000**	NA	NS	15,400	15,400	14,300	NA	11	<10	NS	NS	**101,000**	**7,800**	NA	NS	**408**	**8,610**	**8,480**	NS
Total Organic Carbon	NE	NS	NS	8,800	9,020	6,330	NA	NS	NS	6,650	8,220	NS	NA	<1,000	<1,000	NS	NS	16,000	13,000	14,000	NS	13,100	11,300	12,200	NA	<1,000	<1,000	NS	NS	18,000	13,000	12,000	NS	11,400	10,700	110,000	NS
Light Hydrocarbons (ug/L)																																					
Methane	NE	NS	NS	4	0.260	0.200	NS	NS	NS	67	92	NS	NS	<1,000	<1,000	NS	NS	2500	<1,000	BQL	NS	1,100	790	360	NA	<1,000	<1,000	NS	NS	<1,000	<1,000	BQL	NS	53	49	55	NS
Ethane	NE	NS	NS	<0.025	<0.025	<0.025	NS	NS	NS	0.030	0.044	NS	NS	<10,000	<10,000	NS	NS	<10,000	<10,000	BQL	NS	1,400	1,400	0.630	NA	<10,000	<10,000	NS	NS	<10,000	<10,000	BQL	NS	0.071	0.078	0.210	NS
Ethene	NE	NS	NS	0.047	0.058	<0.025	NS	NS	NS	0.068	0.120	NS	NS	<10,000	<10,000	NS	NS	<10,000	<10,000	BQL	NS	0.340	0.560	0.120	NA	<10,000	<10,000	NS	NS	<10,000	<10,000	BQL	NS	0.040	<0.025	0.087	NS
Organic Acids (mg/L)																																					
Acetic Acid	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<10	<1.0	NS	NS	<10	<1.0	NS	NS	NS	NS	NS	NS	<10	<1.0	NS	NS	<10	<1.0	NS	NS	NS	NS	NS	NS
Propionic Acid	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<25	<50	NS	NS	<25	<50	NS	NS	NS	NS	NS	NS	<25	<50	NS	NS	<25	<50	NS	NS	NS	NS	NS	NS
Lactic Acid	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<10	<1.0	NS	NS	<10	<1.0	NS	NS	NS	NS	NS	NS	<10	<1.0	NS	NS	<10	<1.0	NS	NS	NS	NS	NS	NS
Pyruvic Acid	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<25	58	NS	NS	<25	<10	NS	NS	NS	NS	NS	NS	<25	89	NS	NS	<25	15	NS	NS	NS	NS	NS	NS
Butyric Acid	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<25	<1.0	NS	NS	<25	<1.0	NS	NS	NS	NS	NS	NS	<25	<1.0	NS	NS	<25	<1.0	NS	NS	NS	NS	NS	NS

NOTES:
BOLD values exceed the 2L Groundwater Quality Standards
H = Compound reported with possible high bias. LCS recovery above the QC limit.
J = Detected but below the Reporting Limit, therefore, result is an estimated concentration
ug/L = Micrograms per liter
mg/L = Micrograms per liter
BQL = Below laboratory quantitation limit
N/a = Not applicable
NE = Not established
NS = Not sampled

FIGURES

AMEC Environment & Infrastructure, Inc.
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APPROXIMATE SCALE

2000' 1000' 0' 2000' 4000'

amec

4021 STIRRUP CREEK DRIVE, SUITE 100
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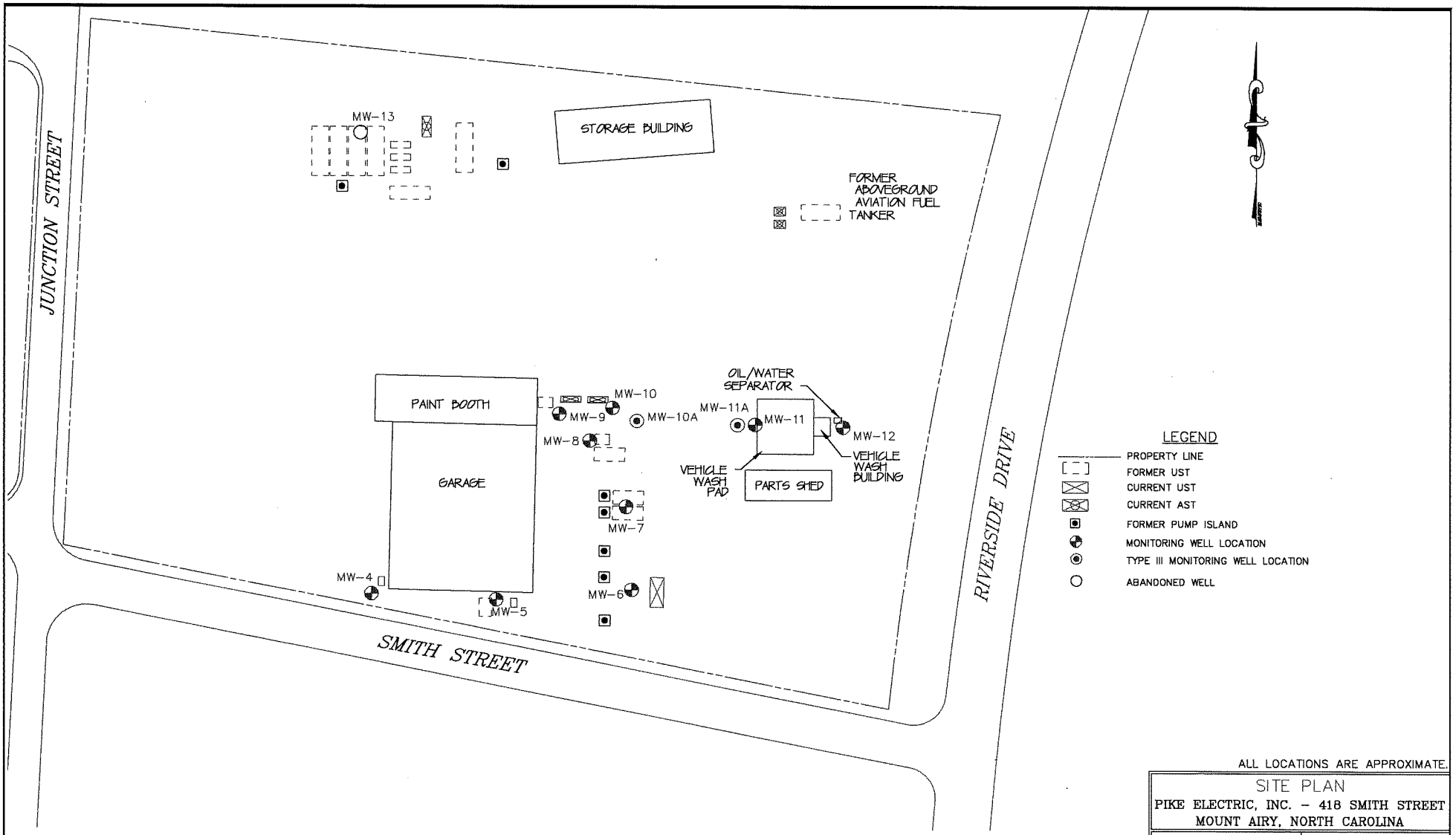
SITE LOCATION MAP
FORMER PIKE ELECTRIC, INC. FACILITY
418 SMITH STREET
MOUNT AIRY, NC

DRAWN: KHL	DATE: AUGUST 2012
CHECK: BDE	PROJECT NO. 569060000
APPROVAL: KR	FIGURE: 1

REFERENCE: United States Geological Survey, 7.5 minute Quadrangle of Mount Airy North, VA-NC dated 1968, Photorevised 1977 and Mount Airy South, NC dated 1970



ALL LOCATIONS ARE APPROXIMATE.

APPROXIMATE SCALE

60 30 0 60

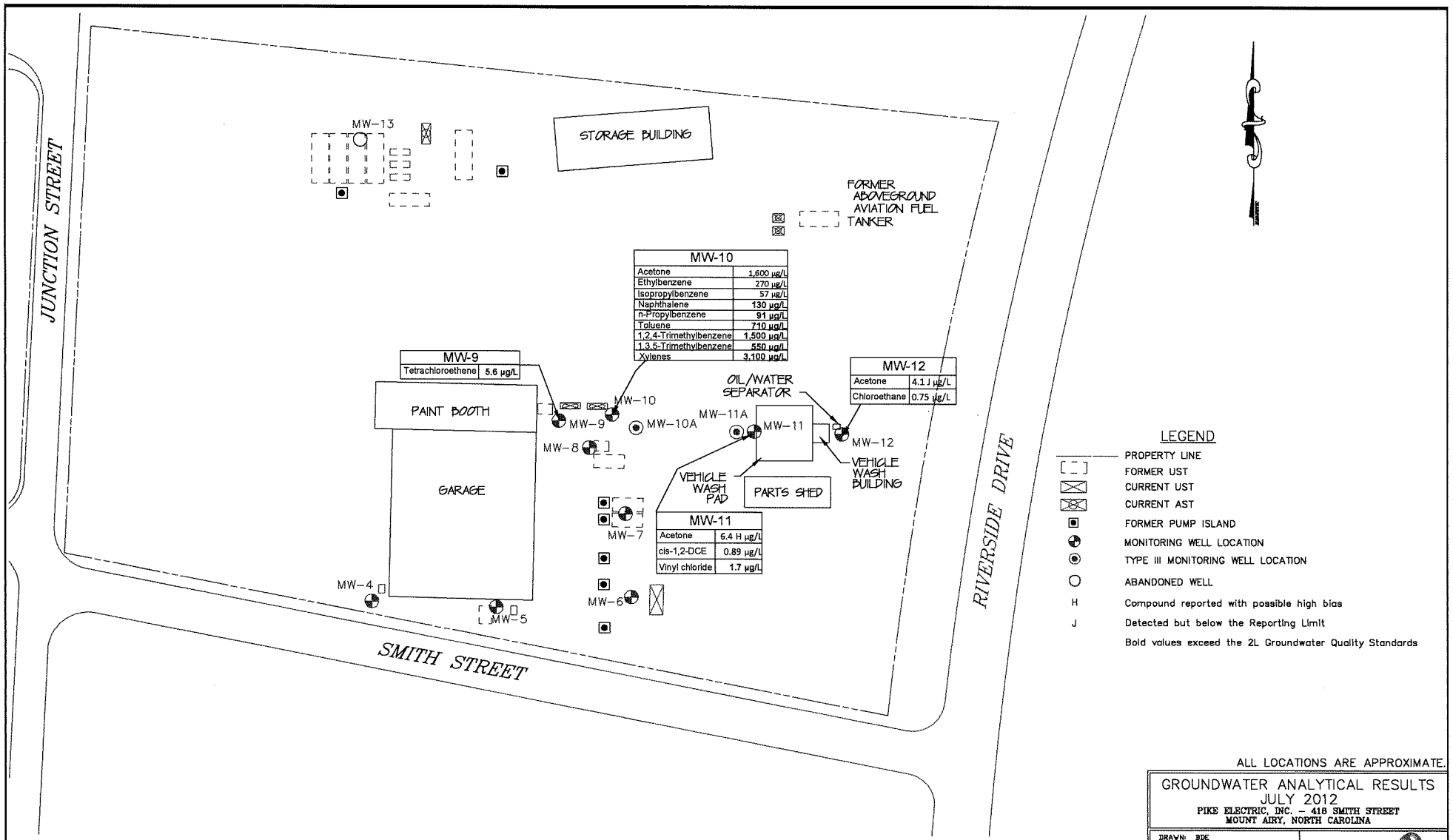
(IN FEET)

REF.: SURRY COUNTY PLANNING DEPARTMENT, AERIAL PHOTOGRAPH, SHEET NO. 5020.12, DATED 1996, FIELD NOTES BY MACTEC PERSONNEL.

SITE PLAN

PIKE ELECTRIC, INC. – 418 SMITH STREET
MOUNT AIRY, NORTH CAROLINA

DRAWN: KHL	amec
DFT CHECK: KHL	
APPROVAL: CLK	4021 STIRRUP CREEK DRIVE, SUITE 100 DURHAM, NORTH CAROLINA, USA 27703 P: (919) 381-9900 F: (919) 381-9901
DATE: AUGUST 2012	
SCALE: NTS	
REFERENCE DWGS: MACTEC FIELD NOTES	JOB NO. 569060000 / DWG NO. 2



REF.: SURRY COUNTY PLANNING DEPARTMENT, AERIAL PHOTOGRAPH, SHEET NO. 5020.12, DATED 1996, FIELD NOTES BY MACTEC PERSONNEL.

GROUNDWATER ANALYTICAL RESULTS
JULY 2012
PIKE ELECTRIC, INC. – 418 SMITH STREET
MOUNT AIRY, NORTH CAROLINA

DRAWN: BDE	
DFT CHECK: BDE	
APPROVAL: KR	
DATE: AUGUST 2012	
SCALE: NTS	
REFERENCE DWGS: MACTEC FIELD NOTES	JOB NO. 569060000 / DWG NO. 3

amec
4021 STIRRUP CREEK DRIVE, SUITE 100
DURHAM, NORTH CAROLINA, USA 27703
P: (919) 381-9900 F: (919) 381-9901

APPENDIX

AMEC Environment & Infrastructure, Inc.
4021 Stirrup Creek Drive, Suite 100
Durham, NC 27703
Licensure: NC Engineering F-1253; NC Geology C-247

Tel – (919) 381-9900
Fax – (919) 381-9901
www.amec.com

SUMMARY OF REMEDIATION ACTIVITIES
OCTOBER 2003

PIKE ELECTRIC
418 SMITH STREET
MOUNT AIRY, SURRY COUNTY, NORTH CAROLINA

Prepared For:

Pike Electric
Mount Airy, North Carolina

Prepared By:

MACTEC Engineering and Consulting, Inc.
Greensboro, North Carolina

MACTEC Project 30459-8-1050

October 2003

MACTEC

MACTEC

October 10, 2003

Mr. Audie Simmons
Pike Electric, Inc.
100 Pike Way
PO Box 868
Mount Airy, North Carolina 27030

Subject: Summary of Remediation Activities
Pike Electric
418 Smith Street
Mount Airy, North Carolina
MACTEC Project 30459-8-1050

Dear Mr. Simmons:

MACTEC Engineering and Consulting, Inc. (MACTEC) is pleased to provide the following project summary for remediation activities completed to date at Pike Electric's former maintenance facility at 418 Smith Street in Mount Airy, North Carolina (Figure 1). This summary describes the project background and scope of remediation activities conducted at the site since December 2002.

This summary report is intended for use solely by Pike Electric, Inc. The contents should not be relied upon by other parties without the expressed, written consent of MACTEC. The findings are relevant to the dates of our site work and should not be relied upon to represent site conditions on other dates.

We appreciate the opportunity to continue to provide our professional services on this project. Please contact us if you have questions concerning the attached document.

Sincerely,

MACTEC ENGINEERING AND CONSULTING, INC.

Randall S. Johnson
Staff Geologist

Mark I. Miller, L.G.
Principal Geologist
Licensed NC 1715

NORTH CAROLINA LICENSED SEAL 1715 GEOLOGIST MARK IVES MILLER

Attachments

MACTEC Engineering and Consulting, Inc.
7347-E West Friendly Avenue • Greensboro, NC 27410
336-294-4221 • Fax: 336-294-4227

PROJECT BACKGROUND

In August 1998, MACTEC Engineering and Consulting, Inc. (MACTEC), formerly Law Engineering and Environmental Services, Inc. (LAW), was contracted to perform a Phase I Environmental Site Assessment (Phase I ESA) at the subject site. The site is an approximate five-acre commercial facility located in a commercial/residential area of Mt. Airy, North Carolina. Currently, the site is occupied by a maintenance building and a gravel parking lot and was used as a maintenance area for Pike Electric Company at the time of the Phase I ESA (Figure 2). Information obtained during our study indicated that the maintenance facility was constructed in the early 1950s. Prior to that time, the site was undeveloped in a residential area. Several environmental areas of concern were identified. These included one current and 17 former underground storage tanks (USTs), four aboveground storage tanks (ASTs), six former fuel dispensers, a vehicle wash pad, a parts shed, a former aviation fuel tanker, and an oil-water separator (Figure 2).

LAW conducted a preliminary soil assessment at the site during September 1998 in the vicinity of the areas of environmental concern identified above. The assessment consisted of the advancement of 29 Geoprobe™ soil borings. Laboratory analysis of the soil samples collected from the borings detected volatile and semi-volatile total petroleum hydrocarbons (TPH) at concentrations exceeding the North Carolina Department of Environment and Natural Resources (NCDENR) Action Level of 10 milligrams per kilogram (mg/kg) in the vicinity of several former USTs, the two current USTs, three former fuel dispenser islands, and the area adjacent to the oil-water separator. Additionally, lead and chromium were detected at concentrations exceeding their respective NCDENR Action Levels in the area adjacent to the oil-water separator and a former waste oil UST. LAW recommended that a Limited Site Assessment (LSA) be completed for the site.

LAW completed the LSA activities in March 1999. These activities included the installation and sampling of ten Type II monitoring wells (MW-4 through MW-13, see Figure 2) and ten soil borings.

Laboratory analysis of the soil samples indicated that volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and chromium were detected at concentrations exceeding their respective Soil to Groundwater Maximum Soil Contaminant Concentrations (MSCCs).

Laboratory analysis of the groundwater samples indicated that seven VOCs, one SVOC, and lead were detected at concentrations exceeding their respective NCDENR 2L Groundwater Quality Standards. Of these constituents, only two VOCs (p-isopropyltoluene and vinyl chloride) and lead were detected at levels exceeding their respective NCDENR Gross Contamination Limits (GCLs). Three volatile TPH constituents in monitoring well MW-5 and two volatile TPH constituents in monitoring well MW-6 were detected at concentrations in excess of their respective NCDENR 2L Groundwater Quality Standards. One semi-volatile TPH constituent was detected in the groundwater samples collected from monitoring wells MW-6, MW-7, MW-8, and MW-12 at concentrations in excess of its NCDENR 2L Groundwater Quality Standard. No GCLs have been established for this compound.

Mr. Joe Grant of the NCDENR Winston-Salem Regional Office recommended that a Corrective Action Plan (CAP) be completed for the site in a meeting on August 3, 1999. Based on the extent of groundwater assessment completed at the site, Mr. Grant stated that the NCDENR would not

require a Comprehensive Site Assessment (CSA). A CAP was prepared and submitted to the NCDENR on January 5, 2000.

After correspondence with the Winston-Salem Regional Office of the NCDENR, an amended CAP was submitted on June 6, 2000. The amended CAP was approved on November 28, 2000. The CAP consisted of semi-annual sampling of selected wells at the site to monitor natural attenuation of the constituents detected at concentrations exceeding their respective NCDENR 2L Groundwater Quality Standards and GCLs. Sampling was conducted in the selected monitoring wells semi-annually from January 2001 to February 2002.

Based on the reduction of the hydrocarbon constituents observed during this sampling period, LAW requested that a "No Further Action Letter" be issued for the site. The NCDENR required that a Notice of Residual Petroleum (NRP) groundwater deed restriction be attached to the deed for the site as a condition for site closure since elevated concentrations of hydrocarbons were still present in the groundwater. The groundwater NRP was filed at the Surry County Courthouse in Dobson, North Carolina on May 7, 2002. This deed restriction prohibits the installation or use of water supply wells at the site. On May 14, 2002, the NCDENR UST Section issued a No Further Action letter for the site. Notification was made to surrounding property owners and city and county officials by certified mail. Based on the elevated residual concentrations of several non-petroleum compounds in groundwater underlying the site, responsibility for the site was transferred to the NCDENR Groundwater Section.

In order to obtain site closure, the NCDENR Groundwater Section required that all groundwater contaminant concentrations be below their respective 2L Groundwater Quality Standards. The primary groundwater contaminants remaining at the site are chlorinated solvents. Chlorinated solvent concentrations can be reduced by bacteria that are most active under anaerobic conditions. In order to reduce the time required for biodegradation of the solvents, MACTEC proposed the introduction of a hydrogen reducing compound, a sodium lactate solution, to stimulate bacterial growth and thereby reduce the concentrations of chlorinated solvents.

SCOPE OF SERVICES

MACTEC submitted a 5I Injection permit to the NCDENR, Division of Water Quality, Underground Injection Control Section on June 13, 2002. The permit was approved on October 16, 2002 (Injection Well Permit WI0400029). The permit noted that the sodium lactate solution would be injected into wells MW-4 through MW-8 and MW-10. Wells MW-10A, MW-11, MW-11A and MW-12 would be reserved for monitoring purposes only. The injection well permit also required analysis of groundwater samples for specific natural attenuation parameters considered conducive to bacterial growth to help ascertain the viability of the remediation project.

On March 7, 2003 MACTEC performed the first injection of the sodium lactate solution into wells MW-4, MW-5, MW-6, MW-7, MW-8, and MW-10 (Figure 2). Each well was injected with five gallons of sodium lactate mixed with 25 gallons of water. Subsequently, MACTEC performed three more injection events in the same manner weekly for the next three weeks ending on March 28, 2003.

On April 24, 2003 MACTEC collected groundwater samples from monitoring wells MW-10A, MW-11, MW-11A, and MW-12. The groundwater samples were analyzed for VOCs using

USEPA method 8260 and for natural attenuation parameters. The natural attenuation parameters assist in evaluating whether a suitable environment conducive to bacterial growth is occurring and/or being maintained. The natural attenuation parameters analyzed were dissolved oxygen (DO), oxidation reduction potential (ORP), pH, temperature, dissolved iron and manganese, nitrate, sulfate, sulfide, chloride, alkalinity, total organic carbon, and carbon dioxide, methane, ethane and ethene, and lactic, pyruvic, acetic, propionic, and butyric acids.

MACTEC commenced the first of four monthly sodium lactate injections into wells MW-4, MW-5, MW-6, MW-7, MW-8, and MW-10 starting on April 25, 2003 and ending on July 28, 2003. On August 26, 2003 MACTEC collected groundwater samples from monitoring wells MW-10A, MW-11, MW-11A, and MW-12. The groundwater samples were analyzed for VOCs and for the natural attenuation parameters described above.

DISCUSSION

The groundwater sample analytical results are presented on Table 1. Copies of the laboratory analytical reports are presented in Appendix A. Of the groundwater samples collected and analyzed during April and August, 2003, only groundwater samples from monitoring well MW-11 contained contaminant concentrations above the laboratory detection limit. Benzene was detected in well MW-11 at 0.0025 milligrams per liter (mg/l) on April 24, 2003 and at 0.0034 mg/l on August 8, 2003. The groundwater sample collected from well MW-11 on April 24, 2003 also contained traces of 1,1-dichloroethane and trans-1,2-dichloroethene at concentrations below their respective 2L Groundwater Quality Standards, and vinyl chloride at a concentration exceeding its 2L Groundwater Quality Standard. The August 8, 2003 groundwater sample from well MW-11 also contained cis-1,2-dichloroethene and tetrachloroethene at concentrations exceeding their 2L Groundwater Quality Standard. None of the contaminant concentrations exceed the NCDENR UST Section Gross Contaminant Levels.

We analyzed for natural attenuation parameters in accordance with the injection well permit requirements. We used the NCDENR Groundwater Section's *Guidelines for the Investigation of Soil and Groundwater Contamination: Chlorinated Solvents and Other Dense Non-Aqueous Phase Liquids* dated July 2003, addendum to the NCDENR *2L Guidelines for the Investigation and Remediation of Soil and Groundwater* dated July 2000 and the USEPA's *Proceedings of the Symposium on Natural Attenuation of Chlorinated Organics in Groundwater* dated May 1997 as guidance for the interpretation of biodegradation parameters. The analytical results of the biodegradation parameters are available in Appendix A.

- The pH range of groundwater should be between 5 and 9 standard units for optimal microbial growth. The pH of each of the water samples collected from monitoring wells MW-10A, MW-11, MW-11A and MW-12 during the April 2003 sampling event were 6.59, 6.51, 5.99, and 6.93 standard units respectively. During the August 2003 sampling event the pH was 6.34, 6.51, 6.33, and 6.64 standard units respectively. Therefore, the pH is favorable for microbial growth.

- The groundwater temperature should range between 10 and 35 degrees Celsius (°C). The temperatures of the groundwater in monitoring wells MW-10A, MW-11, MW-11A and MW-12 during the April 2003 sampling event were 16.8 °C, 14.7 °C, 17.4 °C, and 13.9 °C respectively. During the August 2003 sampling event temperatures were 21.2 °C, 20.7 °C,

19.3 °C, and 22.5 °C respectively. Therefore, the temperatures are favorable for microbial growth.

- DO concentrations of less than 0.5 mg/l are considered adequate to support anaerobic biodegradation of chlorinated solvents. The DO concentrations in monitoring wells MW-10A, MW-11, MW-11A and MW-12 during the April 2003 sampling event were 3.04 mg/l, 1.34 mg/l, 3.25 mg/l, and 1.45 mg/l respectively. The DO concentrations during the August 2003 sampling event were 3.50 mg/l, 1.39 mg/l, 4.10 mg/l, and 1.95 mg/l respectively. DO concentrations do not appear to reflect anaerobic conditions.

- Carbon dioxide is one of the byproducts of bacterial degradation activity on organic compounds. Carbon dioxide concentrations in the groundwater in monitoring wells MW-10A, MW-11, MW-11A and MW-12 during the April 2003 sampling event were 54 mg/l, 240 mg/l, 48 mg/l, and 101 mg/l respectively. During the August 2003 sampling event the carbon dioxide concentrations were 260 mg/l, 870 mg/l, 150 mg/l, and 520 mg/l respectively. These results suggest the presence of bacterial degradation activity within the groundwater at the subject site. The marked increase in carbon dioxide between the two sampling events further indicates a dramatic increase in bacterial activity within the groundwater at the site.

- Nitrate-nitrogen present at concentrations greater than 1 mg/l may impede the biodegradation process. The concentrations of nitrate in the groundwater samples collected from monitoring wells MW-10A, MW-11, MW-11A and MW-12 during the April 2003 sampling event were 1.9 mg/l, <0.10 mg/l, 2.2 mg/l, and <0.10 mg/l respectively. During the April 2003 sampling event nitrate concentrations were 2.2 mg/l, <0.10 mg/l, 2.4 mg/l, and <0.10 mg/l respectively. These results indicate variable nitrate-nitrogen conditions in groundwater underlying the site.

- Total dissolved iron and manganese were present in groundwater samples collected form monitoring wells MW-10A, MW-11, MW-11A, and MW-12 during both the April and August 2003 sampling events. Oxidized forms of these elements can be used as electron acceptors for biodegradation.

- Oxidation reduction potential (ORP) provides information regarding oxidizing or reducing conditions within the groundwater. An ORP of less than 50 millivolts (mV) is considered favorable for biodegradation. The ORP levels for MW-10A, MW-11, MW-11A and MW-12 during the April 2003 sampling event were 200 mV, 180 mV, 170 mV, and 200 mV respectively. The ORP levels during the August 2003 sampling event were 140 mV, 150 mV, 130 mV, and 150 mV respectively. These decreasing ORP values reflect a trend towards conditions more conducive to biodegradation.

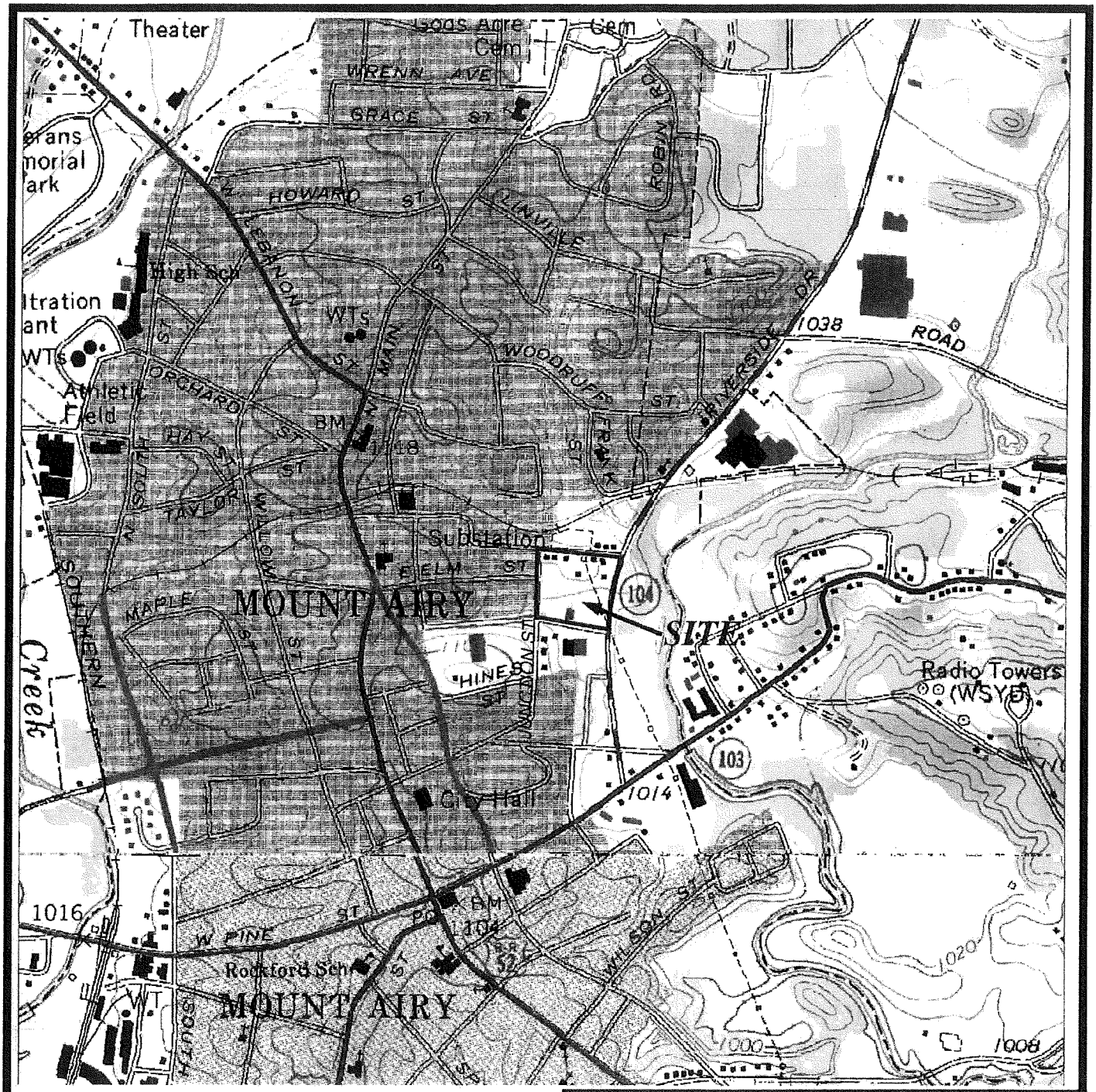
- Chloride ion concentrations provide information regarding the degradation of chlorinated solvents. Chloride was detected in samples collected from monitoring wells MW-10A, MW-11, MW-11A and MW-12 at 8.3 mg/l, 4.2 mg/l, 8.5 mg/l, and 1.3 mg/l respectively. During the August 2003 sampling event chloride concentrations were 8.8 mg/l, 3.6 mg/l, 9.5 mg/l, and 1.3 mg/l respectively. These results suggest that dechlorination of VOCs is occurring within the groundwater at the subject site.

- Cis-1,2-dichloroethene and vinyl chloride are degradation products of trichloroethene and tetrachloroethene. The presence of cis-1,2-dichloroethene and vinyl chloride demonstrate that biodegradation is taking place.

RECOMMENDATIONS

MACTEC recommends waiting for a period of approximately six months without any more injections into the groundwater at the subject site. After this six month period, MACTEC recommends sampling monitoring wells MW-10A, MW-11, MW-11A and MW-12 at the site for VOCs and biodegradation parameters. Based on our review of the contaminant concentration data obtained at that time, MACTEC will then recommend either site closure or additional injection of the sodium lactate solution with subsequent groundwater sampling and analysis.

FIGURES



APPROXIMATE SITE LOCATION

APPROXIMATE SCALE

1000 500 0 1000

(IN FEET)

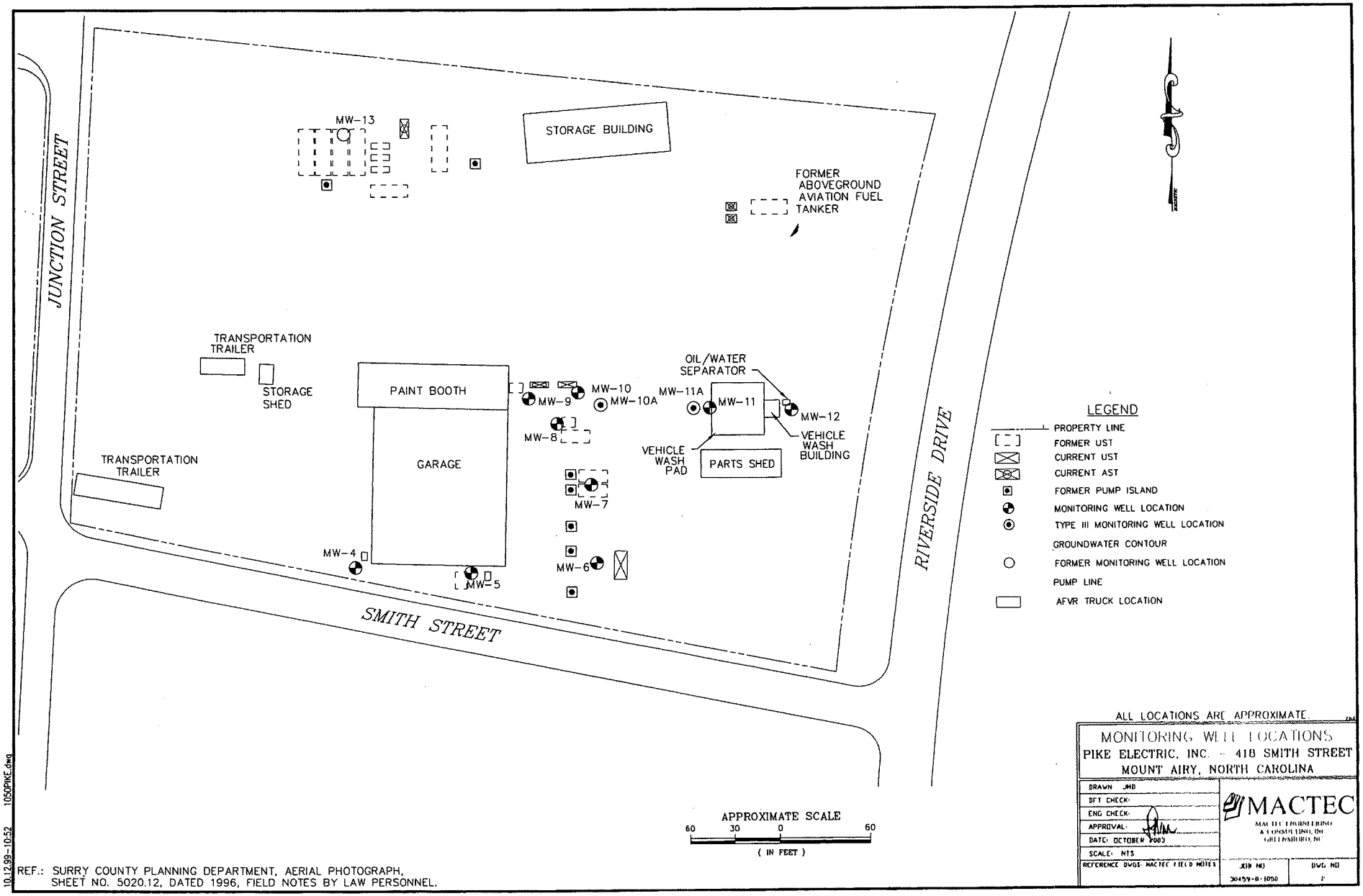
REF.: U.S.G.S. TOPOGRAPHIC MAPS,
MOUNT AIRY NORTH, VA.-N.C. QUADRANGLE,
DATED 1968, PHOTOREVISED 1977, MOUNT AIRY SOUTH,
N.C. QUADRANGLE, DATED 1970.

MACTEC

ENGINEERING AND CONSULTING, INC.
GREENSBORO, NORTH CAROLINA

SITE LOCATION MAP
PIKE ELECTRIC, INC. 418 SMITH ST.
MOUNT AIRY, NORTH CAROLINA

DRAWN BY JMB	DATE OCTOBER 2003
ENG CHECK	PROJECT NO. 34059-8-1050
APPROVAL	FIGURE 1



REF.: SURRY COUNTY PLANNING DEPARTMENT, AERIAL PHOTOGRAPH, SHEET NO. 5020.12, DATED 1996, FIELD NOTES BY LAW PERSONNEL.

TABLE

TABLE 1
GROUNDWATER ANALYTICAL RESULTS

PARAMETER		*Volatile Organic Compounds (mg/L)*																							*Volatile Petroleum Hydrocarbons (mg/L)*			*Semi-Volatile Organic Compounds*	*Extractable Petroleum Hydrocarbons (mg/L)*			*Total Metals (mg/L)*	
SAMPLE ID	COLLECTION DATE	Benzene	Toluene	Ethylbenzene	Total Xylene	1,1-Dichloroethane	1,1-Dichloroethene	1,1,1-Trichloroethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Di-isopropyl ether	MTBE	1,2-Dichloropropane	Bromodichloromethane	Chloroform	Cis-1,2-Dichloroethene	Isopropylbenzene	N-Propylbenzene	p-Isopropyltoluene	sec-Butylbenzene	Tetrachloroethene	Trans-1,2-Dichloroethene	Naphthalene	Trichloroethene	Vinyl Chloride	C_5 - C_8 Aliphatics	C_9- C_{12} Aliphatics	C_9- C_{10} Aromatics	TICs	C_9- C_{18} Aliphatics	C_{19}- C_{36} Aliphatics	C_{11}- C_{22} Aromatics	Chromium	Lead
MDL		0.001	0.005	0.001	0.003	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.005	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.1	0.1	0.1	0.005	0.1	0.1	0.1	0.01	0.01
MW-5	3/16/1999	0.323	9.13	1.84	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	BDL	15.6	18.7	6.05	NA	NA	NA	NA	NA	0.03
MW-5	1/17/2001	0.22	2.2	1.6	6.7	BDL	BDL	BDL	0.88	0.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.11	BDL	BDL	BDL	BDL	0.2	BDL	BDL	6.1	12.0	3.5	NA	NA	NA	NA	NA	0.12
MW-5	7/12/2001	0.11	1.8	0.92	3.4	BDL	BDL	BDL	0.5	0.065	BDL	BDL	0.094	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.2	BDL	BDL	2.7	4.2	1.1	NA	NA	NA	NA	NA	0.365
MW-5	2/1/2002	0.015	0.72	0.33	1.4	BDL	BDL	BDL	0.3	0.074	BDL	BDL	BDL	BDL	BDL	0.0081	0.013	0.048	0.002	0.0043	BDL	BDL	0.045	0.003	0.011	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-6	3/16/1999	0.074	0.086	0.25	0.927	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	BDL	BDL	BDL	BDL	BDL	0.063	BDL	BDL	0.735	3.59	2.18	1.125	1.52	BDL	0.313	NA	NA
MW-6	1/17/2001	0.046	0.07	0.26	0.83	BDL	BDL	BDL	0.17	0.071	BDL	BDL	BDL	BDL	BDL	BDL	0.026	0.073	BDL	BDL	BDL	BDL	0.11	BDL	BDL	0.77	2.3	1.1	0.582	0.63	0.11	1.9	NA	NA
MW-6	7/12/2001	0.13	0.95	1.1	5.1	BDL	BDL	BDL	1.7	0.44	BDL	BDL	BDL	BDL	BDL	BDL	0.058	0.17	BDL	BDL	BDL	BDL	0.46	BDL	BDL	2.4	9.8	3.0	1.152	5.0	1.2	3.5	NA	NA
MW-6	8/21/2001	0.067	0.31	0.53	2.0	BDL	BDL	BDL	0.49	0.16	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.11	BDL	BDL	BDL	BDL	0.18	BDL	BDL	1.4	4.7	2.4	1.465	2.0	0.3	2.1	NA	NA
MW-6	2/1/2002	0.16	BDL	0.38	1.4	BDL	BDL	BDL	0.42	0.21	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.12	BDL	BDL	BDL	BDL	0.18	BDL	BDL	NA	NA	NA	1.33	NA	NA	NA	NA	NA
MW-7	3/16/1999	0.034	0.0013	0.0076	0.0064	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL	BDL	BDL	BDL	BDL	BDL	0.016	BDL	BDL	0.108	0.206	0.301	0.087	0.484	0.216	0.371	NA	NA
MW-7	1/17/2001	0.015	BDL	BDL	BDL	BDL	BDL	BDL	0.046	0.014	BDL	BDL	BDL	BDL	BDL	BDL	0.0057	0.005	0.0034	0.0055	BDL	BDL	0.032	BDL	BDL	BDL	BDL	BDL	0.133	0.14	BDL	0.43	NA	NA
MW-7	7/12/2001	0.014	BDL	BDL	BDL	BDL	BDL	BDL	0.021	0.0069	0.013	0.01	BDL	BDL	BDL	BDL	0.0056	0.0028	0.0017	0.0038	BDL	BDL	0.012	BDL	0.0021	BDL	0.3	0.23	0.02	BDL	BDL	0.34	NA	NA
MW-7	8/21/2001	0.0037	BDL	0.0018	BDL	BDL	BDL	BDL	0.003	0.0019	BDL	BDL	BDL	BDL	BDL	BDL	0.0022	0.0016	BDL	0.0021	BDL	BDL	0.0029	BDL	BDL	BDL	0.24	0.22	0.144	BDL	BDL	0.27	NA	NA
MW-7	2/1/2002	0.009	BDL	BDL	BDL	BDL	BDL	BDL	0.0057	0.017	0.0078	BDL	BDL	BDL	BDL	BDL	0.0028	0.0024	0.0016	0.0023	BDL	BDL	0.017	BDL	BDL	NA	NA	NA	0.02	NA	NA	NA	NA	NA
MW-10	3/16/1999	0.0028	0.008	0.0048	0.027	0.012	0.0081	0.02	BDL	0.0099	BDL	BDL	BDL	BDL	BDL	0.19	BDL	0.0012	0.0013	BDL	0.0046	0.0042	BDL	0.076	0.066	0.15	BDL	BDL	BDL	0.361	0.288	0.273	0.033	0.026
MW-10	1/17/2001	BDL	0.02**	0.0038	0.0043	0.01	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.019	BDL	BDL	BDL	BDL	BDL	0.001	BDL	0.0025	0.0035	BDL	0.11	BDL	BDL	0.11	0.62	0.36	NA	0.26
MW-10	7/12/2001	BDL	BDL	0.0014	BDL	0.0032	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.0054	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.0013	BDL	BDL	BDL	BDL	BDL	0.52	3.3	0.89	NA	0.044
MW-10	2/1/2002	0.0025	BDL	0.0024	0.0058	0.015	BDL	0.0037	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.0200	BDL	BDL	BDL	BDL	0.0014	0.003	BDL	0.0019	0.0025	NA	NA	NA	0.02	NA	NA	NA	NA	NA
MW-10A	4/24/2003	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-10A	8/26/2003	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	NA	NA
MW-11	3/16/1999	0.0038	0.001	0.005	0.0021	BDL	BDL	BDL	BDL	0.0006	BDL	BDL	BDL	BDL	BDL	0.024	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.008	0.0071	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.051	0.366
MW-11	1/17/2001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.13	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.0067	0.049	BDL	BDL	BDL	0.13	BDL	BDL	BDL	NA	0.12
MW-11	7/12/2001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.23	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.046	0.46	BDL	BDL	BDL	BDL	BDL	BDL	NA	0.11
MW-11	2/1/2002	0.0041	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.13	BDL	BDL	BDL	BDL	BDL	0.0034	BDL	0.0019	0.042	NA	NA	NA	BDL	NA	NA	NA	NA	NA
MW-11	4/24/2003	0.0025	BDL	BDL	BDL	0.001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.0040	BDL	BDL	0.042	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-11	8/26/2003	0.0034	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.52	BDL	BDL	BDL	BDL	0.0023	BDL	BDL	BDL	BDL	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-11A	3/15/2000	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.0039	0.03	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.023	BDL	BDL	BDL	NA	BDL
MW-11A	1/17/2001	BDL	0.004**	BDL	BDL	BDL	BDL	BDL	0.0011	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.0013	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	0.0056
MW-11A	7/12/2001	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	BDL
MW-11A	4/24/2003	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-11A	8/26/2003	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-12	4/24/2003	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-12	8/26/2003	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	NA	NA	NA	NA	NA	NA	NA	NA	NA
State 2L Standards 1998		0.001	1	0.029	0.530	0.70	0.01	0.2	0.35	0.350	0.07	0.2	0.00056	0.0006	0.0019	0.07	0.07	0.07	MDL	0.07	0.0007	0.07	0.021	0.0028	0.000015	0.42	4.2	0.21	MDL	4.2	4.2	0.21	0.5	0.015
Gross Contaminant Levels		5.0	257.5	29.0	87.5	700.0	7.0	200*	28.5	25	70	200	1	0.6*	1.9*	70*	70	30	NE	8.5	0.7*	70	15.5	2.8*	0.015*	NE	NE	NE	NE	NE	NE	NE	0.5	0.015

Prepared by: [illegible] Date: 10/03
Checked by: [illegible] Date: 10/03

NOTES:
BDL = Below Detection Limit

Bold = Value exceeds 2L Groundwater Quality Standards
ppm = parts per million
NA = Not Analyzed
N/A = Not Applicable
NE = Not Established
mg/L = milligrams per liter
TIC = Tentatively Identified Compound
* GCL determined as the lower of 50% of the compound solubility @ 25°C or 100 times the State 2L Groundwater Quality Standard
** Identified as a TIC using EPA Method 625

APPENDIX A

ENVIRONMENTAL
SCIENCE CORP.

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

May 02, 2003

Mr. Randy Johnson
MACTEC - Greensboro, NC
7347-E West Friendly Avenue
Greensboro, NC 27410

ESC Sample # : L111950-01

Date Received : April 25, 2003
Description : Pike Electric

Site ID : PIKE ELECTRIC

Sample ID : MW-10A

Project # : 30459-8-1050

Collected By : Randall Johnson
Collection Date : 04/24/03 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Methane	BDL	1.0	ppm	8015M	04/27/03	1
Chloride	8.3	1.0	mg/l	9056	04/25/03	1
Nitrate	1.9	0.10	mg/l	9056	04/25/03	1
Sulfate	BDL	5.0	mg/l	9056	04/25/03	1
Alkalinity	440	20.	mg/l	310.2	04/29/03	2
Free Carbon Dioxide	54.	0.0	mg/l	406B	04/25/03	1
Ethane	BDL	10.	ppm	8015M	04/27/03	1
Ethene	BDL	10.	ppm	8015M	04/27/03	1
ORP	200		mV	2580	04/28/03	1
Sulfide	BDL	0.050	mg/l	9030B	04/28/03	1
TOC (Total Organic Carbon)	BDL	1.0	mg/l	9060	04/26/03	1
Iron,Dissolved	BDL	0.050	mg/l	6010B	04/26/03	1
Manganese,Dissolved	0.053	0.010	mg/l	6010B	04/26/03	1
Volatile Organics						
Acetone	BDL	0.050	mg/l	8260B	04/25/03	1
Acrolein	BDL	0.050	mg/l	8260B	04/25/03	1
Acrylonitrile	BDL	0.050	mg/l	8260B	04/25/03	1
Benzene	BDL	0.0010	mg/l	8260B	04/25/03	1
Bromobenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	04/25/03	1
Bromoform	BDL	0.0010	mg/l	8260B	04/25/03	1
Bromomethane	BDL	0.0010	mg/l	8260B	04/25/03	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	04/25/03	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	04/25/03	1
Chloroethane	BDL	0.0010	mg/l	8260B	04/25/03	1

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)

Laboratory Certification Numbers:
A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

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Est. 1970

REPORT OF ANALYSIS

May 02, 2003

Mr. Randy Johnson
MACTEC - Greensboro, NC
7347-E West Friendly Avenue
Greensboro, NC 27410

ESC Sample # : L111950-01

Date Received : April 25, 2003
Description : Pike Electric

Site ID : PIKE ELECTRIC

Sample ID : MW-10A

Project # : 30459-8-1050

Collected By : Randall Johnson
Collection Date : 04/24/03 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	04/25/03	1
Chloroform	BDL	0.0050	mg/l	8260B	04/25/03	1
Chloromethane	BDL	0.0010	mg/l	8260B	04/25/03	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	04/25/03	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,2-Dibromo-3-Chloropropane	BDL	0.0020	mg/l	8260B	04/25/03	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	04/25/03	1
Dibromomethane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
Dichlorodifluoromethane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	04/25/03	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	04/25/03	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,3-Dichloropropane	BDL	0.0010	mg/l	8260B	04/25/03	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	04/25/03	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	04/25/03	1
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	04/25/03	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	04/25/03	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
Hexachlorobutadiene	BDL	0.0010	mg/l	8260B	04/25/03	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	04/25/03	1
2-Butanone (MEK)	BDL	0.050	mg/l	8260B	04/25/03	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	04/25/03	1
4-Methyl-2-pentanone (MIBK)	BDL	0.050	mg/l	8260B	04/25/03	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	04/25/03	1
Naphthalene	BDL	0.0050	mg/l	8260B	04/25/03	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
Styrene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	04/25/03	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	04/25/03	1
Toluene	BDL	0.0050	mg/l	8260B	04/25/03	1

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)

Laboratory Certification Numbers:
A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

May 02, 2003

Mr. Randy Johnson
MACTEC - Greensboro, NC
7347-E West Friendly Avenue
Greensboro, NC 27410

ESC Sample # : L111950-01

Date Received : April 25, 2003
Description : Pike Electric

Site ID : PIKE ELECTRIC

Sample ID : MW-10A

Project # : 30459-8-1050

Collected By : Randall Johnson
Collection Date : 04/24/03 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	04/25/03	1
Trichloroethene	BDL	0.0010	mg/l	8260B	04/25/03	1
Trichlorofluoromethane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,2,3-Trichloropropane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	04/25/03	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	04/25/03	1
Surrogate Recovery						
Toluene-d8	99.		% Rec.	8260B	04/25/03	1
Dibromofluoromethane	100		% Rec.	8260B	04/25/03	1
4-Bromofluorobenzene	97.		% Rec.	8260B	04/25/03	1

Jimmy Hunt, ESC Representative

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)

Laboratory Certification Numbers:
A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

Note:
The reported analytical results relate only to the sample submitted.
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Reported: 05/02/03 11:36 Printed: 05/02/03 11:37

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Est. 1970

REPORT OF ANALYSIS

May 02, 2003

Mr. Randy Johnson
MACTEC - Greensboro, NC
7347-E West Friendly Avenue
Greensboro, NC 27410

ESC Sample # : L111950-02

Date Received : April 25, 2003
Description : Pike Electric

Site ID : PIKE ELECTRIC

Sample ID : MW-11

Project # : 30459-8-1050

Collected By : Randall Johnson
Collection Date : 04/24/03 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Methane	2.5	1.0	ppm	8015M	04/27/03	1
Chloride	4.2	1.0	mg/l	9056	04/25/03	1
Nitrate	BDL	0.10	mg/l	9056	04/25/03	1
Sulfate	18.	5.0	mg/l	9056	04/25/03	1
Alkalinity	160	10.	mg/l	310.2	04/29/03	1
Free Carbon Dioxide	240	0.0	mg/l	406B	04/25/03	1
Ethane	BDL	10.	ppm	8015M	04/27/03	1
Ethene	BDL	10.	ppm	8015M	04/27/03	1
ORP	180		mV	2580	04/28/03	1
Sulfide	BDL	0.050	mg/l	9030B	04/28/03	1
TOC (Total Organic Carbon)	16.	1.0	mg/l	9060	04/26/03	1
Iron,Dissolved	7.8	0.050	mg/l	6010B	04/26/03	1
Manganese,Dissolved	18.	0.010	mg/l	6010B	04/26/03	1
Volatile Organics						
Acetone	BDL	0.050	mg/l	8260B	04/25/03	1
Acrolein	BDL	0.050	mg/l	8260B	04/25/03	1
Acrylonitrile	BDL	0.050	mg/l	8260B	04/25/03	1
Benzene	0.0025	0.0010	mg/l	8260B	04/25/03	1
Bromobenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	04/25/03	1
Bromoform	BDL	0.0010	mg/l	8260B	04/25/03	1
Bromomethane	BDL	0.0010	mg/l	8260B	04/25/03	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	04/25/03	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	04/25/03	1
Chloroethane	BDL	0.0010	mg/l	8260B	04/25/03	1

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)

Laboratory Certification Numbers:
A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

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REPORT OF ANALYSIS

May 02, 2003

Mr. Randy Johnson
MACTEC - Greensboro, NC
7347-E West Friendly Avenue
Greensboro, NC 27410

ESC Sample # : L111950-02

Date Received : April 25, 2003
Description : Pike Electric

Site ID : PIKE ELECTRIC

Sample ID : MW-11

Project # : 30459-8-1050

Collected By : Randall Johnson
Collection Date : 04/24/03 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	04/25/03	1
Chloroform	BDL	0.0050	mg/l	8260B	04/25/03	1
Chloromethane	BDL	0.0010	mg/l	8260B	04/25/03	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	04/25/03	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,2-Dibromo-3-Chloropropane	BDL	0.0020	mg/l	8260B	04/25/03	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	04/25/03	1
Dibromomethane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
Dichlorodifluoromethane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,1-Dichloroethane	0.0012	0.0010	mg/l	8260B	04/25/03	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	04/25/03	1
cis-1,2-Dichloroethene	0.13	0.0050	mg/l	8260B	04/29/03	5
trans-1,2-Dichloroethene	0.0036	0.0010	mg/l	8260B	04/25/03	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,3-Dichloropropane	BDL	0.0010	mg/l	8260B	04/25/03	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	04/25/03	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	04/25/03	1
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	04/25/03	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	04/25/03	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
Hexachlorobutadiene	BDL	0.0010	mg/l	8260B	04/25/03	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	04/25/03	1
2-Butanone (MEK)	BDL	0.050	mg/l	8260B	04/25/03	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	04/25/03	1
4-Methyl-2-pentanone (MIBK)	BDL	0.050	mg/l	8260B	04/25/03	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	04/25/03	1
Naphthalene	BDL	0.0050	mg/l	8260B	04/25/03	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
Styrene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	04/25/03	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	04/25/03	1
Toluene	BDL	0.0050	mg/l	8260B	04/25/03	1

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)

Laboratory Certification Numbers:
A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

May 02, 2003

Mr. Randy Johnson
MACTEC - Greensboro, NC
7347-E West Friendly Avenue
Greensboro, NC 27410

ESC Sample # : L111950-02

Date Received : April 25, 2003
Description : Pike Electric

Site ID : PIKE ELECTRIC

Sample ID : MW-11

Project # : 30459-8-1050

Collected By : Randall Johnson
Collection Date : 04/24/03 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	04/25/03	1
Trichloroethene	BDL	0.0010	mg/l	8260B	04/25/03	1
Trichlorofluoromethane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,2,3-Trichloropropane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
Vinyl chloride	0.042	0.0010	mg/l	8260B	04/25/03	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	04/25/03	1
Surrogate Recovery						
Toluene-d8	99.		% Rec.	8260B	04/25/03	1
Dibromofluoromethane	100		% Rec.	8260B	04/25/03	1
4-Bromofluorobenzene	99.		% Rec.	8260B	04/25/03	1

Jimmy Hunt, ESC Representative

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)

Laboratory Certification Numbers:
A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

Note:
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REPORT OF ANALYSIS

May 02, 2003

Mr. Randy Johnson
MACTEC - Greensboro, NC
7347-E West Friendly Avenue
Greensboro, NC 27410

ESC Sample # : L111950-03

Date Received : April 25, 2003
Description : Pike Electric

Site ID : PIKE ELECTRIC

Sample ID : MW-11A

Project # : 30459-8-1050

Collected By : Randall Johnson
Collection Date : 04/24/03 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Methane	BDL	1.0	ppm	8015M	04/27/03	1
Chloride	8.5	1.0	mg/l	9056	04/25/03	1
Nitrate	2.2	0.10	mg/l	9056	04/25/03	1
Sulfate	BDL	5.0	mg/l	9056	04/25/03	1
Alkalinity	19.	10.	mg/l	310.2	04/29/03	1
Free Carbon Dioxide	48.	0.0	mg/l	406B	04/25/03	1
Ethane	BDL	10.	ppm	8015M	04/27/03	1
Ethene	BDL	10.	ppm	8015M	04/27/03	1
ORP	170		mV	2580	04/28/03	1
Sulfide	BDL	0.050	mg/l	9030B	04/28/03	1
TOC (Total Organic Carbon)	BDL	1.0	mg/l	9060	04/26/03	1
Iron,Dissolved	BDL	0.050	mg/l	6010B	04/26/03	1
Manganese,Dissolved	0.011	0.010	mg/l	6010B	04/26/03	1
Volatile Organics						
Acetone	BDL	0.050	mg/l	8260B	04/25/03	1
Acrolein	BDL	0.050	mg/l	8260B	04/25/03	1
Acrylonitrile	BDL	0.050	mg/l	8260B	04/25/03	1
Benzene	BDL	0.0010	mg/l	8260B	04/25/03	1
Bromobenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	04/25/03	1
Bromoform	BDL	0.0010	mg/l	8260B	04/25/03	1
Bromomethane	BDL	0.0010	mg/l	8260B	04/25/03	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	04/25/03	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	04/25/03	1
Chloroethane	BDL	0.0010	mg/l	8260B	04/25/03	1

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)

Laboratory Certification Numbers:
A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

RJ

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REPORT OF ANALYSIS

May 02, 2003

Mr. Randy Johnson
MACTEC - Greensboro, NC
7347-E West Friendly Avenue
Greensboro, NC 27410

ESC Sample # : L111950-03

Date Received : April 25, 2003
Description : Pike Electric

Site ID : PIKE ELECTRIC

Sample ID : MW-11A

Project # : 30459-8-1050

Collected By : Randall Johnson
Collection Date : 04/24/03 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	04/25/03	1
Chloroform	BDL	0.0050	mg/l	8260B	04/25/03	1
Chloromethane	BDL	0.0010	mg/l	8260B	04/25/03	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	04/25/03	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,2-Dibromo-3-Chloropropane	BDL	0.0020	mg/l	8260B	04/25/03	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	04/25/03	1
Dibromomethane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
Dichlorodifluoromethane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	04/25/03	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	04/25/03	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,3-Dichloropropane	BDL	0.0010	mg/l	8260B	04/25/03	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	04/25/03	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	04/25/03	1
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	04/25/03	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	04/25/03	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
Hexachlorobutadiene	BDL	0.0010	mg/l	8260B	04/25/03	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	04/25/03	1
2-Butanone (MEK)	BDL	0.050	mg/l	8260B	04/25/03	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	04/25/03	1
4-Methyl-2-pentanone (MIBK)	BDL	0.050	mg/l	8260B	04/25/03	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	04/25/03	1
Naphthalene	BDL	0.0050	mg/l	8260B	04/25/03	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
Styrene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	04/25/03	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	04/25/03	1
Toluene	BDL	0.0050	mg/l	8260B	04/25/03	1

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)

Laboratory Certification Numbers:
A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

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REPORT OF ANALYSIS

May 02, 2003

Mr. Randy Johnson
MACTEC - Greensboro, NC
7347-E West Friendly Avenue
Greensboro, NC 27410

ESC Sample # : L111950-03

Date Received : April 25, 2003
Description : Pike Electric

Site ID : PIKE ELECTRIC

Sample ID : MW-11A

Project # : 30459-8-1050

Collected By : Randall Johnson
Collection Date : 04/24/03 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	04/25/03	1
Trichloroethene	BDL	0.0010	mg/l	8260B	04/25/03	1
Trichlorofluoromethane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,2,3-Trichloropropane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	04/25/03	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	04/25/03	1
Surrogate Recovery						
Toluene-d8	99.		% Rec.	8260B	04/25/03	1
Dibromofluoromethane	100		% Rec.	8260B	04/25/03	1
4-Bromofluorobenzene	97.		% Rec.	8260B	04/25/03	1

Jimmy Hunt, ESC Representative

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)

Laboratory Certification Numbers:
A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

Note:
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REPORT OF ANALYSIS

May 02, 2003

Mr. Randy Johnson
MACTEC - Greensboro, NC
7347-E West Friendly Avenue
Greensboro, NC 27410

ESC Sample # : L111950-04

Date Received : April 25, 2003
Description : Pike Electric

Site ID : PIKE ELECTRIC

Sample ID : MW-12

Project # : 30459-8-1050

Collected By : Randall Johnson
Collection Date : 04/24/03 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Methane	BDL	1.0	ppm	8015M	04/27/03	1
Chloride	1.3	1.0	mg/l	9056	04/25/03	1
Nitrate	BDL	0.10	mg/l	9056	04/25/03	1
Sulfate	62.	5.0	mg/l	9056	04/25/03	1
Alkalinity	180	10.	mg/l	310.2	04/29/03	1
Free Carbon Dioxide	101.	0.00	mg/l	406B	04/25/03	1
Ethane	BDL	10.	ppm	8015M	04/27/03	1
Ethene	BDL	10.	ppm	8015M	04/27/03	1
ORP	200		mV	2580	04/28/03	1
Sulfide	BDL	0.050	mg/l	9030B	04/28/03	1
TOC (Total Organic Carbon)	18.	1.0	mg/l	9060	04/26/03	1
Iron,Dissolved	3.2	0.050	mg/l	6010B	04/26/03	1
Manganese,Dissolved	8.2	0.010	mg/l	6010B	04/26/03	1
Volatile Organics						
Acetone	BDL	0.050	mg/l	8260B	04/25/03	1
Acrolein	BDL	0.050	mg/l	8260B	04/25/03	1
Acrylonitrile	BDL	0.050	mg/l	8260B	04/25/03	1
Benzene	BDL	0.0010	mg/l	8260B	04/25/03	1
Bromobenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	04/25/03	1
Bromoform	BDL	0.0010	mg/l	8260B	04/25/03	1
Bromomethane	BDL	0.0010	mg/l	8260B	04/25/03	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	04/25/03	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	04/25/03	1
Chloroethane	BDL	0.0010	mg/l	8260B	04/25/03	1

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)

Laboratory Certification Numbers:
A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

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REPORT OF ANALYSIS

May 02, 2003

Mr. Randy Johnson
MACTEC - Greensboro, NC
7347-E West Friendly Avenue
Greensboro, NC 27410

ESC Sample # : L111950-04

Date Received : April 25, 2003
Description : Pike Electric

Site ID : PIKE ELECTRIC

Sample ID : MW-12

Project # : 30459-8-1050

Collected By : Randall Johnson
Collection Date : 04/24/03 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	04/25/03	1
Chloroform	BDL	0.0050	mg/l	8260B	04/25/03	1
Chloromethane	BDL	0.0010	mg/l	8260B	04/25/03	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	04/25/03	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,2-Dibromo-3-Chloropropane	BDL	0.0020	mg/l	8260B	04/25/03	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	04/25/03	1
Dibromomethane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
Dichlorodifluoromethane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	04/25/03	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	04/25/03	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,3-Dichloropropane	BDL	0.0010	mg/l	8260B	04/25/03	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	04/25/03	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	04/25/03	1
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	04/25/03	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	04/25/03	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
Hexachlorobutadiene	BDL	0.0010	mg/l	8260B	04/25/03	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	04/25/03	1
2-Butanone (MEK)	BDL	0.050	mg/l	8260B	04/25/03	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	04/25/03	1
4-Methyl-2-pentanone (MIBK)	BDL	0.050	mg/l	8260B	04/25/03	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	04/25/03	1
Naphthalene	BDL	0.0050	mg/l	8260B	04/25/03	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
Styrene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	04/25/03	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	04/25/03	1
Toluene	BDL	0.0050	mg/l	8260B	04/25/03	1

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)

Laboratory Certification Numbers:
A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

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Tax I.D. 62-0814289

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REPORT OF ANALYSIS

May 02, 2003

Mr. Randy Johnson
MACTEC - Greensboro, NC
7347-E West Friendly Avenue
Greensboro, NC 27410

ESC Sample # : L111950-04

Date Received : April 25, 2003
Description : Pike Electric

Site ID : PIKE ELECTRIC

Sample ID : MW-12

Project # : 30459-8-1050

Collected By : Randall Johnson
Collection Date : 04/24/03 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	04/25/03	1
Trichloroethene	BDL	0.0010	mg/l	8260B	04/25/03	1
Trichlorofluoromethane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,2,3-Trichloropropane	BDL	0.0010	mg/l	8260B	04/25/03	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	04/25/03	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	04/25/03	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	04/25/03	1
Surrogate Recovery						
Toluene-d8	99.		% Rec.	8260B	04/25/03	1
Dibromofluoromethane	100		% Rec.	8260B	04/25/03	1
4-Bromofluorobenzene	98.		% Rec.	8260B	04/25/03	1

Jimmy Hunt, ESC Representative

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)

Laboratory Certification Numbers:
A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

Note:
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Reported: 05/02/03 11:36 Printed: 05/02/03 11:37

Attachment A
List of Analytes with QC Qualifiers

Sample #	Analyte	Qualifier
L111950-01	Free Carbon Dioxide	T8
	Acrolein	J4
	2-Chloroethyl vinyl ether	J4
L111950-02	Free Carbon Dioxide	T8
	Acrolein	J4
	2-Chloroethyl vinyl ether	J4
L111950-03	Free Carbon Dioxide	T8
	Acrolein	J4
	2-Chloroethyl vinyl ether	J4
L111950-04	Free Carbon Dioxide	T8
	Acrolein	J4
	2-Chloroethyl vinyl ether	J4

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J4	The associated batch QC was outside the established quality control range for accuracy.
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods,it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Differrence.

Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

Control Limits

2-Fluorophenol	31-119	Nitrobenzene-d5	43-118	Dibromfluoromethane	72-125
Phenol-d5	12-134	2-Fluorobiphenyl	45-128	Toluene-d8	79-120
2,4,6-Tribromophenol	51-141	Terphenyl-d14	43-137	4-Bromofluorobenzene	66-131

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

MACTEC - Greensboro, NC

7347-E West Friendlv Avenue
Greensboro,NC 27410

Alternate billing information:

Report to: **Mr. Randy Johnson**

Email: **rsjohnson@mactec.com**

Project Description: **Pike Electric**

City/State Collected

Phone: (336) 294-4221
FAX: (336) 294-4227

Client Project #: **30459-8-1050**

Lab Project # **LAWENGNC-3045981050**

Collected by (print): Randall S. Johnson

Site/Facility ID#: **PIKE ELECTRIC**

P.O.#:

Collected by (signature):

Packed on Ice N (Y)

Rush? (Lab MUST Be Notified)
___Same Day.....200%
___Next Day.....100%
___Two Day.....50%

Date Results Needed

Email? __No X Yes
FAX? No Yes

Analysis/Container/Preservative

Chain of Custody
Page 1 of 1

Prepared by:
ENVIRONMENTAL SCIENCE CORP.
12065 Lebanon Road
Mt. Juliet, TN 37122
Phone (800) 767-5859
FAX (615) 758-5859

CoCode: **LAWENGNC** (lab use only)
Template/Prelogin: **T19032/ P82082**
Cooler#:
Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	AEK, ORP 500mlHDPE-NoPres	CO2 250mlHDPE-NoPres	Cl, NO3, SO4 125mlHDPE-NoPres	Diss. Fe and Mn 500mlHDPE-NoPres	Methane,Ethane,Ethene 40mlAmb-NoPres	SULFIDE 500mlHDPE-NaOH+ZnAc	TOC 250mlAmb-Septa-HCl	V8260 40mlAmb-HCl	Remarks/Contaminant	Sample # (lab only)
MW-10A		GW		4/24/03		10	X	X	X	X	X	X	X	X		L11950-01
MW-11		GW				10	X	X	X	X	X	X	X	X		02
MW-11A		GW				10	X	X	X	X	X	X	X	X		03
MW-12		GW				10	X	X	X	X	X	X	X	X		04

*Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: ☐ UPS ☑ FedEx ☐ Courier ☐	Condition: (lab use only)
	4/24/04				OK
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.4°C Bottles Received: 40+H6	
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 4/25/03 Time: 9:00	pH Checked: <2 >12 NCF:

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Mr. Randy Johnson
MACTEC - Greensboro, NC
7347-E West Friendly Avenue
Greensboro, NC 27410

May 09, 2003

ESC Sample # : L112118-01

Site ID : PIKE ELECTRIC

Project # : 30459-8-1050

Date Received : April 26, 2003
Description : Pike Electric

Sample ID : MW-10A

Collected By :
Collection Date : 04/25/03 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Acetic Acid	BDL	10.	mg/l		04/28/03	1
Propionic Acid	BDL	25.	mg/l		04/28/03	1
Lactic Acid	BDL	10.	mg/l		04/28/03	1
Pyruvic Acid	BDL	25.	mg/l		04/28/03	1
Butyric Acid	BDL	25.	mg/l		04/28/03	1

Jimmy Hunt, ESC Representative

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)

Laboratory Certification Numbers:
A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

Note:
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Reported: 05/09/03 17:05 Printed: 05/09/03 17:05
L112118-01 (ORG ACIDS) - Subcontracted to Analytical Services, Inc.

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Tax I.D. 62-0814289

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REPORT OF ANALYSIS

Mr. Randy Johnson
MACTEC - Greensboro, NC
7347-E West Friendly Avenue
Greensboro, NC 27410

May 09, 2003

ESC Sample # : L112118-03

Date Received : April 26, 2003
Description : Pike Electric

Site ID : PIKE ELECTRIC

Sample ID : MW-11A

Project # : 30459-8-1050

Collected By :
Collection Date : 04/25/03 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Acetic Acid	BDL	10.	mg/l		04/28/03	1
Propionic Acid	BDL	25.	mg/l		04/28/03	1
Lactic Acid	BDL	10.	mg/l		04/28/03	1
Pyruvic Acid	BDL	25.	mg/l		04/28/03	1
Butyric Acid	BDL	25.	mg/l		04/28/03	1

Jimmy Hunt, ESC Representative

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)

Laboratory Certification Numbers:
A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

Note:
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Reported: 05/09/03 17:05 Printed: 05/09/03 17:06
L112118-03 (ORG ACIDS) - Subcontracted to Analytical Services, Inc.

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REPORT OF ANALYSIS

Mr. Randy Johnson
MACTEC - Greensboro, NC
7347-E West Friendly Avenue
Greensboro, NC 27410

May 09, 2003

ESC Sample # : L112118-02

Date Received : April 26, 2003
Description : Pike Electric

Site ID : PIKE ELECTRIC

Sample ID : MW-11

Project # : 30459-8-1050

Collected By :
Collection Date : 04/25/03 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Acetic Acid	BDL	10.	mg/l		04/28/03	1
Propionic Acid	BDL	25.	mg/l		04/28/03	1
Lactic Acid	BDL	10.	mg/l		04/28/03	1
Pyruvic Acid	BDL	25.	mg/l		04/28/03	1
Butyric Acid	BDL	25.	mg/l		04/28/03	1

Jimmy Hunt, ESC Representative

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)

Laboratory Certification Numbers:
A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

Note:
The reported analytical results relate only to the sample submitted.
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Reported: 05/09/03 17:05 Printed: 05/09/03 17:05
L112118-02 (ORG ACIDS) - Subcontracted to Analytical Services, Inc.

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REPORT OF ANALYSIS

Mr. Randy Johnson
MACTEC - Greensboro, NC
7347-E West Friendly Avenue
Greensboro, NC 27410

May 09, 2003

ESC Sample # : L112118-04

Date Received : April 26, 2003
Description : Pike Electric

Site ID : PIKE ELECTRIC

Sample ID : MW-12

Project # : 30459-8-1050

Collected By :
Collection Date : 04/25/03 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Acetic Acid	BDL	10.	mg/l		04/28/03	1
Propionic Acid	BDL	25.	mg/l		04/28/03	1
Lactic Acid	BDL	10.	mg/l		04/28/03	1
Pyruvic Acid	BDL	25.	mg/l		04/28/03	1
Butyric Acid	BDL	25.	mg/l		04/28/03	1

Jimmy Hunt, ESC Representative

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)

Laboratory Certification Numbers:
A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

Note:
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Reported: 05/09/03 17:05 Printed: 05/09/03 17:06
L112118-04 (ORG ACIDS) - Subcontracted to Analytical Services, Inc.

MACTEC - Greensboro, NC

7347-E West Friendlv Avenue
Greensboro,NC 27410

Alternate billing information:

Analysis/Container/Preservative

Chain of Custody
Page ___ of ___

Prepared by:
ENVIRONMENTAL SCIENCE CORP.
12065 Lebanon Road
Mt. Juliet, TN 37122
Phone (800) 767-5859
FAX (615) 758-5859

Report to: Mr. Randy Johnson

Email: rsjohnson@mactec.com

Project Description: Pike Electric

City/State Collected

Phone: (336) 294-4221
FAX: (336) 294-4227

Client Project #: 30459-8-1050

Lab Project #: LAWENGNC-30459810 50

Collected by (print):

Site/Facility ID#: PIKE ELECTRIC

P.O.#:

Collected by (signature):

Packed on Ice N ___ Y ___

Rush? (Lab MUST Be Notified)
___Same Day 200%
___ Next Day.....100%
___ Two Day 50%

Date Results Needed

Email? __No X Yes
FAX? __No __Yes

CoCode: LAWENGNC (lab use only)
Template/Prelogin: T19036/ P82081
Cooler #: 4-21-03
Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	ORG ACIDS 40mlClr-NoPres						Remarks/Contaminant	Sample # (lab only)
MW-10A		GW		4/25/03		2	X							L112118-01
MW-11		GW		↑		2	X							-02
MW-11A		GW		↕		2	X							-03
MW-12		GW		↓		2	X							-04

*Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other _____

pH _____ Temp _____

Remarks:

Flow _____ Other _____

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐	Condition: (lab use only)
	4/25/03	4:10			
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 2.8° Bottles Received: 8V	OK
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 4/26/03 Time: 10:30	pH Checked: NCF:

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

September 03, 2003

Mr. Randy Johnson
MACTEC - Greensboro, NC
7347-E West Friendly Avenue
Greensboro, NC 27410

ESC Sample # : L125436-01

Date Received : August 27, 2003
Description : Pike Electric

Site ID : PIKE ELECTRIC

Sample ID : MW-10A

Project # : 30459-8-1050

Collected By : Randall S. Johnson
Collection Date : 08/26/03 12:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Methane	BDL	1.0	ppm	8015M	08/28/03	1
Chloride	8.8	1.0	mg/l	9056	08/30/03	1
Nitrate	2.2	0.10	mg/l	9056	08/30/03	1
Sulfate	BDL	5.0	mg/l	9056	08/30/03	1
Alkalinity	28.	10.	mg/l	310.2	08/29/03	1
Free Carbon Dioxide	260	0.0	mg/l	406B	08/27/03	1
Ethane	BDL	10.	ppm	8015M	08/28/03	1
Ethene	BDL	10.	ppm	8015M	08/28/03	1
ORP	140		mV	2580	09/03/03	1
Sulfide	BDL	0.050	mg/l	9030B	08/30/03	1
TOC (Total Organic Carbon)	BDL	1.0	mg/l	9060	08/27/03	1
Iron,Dissolved	BDL	0.050	mg/l	6010B	08/28/03	1
Manganese,Dissolved	BDL	0.010	mg/l	6010B	08/28/03	1
Volatile Organics						
Acetone	BDL	0.050	mg/l	8260B	08/28/03	1
Acrolein	BDL	0.050	mg/l	8260B	08/28/03	1
Acrylonitrile	BDL	0.050	mg/l	8260B	08/28/03	1
Benzene	BDL	0.0010	mg/l	8260B	08/28/03	1
Bromobenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	08/28/03	1
Bromoform	BDL	0.0010	mg/l	8260B	08/28/03	1
Bromomethane	BDL	0.0010	mg/l	8260B	08/28/03	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	08/28/03	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	08/28/03	1
Chloroethane	BDL	0.0010	mg/l	8260B	08/28/03	1

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)

Laboratory Certification Numbers:
A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

September 03, 2003

Mr. Randy Johnson
MACTEC - Greensboro, NC
7347-E West Friendly Avenue
Greensboro, NC 27410

ESC Sample # : L125436-01

Date Received : August 27, 2003
Description : Pike Electric

Site ID : PIKE ELECTRIC

Sample ID : MW-10A

Project # : 30459-8-1050

Collected By : Randall S. Johnson
Collection Date : 08/26/03 12:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	08/28/03	1
Chloroform	BDL	0.0050	mg/l	8260B	08/28/03	1
Chloromethane	BDL	0.0010	mg/l	8260B	08/28/03	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	08/28/03	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,2-Dibromo-3-Chloropropane	BDL	0.0020	mg/l	8260B	08/28/03	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	08/28/03	1
Dibromomethane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
Dichlorodifluoromethane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	08/28/03	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	08/28/03	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,3-Dichloropropane	BDL	0.0010	mg/l	8260B	08/28/03	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	08/28/03	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	08/28/03	1
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	08/28/03	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	08/28/03	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
Hexachlorobutadiene	BDL	0.0010	mg/l	8260B	08/28/03	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	08/28/03	1
2-Butanone (MEK)	BDL	0.050	mg/l	8260B	08/28/03	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	08/28/03	1
4-Methyl-2-pentanone (MIBK)	BDL	0.050	mg/l	8260B	08/28/03	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	08/28/03	1
Naphthalene	BDL	0.0050	mg/l	8260B	08/28/03	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
Styrene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	08/28/03	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	08/28/03	1
Toluene	BDL	0.0050	mg/l	8260B	08/28/03	1

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)

Laboratory Certification Numbers:
A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

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REPORT OF ANALYSIS

Mr. Randy Johnson
MACTEC - Greensboro, NC
7347-E West Friendly Avenue
Greensboro, NC 27410

September 03, 2003

ESC Sample # : L125436-01

Site ID : PIKE ELECTRIC

Project # : 30459-8-1050

Date Received : August 27, 2003
Description : Pike Electric

Sample ID : MW-10A

Collected By : Randall S. Johnson
Collection Date : 08/26/03 12:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	08/28/03	1
Trichloroethene	BDL	0.0010	mg/l	8260B	08/28/03	1
Trichlorofluoromethane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,2,3-Trichloropropane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	08/28/03	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	08/28/03	1
Surrogate Recovery						
Toluene-d8	99.		% Rec.	8260B	08/28/03	1
Dibromofluoromethane	96.		% Rec.	8260B	08/28/03	1
4-Bromofluorobenzene	100		% Rec.	8260B	08/28/03	1

Jimmy Hunt, ESC Representative

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)

Laboratory Certification Numbers:
A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

Note:
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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

September 03, 2003

Mr. Randy Johnson
MACTEC - Greensboro, NC
7347-E West Friendly Avenue
Greensboro, NC 27410

ESC Sample # : L125436-02

Date Received : August 27, 2003
Description : Pike Electric

Site ID : PIKE ELECTRIC

Sample ID : MW-11

Project # : 30459-8-1050

Collected By : Randall S. Johnson
Collection Date : 08/26/03 13:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Methane	BDL	1.0	ppm	8015M	08/28/03	1
Chloride	3.6	1.0	mg/l	9056	08/30/03	1
Nitrate	BDL	0.10	mg/l	9056	08/30/03	1
Sulfate	25.	5.0	mg/l	9056	08/30/03	1
Alkalinity	280	10.	mg/l	310.2	08/29/03	1
Free Carbon Dioxide	870	0.0	mg/l	406B	08/27/03	1
Ethane	BDL	10.	ppm	8015M	08/28/03	1
Ethene	BDL	10.	ppm	8015M	08/28/03	1
ORP	150		mV	2580	09/03/03	1
Sulfide	BDL	0.050	mg/l	9030B	08/30/03	1
TOC (Total Organic Carbon)	13.	1.0	mg/l	9060	08/27/03	1
Iron,Dissolved	15.	0.050	mg/l	6010B	08/28/03	1
Manganese,Dissolved	16.	0.010	mg/l	6010B	08/28/03	1
Volatile Organics						
Acetone	BDL	0.050	mg/l	8260B	08/28/03	1
Acrolein	BDL	0.050	mg/l	8260B	08/28/03	1
Acrylonitrile	BDL	0.050	mg/l	8260B	08/28/03	1
Benzene	0.0034	0.0010	mg/l	8260B	08/28/03	1
Bromobenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	08/28/03	1
Bromoform	BDL	0.0010	mg/l	8260B	08/28/03	1
Bromomethane	BDL	0.0010	mg/l	8260B	08/28/03	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	08/28/03	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	08/28/03	1
Chloroethane	BDL	0.0010	mg/l	8260B	08/28/03	1

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)

Laboratory Certification Numbers:
A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

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REPORT OF ANALYSIS

Mr. Randy Johnson
MACTEC - Greensboro, NC
7347-E West Friendly Avenue
Greensboro, NC 27410

September 03, 2003

ESC Sample # : L125436-02

Date Received : August 27, 2003
Description : Pike Electric

Site ID : PIKE ELECTRIC

Sample ID : MW-11

Project # : 30459-8-1050

Collected By : Randall S. Johnson
Collection Date : 08/26/03 13:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	08/28/03	1
Chloroform	BDL	0.0050	mg/l	8260B	08/28/03	1
Chloromethane	BDL	0.0010	mg/l	8260B	08/28/03	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	08/28/03	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,2-Dibromo-3-Chloropropane	BDL	0.0020	mg/l	8260B	08/28/03	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	08/28/03	1
Dibromomethane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
Dichlorodifluoromethane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	08/28/03	1
cis-1,2-Dichloroethene	0.052	0.0010	mg/l	8260B	08/28/03	1
trans-1,2-Dichloroethene	0.0023	0.0010	mg/l	8260B	08/28/03	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,3-Dichloropropane	BDL	0.0010	mg/l	8260B	08/28/03	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	08/28/03	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	08/28/03	1
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	08/28/03	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	08/28/03	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
Hexachlorobutadiene	BDL	0.0010	mg/l	8260B	08/28/03	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	08/28/03	1
2-Butanone (MEK)	BDL	0.050	mg/l	8260B	08/28/03	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	08/28/03	1
4-Methyl-2-pentanone (MIBK)	BDL	0.050	mg/l	8260B	08/28/03	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	08/28/03	1
Naphthalene	BDL	0.0050	mg/l	8260B	08/28/03	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
Styrene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	08/28/03	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	08/28/03	1
Toluene	BDL	0.0050	mg/l	8260B	08/28/03	1

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)

Laboratory Certification Numbers:
A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

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REPORT OF ANALYSIS

Mr. Randy Johnson
MACTEC - Greensboro, NC
7347-E West Friendly Avenue
Greensboro, NC 27410

September 03, 2003

ESC Sample # : L125436-02

Site ID : PIKE ELECTRIC

Project # : 30459-8-1050

Date Received : August 27, 2003
Description : Pike Electric

Sample ID : MW-11

Collected By : Randall S. Johnson
Collection Date : 08/26/03 13:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	08/28/03	1
Trichloroethene	BDL	0.0010	mg/l	8260B	08/28/03	1
Trichlorofluoromethane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,2,3-Trichloropropane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	08/28/03	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	08/28/03	1
Surrogate Recovery						
Toluene-d8	100		% Rec.	8260B	08/28/03	1
Dibromofluoromethane	98.		% Rec.	8260B	08/28/03	1
4-Bromofluorobenzene	99.		% Rec.	8260B	08/28/03	1

Jimmy Hunt, ESC Representative

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)

Laboratory Certification Numbers:
A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

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REPORT OF ANALYSIS

Mr. Randy Johnson
MACTEC - Greensboro, NC
7347-E West Friendly Avenue
Greensboro, NC 27410

September 03, 2003

ESC Sample # : L125436-03

Date Received : August 27, 2003
Description : Pike Electric

Site ID : PIKE ELECTRIC

Sample ID : MW-11A

Project # : 30459-8-1050

Collected By : Randall S. Johnson
Collection Date : 08/26/03 14:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Methane	BDL	1.0	ppm	8015M	08/28/03	1
Chloride	9.5	1.0	mg/l	9056	08/30/03	1
Nitrate	2.4	0.10	mg/l	9056	08/30/03	1
Sulfate	BDL	5.0	mg/l	9056	08/30/03	1
Alkalinity	28.	10.	mg/l	310.2	08/29/03	1
Free Carbon Dioxide	150	0.0	mg/l	406B	08/27/03	1
Ethane	BDL	10.	ppm	8015M	08/28/03	1
Ethene	BDL	10.	ppm	8015M	08/28/03	1
ORP	130		mV	2580	09/03/03	1
Sulfide	BDL	0.050	mg/l	9030B	08/30/03	1
TOC (Total Organic Carbon)	BDL	1.0	mg/l	9060	08/27/03	1
Iron,Dissolved	BDL	0.050	mg/l	6010B	08/28/03	1
Manganese,Dissolved	BDL	0.010	mg/l	6010B	08/28/03	1
Volatile Organics						
Acetone	BDL	0.050	mg/l	8260B	08/28/03	1
Acrolein	BDL	0.050	mg/l	8260B	08/28/03	1
Acrylonitrile	BDL	0.050	mg/l	8260B	08/28/03	1
Benzene	BDL	0.0010	mg/l	8260B	08/28/03	1
Bromobenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	08/28/03	1
Bromoform	BDL	0.0010	mg/l	8260B	08/28/03	1
Bromomethane	BDL	0.0010	mg/l	8260B	08/28/03	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	08/28/03	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	08/28/03	1
Chloroethane	BDL	0.0010	mg/l	8260B	08/28/03	1

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)

Laboratory Certification Numbers:
A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
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REPORT OF ANALYSIS

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MACTEC - Greensboro, NC
7347-E West Friendly Avenue
Greensboro, NC 27410

September 03, 2003

ESC Sample # : L125436-03

Date Received : August 27, 2003
Description : Pike Electric

Site ID : PIKE ELECTRIC

Sample ID : MW-11A

Project # : 30459-8-1050

Collected By : Randall S. Johnson
Collection Date : 08/26/03 14:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	08/28/03	1
Chloroform	BDL	0.0050	mg/l	8260B	08/28/03	1
Chloromethane	BDL	0.0010	mg/l	8260B	08/28/03	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	08/28/03	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,2-Dibromo-3-Chloropropane	BDL	0.0020	mg/l	8260B	08/28/03	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	08/28/03	1
Dibromomethane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
Dichlorodifluoromethane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	08/28/03	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	08/28/03	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,3-Dichloropropane	BDL	0.0010	mg/l	8260B	08/28/03	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	08/28/03	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	08/28/03	1
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	08/28/03	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	08/28/03	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
Hexachlorobutadiene	BDL	0.0010	mg/l	8260B	08/28/03	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	08/28/03	1
2-Butanone (MEK)	BDL	0.050	mg/l	8260B	08/28/03	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	08/28/03	1
4-Methyl-2-pentanone (MIBK)	BDL	0.050	mg/l	8260B	08/28/03	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	08/28/03	1
Naphthalene	BDL	0.0050	mg/l	8260B	08/28/03	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
Styrene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	08/28/03	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	08/28/03	1
Toluene	BDL	0.0050	mg/l	8260B	08/28/03	1

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)

Laboratory Certification Numbers:
A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
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REPORT OF ANALYSIS

Mr. Randy Johnson
MACTEC - Greensboro, NC
7347-E West Friendly Avenue
Greensboro, NC 27410

September 03, 2003

ESC Sample # : L125436-03

Date Received : August 27, 2003
Description : Pike Electric

Site ID : PIKE ELECTRIC

Sample ID : MW-11A

Project # : 30459-8-1050

Collected By : Randall S. Johnson
Collection Date : 08/26/03 14:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	08/28/03	1
Trichloroethene	BDL	0.0010	mg/l	8260B	08/28/03	1
Trichlorofluoromethane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,2,3-Trichloropropane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	08/28/03	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	08/28/03	1
Surrogate Recovery						
Toluene-d8	100		% Rec.	8260B	08/28/03	1
Dibromofluoromethane	98.		% Rec.	8260B	08/28/03	1
4-Bromofluorobenzene	98.		% Rec.	8260B	08/28/03	1

Jimmy Hunt, ESC Representative

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)

Laboratory Certification Numbers:
A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Mr. Randy Johnson
MACTEC - Greensboro, NC
7347-E West Friendly Avenue
Greensboro, NC 27410

September 03, 2003

ESC Sample # : L125436-04

Date Received : August 27, 2003
Description : Pike Electric

Site ID : PIKE ELECTRIC

Sample ID : MW-12

Project # : 30459-8-1050

Collected By : Randall S. Johnson
Collection Date : 08/26/03 13:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Methane	BDL	1.0	ppm	8015M	08/28/03	1
Chloride	1.3	1.0	mg/l	9056	08/30/03	1
Nitrate	BDL	0.10	mg/l	9056	08/30/03	1
Sulfate	53.	5.0	mg/l	9056	08/30/03	1
Alkalinity	260	10.	mg/l	310.2	08/29/03	1
Free Carbon Dioxide	520	0.0	mg/l	406B	08/27/03	1
Ethane	BDL	10.	ppm	8015M	08/28/03	1
Ethene	BDL	10.	ppm	8015M	08/28/03	1
ORP	150		mV	2580	09/03/03	1
Sulfide	BDL	0.050	mg/l	9030B	08/30/03	1
TOC (Total Organic Carbon)	13.	1.0	mg/l	9060	08/27/03	1
Iron,Dissolved	3.3	0.050	mg/l	6010B	08/28/03	1
Manganese,Dissolved	7.6	0.010	mg/l	6010B	08/28/03	1
Volatile Organics						
Acetone	BDL	0.050	mg/l	8260B	08/28/03	1
Acrolein	BDL	0.050	mg/l	8260B	08/28/03	1
Acrylonitrile	BDL	0.050	mg/l	8260B	08/28/03	1
Benzene	BDL	0.0010	mg/l	8260B	08/28/03	1
Bromobenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
Bromodichloromethane	BDL	0.0010	mg/l	8260B	08/28/03	1
Bromoform	BDL	0.0010	mg/l	8260B	08/28/03	1
Bromomethane	BDL	0.0010	mg/l	8260B	08/28/03	1
n-Butylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
sec-Butylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
tert-Butylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
Carbon tetrachloride	BDL	0.0010	mg/l	8260B	08/28/03	1
Chlorobenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
Chlorodibromomethane	BDL	0.0010	mg/l	8260B	08/28/03	1
Chloroethane	BDL	0.0010	mg/l	8260B	08/28/03	1

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)

Laboratory Certification Numbers:
A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Mr. Randy Johnson
MACTEC - Greensboro, NC
7347-E West Friendly Avenue
Greensboro, NC 27410

September 03, 2003

ESC Sample # : L125436-04

Date Received : August 27, 2003
Description : Pike Electric

Site ID : PIKE ELECTRIC

Sample ID : MW-12

Project # : 30459-8-1050

Collected By : Randall S. Johnson
Collection Date : 08/26/03 13:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	8260B	08/28/03	1
Chloroform	BDL	0.0050	mg/l	8260B	08/28/03	1
Chloromethane	BDL	0.0010	mg/l	8260B	08/28/03	1
2-Chlorotoluene	BDL	0.0010	mg/l	8260B	08/28/03	1
4-Chlorotoluene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,2-Dibromo-3-Chloropropane	BDL	0.0020	mg/l	8260B	08/28/03	1
1,2-Dibromoethane	BDL	0.0010	mg/l	8260B	08/28/03	1
Dibromomethane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
Dichlorodifluoromethane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,1-Dichloroethane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,2-Dichloroethane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,1-Dichloroethene	BDL	0.0010	mg/l	8260B	08/28/03	1
cis-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	08/28/03	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,2-Dichloropropane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,1-Dichloropropene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,3-Dichloropropane	BDL	0.0010	mg/l	8260B	08/28/03	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	08/28/03	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	8260B	08/28/03	1
2,2-Dichloropropane	BDL	0.0010	mg/l	8260B	08/28/03	1
Di-isopropyl ether	BDL	0.0010	mg/l	8260B	08/28/03	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
Hexachlorobutadiene	BDL	0.0010	mg/l	8260B	08/28/03	1
Isopropylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
p-Isopropyltoluene	BDL	0.0010	mg/l	8260B	08/28/03	1
2-Butanone (MEK)	BDL	0.050	mg/l	8260B	08/28/03	1
Methylene Chloride	BDL	0.0050	mg/l	8260B	08/28/03	1
4-Methyl-2-pentanone (MIBK)	BDL	0.050	mg/l	8260B	08/28/03	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	08/28/03	1
Naphthalene	BDL	0.0050	mg/l	8260B	08/28/03	1
n-Propylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
Styrene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,1,1,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	8260B	08/28/03	1
Tetrachloroethene	BDL	0.0010	mg/l	8260B	08/28/03	1
Toluene	BDL	0.0050	mg/l	8260B	08/28/03	1

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)

Laboratory Certification Numbers:
A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

September 03, 2003

Mr. Randy Johnson
MACTEC - Greensboro, NC
7347-E West Friendly Avenue
Greensboro, NC 27410

ESC Sample # : L125436-04

Date Received : August 27, 2003
Description : Pike Electric

Site ID : PIKE ELECTRIC

Sample ID : MW-12

Project # : 30459-8-1050

Collected By : Randall S. Johnson
Collection Date : 08/26/03 13:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
1,2,3-Trichlorobenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,2,4-Trichlorobenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	8260B	08/28/03	1
Trichloroethene	BDL	0.0010	mg/l	8260B	08/28/03	1
Trichlorofluoromethane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,2,3-Trichloropropane	BDL	0.0010	mg/l	8260B	08/28/03	1
1,2,4-Trimethylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,2,3-Trimethylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
1,3,5-Trimethylbenzene	BDL	0.0010	mg/l	8260B	08/28/03	1
Vinyl chloride	BDL	0.0010	mg/l	8260B	08/28/03	1
Xylenes, Total	BDL	0.0030	mg/l	8260B	08/28/03	1
Surrogate Recovery						
Toluene-d8	100		% Rec.	8260B	08/28/03	1
Dibromofluoromethane	98.		% Rec.	8260B	08/28/03	1
4-Bromofluorobenzene	98.		% Rec.	8260B	08/28/03	1

Jimmy Hunt, ESC Representative

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)

Laboratory Certification Numbers:
A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

Note:
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Reported: 09/03/03 15:50 Printed: 09/03/03 15:51

Attachment A
List of Analytes with QC Qualifiers

Sample #	Analyte	Qualifier
L125436-01	Nitrate	Q
L125436-02	Nitrate	Q
L125436-03	Nitrate	Q
L125436-04	Nitrate	Q

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
Q	(ESC) Sample held beyond the accepted holding time.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Differrence.

Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

Control Limits

2-Fluorophenol	31-119	Nitrobenzene-d5	43-118	Dibromfluoromethane	72-125
Phenol-d5	12-134	2-Fluorobiphenyl	45-128	Toluene-d8	79-120
2,4,6-Tribromophenol	51-141	Terphenyl-d14	43-137	4-Bromofluorobenzene	66-131

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

MACTEC - Greensboro, NC

7347-E West Friendlv Avenue
Greensboro,NC 27410

Alternate billing information:

Chain of Custody
Page ___ of ___

Prepared by:
ENVIRONMENTAL SCIENCE CORP.
12065 Lebanon Road
Mt. Juliet, TN 37122
Phone (800) 767-5859
FAX (615) 758-5859

Report to: Mr. Randy Johnson
Email: rsjohnson@mactec.com
Project Description: Pike Electric
City/State Collected: MT Airy, NC
Phone: (336) 294-4221
FAX: (336) 294-4227
Client Project #: 30459-8-1050
Lab Project #: LAWENGNC-3045981050
Collected by (print): Randall S Johnson
Site/Facility ID#: PIKE ELECTRIC
P.O.#:
Collected by (signature): Randall S Johnson
Packed on Ice N Y X

Rush? (Lab MUST Be Notified)
___Same Day 200%
___Next Day. 100%
___Two Day 50%

Date Results Needed
Email? ___No X Yes
FAX? ___No ___Yes

CoCode: LAWENGNC (lab use only)
Template/Prelogin: T19032/ P91260
Cooler #: 8/18/03
Shipped Via: FedEX Ground CC

Analysis/Container/Preservative

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	ALK, ORP 500mlHDPE-NoPres	CO2 250mlHDPE-NoPres	Cl, NO3, SO4 125mlHDPE-NoPres	Diss. Fe and Mn 500mlHDPE-NoPres	Methane,EthaneEthene 40mlAmb-NoPres	SULFIDE 500mlHDPE-NaOH+ZnAc	TOC 250mlAmb-Septa-HCl	V8260 40mlAmb-HCl	Remarks/Contaminant	Sample # (lab only)
MW-10A		GW		8-26-03	1200	10	X	X	X	X	X	X	X	X		L125436-01
MW-11		GW			1300	10	X	X	X	X	X	X	X	X		-02
MW-11A		GW			1400	10	X	X	X	X	X	X	X	X		-03
MW-12		GW			1300	10	X	X	X	X	X	X	X	X		-04

*Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: ☐ UPS ☐ FedEx ☑ Courier ☐	Condition: (lab use only)
Joseph S Johnson	8/25/03	4:30	Hamid Shadi		ok
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 2.5°C Bottles Received: 40+HB	
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 8/25/03 Time: 900	pH Checked: <2>12 NCF:

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Mr. Randy Johnson
MACTEC - Greensboro, NC
7347-E West Friendly Avenue
Greensboro, NC 27410

September 19, 2003

ESC Sample # : L125430-01

Site ID : PIKE ELECTRIC

Project # : 30459-8-1050

Date Received : August 27, 2003
Description : Pike Electric

Sample ID : MW-10A

Collected By : Randall Johnson
Collection Date : 08/26/03 12:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Acetic Acid	BDL	1.0	mg/l		09/13/03	1
Propionic Acid	BDL	50.	mg/l		09/16/03	1
Lactic Acid	BDL	1.0	mg/l		09/14/03	1
Pyruvic Acid	58.	10.	mg/l		09/16/03	1
Butyric Acid	BDL	1.0	mg/l		09/14/03	1

Jimmy Hunt, ESC Representative

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)

Laboratory Certification Numbers:
A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

Note:
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L125430-01 () - Subcontracted to Analytical Services, Inc.

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REPORT OF ANALYSIS

September 19, 2003

Mr. Randy Johnson
MACTEC - Greensboro, NC
7347-E West Friendly Avenue
Greensboro, NC 27410

ESC Sample # : L125430-02

Date Received : August 27, 2003
Description : Pike Electric

Site ID : PIKE ELECTRIC

Sample ID : MW-11

Project # : 30459-8-1050

Collected By : Randall Johnson
Collection Date : 08/26/03 13:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Acetic Acid	BDL	1.0	mg/l		09/13/03	1
Propionic Acid	BDL	50.	mg/l		09/16/03	1
Lactic Acid	BDL	1.0	mg/l		09/14/03	1
Pyruvic Acid	BDL	10.	mg/l		09/16/03	1
Butyric Acid	BDL	1.0	mg/l		09/14/03	1

Jimmy Hunt, ESC Representative

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)

Laboratory Certification Numbers:
A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

Note:
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Reported: 09/19/03 11:09 Printed: 09/19/03 11:10
L125430-02 () - Subcontracted to Analytical Services, Inc.

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Mr. Randy Johnson
MACTEC - Greensboro, NC
7347-E West Friendly Avenue
Greensboro, NC 27410

September 19, 2003

ESC Sample # : L125430-03

Site ID : PIKE ELECTRIC

Project # : 30459-8-1050

Date Received : August 27, 2003
Description : Pike Electric

Sample ID : MW-11A

Collected By : Randall Johnson
Collection Date : 08/26/03 14:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Acetic Acid	BDL	1.0	mg/l		09/13/03	1
Propionic Acid	BDL	50.	mg/l		09/16/03	1
Lactic Acid	BDL	1.0	mg/l		09/14/03	1
Pyruvic Acid	89.	10.	mg/l		09/16/03	1
Butyric Acid	BDL	1.0	mg/l		09/14/03	1

Jimmy Hunt, ESC Representative

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)

Laboratory Certification Numbers:
A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

Note:
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Reported: 09/19/03 11:09 Printed: 09/19/03 11:10
L125430-03 () - Subcontracted to Analytical Services, Inc.

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Mr. Randy Johnson
MACTEC - Greensboro, NC
7347-E West Friendly Avenue
Greensboro, NC 27410

September 19, 2003

ESC Sample # : L125430-04

Site ID : PIKE ELECTRIC

Project # : 30459-8-1050

Date Received : August 27, 2003
Description : Pike Electric

Sample ID : MW-12

Collected By : Randall Johnson
Collection Date : 08/26/03 15:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Acetic Acid	BDL	1.0	mg/l		09/13/03	1
Propionic Acid	BDL	50.	mg/l		09/16/03	1
Lactic Acid	BDL	1.0	mg/l		09/14/03	1
Pyruvic Acid	15.	10.	mg/l		09/16/03	1
Butyric Acid	BDL	1.0	mg/l		09/14/03	1

Jimmy Hunt, ESC Representative

BDL - Below Detection Limit
Det. Limit - Estimated Quantitation Limit(EQL)

Laboratory Certification Numbers:
A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233

Note:
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Reported: 09/19/03 11:09 Printed: 09/19/03 11:10
L125430-04 () - Subcontracted to Analytical Services, Inc.

MACTEC - Greensboro, NC

7347-E West Friendlv Avenue
Greensboro,NC 27410

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Prepared by:
ENVIRONMENTAL SCIENCE CORP.
12065 Lebanon Road
Mt. Juliet, TN 37122
Phone (800) 767-5859
FAX (615) 758-5859

Report to: Mr. Randy Johnson
Email: rsjohnson@mactec.com
Project Description: Pike Electric
City/State Collected: MT Airy NC
Phone: (336) 294-4221
FAX: (336) 294-4227
Client Project #: 30459-8-1050
Lab Project #: LAWENGNC-3045981050
Collected by (print): Randall S Johnson
Site/Facility ID#: PIKE ELECTRIC
P.O.#:
Collected by (signature): Randall S Johnson
Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___Same Day 200%
___ Next Day. 100%
___ Two Day 50%

Date Results Needed
Email? __No X Yes
FAX? __No __Yes

CoCode: LAWENGNC (lab use only)
Template/Prelogin: T19036/ P91261
Cooler #: 8/18/03
Shipped Via: FedEX Ground CC

Analysis/Container/Preservative: ORG ACIDS 40mlClr-NoPres

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	ORG ACIDS 40mlClr-NoPres	Remarks/Contaminant	Sample # (lab only)
MW-10A		GW		8/26/03	1200	2	X		C125430-01
MW-11		GW			1300	2	X		-02
MW-11A		GW			1400	2	X		-03
MW-12		GW			1500	2	X		-04

*Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: ☐ UPS ☑ FedEx ☑ Courier ☐	Condition: (lab use only)
Josh S Johnson	8/26/03	4:30	Hart Shaw		
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.5° Bottles Received: 8+1TB	
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 8/27/03 Time: 9:00	pH Checked: NCF: