OPERATION/CONSTRUCTION MANAGERS
Municipal Services
CIVIL/SANITARY ENGINEERS
Engineering Company, P.A.

Ms. Jaclynne Drummond
Solid Waste Section - Compliance
Division of Waste Management
North Carolina Department of Environment and Natural Resources
401 Oberlin Road, Suite 150
Raleigh, NC 27605

March 15, 2010

Re: **Limited Soil and Surface Water Assessment Report**
Scott Creek Transfer Station
1172 Mineral Springs Drive
Sylva, Jackson County, NC
Permit No. 50.03T
MESCO Project no. G10046.0

Dear Ms. Drummond:

Municipal Engineering Services Co., P.A. (MESCO), on behalf of Jackson County, appreciates the opportunity to submit this brief letter report that presents soil and surface water sample results acquired during a limited assessment performed on February 17, 2010. The limited assessment was performed in response to questions regarding potentially-impacted soils and surface waters associated with leachate observed and reported in a *Facility Compliance Audit Report* performed September 24, 2009 at the Jackson County Municipal Solid Waste and Construction and Demolition (C&D) Transfer Facility, Scott Creek Transfer Station, 1172 Mineral Springs Drive, Sylva, NC. The limited assessment was performed in general accordance with MESCO's *Sample and Analysis Plan* approved by the North Carolina Department of Environment and Natural Resources (NCDENR), Division of Waste Management (DWM), Solid Waste Section (SWS) on February 11, 2010.

BACKGROUND

On September 24, 2009, representatives of the SWS, as part of a comprehensive field audit of the site, reported that "…water that came in contact with solid waste (leachate) was not contained on the site, not treated prior to discharge from the site"…and apparently "…discharged into the surface water of Ochre Hill Creek, just before it empties into Scott Creek." In a follow-up email to MESCO dated January 27, 2010, you indicated "…sampling the horizontal and vertical extent of the soils and surface water…is very important at this time." On February 17, 2010, a MESCO environmental professional visited the site, as shown on Plate 1, to collect the soil and surface water samples as proposed in the SAP.

PO Box 97, Garner, North Carolina 27529 (919) 772-5393
PO Box 828, Morehead City, NC 28557 (252) 726-9481
PO Box 349, Boone, North Carolina 28607 (828) 262-1767

SCOPE OF SERVICES

Upon arriving at the site, a MESCO environmental professional traversed the area to select representative soil and surface water sample locations. A stainless-steel hand auger (auger) was used to collect a background sample (HA-BG) from an area of the site reportedly upgradient from the observed spill. Additional auger borings were attempted along the banks of Ochre Hill Creek in an area reported to be in the flow of the spill but, since the site was currently undergoing construction of a new facility, those attempts were terminated after realizing that the heavily compacted aggregate base course (ABC) was probably part of the new construction and did not represent materials in place at the time of the spill. Two additional sample locations (HA1 and HA2) were selected further downgradient of the initial locations near new utility line excavations. Samples were collected from the excavation and adjacent stockpiles. Soil samples were field screened with a flame-ionization detector (FID), which measures volatile organic compound (VOC) vapors, and a photo-ionization detector (PID), which measures inorganic vapors. Sample elevations, reported in inches below the ground surface (bgs), and FID/PID readings were recorded at each boring location.

Hand auger borings were planned to be advanced to approximately five feet bgs. However, at both locations, borings were terminated prior to reaching five feet due to soil density and/or rock (refusal). Samples were collected, placed in re-sealable plastic bags, allowed to volatilize for approximately 10-15 minutes, and FID/PID readings were recorded. Between sample locations, the hand auger handle, stems, and bucket were cleaned and decontaminated using phosphate-free soap, isopropyl alcohol, and de-ionized or distilled water.

A portion or aliquot of the soil sample with the highest observed FID/PID readings at each boring location was transferred into laboratory-prepared containers. FID/PID readings are presented on Table 1. As shown on Table 1, the highest FID/PID readings recorded at location HA1 were reported in the sample collected 12 inches bgs [HA1-12 (19.2/3.2)], and the highest FID/PID readings recorded at location HA2 were reported in the sample collected at 24 inches bgs [HA2-24 (17.5/3.6)]. FID/PID readings in the background sample (HA-BG) were 3.2/1.2, respectively. Soil samples were collected in laboratory-prepared containers, labeled, packed in ice-filled coolers, and delivered under standard chain-of-custody (CoC) protocol to a State of North Carolina-certified analytical laboratory (Environmental Science Corporation (ESC), Mt. Juliet, TN) and analyzed for Appendix I VOCs using EPA Test Method 8260B, Appendix I metals using EPA Test Methods 6010 and 7470, soluble nitrate, soluble sulfate, total phosphorous, and pH. In accordance with directions from your office, soil sample results were compared to the Remediation Goals (RGs) established by the NCDENR-DWM-Inactive Hazardous Sites Branch (IHSB), updated January 2010.

Surface water samples were also collected as proposed in the SAP. First, a background sample (SW-BG) was collected from Ochre Hill Creek upgradient of the site. The second sample (SW-DG) was collected from the creek approximately 25 feet downgradient (north) of the culvert constructed beneath the facility entrance road. Samples were collected in laboratory-prepared containers, labeled, packed in ice-filled coolers, and delivered under standard CoC protocol to ESC for analysis of Appendix I VOCs, Appendix I metals, soluble nitrate, soluble sulfate, total phosphorous, pH, biological oxygen demand (BOD), and chemical oxygen demand (COD).

Surface water sample results were compared to their respective North Carolina Surface Water and Wetland Standards as promulgated in 15A NCAC 2B (the "2B Standards")] also known as "the Red Book". According to information presented in the Red Book, Ochre Hill Creek is currently classified as "Class C" waters.

SAMPLE RESULTS

A review of the soil laboratory results provided on *Table 2 Soil Sample Analysis* indicates that concentrations of arsenic and/or selenium were detected in all sample locations, including the background sample (HA-BG), at levels elevated above their RGs of 5.8 ppm and 2.1 ppm, respectively. None of the other Appendix I target metals or target VOCs were detected in concentrations above their respective RGs.

A review of the surface water sample results presented in *Table 3 Water Sample Analysis* indicates that none of the target analytes were detected at a level equal to or above the established 2B Standards. Other geochemical parameters typically associated with landfill leachate, including BOD, COD, and pH, were analyzed as requested.

FINDINGS

Based on the sample results presented on the attached tables and discussed above, it is our opinion that:

- The elevated levels of a few target analytes detected in the soil samples are more probably due to the natural occurrence of sulfides in the surrounding saprolite and basement rock instead of the reported spill, especially since concentrations in the background sample are greater or equal to concentrations detected in the downgradient sample.

- The concentrations of surface water target analytes detected in the downgradient sample (SW-DG) are very similar to the concentrations detected in the background sample (SW-BG). The level of target analyte detections may not be elevated due to the impact of numerous recent precipitation events (i.e., ice, snow, and rain, etc.) on the stream's flow rate since the reported event. Neither sample contained elevated levels of target analytes typically associated with landfill-type leachate.

- No additional action is required.

This report summary meets the requirements for the Compliance Order from the Division of Waste Management. All data, information and conclusions contained herein indicate no hindrance to the current operations and procedures of the landfill.

CLOSING

Municipal Engineering Services Co., P.A., on behalf of the Jackson County, appreciates the opportunity to submit this brief report to the Solid Waste Section. Please contact us at (919) 772-5393 or mbrown@mesco.com if you have any questions or comments regarding this report.

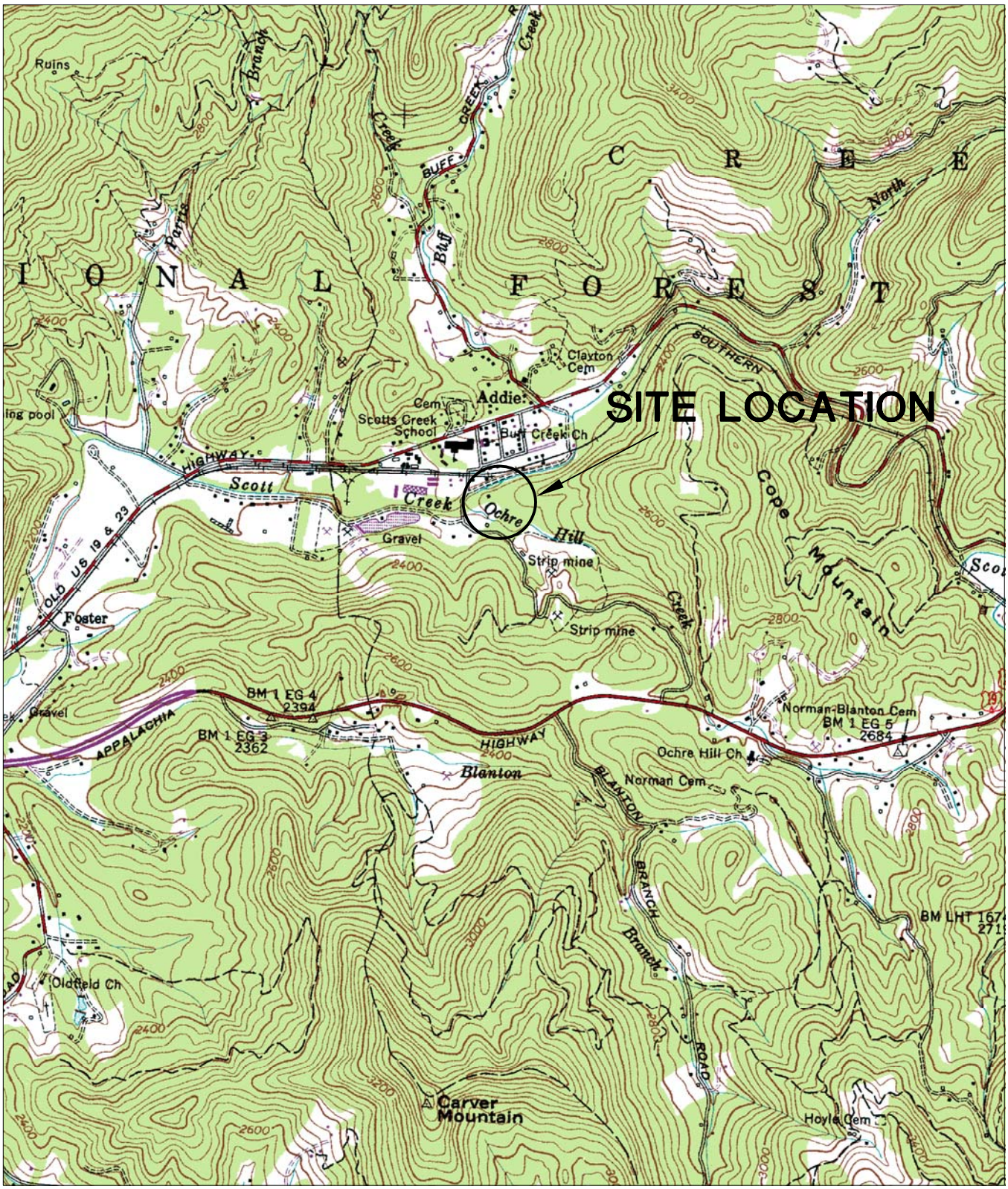
Sincerely,
MUNICIPAL ENGINEERING SERVICES CO., P.A.

Mark Brown, LG, PG
Senior Geologist

Enclosures

cc: Chad Parker, Jackson County
Wayne Sullivan, MESCO

Plates



MAP SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC – SYLVA NORTH, NC

N

GRAPHIC SCALE

0' 2000' 4000'

LICENSE NUMBER: C-0301

Municipal Services Engineering Company, P.A.

P.O. BOX 97 GARNER, N.C. 27529 (919) 772-0300

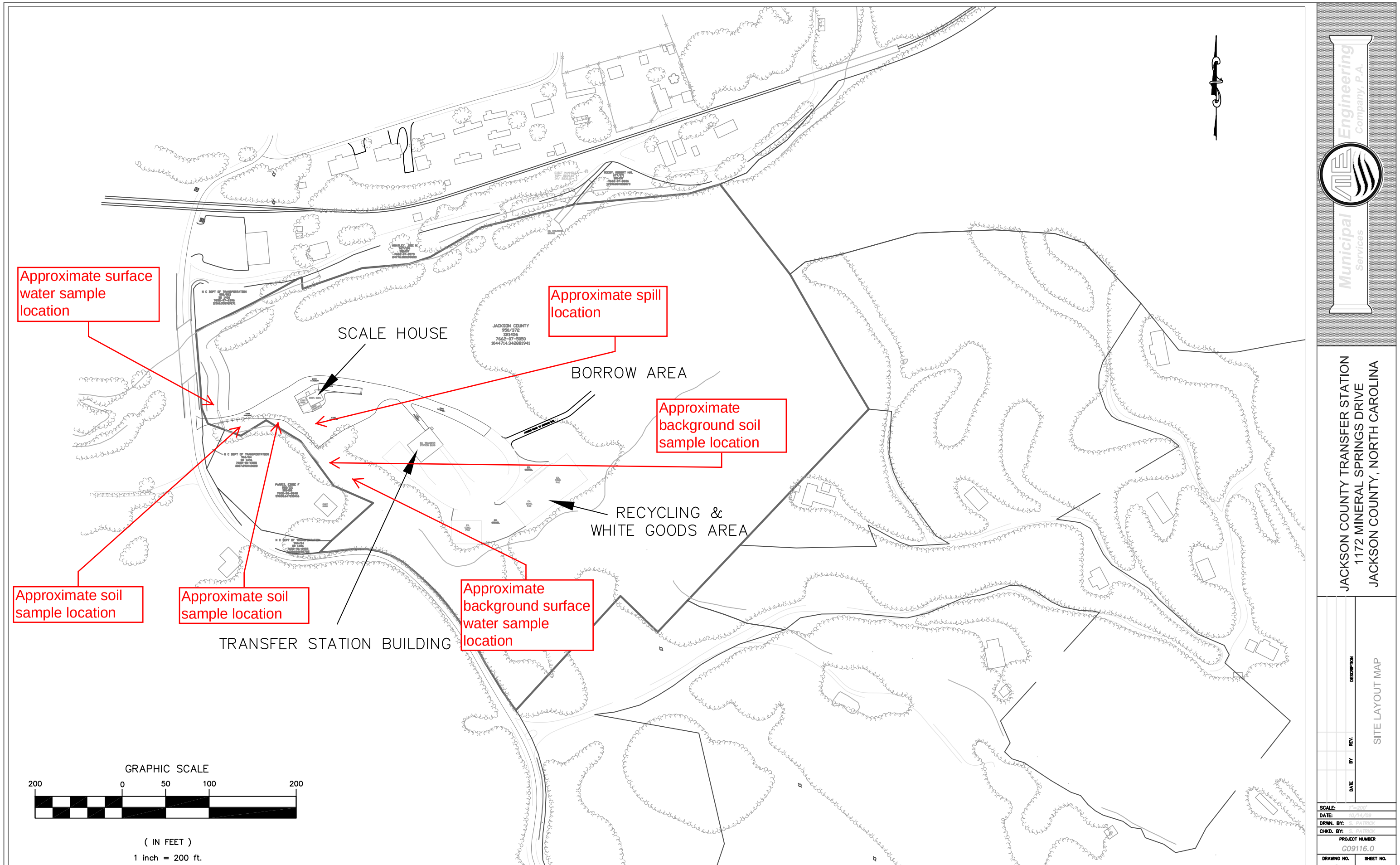
P.O. BOX 848 BOONE, N.C. 28607 (828) 262-1747

P.O. BOX 925 MOORESVILLE CITY, N.C. 28117 (704) 799-2436

SITE LOCATION MAP

JACKSON COUNTY SOLID WASTE DEPARTMENT
JACKSON COUNTY TRANSFER STATION
1172 MINERAL SPRINGS ROAD
SYLVA, JACKSON COUNTY, NORTH CAROLINA

PROJECT NO.	G09116.0	DRAWN BY:	SKP	DATE:	10/14/09
SCALE:	1" = 2,000'	CHECKED BY:	SMB	FIGURE NO.	1


Approximate surface water sample location
Approximate spill location
SCALE HOUSE
BORROW AREA
Approximate background soil sample location
RECYCLING & WHITE GOODS AREA
Approximate soil sample location
Approximate soil sample location
Approximate background surface water sample location
TRANSFER STATION BUILDING
GRAPHIC SCALE
200 0 50 100 200
(IN FEET)
1 inch = 200 ft.
Municipal Engineering Services Company, P.A.
JACKSON COUNTY TRANSFER STATION
1172 MINERAL SPRINGS DRIVE
JACKSON COUNTY, NORTH CAROLINA
DATE BY REV. DESCRIPTION
SITE LAYOUT MAP
SCALE: 1"=200'
DATE: 10/14/09
DRWN. BY: S. PATRICK
CHKD. BY: S. PATRICK
PROJECT NUMBER
G09116.0
DRAWING NO. 2
SHEET NO.

Tables

TABLE 1
Volatile Organic/Inorganic Compound Vapor Analysis
Scott Creek Transfer Station
1172 Mineral Springs Road
Sylva, Jackson County, NC
MESCO Project Number G10046.0
March 11, 2010

SAMPLE LOCATION		Sampling Date	Sampling Depth (inches bgs)	FID	PID	Depth to Auger Refusal (inches bgs)	Depth to Water (inches bgs)	Comments
Background Sample	HA1-BG	2/17/2010	12	3.2	1.2		NE	Sample submitted for analysis
Sample Location 1	HA1-12	2/17/2010	12	19.2	3.2			Sample submitted for analysis
	HA1-24	2/17/2010	24	7.6	4.1		NE	
	HA1-36	2/17/2010	36	refusal			NE	Sample too dense to collect
Sample Location 2	HA2-12	2/17/2010	12	5.6	2.2		NE	
	HA2-24	2/17/2010	24	17.5	3.6		NE	Sample submitted for analysis
	HA2-36	2/17/2010	36	refusal			NE	Sample too dense to collect

Notes:

Sample results are presented in "parts per million" (ppm) organic or inorganic vapors.

BGS Below the ground surface at the sample location

FID Flame ionization detector reports the level of organic vapors detected in a resealable sample bag.

PID Photon ionization detector reports the level of inorganic vapors detected in a resealable sample bag.

NE Not encountered

TABLE 2
Soil Sample Analysis
Scott Creek Transfer Station
1172 Mineral Springs Drive
Sylva, Jackson County, NC
MESCO Project Number G10046.0
March 11, 2010

SAMPLE LOCATION		Sample Collection Date	HA-BG	HA1-12	HA2-24	IHSB Remediation Goals (RGs)
TARGET ANALYTE	Analytical Method					
Phosphate	9056	2/17/2010	1.3	7.6	<1.3	NE
Nitrate	9056		0.45	<0.10	0.11	25000
Sulfate	9056		<5.0	<5.0	5.3	NE
Appendix I Metals List						
Mercury	7471	2/17/2010	<0.025	0.045	0.034	1.0
Arsenic	6010B	2/17/2010	**15**	<5.8	**<6.3** [1]	5.8
Barium	6010B		68	120	200	580.0
Cadmium	6010B		0.86	0.39	<0.32	3.0
Chromium	6010B		110	52	140	360000.0
Lead	6010B		21	8.6	17	270.0
Selenium	6010B		**21**	**10**	**16**	2.1
Silver	6010B		0.65	<0.58	<0.63	3.4
Appendix I Volatile Organic Compounds List						
Acetone	8260B	2/17/2010	0.068	<0.058	<0.058	24.0

Notes:

Sample results are presented in "parts per million" (ppm), referring to milligrams per kilogram (mg/kg) or milligrams per liter (mg/L).

Sample results are presented only in cases where they were reported exceeding the laboratory quanitative limits. Data points at other sample locations are presented as "less than the quantitative limit" (I.e., <0.60) for comparison purposes.

IHSB Remediation Goals (RGs) refer to the cleanup goals established by the NCDENR, Division of Waste Management, Inactive Hazardous Sites Branch (IHSB), January 2010 for the protection of groundwater.

NE Indicates that an RG has not been established. In many cases where an RG (allowable limit) has not been established, a detection is consid

Bold entries indicate exceedance to IHSB RGs.

1 According to data presented in ESC *Report of Analysis* , sample was diluted 5 times during analysis.

TABLE 3
Water Sample Analysis
Scott Creek Transfer Station
1172 Mineral Springs Drive
Sylva, Jackson County, NC
MESCO Project Number G10046.0
March 11, 2010

TARGET ANALYTE	Analytical Method	SW-BG[1]	SW-DG[1]	2B Standards[3]
Nitrate	9056.0	0.6	0.58	10
Sulfate	9056.0	<0.21[2]	<0.21	250
BOD	SM5210B	<1.7	<1.7	NE[6]
COD	410.4	<1.7	<1.7	NE
Dissolved Oxygen		NA[4]	NA	>4.99999
pH	9040C	7.7	7.9	6.0-9.0
Phosphorous, total	365.1	0.031	0.068	NE
Antimony	6020	<0.00021	<0.00021	0.64
Arsenic	6020	<0.00025	<0.00025	0.01
Barium	6020	0.037	0.038	200
Beryllium	6020	<0.00012	0.0016	0.0065
Cadmium	6020	<0.00016	<0.00016	0.002
Chromium	6020	<0.00054	<0.00054	0.05
Copper	6020	<0.00052	<0.00052	0.007
Cobalt	6020	<0.00026	<0.00026	0.27
Lead	6020	<0.00024	<0.00024	0.025
Nickel	6020	0.00047	0.00076	0.088
Selenium	6020	<0.00038	<0.00038	0.005
Silver	6020	<0.00031	<0.00031	0.00006
Thallium	6020	<0.00019	<0.00019	0.00047
Vanadium	6020	<0.00018	<0.00018	NE
Zinc	6020	0.0026	0.0026	0.05
Mercury	7470A	<0.000017	<0.000017	0.000012
All VOC target analytes	8260B	BDL[5]	BDL	varies

Notes:

1. Surface water samples collected from Ochre Hill Creek adjacent to site. Background sample (SW-BG) collected south of site and upgradient of estimated spill location. Downgradient sample (SW-DG) collected west of site and north of site entrance culvert. Sample results and referenced standards are presented in milligrams per liter (mg/L). Samples were originally analyzed per EPA Test Method 6010B and later analyzed per EPA Test Method 6020 to reach lower detection limits. As shown total metals are presented using EPA Test Method 6020.
2. **<0.21** Indicates that the target compound was detected at a concentration "less than" or below the respective laboratory method detection limits.
3. **2B Standards** North Carolina Surface Water and Wetlands Standards as promulgated in 15A NCAC 2B (aka, "the REDBOOK"). Ochre Hill Creek is currently classified as a "Class C" stream.
4. **NA** Inadvertently not analyzed by the analytical laboratory.
5. **BDL** Below the laboratory method detection limits
6 **NE** Not Established
7. **Bold** data indicates an exceedance to the referenced standard.

Laboratory Analytical Data

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

Mark Brown
Municipal Engineering Services Company
PO Box 97
Garner, NC 27529

Report Summary

Thursday March 11, 2010

Report Number: L445670
Samples Received: 02/19/10
Client Project: G10046.0

Description: Jackson County Transfer Station

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By: Jimmy Hunt

Jimmy Hunt , ESC Representative

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
NJ - TN002,NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

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Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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

Mark Brown
Municipal Engineering Services Comp
PO Box 97
Garner, NC 27529

March 11,2010

ESC Sample # : L445670-01

Date Received : February 19, 2010
Description : Jackson County Transfer Station

Site ID :

Sample ID : HA-BG

Project # : G10046.0

Collected By : Mark Brown
Collection Date : 02/17/10 10:00

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Phosphate as P	1.3	0.077	1.2	mg/kg		9056	02/25/10	1
pH	5.6			su		9045D	02/24/10	1
Total Solids	81.0			%		2540G	02/22/10	1
Mercury	0.015	0.0025	0.025	mg/kg	J	7471	02/20/10	1
Arsenic	15.	0.33	1.2	mg/kg		6010B	02/22/10	1
Barium	68.	0.050	0.31	mg/kg		6010B	02/22/10	1
Cadmium	0.86	0.040	0.31	mg/kg		6010B	02/22/10	1
Chromium	110	0.085	0.62	mg/kg		6010B	02/22/10	1
Lead	21.	0.090	0.31	mg/kg		6010B	02/22/10	1
Selenium	21.	0.32	1.2	mg/kg		6010B	02/22/10	1
Silver	0.65	0.17	0.62	mg/kg		6010B	02/22/10	1
Volatile Organics								
Acetone	0.068	0.017	0.062	mg/kg		8260B	02/20/10	1
Acrylonitrile	U	0.0020	0.012	mg/kg		8260B	02/20/10	1
Benzene	0.00048	0.00032	0.0012	mg/kg	J	8260B	02/20/10	1
Bromobenzene	U	0.00022	0.0012	mg/kg		8260B	02/20/10	1
Bromodichloromethane	U	0.00039	0.0012	mg/kg		8260B	02/20/10	1
Bromoform	U	0.00058	0.0012	mg/kg		8260B	02/20/10	1
Bromomethane	U	0.0013	0.0062	mg/kg		8260B	02/20/10	1
n-Butylbenzene	U	0.00024	0.0012	mg/kg		8260B	02/20/10	1
sec-Butylbenzene	U	0.00020	0.0012	mg/kg		8260B	02/20/10	1
tert-Butylbenzene	U	0.00019	0.0012	mg/kg		8260B	02/20/10	1
Carbon tetrachloride	U	0.00032	0.0012	mg/kg		8260B	02/20/10	1
Chlorobenzene	U	0.00025	0.0012	mg/kg		8260B	02/20/10	1
Chlorodibromomethane	U	0.00023	0.0012	mg/kg		8260B	02/20/10	1
Chloroethane	U	0.00059	0.0062	mg/kg		8260B	02/20/10	1
2-Chloroethyl vinyl ether	U	0.0032	0.062	mg/kg		8260B	02/20/10	1
Chloroform	U	0.00041	0.0062	mg/kg		8260B	02/20/10	1
Chloromethane	U	0.00056	0.0012	mg/kg		8260B	02/20/10	1
2-Chlorotoluene	U	0.00023	0.0012	mg/kg		8260B	02/20/10	1
4-Chlorotoluene	U	0.00032	0.0012	mg/kg		8260B	02/20/10	1
1,2-Dibromo-3-Chloropropane	U	0.0012	0.0062	mg/kg		8260B	02/20/10	1
1,2-Dibromoethane	U	0.00032	0.0012	mg/kg		8260B	02/20/10	1
Dibromomethane	U	0.00032	0.0012	mg/kg		8260B	02/20/10	1
1,2-Dichlorobenzene	U	0.00024	0.0012	mg/kg		8260B	02/20/10	1
1,3-Dichlorobenzene	U	0.00038	0.0012	mg/kg		8260B	02/20/10	1
1,4-Dichlorobenzene	U	0.00022	0.0012	mg/kg		8260B	02/20/10	1
Dichlorodifluoromethane	U	0.00032	0.0062	mg/kg		8260B	02/20/10	1

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD
RDL = Reported Detection Limit = LOQ = PQL = EQL
Note:
This report shall not be reproduced, except in full, without the written approval from ESC.
The reported analytical results relate only to the sample submitted
Reported: 03/11/10 09:48 Printed: 03/11/10 09:50
L445670-01 (PH) - 5.6@18.5c

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

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Est. 1970

REPORT OF ANALYSIS

Mark Brown
Municipal Engineering Services Comp
PO Box 97
Garner, NC 27529

March 11,2010

ESC Sample # : L445670-01

Date Received : February 19, 2010
Description : Jackson County Transfer Station

Site ID :

Sample ID : HA-BG

Project # : G10046.0

Collected By : Mark Brown
Collection Date : 02/17/10 10:00

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
1,1-Dichloroethane	U	0.00026	0.0012	mg/kg		8260B	02/20/10	1
1,2-Dichloroethane	U	0.00053	0.0012	mg/kg		8260B	02/20/10	1
1,1-Dichloroethene	U	0.00074	0.0012	mg/kg		8260B	02/20/10	1
cis-1,2-Dichloroethene	U	0.00072	0.0012	mg/kg		8260B	02/20/10	1
trans-1,2-Dichloroethene	U	0.00068	0.0012	mg/kg		8260B	02/20/10	1
1,2-Dichloropropane	U	0.00075	0.0012	mg/kg		8260B	02/20/10	1
1,1-Dichloropropene	U	0.00034	0.0012	mg/kg		8260B	02/20/10	1
1,3-Dichloropropane	U	0.00028	0.0012	mg/kg		8260B	02/20/10	1
cis-1,3-Dichloropropene	U	0.00026	0.0012	mg/kg		8260B	02/20/10	1
trans-1,3-Dichloropropene	U	0.00036	0.0012	mg/kg		8260B	02/20/10	1
2,2-Dichloropropane	U	0.00055	0.0012	mg/kg		8260B	02/20/10	1
Di-isopropyl ether	U	0.00030	0.0012	mg/kg		8260B	02/20/10	1
Ethylbenzene	U	0.00023	0.0012	mg/kg		8260B	02/20/10	1
Hexachloro-1,3-butadiene	U	0.00036	0.0012	mg/kg		8260B	02/20/10	1
Isopropylbenzene	U	0.00021	0.0012	mg/kg		8260B	02/20/10	1
p-Isopropyltoluene	U	0.00017	0.0012	mg/kg		8260B	02/20/10	1
2-Butanone (MEK)	0.0062	0.0027	0.012	mg/kg	J	8260B	02/20/10	1
Methylene Chloride	U	0.00060	0.0062	mg/kg		8260B	02/20/10	1
4-Methyl-2-pentanone (MIBK)	U	0.0014	0.012	mg/kg		8260B	02/20/10	1
Methyl tert-butyl ether	U	0.00028	0.0012	mg/kg		8260B	02/20/10	1
Naphthalene	U	0.00040	0.0062	mg/kg		8260B	02/20/10	1
n-Propylbenzene	U	0.00020	0.0012	mg/kg		8260B	02/20/10	1
Styrene	U	0.00020	0.0012	mg/kg		8260B	02/20/10	1
1,1,1,2-Tetrachloroethane	U	0.00020	0.0012	mg/kg		8260B	02/20/10	1
1,1,2,2-Tetrachloroethane	U	0.00033	0.0012	mg/kg		8260B	02/20/10	1
1,1,2-Trichloro-1,2,2-trifluoro	U	0.00025	0.0012	mg/kg		8260B	02/20/10	1
Tetrachloroethene	U	0.00023	0.0012	mg/kg		8260B	02/20/10	1
Toluene	U	0.0012	0.0062	mg/kg		8260B	02/20/10	1
1,2,3-Trichlorobenzene	U	0.00023	0.0012	mg/kg		8260B	02/20/10	1
1,2,4-Trichlorobenzene	U	0.00025	0.0012	mg/kg		8260B	02/20/10	1
1,1,1-Trichloroethane	U	0.00052	0.0012	mg/kg		8260B	02/20/10	1
1,1,2-Trichloroethane	U	0.00046	0.0012	mg/kg		8260B	02/20/10	1
Trichloroethene	U	0.00034	0.0012	mg/kg		8260B	02/20/10	1
Trichlorofluoromethane	U	0.00027	0.0062	mg/kg		8260B	02/20/10	1
1,2,3-Trichloropropane	U	0.00068	0.0012	mg/kg		8260B	02/20/10	1
1,2,4-Trimethylbenzene	U	0.00017	0.0012	mg/kg		8260B	02/20/10	1
1,2,3-Trimethylbenzene	U	0.00020	0.0012	mg/kg		8260B	02/20/10	1
1,3,5-Trimethylbenzene	U	0.00022	0.0012	mg/kg		8260B	02/20/10	1
Vinyl chloride	U	0.00029	0.0012	mg/kg		8260B	02/20/10	1
Xylenes, Total	U	0.00046	0.0037	mg/kg		8260B	02/20/10	1
Surrogate Recovery								
Toluene-d8	96.7			% Rec.		8260B	02/20/10	1
Dibromofluoromethane	97.0			% Rec.		8260B	02/20/10	1

Results listed are dry weight basis.
U = ND (Not Detected)
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L445670-01 (PH) - 5.6@18.5c

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Mark Brown
Municipal Engineering Services Comp
PO Box 97
Garner, NC 27529

March 11,2010

ESC Sample # : L445670-01

Date Received : February 19, 2010
Description : Jackson County Transfer Station

Site ID :

Sample ID : HA-BG

Project # : G10046.0

Collected By : Mark Brown
Collection Date : 02/17/10 10:00

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
4-Bromofluorobenzene	99.5			% Rec.		8260B	02/20/10	1

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REPORT OF ANALYSIS

Mark Brown
Municipal Engineering Services Comp
PO Box 97
Garner, NC 27529

March 11,2010

ESC Sample # : L445670-02

Date Received : February 19, 2010
Description : Jackson County Transfer Station

Site ID :

Sample ID : HA1-12 12IN

Project # : G10046.0

Collected By : Mark Brown
Collection Date : 02/17/10 10:15

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Phosphate as P	BDL	0.077	1.2	mg/kg		9056	02/25/10	1
pH	7.6			su		9045D	02/24/10	1
Total Solids	85.8			%		2540G	02/22/10	1
Mercury	0.044	0.0025	0.023	mg/kg		7471	02/20/10	1
Arsenic	U	1.6	5.8	mg/kg	O	6010B	02/22/10	5
Barium	120	0.050	0.29	mg/kg		6010B	02/22/10	1
Cadmium	0.40	0.040	0.29	mg/kg		6010B	02/22/10	1
Chromium	52.	0.085	0.58	mg/kg		6010B	02/22/10	1
Lead	8.6	0.090	0.29	mg/kg		6010B	02/22/10	1
Selenium	10.	0.32	1.2	mg/kg		6010B	02/22/10	1
Silver	0.26	0.16	0.58	mg/kg	J	6010B	02/22/10	1
Volatile Organics								
Acetone	0.026	0.017	0.058	mg/kg	J	8260B	02/20/10	1
Acrylonitrile	U	0.0020	0.012	mg/kg		8260B	02/20/10	1
Benzene	U	0.00032	0.0012	mg/kg		8260B	02/20/10	1
Bromobenzene	U	0.00022	0.0012	mg/kg		8260B	02/20/10	1
Bromodichloromethane	U	0.00039	0.0012	mg/kg		8260B	02/20/10	1
Bromoform	U	0.00058	0.0012	mg/kg		8260B	02/20/10	1
Bromomethane	U	0.0013	0.0058	mg/kg		8260B	02/20/10	1
n-Butylbenzene	U	0.00024	0.0012	mg/kg		8260B	02/20/10	1
sec-Butylbenzene	U	0.00020	0.0012	mg/kg		8260B	02/20/10	1
tert-Butylbenzene	U	0.00019	0.0012	mg/kg		8260B	02/20/10	1
Carbon tetrachloride	U	0.00032	0.0012	mg/kg		8260B	02/20/10	1
Chlorobenzene	U	0.00025	0.0012	mg/kg		8260B	02/20/10	1
Chlorodibromomethane	U	0.00023	0.0012	mg/kg		8260B	02/20/10	1
Chloroethane	U	0.00059	0.0058	mg/kg		8260B	02/20/10	1
2-Chloroethyl vinyl ether	U	0.0032	0.058	mg/kg		8260B	02/20/10	1
Chloroform	U	0.00041	0.0058	mg/kg		8260B	02/20/10	1
Chloromethane	U	0.00056	0.0012	mg/kg		8260B	02/20/10	1
2-Chlorotoluene	U	0.00023	0.0012	mg/kg		8260B	02/20/10	1
4-Chlorotoluene	U	0.00032	0.0012	mg/kg		8260B	02/20/10	1
1,2-Dibromo-3-Chloropropane	U	0.0012	0.0058	mg/kg		8260B	02/20/10	1
1,2-Dibromoethane	U	0.00032	0.0012	mg/kg		8260B	02/20/10	1
Dibromomethane	U	0.00032	0.0012	mg/kg		8260B	02/20/10	1
1,2-Dichlorobenzene	U	0.00024	0.0012	mg/kg		8260B	02/20/10	1
1,3-Dichlorobenzene	U	0.00038	0.0012	mg/kg		8260B	02/20/10	1
1,4-Dichlorobenzene	U	0.00022	0.0012	mg/kg		8260B	02/20/10	1
Dichlorodifluoromethane	U	0.00032	0.0058	mg/kg		8260B	02/20/10	1

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Mark Brown
Municipal Engineering Services Comp
PO Box 97
Garner, NC 27529

March 11,2010

ESC Sample # : L445670-02

Date Received : February 19, 2010
Description : Jackson County Transfer Station

Site ID :

Sample ID : HA1-12 12IN

Project # : G10046.0

Collected By : Mark Brown
Collection Date : 02/17/10 10:15

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
1,1-Dichloroethane	U	0.00026	0.0012	mg/kg		8260B	02/20/10	1
1,2-Dichloroethane	U	0.00053	0.0012	mg/kg		8260B	02/20/10	1
1,1-Dichloroethene	U	0.00074	0.0012	mg/kg		8260B	02/20/10	1
cis-1,2-Dichloroethene	U	0.00072	0.0012	mg/kg		8260B	02/20/10	1
trans-1,2-Dichloroethene	U	0.00068	0.0012	mg/kg		8260B	02/20/10	1
1,2-Dichloropropane	U	0.00075	0.0012	mg/kg		8260B	02/20/10	1
1,1-Dichloropropene	U	0.00034	0.0012	mg/kg		8260B	02/20/10	1
1,3-Dichloropropane	U	0.00028	0.0012	mg/kg		8260B	02/20/10	1
cis-1,3-Dichloropropene	U	0.00026	0.0012	mg/kg		8260B	02/20/10	1
trans-1,3-Dichloropropene	U	0.00036	0.0012	mg/kg		8260B	02/20/10	1
2,2-Dichloropropane	U	0.00055	0.0012	mg/kg		8260B	02/20/10	1
Di-isopropyl ether	U	0.00030	0.0012	mg/kg		8260B	02/20/10	1
Ethylbenzene	U	0.00023	0.0012	mg/kg		8260B	02/20/10	1
Hexachloro-1,3-butadiene	U	0.00036	0.0012	mg/kg		8260B	02/20/10	1
Isopropylbenzene	U	0.00021	0.0012	mg/kg		8260B	02/20/10	1
p-Isopropyltoluene	U	0.00017	0.0012	mg/kg		8260B	02/20/10	1
2-Butanone (MEK)	0.0036	0.0027	0.012	mg/kg	J	8260B	02/20/10	1
Methylene Chloride	U	0.00060	0.0058	mg/kg		8260B	02/20/10	1
4-Methyl-2-pentanone (MIBK)	U	0.0014	0.012	mg/kg		8260B	02/20/10	1
Methyl tert-butyl ether	U	0.00028	0.0012	mg/kg		8260B	02/20/10	1
Naphthalene	U	0.00040	0.0058	mg/kg		8260B	02/20/10	1
n-Propylbenzene	U	0.00020	0.0012	mg/kg		8260B	02/20/10	1
Styrene	U	0.00020	0.0012	mg/kg		8260B	02/20/10	1
1,1,1,2-Tetrachloroethane	U	0.00020	0.0012	mg/kg		8260B	02/20/10	1
1,1,2,2-Tetrachloroethane	U	0.00033	0.0012	mg/kg		8260B	02/20/10	1
1,1,2-Trichloro-1,2,2-trifluoro	U	0.00025	0.0012	mg/kg		8260B	02/20/10	1
Tetrachloroethene	U	0.00023	0.0012	mg/kg		8260B	02/20/10	1
Toluene	U	0.0012	0.0058	mg/kg		8260B	02/20/10	1
1,2,3-Trichlorobenzene	U	0.00023	0.0012	mg/kg		8260B	02/20/10	1
1,2,4-Trichlorobenzene	U	0.00025	0.0012	mg/kg		8260B	02/20/10	1
1,1,1-Trichloroethane	U	0.00052	0.0012	mg/kg		8260B	02/20/10	1
1,1,2-Trichloroethane	U	0.00046	0.0012	mg/kg		8260B	02/20/10	1
Trichloroethene	U	0.00034	0.0012	mg/kg		8260B	02/20/10	1
Trichlorofluoromethane	U	0.00027	0.0058	mg/kg		8260B	02/20/10	1
1,2,3-Trichloropropane	U	0.00068	0.0012	mg/kg		8260B	02/20/10	1
1,2,4-Trimethylbenzene	U	0.00017	0.0012	mg/kg		8260B	02/20/10	1
1,2,3-Trimethylbenzene	U	0.00020	0.0012	mg/kg		8260B	02/20/10	1
1,3,5-Trimethylbenzene	U	0.00022	0.0012	mg/kg		8260B	02/20/10	1
Vinyl chloride	U	0.00029	0.0012	mg/kg		8260B	02/20/10	1
Xylenes, Total	U	0.00046	0.0035	mg/kg		8260B	02/20/10	1
Surrogate Recovery								
Toluene-d8	97.0			% Rec.		8260B	02/20/10	1
Dibromofluoromethane	96.6			% Rec.		8260B	02/20/10	1

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REPORT OF ANALYSIS

Mark Brown
Municipal Engineering Services Comp
PO Box 97
Garner, NC 27529

March 11,2010

ESC Sample # : L445670-02

Date Received : February 19, 2010
Description : Jackson County Transfer Station

Site ID :

Sample ID : HA1-12 12IN

Project # : G10046.0

Collected By : Mark Brown
Collection Date : 02/17/10 10:15

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
4-Bromofluorobenzene	101.			% Rec.		8260B	02/20/10	1

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REPORT OF ANALYSIS

Mark Brown
Municipal Engineering Services Comp
PO Box 97
Garner, NC 27529

March 11, 2010

ESC Sample # : L445670-03

Date Received : February 19, 2010
Description : Jackson County Transfer Station

Site ID :

Sample ID : HA2-24 24IN

Project # : G10046.0

Collected By : Mark Brown
Collection Date : 02/17/10 10:30

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Phosphate as P	BDL	0.077	1.3	mg/kg		9056	02/25/10	1
pH	7.0			su		9045D	02/24/10	1
Total Solids	79.3			%		2540G	02/22/10	1
Mercury	0.034	0.0025	0.025	mg/kg		7471	02/20/10	1
Arsenic	U	1.6	6.3	mg/kg	O	6010B	02/22/10	5
Barium	200	0.050	0.32	mg/kg		6010B	02/22/10	1
Cadmium	0.19	0.040	0.32	mg/kg	J	6010B	02/22/10	1
Chromium	140	0.085	0.63	mg/kg		6010B	02/22/10	1
Lead	18.	0.090	0.32	mg/kg		6010B	02/22/10	1
Selenium	15.	0.32	1.3	mg/kg		6010B	02/22/10	1
Silver	0.45	0.16	0.63	mg/kg	J	6010B	02/22/10	1
Volatile Organics								
Acetone	0.052	0.017	0.063	mg/kg	J	8260B	02/20/10	1
Acrylonitrile	U	0.0020	0.013	mg/kg		8260B	02/20/10	1
Benzene	U	0.00032	0.0013	mg/kg		8260B	02/20/10	1
Bromobenzene	U	0.00022	0.0013	mg/kg		8260B	02/20/10	1
Bromodichloromethane	U	0.00039	0.0013	mg/kg		8260B	02/20/10	1
Bromoform	U	0.00058	0.0013	mg/kg		8260B	02/20/10	1
Bromomethane	U	0.0013	0.0063	mg/kg		8260B	02/20/10	1
n-Butylbenzene	U	0.00024	0.0013	mg/kg		8260B	02/20/10	1
sec-Butylbenzene	U	0.00020	0.0013	mg/kg		8260B	02/20/10	1
tert-Butylbenzene	U	0.00019	0.0013	mg/kg		8260B	02/20/10	1
Carbon tetrachloride	U	0.00032	0.0013	mg/kg		8260B	02/20/10	1
Chlorobenzene	U	0.00025	0.0013	mg/kg		8260B	02/20/10	1
Chlorodibromomethane	U	0.00023	0.0013	mg/kg		8260B	02/20/10	1
Chloroethane	U	0.00059	0.0063	mg/kg		8260B	02/20/10	1
2-Chloroethyl vinyl ether	U	0.0032	0.063	mg/kg		8260B	02/20/10	1
Chloroform	U	0.00041	0.0063	mg/kg		8260B	02/20/10	1
Chloromethane	U	0.00056	0.0013	mg/kg		8260B	02/20/10	1
2-Chlorotoluene	U	0.00023	0.0013	mg/kg		8260B	02/20/10	1
4-Chlorotoluene	U	0.00032	0.0013	mg/kg		8260B	02/20/10	1
1,2-Dibromo-3-Chloropropane	U	0.0012	0.0063	mg/kg		8260B	02/20/10	1
1,2-Dibromoethane	U	0.00032	0.0013	mg/kg		8260B	02/20/10	1
Dibromomethane	U	0.00032	0.0013	mg/kg		8260B	02/20/10	1
1,2-Dichlorobenzene	U	0.00024	0.0013	mg/kg		8260B	02/20/10	1
1,3-Dichlorobenzene	U	0.00038	0.0013	mg/kg		8260B	02/20/10	1
1,4-Dichlorobenzene	U	0.00022	0.0013	mg/kg		8260B	02/20/10	1
Dichlorodifluoromethane	U	0.00032	0.0063	mg/kg		8260B	02/20/10	1

Results listed are dry weight basis.
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Tax I.D. 62-0814289

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REPORT OF ANALYSIS

Mark Brown
Municipal Engineering Services Comp
PO Box 97
Garner, NC 27529

March 11, 2010

ESC Sample # : L445670-03

Date Received : February 19, 2010
Description : Jackson County Transfer Station

Site ID :

Sample ID : HA2-24 24IN

Project # : G10046.0

Collected By : Mark Brown
Collection Date : 02/17/10 10:30

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
1,1-Dichloroethane	U	0.00026	0.0013	mg/kg		8260B	02/20/10	1
1,2-Dichloroethane	U	0.00053	0.0013	mg/kg		8260B	02/20/10	1
1,1-Dichloroethene	U	0.00074	0.0013	mg/kg		8260B	02/20/10	1
cis-1,2-Dichloroethene	U	0.00072	0.0013	mg/kg		8260B	02/20/10	1
trans-1,2-Dichloroethene	U	0.00068	0.0013	mg/kg		8260B	02/20/10	1
1,2-Dichloropropane	U	0.00075	0.0013	mg/kg		8260B	02/20/10	1
1,1-Dichloropropene	U	0.00034	0.0013	mg/kg		8260B	02/20/10	1
1,3-Dichloropropane	U	0.00028	0.0013	mg/kg		8260B	02/20/10	1
cis-1,3-Dichloropropene	U	0.00026	0.0013	mg/kg		8260B	02/20/10	1
trans-1,3-Dichloropropene	U	0.00036	0.0013	mg/kg		8260B	02/20/10	1
2,2-Dichloropropane	U	0.00055	0.0013	mg/kg		8260B	02/20/10	1
Di-isopropyl ether	U	0.00030	0.0013	mg/kg		8260B	02/20/10	1
Ethylbenzene	U	0.00023	0.0013	mg/kg		8260B	02/20/10	1
Hexachloro-1,3-butadiene	U	0.00036	0.0013	mg/kg		8260B	02/20/10	1
Isopropylbenzene	U	0.00021	0.0013	mg/kg		8260B	02/20/10	1
p-Isopropyltoluene	U	0.00017	0.0013	mg/kg		8260B	02/20/10	1
2-Butanone (MEK)	0.011	0.0027	0.013	mg/kg	J	8260B	02/20/10	1
Methylene Chloride	U	0.00060	0.0063	mg/kg		8260B	02/20/10	1
4-Methyl-2-pentanone (MIBK)	U	0.0014	0.013	mg/kg		8260B	02/20/10	1
Methyl tert-butyl ether	U	0.00028	0.0013	mg/kg		8260B	02/20/10	1
Naphthalene	U	0.00040	0.0063	mg/kg		8260B	02/20/10	1
n-Propylbenzene	U	0.00020	0.0013	mg/kg		8260B	02/20/10	1
Styrene	U	0.00020	0.0013	mg/kg		8260B	02/20/10	1
1,1,1,2-Tetrachloroethane	U	0.00020	0.0013	mg/kg		8260B	02/20/10	1
1,1,2,2-Tetrachloroethane	U	0.00033	0.0013	mg/kg		8260B	02/20/10	1
1,1,2-Trichloro-1,2,2-trifluoro	U	0.00025	0.0013	mg/kg		8260B	02/20/10	1
Tetrachloroethene	U	0.00023	0.0013	mg/kg		8260B	02/20/10	1
Toluene	U	0.0012	0.0063	mg/kg		8260B	02/20/10	1
1,2,3-Trichlorobenzene	U	0.00023	0.0013	mg/kg		8260B	02/20/10	1
1,2,4-Trichlorobenzene	U	0.00025	0.0013	mg/kg		8260B	02/20/10	1
1,1,1-Trichloroethane	U	0.00052	0.0013	mg/kg		8260B	02/20/10	1
1,1,2-Trichloroethane	U	0.00046	0.0013	mg/kg		8260B	02/20/10	1
Trichloroethene	U	0.00034	0.0013	mg/kg		8260B	02/20/10	1
Trichlorofluoromethane	U	0.00027	0.0063	mg/kg		8260B	02/20/10	1
1,2,3-Trichloropropane	U	0.00068	0.0013	mg/kg		8260B	02/20/10	1
1,2,4-Trimethylbenzene	U	0.00017	0.0013	mg/kg		8260B	02/20/10	1
1,2,3-Trimethylbenzene	U	0.00020	0.0013	mg/kg		8260B	02/20/10	1
1,3,5-Trimethylbenzene	U	0.00022	0.0013	mg/kg		8260B	02/20/10	1
Vinyl chloride	U	0.00029	0.0013	mg/kg		8260B	02/20/10	1
Xylenes, Total	U	0.00046	0.0038	mg/kg		8260B	02/20/10	1
Surrogate Recovery								
Toluene-d8	97.3			% Rec.		8260B	02/20/10	1
Dibromofluoromethane	97.5			% Rec.		8260B	02/20/10	1

Results listed are dry weight basis.
U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD
RDL = Reported Detection Limit = LOQ = PQL = EQL
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REPORT OF ANALYSIS

Mark Brown
Municipal Engineering Services Comp
PO Box 97
Garner, NC 27529

March 11, 2010

ESC Sample # : L445670-03

Date Received : February 19, 2010
Description : Jackson County Transfer Station

Site ID :

Sample ID : HA2-24 24IN

Project # : G10046.0

Collected By : Mark Brown
Collection Date : 02/17/10 10:30

Parameter	Dry Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
4-Bromofluorobenzene	99.7			% Rec.		8260B	02/20/10	1

Results listed are dry weight basis.
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REPORT OF ANALYSIS

Mark Brown
Municipal Engineering Services Comp
PO Box 97
Garner, NC 27529

March 11, 2010

ESC Sample # : L445670-04

Date Received : February 19, 2010
Description : Jackson County Transfer Station

Site ID :

Sample ID : SW-BG

Project # : G10046.0

Collected By : Mark Brown
Collection Date : 02/17/10 11:00

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	0.60	0.031	0.10	mg/l		9056	02/19/10	1
Sulfate	U	0.21	5.0	mg/l		9056	02/19/10	1
BOD	U	1.7	5.0	mg/l		SM5210B	02/19/10	1
COD	U	1.7	10.	mg/l		410.4	02/22/10	1
pH	7.7			su	T8	9040C	02/20/10	1
Phosphorus,Total	0.031	0.019	0.10	mg/l	J	365.1	02/25/10	1
Mercury	U	0.000017	0.00020	mg/l		7470A	02/20/10	1
Arsenic	U	0.0065	0.020	mg/l		6010B	02/21/10	1
Barium	0.042	0.0010	0.0050	mg/l		6010B	02/21/10	1
Cadmium	U	0.00080	0.0050	mg/l		6010B	02/21/10	1
Chromium	0.0020	0.0017	0.010	mg/l	J	6010B	02/21/10	1
Lead	U	0.0018	0.0050	mg/l		6010B	02/21/10	1
Selenium	U	0.0063	0.020	mg/l		6010B	02/21/10	1
Silver	U	0.0033	0.010	mg/l		6010B	02/21/10	1
Volatile Organics								
Acetone	U	0.0089	0.050	mg/l		8260B	02/21/10	1
Acrolein	U	0.014	0.050	mg/l		8260B	02/21/10	1
Acrylonitrile	U	0.0017	0.010	mg/l		8260B	02/21/10	1
Benzene	U	0.00029	0.0010	mg/l		8260B	02/21/10	1
Bromobenzene	U	0.00024	0.0010	mg/l		8260B	02/21/10	1
Bromodichloromethane	U	0.00037	0.0010	mg/l		8260B	02/21/10	1
Bromoform	U	0.00051	0.0010	mg/l		8260B	02/21/10	1
Bromomethane	U	0.00089	0.0050	mg/l		8260B	02/21/10	1
n-Butylbenzene	U	0.00023	0.0010	mg/l		8260B	02/21/10	1
sec-Butylbenzene	U	0.00022	0.0010	mg/l		8260B	02/21/10	1
tert-Butylbenzene	U	0.00020	0.0010	mg/l		8260B	02/21/10	1
Carbon tetrachloride	U	0.00031	0.0010	mg/l		8260B	02/21/10	1
Chlorobenzene	U	0.00026	0.0010	mg/l		8260B	02/21/10	1
Chlorodibromomethane	U	0.00042	0.0010	mg/l		8260B	02/21/10	1
Chloroethane	U	0.00086	0.0050	mg/l		8260B	02/21/10	1
2-Chloroethyl vinyl ether	U	0.0014	0.050	mg/l		8260B	02/21/10	1
Chloroform	U	0.00033	0.0050	mg/l		8260B	02/21/10	1
Chloromethane	U	0.00025	0.0025	mg/l		8260B	02/21/10	1
2-Chlorotoluene	U	0.00022	0.0010	mg/l		8260B	02/21/10	1
4-Chlorotoluene	U	0.00016	0.0010	mg/l		8260B	02/21/10	1
1,2-Dibromo-3-Chloropropane	U	0.00048	0.0050	mg/l		8260B	02/21/10	1

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Mark Brown
Municipal Engineering Services Comp
PO Box 97
Garner, NC 27529

March 11, 2010

ESC Sample # : L445670-04

Date Received : February 19, 2010
Description : Jackson County Transfer Station

Site ID :

Sample ID : SW-BG

Project # : G10046.0

Collected By : Mark Brown
Collection Date : 02/17/10 11:00

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
1,2-Dibromoethane	U	0.00048	0.0010	mg/l		8260B	02/21/10	1
Dibromomethane	U	0.00028	0.0010	mg/l		8260B	02/21/10	1
1,2-Dichlorobenzene	U	0.00029	0.0010	mg/l		8260B	02/21/10	1
1,3-Dichlorobenzene	U	0.00019	0.0010	mg/l		8260B	02/21/10	1
1,4-Dichlorobenzene	U	0.00030	0.0010	mg/l		8260B	02/21/10	1
Dichlorodifluoromethane	U	0.00054	0.0050	mg/l		8260B	02/21/10	1
1,1-Dichloroethane	U	0.00031	0.0010	mg/l		8260B	02/21/10	1
1,2-Dichloroethane	U	0.00027	0.0010	mg/l		8260B	02/21/10	1
1,1-Dichloroethene	U	0.00050	0.0010	mg/l		8260B	02/21/10	1
cis-1,2-Dichloroethene	U	0.00038	0.0010	mg/l		8260B	02/21/10	1
trans-1,2-Dichloroethene	U	0.00030	0.0010	mg/l		8260B	02/21/10	1
1,2-Dichloropropane	U	0.00052	0.0010	mg/l		8260B	02/21/10	1
1,1-Dichloropropene	U	0.00022	0.0010	mg/l		8260B	02/21/10	1
1,3-Dichloropropane	U	0.00023	0.0010	mg/l		8260B	02/21/10	1
cis-1,3-Dichloropropene	U	0.00026	0.0010	mg/l		8260B	02/21/10	1
trans-1,3-Dichloropropene	U	0.00024	0.0010	mg/l		8260B	02/21/10	1
2,2-Dichloropropane	U	0.00025	0.0010	mg/l		8260B	02/21/10	1
Di-isopropyl ether	U	0.00025	0.0010	mg/l		8260B	02/21/10	1
Ethylbenzene	U	0.00022	0.0010	mg/l		8260B	02/21/10	1
Hexachloro-1,3-butadiene	U	0.00049	0.0010	mg/l		8260B	02/21/10	1
Isopropylbenzene	U	0.00019	0.0010	mg/l		8260B	02/21/10	1
p-Isopropyltoluene	U	0.00021	0.0010	mg/l		8260B	02/21/10	1
2-Butanone (MEK)	U	0.0045	0.010	mg/l		8260B	02/21/10	1
Methylene Chloride	U	0.00030	0.0050	mg/l		8260B	02/21/10	1
4-Methyl-2-pentanone (MIBK)	U	0.0014	0.010	mg/l		8260B	02/21/10	1
Methyl tert-butyl ether	U	0.00019	0.0010	mg/l		8260B	02/21/10	1
Naphthalene	U	0.00017	0.0050	mg/l		8260B	02/21/10	1
n-Propylbenzene	U	0.00022	0.0010	mg/l		8260B	02/21/10	1
Styrene	U	0.00038	0.0010	mg/l		8260B	02/21/10	1
1,1,1,2-Tetrachloroethane	U	0.00040	0.0010	mg/l		8260B	02/21/10	1
1,1,2,2-Tetrachloroethane	U	0.00022	0.0010	mg/l		8260B	02/21/10	1
1,1,2-Trichloro-1,2,2-trifluoro	U	0.00022	0.0010	mg/l		8260B	02/21/10	1
Tetrachloroethene	U	0.00029	0.0010	mg/l		8260B	02/21/10	1
Toluene	U	0.00027	0.0050	mg/l		8260B	02/21/10	1
1,2,3-Trichlorobenzene	U	0.00024	0.0010	mg/l		8260B	02/21/10	1
1,2,4-Trichlorobenzene	U	0.00026	0.0010	mg/l		8260B	02/21/10	1
1,1,1-Trichloroethane	U	0.00027	0.0010	mg/l		8260B	02/21/10	1
1,1,2-Trichloroethane	U	0.00045	0.0010	mg/l		8260B	02/21/10	1
Trichloroethene	U	0.00037	0.0010	mg/l		8260B	02/21/10	1
Trichlorofluoromethane	U	0.00029	0.0050	mg/l		8260B	02/21/10	1
1,2,3-Trichloropropane	U	0.00036	0.0010	mg/l		8260B	02/21/10	1
1,2,4-Trimethylbenzene	U	0.00020	0.0010	mg/l		8260B	02/21/10	1
1,2,3-Trimethylbenzene	U	0.00022	0.0010	mg/l		8260B	02/21/10	1

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REPORT OF ANALYSIS

Mark Brown
Municipal Engineering Services Comp
PO Box 97
Garner, NC 27529

March 11, 2010

ESC Sample # : L445670-04

Date Received : February 19, 2010
Description : Jackson County Transfer Station

Site ID :

Sample ID : SW-BG

Project # : G10046.0

Collected By : Mark Brown
Collection Date : 02/17/10 11:00

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
1,3,5-Trimethylbenzene	U	0.00020	0.0010	mg/l		8260B	02/21/10	1
Vinyl chloride	U	0.00027	0.0010	mg/l		8260B	02/21/10	1
Xylenes, Total	U	0.00086	0.0030	mg/l		8260B	02/21/10	1
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	02/21/10	1
Dibromofluoromethane	122.			% Rec.		8260B	02/21/10	1
4-Bromofluorobenzene	99.2			% Rec.		8260B	02/21/10	1

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REPORT OF ANALYSIS

Mark Brown
Municipal Engineering Services Comp
PO Box 97
Garner, NC 27529

March 11, 2010

ESC Sample # : L445670-05

Date Received : February 19, 2010
Description : Jackson County Transfer Station

Site ID :

Sample ID : SW-DG

Project # : G10046.0

Collected By : Mark Brown
Collection Date : 02/17/10 11:15

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	0.58	0.031	0.10	mg/l		9056	02/19/10	1
Sulfate	U	0.21	5.0	mg/l		9056	02/19/10	1
BOD	U	1.7	5.0	mg/l		SM5210B	02/19/10	1
COD	U	1.7	10.	mg/l		410.4	02/22/10	1
pH	7.9			su	T8	9040C	02/20/10	1
Phosphorus,Total	0.068	0.019	0.10	mg/l	J	365.1	02/25/10	1
Mercury	U	0.000017	0.00020	mg/l		7470A	02/20/10	1
Arsenic	U	0.0065	0.020	mg/l		6010B	02/21/10	1
Barium	0.043	0.0010	0.0050	mg/l		6010B	02/21/10	1
Cadmium	U	0.00080	0.0050	mg/l		6010B	02/21/10	1
Chromium	0.0018	0.0017	0.010	mg/l	J	6010B	02/21/10	1
Lead	U	0.0018	0.0050	mg/l		6010B	02/21/10	1
Selenium	U	0.0063	0.020	mg/l		6010B	02/21/10	1
Silver	U	0.0033	0.010	mg/l		6010B	02/21/10	1
Volatile Organics								
Acetone	U	0.0089	0.050	mg/l		8260B	02/21/10	1
Acrolein	U	0.014	0.050	mg/l		8260B	02/21/10	1
Acrylonitrile	U	0.0017	0.010	mg/l		8260B	02/21/10	1
Benzene	U	0.00029	0.0010	mg/l		8260B	02/21/10	1
Bromobenzene	U	0.00024	0.0010	mg/l		8260B	02/21/10	1
Bromodichloromethane	U	0.00037	0.0010	mg/l		8260B	02/21/10	1
Bromoform	U	0.00051	0.0010	mg/l		8260B	02/21/10	1
Bromomethane	U	0.00089	0.0050	mg/l		8260B	02/21/10	1
n-Butylbenzene	U	0.00023	0.0010	mg/l		8260B	02/21/10	1
sec-Butylbenzene	U	0.00022	0.0010	mg/l		8260B	02/21/10	1
tert-Butylbenzene	U	0.00020	0.0010	mg/l		8260B	02/21/10	1
Carbon tetrachloride	U	0.00031	0.0010	mg/l		8260B	02/21/10	1
Chlorobenzene	U	0.00026	0.0010	mg/l		8260B	02/21/10	1
Chlorodibromomethane	U	0.00042	0.0010	mg/l		8260B	02/21/10	1
Chloroethane	U	0.00086	0.0050	mg/l		8260B	02/21/10	1
2-Chloroethyl vinyl ether	U	0.0014	0.050	mg/l		8260B	02/21/10	1
Chloroform	U	0.00033	0.0050	mg/l		8260B	02/21/10	1
Chloromethane	U	0.00025	0.0025	mg/l		8260B	02/21/10	1
2-Chlorotoluene	U	0.00022	0.0010	mg/l		8260B	02/21/10	1
4-Chlorotoluene	U	0.00016	0.0010	mg/l		8260B	02/21/10	1
1,2-Dibromo-3-Chloropropane	U	0.00048	0.0050	mg/l		8260B	02/21/10	1

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REPORT OF ANALYSIS

Mark Brown
Municipal Engineering Services Comp
PO Box 97
Garner, NC 27529

March 11, 2010

ESC Sample # : L445670-05

Date Received : February 19, 2010
Description : Jackson County Transfer Station

Site ID :

Sample ID : SW-DG

Project # : G10046.0

Collected By : Mark Brown
Collection Date : 02/17/10 11:15

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
1,2-Dibromoethane	U	0.00048	0.0010	mg/l		8260B	02/21/10	1
Dibromomethane	U	0.00028	0.0010	mg/l		8260B	02/21/10	1
1,2-Dichlorobenzene	U	0.00029	0.0010	mg/l		8260B	02/21/10	1
1,3-Dichlorobenzene	U	0.00019	0.0010	mg/l		8260B	02/21/10	1
1,4-Dichlorobenzene	U	0.00030	0.0010	mg/l		8260B	02/21/10	1
Dichlorodifluoromethane	U	0.00054	0.0050	mg/l		8260B	02/21/10	1
1,1-Dichloroethane	U	0.00031	0.0010	mg/l		8260B	02/21/10	1
1,2-Dichloroethane	U	0.00027	0.0010	mg/l		8260B	02/21/10	1
1,1-Dichloroethene	U	0.00050	0.0010	mg/l		8260B	02/21/10	1
cis-1,2-Dichloroethene	U	0.00038	0.0010	mg/l		8260B	02/21/10	1
trans-1,2-Dichloroethene	U	0.00030	0.0010	mg/l		8260B	02/21/10	1
1,2-Dichloropropane	U	0.00052	0.0010	mg/l		8260B	02/21/10	1
1,1-Dichloropropene	U	0.00022	0.0010	mg/l		8260B	02/21/10	1
1,3-Dichloropropane	U	0.00023	0.0010	mg/l		8260B	02/21/10	1
cis-1,3-Dichloropropene	U	0.00026	0.0010	mg/l		8260B	02/21/10	1
trans-1,3-Dichloropropene	U	0.00024	0.0010	mg/l		8260B	02/21/10	1
2,2-Dichloropropane	U	0.00025	0.0010	mg/l		8260B	02/21/10	1
Di-isopropyl ether	U	0.00025	0.0010	mg/l		8260B	02/21/10	1
Ethylbenzene	U	0.00022	0.0010	mg/l		8260B	02/21/10	1
Hexachloro-1,3-butadiene	U	0.00049	0.0010	mg/l		8260B	02/21/10	1
Isopropylbenzene	U	0.00019	0.0010	mg/l		8260B	02/21/10	1
p-Isopropyltoluene	U	0.00021	0.0010	mg/l		8260B	02/21/10	1
2-Butanone (MEK)	U	0.0045	0.010	mg/l		8260B	02/21/10	1
Methylene Chloride	U	0.00030	0.0050	mg/l		8260B	02/21/10	1
4-Methyl-2-pentanone (MIBK)	U	0.0014	0.010	mg/l		8260B	02/21/10	1
Methyl tert-butyl ether	U	0.00019	0.0010	mg/l		8260B	02/21/10	1
Naphthalene	U	0.00017	0.0050	mg/l		8260B	02/21/10	1
n-Propylbenzene	U	0.00022	0.0010	mg/l		8260B	02/21/10	1
Styrene	U	0.00038	0.0010	mg/l		8260B	02/21/10	1
1,1,1,2-Tetrachloroethane	U	0.00040	0.0010	mg/l		8260B	02/21/10	1
1,1,2,2-Tetrachloroethane	U	0.00022	0.0010	mg/l		8260B	02/21/10	1
1,1,2-Trichloro-1,2,2-trifluoro	U	0.00022	0.0010	mg/l		8260B	02/21/10	1
Tetrachloroethene	U	0.00029	0.0010	mg/l		8260B	02/21/10	1
Toluene	U	0.00027	0.0050	mg/l		8260B	02/21/10	1
1,2,3-Trichlorobenzene	U	0.00024	0.0010	mg/l		8260B	02/21/10	1
1,2,4-Trichlorobenzene	U	0.00026	0.0010	mg/l		8260B	02/21/10	1
1,1,1-Trichloroethane	U	0.00027	0.0010	mg/l		8260B	02/21/10	1
1,1,2-Trichloroethane	U	0.00045	0.0010	mg/l		8260B	02/21/10	1
Trichloroethene	U	0.00037	0.0010	mg/l		8260B	02/21/10	1
Trichlorofluoromethane	U	0.00029	0.0050	mg/l		8260B	02/21/10	1
1,2,3-Trichloropropane	U	0.00036	0.0010	mg/l		8260B	02/21/10	1
1,2,4-Trimethylbenzene	U	0.00020	0.0010	mg/l		8260B	02/21/10	1
1,2,3-Trimethylbenzene	U	0.00022	0.0010	mg/l		8260B	02/21/10	1

U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD
RDL = Reported Detection Limit = LOQ = PQL = EQL
Note:
The reported analytical results relate only to the sample submitted.
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.
Reported: 03/11/10 09:48 Printed: 03/11/10 09:50
L445670-05 (PH) - 7.9@16.8c

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

Mark Brown
Municipal Engineering Services Comp
PO Box 97
Garner, NC 27529

March 11, 2010

ESC Sample # : L445670-05

Date Received : February 19, 2010
Description : Jackson County Transfer Station

Site ID :

Sample ID : SW-DG

Project # : G10046.0

Collected By : Mark Brown
Collection Date : 02/17/10 11:15

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
1,3,5-Trimethylbenzene	U	0.00020	0.0010	mg/l		8260B	02/21/10	1
Vinyl chloride	U	0.00027	0.0010	mg/l		8260B	02/21/10	1
Xylenes, Total	U	0.00086	0.0030	mg/l		8260B	02/21/10	1
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	02/21/10	1
Dibromofluoromethane	123.			% Rec.		8260B	02/21/10	1
4-Bromofluorobenzene	100.			% Rec.		8260B	02/21/10	1

U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD
RDL = Reported Detection Limit = LOQ = PQL = EQL
Note:
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L445670-05 (PH) - 7.9@16.8c

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REPORT OF ANALYSIS

Mark Brown
Municipal Engineering Services Comp
PO Box 97
Garner, NC 27529

March 11, 2010

ESC Sample # : L445670-06

Date Received : February 19, 2010
Description : Jackson County Transfer Station

Site ID :

Sample ID : HA-BG

Project # : G10046.0

Collected By : Mark Brown
Collection Date : 02/17/10 10:00

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	0.45	0.031	0.10	mg/l		9056	03/01/10	1
Sulfate	U	0.21	5.0	mg/l		9056	02/20/10	1
Water Extraction	-					D3987-8	02/20/10	1
Water Extraction	-					D3987-8	02/20/10	1

U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD
RDL = Reported Detection Limit = LOQ = PQL = EQL
Note:
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Reported: 03/11/10 09:48 Printed: 03/11/10 09:50

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REPORT OF ANALYSIS

Mark Brown
Municipal Engineering Services Comp
PO Box 97
Garner, NC 27529

March 11, 2010

ESC Sample # : L445670-07

Date Received : February 19, 2010
Description : Jackson County Transfer Station

Site ID :

Sample ID : HA1-12 12IN

Project # : G10046.0

Collected By : Mark Brown
Collection Date : 02/17/10 10:15

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	U	0.031	0.10	mg/l		9056	03/01/10	1
Sulfate	U	0.21	5.0	mg/l		9056	02/20/10	1
Water Extraction	-					D3987-8	02/20/10	1
Water Extraction	-					D3987-8	02/20/10	1

U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD
RDL = Reported Detection Limit = LOQ = PQL = EQL
Note:
The reported analytical results relate only to the sample submitted.
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Reported: 03/11/10 09:48 Printed: 03/11/10 09:50

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REPORT OF ANALYSIS

Mark Brown
Municipal Engineering Services Comp
PO Box 97
Garner, NC 27529

March 11, 2010

ESC Sample # : L445670-08

Date Received : February 19, 2010
Description : Jackson County Transfer Station

Site ID :

Sample ID : HA2-24 24IN

Project # : G10046.0

Collected By : Mark Brown
Collection Date : 02/17/10 10:30

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	0.11	0.031	0.10	mg/l		9056	03/01/10	1
Sulfate	5.3	0.21	5.0	mg/l		9056	02/20/10	1
Water Extraction	-					D3987-8	02/20/10	1
Water Extraction	-					D3987-8	02/20/10	1

U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD
RDL = Reported Detection Limit = LOQ = PQL = EQL
Note:
The reported analytical results relate only to the sample submitted.
This report shall not be reproduced, except in full, without the written approval from ESC.
.
Reported: 03/11/10 09:48 Printed: 03/11/10 09:50

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L445670-01	WG464222	SAMP	Benzene	R1124259	J
	WG464222	SAMP	2-Butanone (MEK)	R1124259	J
	WG464108	SAMP	Mercury	R1124321	J
L445670-02	WG464222	SAMP	Acetone	R1124259	J
	WG464222	SAMP	2-Butanone (MEK)	R1124259	J
	WG464140	SAMP	Arsenic	R1125731	O
	WG464140	SAMP	Silver	R1125731	J
L445670-03	WG464222	SAMP	Acetone	R1124259	J
	WG464222	SAMP	2-Butanone (MEK)	R1124259	J
	WG464140	SAMP	Arsenic	R1125731	O
	WG464140	SAMP	Cadmium	R1125731	J
	WG464140	SAMP	Silver	R1125731	J
L445670-04	WG464094	SAMP	pH	R1124757	T8
	WG464156	SAMP	Chromium	R1124789	J
	WG464997	SAMP	Phosphorus,Total	R1128589	J
L445670-05	WG464094	SAMP	pH	R1124757	T8
	WG464156	SAMP	Chromium	R1124789	J
	WG464997	SAMP	Phosphorus,Total	R1128589	J
L445670-06	WG465212	SAMP	Water Extraction	R1131116	W2
L445670-07	WG465212	SAMP	Water Extraction	R1131116	W2
L445670-08	WG465212	SAMP	Water Extraction	R1131116	W2

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
O	(ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.
W2	(ESC) - Insufficient sample amount to perform method as required. Sample amount approved per client instruction.

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.

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

Summary of Remarks For Samples Printed
03/11/10 at 09:50:46

TSR Signing Reports: 350
R5 - Desired TAT

Sample: L445670-01 Account: MUNENGGNC Received: 02/19/10 09:00 Due Date: 03/12/10 00:00 RPT Date: 03/11/10 09:48
UNI 519699 TM 3/9/10
Sample: L445670-02 Account: MUNENGGNC Received: 02/19/10 09:00 Due Date: 03/12/10 00:00 RPT Date: 03/11/10 09:48

Sample: L445670-03 Account: MUNENGGNC Received: 02/19/10 09:00 Due Date: 03/12/10 00:00 RPT Date: 03/11/10 09:48

Sample: L445670-04 Account: MUNENGGNC Received: 02/19/10 09:00 Due Date: 03/12/10 00:00 RPT Date: 03/11/10 09:48

Sample: L445670-05 Account: MUNENGGNC Received: 02/19/10 09:00 Due Date: 03/12/10 00:00 RPT Date: 03/11/10 09:48

Sample: L445670-06 Account: MUNENGGNC Received: 02/19/10 09:00 Due Date: 03/12/10 00:00 RPT Date: 03/11/10 09:48
Rotate for Nitrate, and Sulfate
Sample: L445670-07 Account: MUNENGGNC Received: 02/19/10 09:00 Due Date: 03/12/10 00:00 RPT Date: 03/11/10 09:48
Rotate for Nitrate, and Sulfate
Sample: L445670-08 Account: MUNENGGNC Received: 02/19/10 09:00 Due Date: 03/12/10 00:00 RPT Date: 03/11/10 09:48
Rotate for Nitrate, and Sulfate

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Municipal Engineering Services Company
Mark Brown
PO Box 97

Garner, NC 27529

Quality Assurance Report
Level II

L445670

March 11, 2010

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
1,1,1,2-Tetrachloroethane	< .001	mg/kg			WG464222	02/20/10 13:52
1,1,1-Trichloroethane	< .001	mg/kg			WG464222	02/20/10 13:52
1,1,2,2-Tetrachloroethane	< .001	mg/kg			WG464222	02/20/10 13:52
1,1,2-Trichloroethane	< .001	mg/kg			WG464222	02/20/10 13:52
1,1,2-Trichloro-1,2,2-trifluoroethane	< .001	mg/kg			WG464222	02/20/10 13:52
1,1-Dichloroethane	< .001	mg/kg			WG464222	02/20/10 13:52
1,1-Dichloroethene	< .001	mg/kg			WG464222	02/20/10 13:52
1,1-Dichloropropene	< .001	mg/kg			WG464222	02/20/10 13:52
1,2,3-Trichlorobenzene	< .001	mg/kg			WG464222	02/20/10 13:52
1,2,3-Trichloropropane	< .001	mg/kg			WG464222	02/20/10 13:52
1,2,3-Trimethylbenzene	< .001	mg/kg			WG464222	02/20/10 13:52
1,2,4-Trichlorobenzene	< .001	mg/kg			WG464222	02/20/10 13:52
1,2,4-Trimethylbenzene	< .001	mg/kg			WG464222	02/20/10 13:52
1,2-Dibromo-3-Chloropropane	< .005	mg/kg			WG464222	02/20/10 13:52
1,2-Dibromoethane	< .001	mg/kg			WG464222	02/20/10 13:52
1,2-Dichlorobenzene	< .001	mg/kg			WG464222	02/20/10 13:52
1,2-Dichloroethane	< .001	mg/kg			WG464222	02/20/10 13:52
1,2-Dichloropropane	< .001	mg/kg			WG464222	02/20/10 13:52
1,3,5-Trimethylbenzene	< .001	mg/kg			WG464222	02/20/10 13:52
1,3-Dichlorobenzene	< .001	mg/kg			WG464222	02/20/10 13:52
1,3-Dichloropropane	< .001	mg/kg			WG464222	02/20/10 13:52
1,4-Dichlorobenzene	< .001	mg/kg			WG464222	02/20/10 13:52
2,2-Dichloropropane	< .001	mg/kg			WG464222	02/20/10 13:52
2-Butanone (MEK)	< .01	mg/kg			WG464222	02/20/10 13:52
2-Chloroethyl vinyl ether	< .001	mg/kg			WG464222	02/20/10 13:52
2-Chlorotoluene	< .001	mg/kg			WG464222	02/20/10 13:52
4-Chlorotoluene	< .001	mg/kg			WG464222	02/20/10 13:52
4-Methyl-2-pentanone (MIBK)	< .01	mg/kg			WG464222	02/20/10 13:52
Acetone	< .05	mg/kg			WG464222	02/20/10 13:52
Acrylonitrile	< .01	mg/kg			WG464222	02/20/10 13:52
Benzene	< .001	mg/kg			WG464222	02/20/10 13:52
Bromobenzene	< .001	mg/kg			WG464222	02/20/10 13:52
Bromodichloromethane	< .001	mg/kg			WG464222	02/20/10 13:52
Bromoform	< .001	mg/kg			WG464222	02/20/10 13:52
Bromomethane	< .005	mg/kg			WG464222	02/20/10 13:52
Carbon tetrachloride	< .001	mg/kg			WG464222	02/20/10 13:52
Chlorobenzene	< .001	mg/kg			WG464222	02/20/10 13:52
Chlorodibromomethane	< .001	mg/kg			WG464222	02/20/10 13:52
Chloroethane	< .005	mg/kg			WG464222	02/20/10 13:52
Chloroform	< .005	mg/kg			WG464222	02/20/10 13:52
Chloromethane	< .001	mg/kg			WG464222	02/20/10 13:52
cis-1,2-Dichloroethene	< .001	mg/kg			WG464222	02/20/10 13:52
cis-1,3-Dichloropropene	< .001	mg/kg			WG464222	02/20/10 13:52
Di-isopropyl ether	< .001	mg/kg			WG464222	02/20/10 13:52
Dibromomethane	< .001	mg/kg			WG464222	02/20/10 13:52
Dichlorodifluoromethane	< .005	mg/kg			WG464222	02/20/10 13:52
Ethylbenzene	< .001	mg/kg			WG464222	02/20/10 13:52
Hexachloro-1,3-butadiene	< .001	mg/kg			WG464222	02/20/10 13:52
Isopropylbenzene	< .001	mg/kg			WG464222	02/20/10 13:52
Methyl tert-butyl ether	< .001	mg/kg			WG464222	02/20/10 13:52
Methylene Chloride	< .005	mg/kg			WG464222	02/20/10 13:52
n-Butylbenzene	< .001	mg/kg			WG464222	02/20/10 13:52
n-Propylbenzene	< .001	mg/kg			WG464222	02/20/10 13:52
Naphthalene	< .005	mg/kg			WG464222	02/20/10 13:52
p-Isopropyltoluene	< .001	mg/kg			WG464222	02/20/10 13:52
sec-Butylbenzene	< .001	mg/kg			WG464222	02/20/10 13:52
Styrene	< .001	mg/kg			WG464222	02/20/10 13:52
tert-Butylbenzene	< .001	mg/kg			WG464222	02/20/10 13:52
Tetrachloroethene	< .001	mg/kg			WG464222	02/20/10 13:52

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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Mark Brown
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Quality Assurance Report
Level II

L445670

March 11, 2010

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Toluene	< .005	mg/kg			WG464222	02/20/10 13:52
trans-1,2-Dichloroethene	< .001	mg/kg			WG464222	02/20/10 13:52
trans-1,3-Dichloropropene	< .001	mg/kg			WG464222	02/20/10 13:52
Trichloroethene	< .001	mg/kg			WG464222	02/20/10 13:52
Trichlorofluoromethane	< .005	mg/kg			WG464222	02/20/10 13:52
Vinyl chloride	< .001	mg/kg			WG464222	02/20/10 13:52
Xylenes, Total	< .003	mg/kg			WG464222	02/20/10 13:52
4-Bromofluorobenzene		% Rec.	101.8	59-140	WG464222	02/20/10 13:52
Dibromofluoromethane		% Rec.	92.42	63-139	WG464222	02/20/10 13:52
Toluene-d8		% Rec.	95.17	84-116	WG464222	02/20/10 13:52
Mercury	< .02	mg/kg			WG464108	02/20/10 10:12
Mercury	< .0002	mg/l			WG464104	02/20/10 14:08
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG464178	02/21/10 12:48
1,1,1-Trichloroethane	< .001	mg/l			WG464178	02/21/10 12:48
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG464178	02/21/10 12:48
1,1,2-Trichloroethane	< .001	mg/l			WG464178	02/21/10 12:48
1,1,2-Trichloro-1,2,2-trifluoroethane	< .001	mg/l			WG464178	02/21/10 12:48
1,1-Dichloroethane	< .001	mg/l			WG464178	02/21/10 12:48
1,1-Dichloroethene	< .001	mg/l			WG464178	02/21/10 12:48
1,1-Dichloropropene	< .001	mg/l			WG464178	02/21/10 12:48
1,2,3-Trichlorobenzene	< .001	mg/l			WG464178	02/21/10 12:48
1,2,3-Trichloropropane	< .001	mg/l			WG464178	02/21/10 12:48
1,2,3-Trimethylbenzene	< .001	mg/l			WG464178	02/21/10 12:48
1,2,4-Trichlorobenzene	< .001	mg/l			WG464178	02/21/10 12:48
1,2,4-Trimethylbenzene	< .001	mg/l			WG464178	02/21/10 12:48
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG464178	02/21/10 12:48
1,2-Dibromoethane	< .001	mg/l			WG464178	02/21/10 12:48
1,2-Dichlorobenzene	< .001	mg/l			WG464178	02/21/10 12:48
1,2-Dichloroethane	< .001	mg/l			WG464178	02/21/10 12:48
1,2-Dichloropropane	< .001	mg/l			WG464178	02/21/10 12:48
1,3,5-Trimethylbenzene	< .001	mg/l			WG464178	02/21/10 12:48
1,3-Dichlorobenzene	< .001	mg/l			WG464178	02/21/10 12:48
1,3-Dichloropropane	< .001	mg/l			WG464178	02/21/10 12:48
1,4-Dichlorobenzene	< .001	mg/l			WG464178	02/21/10 12:48
2,2-Dichloropropane	< .001	mg/l			WG464178	02/21/10 12:48
2-Butanone (MEK)	< .01	mg/l			WG464178	02/21/10 12:48
2-Chloroethyl vinyl ether	< .001	mg/l			WG464178	02/21/10 12:48
2-Chlorotoluene	< .001	mg/l			WG464178	02/21/10 12:48
4-Chlorotoluene	< .001	mg/l			WG464178	02/21/10 12:48
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG464178	02/21/10 12:48
Acetone	< .05	mg/l			WG464178	02/21/10 12:48
Acrolein	< .05	mg/l			WG464178	02/21/10 12:48
Acrylonitrile	< .01	mg/l			WG464178	02/21/10 12:48
Benzene	< .001	mg/l			WG464178	02/21/10 12:48
Bromobenzene	< .001	mg/l			WG464178	02/21/10 12:48
Bromodichloromethane	< .001	mg/l			WG464178	02/21/10 12:48
Bromoform	< .001	mg/l			WG464178	02/21/10 12:48
Bromomethane	< .005	mg/l			WG464178	02/21/10 12:48
Carbon tetrachloride	< .001	mg/l			WG464178	02/21/10 12:48
Chlorobenzene	< .001	mg/l			WG464178	02/21/10 12:48
Chlorodibromomethane	< .001	mg/l			WG464178	02/21/10 12:48
Chloroethane	< .001	mg/l			WG464178	02/21/10 12:48
Chloroform	< .005	mg/l			WG464178	02/21/10 12:48

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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Mark Brown
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Quality Assurance Report
Level II

L445670

March 11, 2010

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Chloromethane	< .001	mg/l			WG464178	02/21/10 12:48
cis-1,2-Dichloroethene	< .001	mg/l			WG464178	02/21/10 12:48
cis-1,3-Dichloropropene	< .001	mg/l			WG464178	02/21/10 12:48
Di-isopropyl ether	< .001	mg/l			WG464178	02/21/10 12:48
Dibromomethane	< .001	mg/l			WG464178	02/21/10 12:48
Dichlorodifluoromethane	< .005	mg/l			WG464178	02/21/10 12:48
Ethylbenzene	< .001	mg/l			WG464178	02/21/10 12:48
Hexachloro-1,3-butadiene	< .001	mg/l			WG464178	02/21/10 12:48
Isopropylbenzene	< .001	mg/l			WG464178	02/21/10 12:48
Methyl tert-butyl ether	< .001	mg/l			WG464178	02/21/10 12:48
Methylene Chloride	< .005	mg/l			WG464178	02/21/10 12:48
n-Butylbenzene	< .001	mg/l			WG464178	02/21/10 12:48
n-Propylbenzene	< .001	mg/l			WG464178	02/21/10 12:48
Naphthalene	< .005	mg/l			WG464178	02/21/10 12:48
p-Isopropyltoluene	< .001	mg/l			WG464178	02/21/10 12:48
sec-Butylbenzene	< .001	mg/l			WG464178	02/21/10 12:48
Styrene	< .001	mg/l			WG464178	02/21/10 12:48
tert-Butylbenzene	< .001	mg/l			WG464178	02/21/10 12:48
Tetrachloroethene	< .001	mg/l			WG464178	02/21/10 12:48
Toluene	< .005	mg/l			WG464178	02/21/10 12:48
trans-1,2-Dichloroethene	< .001	mg/l			WG464178	02/21/10 12:48
trans-1,3-Dichloropropene	< .001	mg/l			WG464178	02/21/10 12:48
Trichloroethene	< .001	mg/l			WG464178	02/21/10 12:48
Trichlorofluoromethane	< .005	mg/l			WG464178	02/21/10 12:48
Vinyl chloride	< .001	mg/l			WG464178	02/21/10 12:48
Xylenes, Total	< .003	mg/l			WG464178	02/21/10 12:48
4-Bromofluorobenzene		% Rec.	97.78	75-128	WG464178	02/21/10 12:48
Dibromofluoromethane		% Rec.	117.0	79-125	WG464178	02/21/10 12:48
Toluene-d8		% Rec.	104.0	87-114	WG464178	02/21/10 12:48
pH	4.50	su			WG464094	02/20/10 14:39
Arsenic	< .02	mg/l			WG464156	02/21/10 16:54
Barium	< .005	mg/l			WG464156	02/21/10 16:54
Cadmium	< .005	mg/l			WG464156	02/21/10 16:54
Chromium	< .01	mg/l			WG464156	02/21/10 16:54
Lead	< .005	mg/l			WG464156	02/21/10 16:54
Selenium	< .02	mg/l			WG464156	02/21/10 16:54
Silver	< .01	mg/l			WG464156	02/21/10 16:54
COD	< 10	mg/l			WG464233	02/22/10 12:43
Total Solids	< .1	%			WG464066	02/22/10 10:35
Total Solids	< .1	%			WG464067	02/22/10 10:32
Total Solids	< .1	%			WG464078	02/22/10 10:39
Nitrate	< .1	mg/l			WG464039	02/19/10 11:23
Sulfate	< 5	mg/l			WG464039	02/19/10 11:23

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Municipal Engineering Services Company
Mark Brown
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Quality Assurance Report
Level II

L445670

March 11, 2010

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Arsenic	< 1	mg/kg			WG464140	02/22/10 13:21
Barium	< .25	mg/kg			WG464140	02/22/10 13:21
Cadmium	< .25	mg/kg			WG464140	02/22/10 13:21
Chromium	< .5	mg/kg			WG464140	02/22/10 13:21
Lead	< .25	mg/kg			WG464140	02/22/10 13:21
Selenium	< 1	mg/kg			WG464140	02/22/10 13:21
Silver	< .5	mg/kg			WG464140	02/22/10 13:21
Sulfate	< 5	mg/l			WG464248	02/20/10 10:07
pH	4.20	su			WG464277	02/24/10 10:55
Phosphorus,Total	< .1	mg/l			WG464997	02/25/10 03:11
Phosphate as P	< 1	mg/kg			WG464693	02/25/10 13:02
BOD	-0.140	mg/l			WG464087	02/19/10 09:52
Nitrate	< .1	mg/l			WG465496	03/01/10 11:24

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
Mercury	mg/kg	0	0	0	20	L445710-02	WG464108
Mercury	mg/l	0	0	0	20	L445674-05	WG464104
pH	su	6.30	6.30	0	1	L445496-01	WG464094
pH	su	7.40	7.40	0	1	L445684-04	WG464094
Arsenic	mg/l	0	0	0	20	L445786-04	WG464156
Barium	mg/l	0.0150	0.0150	1.32	20	L445786-04	WG464156
Cadmium	mg/l	0	0	0	20	L445786-04	WG464156
Chromium	mg/l	0	0	0	20	L445786-04	WG464156
Lead	mg/l	0.0110	0.0130	20.3*	20	L445786-04	WG464156
Selenium	mg/l	0	0	0	20	L445786-04	WG464156
Silver	mg/l	0	0	0	20	L445786-04	WG464156
COD	mg/l	0	0	0	5	L445678-01	WG464233
COD	mg/l	770.	770.	0	5	L445696-07	WG464233
Total Solids	%	82.0	81.5	0.153	5	L445510-01	WG464066
Total Solids	%	81.0	81.0	0.0121	5	L445670-01	WG464067
Total Solids	%	81.0	79.8	1.19	5	L445740-01	WG464078

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Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
			Duplicate				
Nitrate	mg/l	0	0	0	20	L445430-03	WG464039
Sulfate	mg/l	0	0	0	20	L445430-03	WG464039
Nitrate	mg/l	0	0	0	20	L445430-04	WG464039
Sulfate	mg/l	9.40	9.60	1.79	20	L445430-04	WG464039
Arsenic	mg/kg	4.40	4.40	0.454	20	L445710-02	WG464140
Barium	mg/kg	110.	120.	11.5	20	L445710-02	WG464140
Cadmium	mg/kg	0	0	0	20	L445710-02	WG464140
Chromium	mg/kg	20.0	21.0	7.41	20	L445710-02	WG464140
Lead	mg/kg	11.0	12.0	6.90	20	L445710-02	WG464140
Selenium	mg/kg	8.90	9.80	9.29	20	L445710-02	WG464140
Silver	mg/kg	0	0	0	20	L445710-02	WG464140
Sulfate	mg/l	72.0	73.0	0.825	20	L445810-01	WG464248
Sulfate	mg/l	58.0	58.0	0.345	20	L445810-05	WG464248
pH	su	5.60	5.60	0	1	L445670-01	WG464277
Phosphorus,Total	mg/l	0	0.0680	NA	20	L445670-05	WG464997
Phosphorus,Total	mg/l	0.0540	0.110	68.3*	20	L445508-11	WG464997
BOD	mg/l	0	0	0	5	L445508-02	WG464087
BOD	mg/l	0	0	0	5	L445610-02	WG464087
BOD	mg/l	0	0	0	5	L445672-01	WG464087
BOD	mg/l	0	0	0	5	L445670-04	WG464087
BOD	mg/l	1200	1300	9.00*	5	L445820-02	WG464087

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
			Laboratory Control Sample			
1,1,1,2-Tetrachloroethane	mg/kg	.025	0.0275	110.	73-134	WG464222
1,1,1-Trichloroethane	mg/kg	.025	0.0232	92.7	62-135	WG464222
1,1,2,2-Tetrachloroethane	mg/kg	.025	0.0259	104.	74-129	WG464222
1,1,2-Trichloroethane	mg/kg	.025	0.0272	109.	77-124	WG464222
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	.025	0.0262	105.	49-155	WG464222
1,1-Dichloroethane	mg/kg	.025	0.0212	84.8	61-134	WG464222
1,1-Dichloroethene	mg/kg	.025	0.0243	97.3	53-136	WG464222
1,1-Dichloropropene	mg/kg	.025	0.0227	90.8	63-132	WG464222
1,2,3-Trichlorobenzene	mg/kg	.025	0.0280	112.	62-146	WG464222
1,2,3-Trichloropropane	mg/kg	.025	0.0244	97.5	70-133	WG464222
1,2,3-Trimethylbenzene	mg/kg	.025	0.0246	98.4	73-126	WG464222
1,2,4-Trichlorobenzene	mg/kg	.025	0.0280	112.	61-148	WG464222
1,2,4-Trimethylbenzene	mg/kg	.025	0.0253	101.	68-135	WG464222
1,2-Dibromo-3-Chloropropane	mg/kg	.025	0.0265	106.	61-134	WG464222
1,2-Dibromoethane	mg/kg	.025	0.0282	113.	76-127	WG464222
1,2-Dichlorobenzene	mg/kg	.025	0.0271	108.	77-123	WG464222
1,2-Dichloroethane	mg/kg	.025	0.0215	86.2	58-141	WG464222
1,2-Dichloropropane	mg/kg	.025	0.0229	91.5	71-128	WG464222
1,3,5-Trimethylbenzene	mg/kg	.025	0.0261	105.	71-133	WG464222
1,3-Dichlorobenzene	mg/kg	.025	0.0276	110.	71-132	WG464222
1,3-Dichloropropane	mg/kg	.025	0.0261	104.	76-120	WG464222
1,4-Dichlorobenzene	mg/kg	.025	0.0260	104.	72-123	WG464222
2,2-Dichloropropane	mg/kg	.025	0.0216	86.3	50-147	WG464222
2-Butanone (MEK)	mg/kg	.125	0.109	87.3	51-131	WG464222

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Analyte	Units	Laboratory Control Sample Known Val	Result	% Rec	Limit	Batch
2-Chloroethyl vinyl ether	mg/kg	.125	0.0750	60.0	0-188	WG464222
2-Chlorotoluene	mg/kg	.025	0.0263	105.	73-128	WG464222
4-Chlorotoluene	mg/kg	.025	0.0259	104.	72-129	WG464222
4-Methyl-2-pentanone (MIBK)	mg/kg	.125	0.114	91.5	61-143	WG464222
Acetone	mg/kg	.125	0.0964	77.1	44-140	WG464222
Acrylonitrile	mg/kg	.125	0.0937	74.9	55-143	WG464222
Benzene	mg/kg	.025	0.0227	90.8	65-128	WG464222
Bromobenzene	mg/kg	.025	0.0259	104.	75-123	WG464222
Bromodichloromethane	mg/kg	.025	0.0239	95.5	66-126	WG464222
Bromoform	mg/kg	.025	0.0272	109.	64-139	WG464222
Bromomethane	mg/kg	.025	0.0227	90.8	41-175	WG464222
Carbon tetrachloride	mg/kg	.025	0.0236	94.5	60-140	WG464222
Chlorobenzene	mg/kg	.025	0.0274	110.	75-125	WG464222
Chlorodibromomethane	mg/kg	.025	0.0269	108.	72-137	WG464222
Chloroethane	mg/kg	.025	0.0206	82.4	44-159	WG464222
Chloroform	mg/kg	.025	0.0228	91.2	63-123	WG464222
Chloromethane	mg/kg	.025	0.0221	88.3	42-149	WG464222
cis-1,2-Dichloroethene	mg/kg	.025	0.0235	94.2	71-129	WG464222
cis-1,3-Dichloropropene	mg/kg	.025	0.0240	96.1	73-132	WG464222
Di-isopropyl ether	mg/kg	.025	0.0203	81.3	59-143	WG464222
Dibromomethane	mg/kg	.025	0.0247	98.8	70-130	WG464222
Dichlorodifluoromethane	mg/kg	.025	0.0268	107.	26-186	WG464222
Ethylbenzene	mg/kg	.025	0.0267	107.	74-128	WG464222
Hexachloro-1,3-butadiene	mg/kg	.025	0.0287	115.	65-137	WG464222
Isopropylbenzene	mg/kg	.025	0.0273	109.	73-130	WG464222
Methyl tert-butyl ether	mg/kg	.025	0.0166	66.5	44-148	WG464222
Methylene Chloride	mg/kg	.025	0.0209	83.8	57-129	WG464222
n-Butylbenzene	mg/kg	.025	0.0255	102.	60-145	WG464222
n-Propylbenzene	mg/kg	.025	0.0260	104.	71-132	WG464222
Naphthalene	mg/kg	.025	0.0267	107.	61-142	WG464222
p-Isopropyltoluene	mg/kg	.025	0.0275	110.	67-138	WG464222
sec-Butylbenzene	mg/kg	.025	0.0270	108.	71-134	WG464222
Styrene	mg/kg	.025	0.0278	111.	76-133	WG464222
tert-Butylbenzene	mg/kg	.025	0.0271	108.	72-132	WG464222
Tetrachloroethene	mg/kg	.025	0.0290	116.	65-135	WG464222
Toluene	mg/kg	.025	0.0237	94.9	70-120	WG464222
trans-1,2-Dichloroethene	mg/kg	.025	0.0229	91.6	61-133	WG464222
trans-1,3-Dichloropropene	mg/kg	.025	0.0243	97.2	70-135	WG464222
Trichloroethene	mg/kg	.025	0.0259	104.	71-126	WG464222
Trichlorofluoromethane	mg/kg	.025	0.0218	87.4	52-147	WG464222
Vinyl chloride	mg/kg	.025	0.0221	88.5	50-151	WG464222
Xylenes, Total	mg/kg	.075	0.0783	104.	74-127	WG464222
4-Bromofluorobenzene				99.86	59-140	WG464222
Dibromofluoromethane				90.11	63-139	WG464222
Toluene-d8				94.93	84-116	WG464222
Mercury	mg/kg	8.77	10.6	121.	71.6-127.7	WG464108
Mercury	mg/l	.003	0.00295	98.3	85-115	WG464104
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0252	101.	75-134	WG464178
1,1,1-Trichloroethane	mg/l	.025	0.0259	104.	67-137	WG464178
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0240	96.1	72-128	WG464178
1,1,2-Trichloroethane	mg/l	.025	0.0251	100.	79-123	WG464178
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	.025	0.0307	123.	51-149	WG464178
1,1-Dichloroethane	mg/l	.025	0.0249	99.5	67-133	WG464178

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Analyte	Units	Laboratory Control Sample Known Val	Result	% Rec	Limit	Batch
1,1-Dichloroethene	mg/l	.025	0.0244	97.6	60-130	WG464178
1,1-Dichloropropene	mg/l	.025	0.0232	92.6	68-132	WG464178
1,2,3-Trichlorobenzene	mg/l	.025	0.0244	97.6	63-138	WG464178
1,2,3-Trichloropropane	mg/l	.025	0.0248	99.3	68-130	WG464178
1,2,3-Trimethylbenzene	mg/l	.025	0.0236	94.3	70-127	WG464178
1,2,4-Trichlorobenzene	mg/l	.025	0.0241	96.3	65-137	WG464178
1,2,4-Trimethylbenzene	mg/l	.025	0.0223	89.2	72-135	WG464178
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0239	95.5	55-134	WG464178
1,2-Dibromoethane	mg/l	.025	0.0249	99.8	75-126	WG464178
1,2-Dichlorobenzene	mg/l	.025	0.0247	98.9	75-122	WG464178
1,2-Dichloroethane	mg/l	.025	0.0257	103.	63-137	WG464178
1,2-Dichloropropane	mg/l	.025	0.0224	89.5	74-122	WG464178
1,3,5-Trimethylbenzene	mg/l	.025	0.0234	93.5	73-134	WG464178
1,3-Dichlorobenzene	mg/l	.025	0.0228	91.1	73-131	WG464178
1,3-Dichloropropane	mg/l	.025	0.0240	96.2	77-119	WG464178
1,4-Dichlorobenzene	mg/l	.025	0.0235	94.1	70-121	WG464178
2,2-Dichloropropane	mg/l	.025	0.0257	103.	46-151	WG464178
2-Butanone (MEK)	mg/l	.125	0.115	91.9	53-132	WG464178
2-Chloroethyl vinyl ether	mg/l	.125	0.102	81.6	0-171	WG464178
2-Chlorotoluene	mg/l	.025	0.0238	95.2	74-128	WG464178
4-Chlorotoluene	mg/l	.025	0.0228	91.3	74-130	WG464178
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.113	90.2	60-142	WG464178
Acetone	mg/l	.125	0.116	92.5	48-134	WG464178
Acrolein	mg/l	.125	0.0868	69.4	6-182	WG464178
Acrylonitrile	mg/l	.125	0.110	88.3	60-140	WG464178
Benzene	mg/l	.025	0.0232	92.8	67-126	WG464178
Bromobenzene	mg/l	.025	0.0240	96.1	76-123	WG464178
Bromodichloromethane	mg/l	.025	0.0263	105.	68-133	WG464178
Bromoform	mg/l	.025	0.0270	108.	60-139	WG464178
Bromomethane	mg/l	.025	0.0230	92.1	45-175	WG464178
Carbon tetrachloride	mg/l	.025	0.0270	108.	64-141	WG464178
Chlorobenzene	mg/l	.025	0.0246	98.4	77-125	WG464178
Chlorodibromomethane	mg/l	.025	0.0268	107.	73-138	WG464178
Chloroethane	mg/l	.025	0.0196	78.3	49-155	WG464178
Chloroform	mg/l	.025	0.0262	105.	66-126	WG464178
Chloromethane	mg/l	.025	0.0188	75.2	45-152	WG464178
cis-1,2-Dichloroethene	mg/l	.025	0.0236	94.5	72-128	WG464178
cis-1,3-Dichloropropene	mg/l	.025	0.0239	95.7	73-131	WG464178
Di-isopropyl ether	mg/l	.025	0.0230	92.2	63-139	WG464178
Dibromomethane	mg/l	.025	0.0243	97.1	73-125	WG464178
Dichlorodifluoromethane	mg/l	.025	0.0285	114.	39-189	WG464178
Ethylbenzene	mg/l	.025	0.0238	95.0	76-129	WG464178
Hexachloro-1,3-butadiene	mg/l	.025	0.0271	109.	67-135	WG464178
Isopropylbenzene	mg/l	.025	0.0241	96.6	73-132	WG464178
Methyl tert-butyl ether	mg/l	.025	0.0250	100.	51-142	WG464178
Methylene Chloride	mg/l	.025	0.0253	101.	64-125	WG464178
n-Butylbenzene	mg/l	.025	0.0251	100.	63-142	WG464178
n-Propylbenzene	mg/l	.025	0.0234	93.8	71-132	WG464178
Naphthalene	mg/l	.025	0.0243	97.2	56-145	WG464178
p-Isopropyltoluene	mg/l	.025	0.0228	91.1	68-138	WG464178
sec-Butylbenzene	mg/l	.025	0.0233	93.3	70-135	WG464178
Styrene	mg/l	.025	0.0233	93.4	78-130	WG464178
tert-Butylbenzene	mg/l	.025	0.0235	93.9	72-134	WG464178
Tetrachloroethene	mg/l	.025	0.0226	90.4	67-135	WG464178
Toluene	mg/l	.025	0.0222	88.6	72-122	WG464178
trans-1,2-Dichloroethene	mg/l	.025	0.0243	97.2	67-129	WG464178
trans-1,3-Dichloropropene	mg/l	.025	0.0248	99.2	66-137	WG464178
Trichloroethene	mg/l	.025	0.0222	88.6	74-126	WG464178
Trichlorofluoromethane	mg/l	.025	0.0254	102.	54-156	WG464178

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		Laboratory Control Sample				
Analyte	Units	Known Val	Result	% Rec	Limit	Batch
Vinyl chloride	mg/l	.025	0.0209	83.6	55-153	WG464178
Xylenes, Total	mg/l	.075	0.0701	93.5	75-128	WG464178
4-Bromofluorobenzene				106.7	75-128	WG464178
Dibromofluoromethane				111.5	79-125	WG464178
Toluene-d8				103.0	87-114	WG464178
pH	su	6.46	6.40	99.1	97.9-100.8	WG464094
Arsenic	mg/l	1.13	1.15	102.	85-115	WG464156
Barium	mg/l	1.13	1.20	106.	85-115	WG464156
Cadmium	mg/l	1.13	1.21	107.	85-115	WG464156
Chromium	mg/l	1.13	1.21	107.	85-115	WG464156
Lead	mg/l	1.13	1.19	105.	85-115	WG464156
Selenium	mg/l	1.13	1.07	94.7	85-115	WG464156
Silver	mg/l	1.13	1.18	104.	85-115	WG464156
COD	mg/l	375	391.	104.	90-110	WG464233
Total Solids	%	50	50.0	100.	85-115	WG464066
Total Solids	%	50	50.0	100.	85-115	WG464067
Total Solids	%	50	50.0	100.	85-115	WG464078
Nitrate	mg/l	8	8.23	103.	90-110	WG464039
Sulfate	mg/l	40	40.1	100.	90-110	WG464039
Arsenic	mg/kg	192	184.	95.8	78.6-120.8	WG464140
Barium	mg/kg	420	439.	105.	78.8-121.4	WG464140
Cadmium	mg/kg	70.1	66.6	95.0	78.5-121.5	WG464140
Chromium	mg/kg	168	178.	106.	80.4-120.2	WG464140
Lead	mg/kg	113	114.	101.	77.3-122.1	WG464140
Selenium	mg/kg	176	180.	102.	75.6-125.0	WG464140
Silver	mg/kg	115	115.	100.	66-133.9	WG464140
Sulfate	mg/l	40	38.8	97.0	90-110	WG464248
pH	su	6.46	6.40	99.1	97.9-100.8	WG464277
Phosphorus,Total	mg/l	1	0.926	92.6	85-115	WG464997
Phosphate as P	mg/kg	20	20.4	102.	85-115	WG464693
BOD	mg/l	198	189.	95.5	84.6-115.4	WG464087
BOD	mg/l	198	180.	90.9	84.6-115.4	WG464087
BOD	mg/l	198	185.	93.4	84.6-115.4	WG464087

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Municipal Engineering Services Company
Mark Brown
PO Box 97

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Quality Assurance Report
Level II

L445670

March 11, 2010

Analyte	Units	Laboratory Control Sample Known Val	Result	% Rec	Limit	Batch
BOD	mg/l	198	183.	92.4	84.6-115.4	WG464087
BOD	mg/l	198	223.	113.	84.6-115.4	WG464087
BOD	mg/l	198	195.	98.5	84.6-115.4	WG464087
BOD	mg/l	198	201.	102.	84.6-115.4	WG464087
BOD	mg/l	198	186.	93.9	84.6-115.4	WG464087
Nitrate	mg/l	8	8.20	103.	90-110	WG465496

Analyte	Units	Laboratory Control Sample Duplicate Result	Ref	%Rec	Limit	RPD	Limit	Batch
1,1,1,2-Tetrachloroethane	mg/kg	0.0280	0.0275	112.	73-134	1.89	20	WG464222
1,1,1-Trichloroethane	mg/kg	0.0237	0.0232	95.0	62-135	2.37	20	WG464222
1,1,2,2-Tetrachloroethane	mg/kg	0.0257	0.0259	103.	74-129	0.763	20	WG464222
1,1,2-Trichloroethane	mg/kg	0.0272	0.0272	109.	77-124	0.000736	20	WG464222
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.0274	0.0262	110.	49-155	4.52	20	WG464222
1,1-Dichloroethane	mg/kg	0.0215	0.0212	86.0	61-134	1.43	20	WG464222
1,1-Dichloroethene	mg/kg	0.0248	0.0243	99.0	53-136	2.06	20	WG464222
1,1-Dichloropropene	mg/kg	0.0235	0.0227	94.0	63-132	3.45	20	WG464222
1,2,3-Trichlorobenzene	mg/kg	0.0293	0.0280	117.	62-146	4.72	20	WG464222
1,2,3-Trichloropropane	mg/kg	0.0241	0.0244	96.0	70-133	1.19	20	WG464222
1,2,3-Trimethylbenzene	mg/kg	0.0251	0.0246	100.	73-126	1.84	20	WG464222
1,2,4-Trichlorobenzene	mg/kg	0.0292	0.0280	117.	61-148	4.48	20	WG464222
1,2,4-Trimethylbenzene	mg/kg	0.0256	0.0253	102.	68-135	1.31	20	WG464222
1,2-Dibromo-3-Chloropropane	mg/kg	0.0264	0.0265	106.	61-134	0.388	21	WG464222
1,2-Dibromoethane	mg/kg	0.0277	0.0282	111.	76-127	1.66	20	WG464222
1,2-Dichlorobenzene	mg/kg	0.0273	0.0271	109.	77-123	0.922	20	WG464222
1,2-Dichloroethane	mg/kg	0.0223	0.0215	89.0	58-141	3.49	20	WG464222
1,2-Dichloropropane	mg/kg	0.0235	0.0229	94.0	71-128	2.72	20	WG464222
1,3,5-Trimethylbenzene	mg/kg	0.0270	0.0261	108.	71-133	3.27	20	WG464222
1,3-Dichlorobenzene	mg/kg	0.0286	0.0276	114.	71-132	3.40	20	WG464222
1,3-Dichloropropane	mg/kg	0.0259	0.0261	104.	76-120	0.675	20	WG464222
1,4-Dichlorobenzene	mg/kg	0.0267	0.0260	107.	72-123	2.73	20	WG464222
2,2-Dichloropropane	mg/kg	0.0220	0.0216	88.0	50-147	1.98	20	WG464222
2-Butanone (MEK)	mg/kg	0.104	0.109	83.0	51-131	4.63	25	WG464222
2-Chloroethyl vinyl ether	mg/kg	0.0688	0.0750	55.0	0-188	8.56	39	WG464222
2-Chlorotoluene	mg/kg	0.0269	0.0263	107.	73-128	2.12	20	WG464222
4-Chlorotoluene	mg/kg	0.0265	0.0259	106.	72-129	2.23	20	WG464222
4-Methyl-2-pentanone (MIBK)	mg/kg	0.110	0.114	88.0	61-143	3.92	23	WG464222
Acetone	mg/kg	0.0941	0.0964	75.0	44-140	2.37	25	WG464222
Acrylonitrile	mg/kg	0.0929	0.0937	74.0	55-143	0.779	20	WG464222
Benzene	mg/kg	0.0232	0.0227	93.0	65-128	2.12	20	WG464222
Bromobenzene	mg/kg	0.0260	0.0259	104.	75-123	0.111	20	WG464222
Bromodichloromethane	mg/kg	0.0245	0.0239	98.0	66-126	2.40	20	WG464222
Bromoform	mg/kg	0.0272	0.0272	109.	64-139	0.111	20	WG464222
Bromomethane	mg/kg	0.0249	0.0227	100.	41-175	9.29	20	WG464222
Carbon tetrachloride	mg/kg	0.0243	0.0236	97.0	60-140	2.80	20	WG464222
Chlorobenzene	mg/kg	0.0282	0.0274	113.	75-125	2.97	20	WG464222
Chlorodibromomethane	mg/kg	0.0271	0.0269	108.	72-137	0.635	20	WG464222
Chloroethane	mg/kg	0.0219	0.0206	88.0	44-159	6.12	20	WG464222
Chloroform	mg/kg	0.0233	0.0228	93.0	63-123	1.98	20	WG464222
Chloromethane	mg/kg	0.0221	0.0221	88.0	42-149	0.00331	20	WG464222
cis-1,2-Dichloroethene	mg/kg	0.0237	0.0235	95.0	71-129	0.880	20	WG464222
cis-1,3-Dichloropropene	mg/kg	0.0241	0.0240	96.0	73-132	0.454	20	WG464222
Di-isopropyl ether	mg/kg	0.0208	0.0203	83.0	59-143	2.13	20	WG464222
Dibromomethane	mg/kg	0.0250	0.0247	100.	70-130	1.02	20	WG464222
Dichlorodifluoromethane	mg/kg	0.0278	0.0268	111.	26-186	3.55	22	WG464222
Ethylbenzene	mg/kg	0.0270	0.0267	108.	74-128	1.07	20	WG464222

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Quality Assurance Report
Level II

L445670

March 11, 2010

		Laboratory Control Sample Duplicate						
Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
Hexachloro-1,3-butadiene	mg/kg	0.0297	0.0287	119.	65-137	3.68	20	WG464222
Isopropylbenzene	mg/kg	0.0275	0.0273	110.	73-130	0.769	20	WG464222
Methyl tert-butyl ether	mg/kg	0.0185	0.0166	74.0	44-148	10.7	20	WG464222
Methylene Chloride	mg/kg	0.0216	0.0209	86.0	57-129	2.90	20	WG464222
n-Butylbenzene	mg/kg	0.0261	0.0255	104.	60-145	2.53	20	WG464222
n-Propylbenzene	mg/kg	0.0268	0.0260	107.	71-132	3.04	20	WG464222
Naphthalene	mg/kg	0.0270	0.0267	108.	61-142	1.09	20	WG464222
p-Isopropyltoluene	mg/kg	0.0283	0.0275	113.	67-138	3.02	20	WG464222
sec-Butylbenzene	mg/kg	0.0277	0.0270	111.	71-134	2.51	20	WG464222
Styrene	mg/kg	0.0284	0.0278	114.	76-133	2.40	20	WG464222
tert-Butylbenzene	mg/kg	0.0281	0.0271	112.	72-132	3.75	20	WG464222
Tetrachloroethene	mg/kg	0.0287	0.0290	115.	65-135	0.973	20	WG464222
Toluene	mg/kg	0.0240	0.0237	96.0	70-120	1.18	20	WG464222
trans-1,2-Dichloroethene	mg/kg	0.0238	0.0229	95.0	61-133	3.79	20	WG464222
trans-1,3-Dichloropropene	mg/kg	0.0240	0.0243	96.0	70-135	1.23	20	WG464222
Trichloroethene	mg/kg	0.0262	0.0259	105.	71-126	1.20	20	WG464222
Trichlorofluoromethane	mg/kg	0.0229	0.0218	92.0	52-147	4.83	20	WG464222
Vinyl chloride	mg/kg	0.0226	0.0221	90.0	50-151	2.22	20	WG464222
Xylenes, Total	mg/kg	0.0800	0.0783	107.	74-127	2.21	20	WG464222
4-Bromofluorobenzene				100.6	59-140			WG464222
Dibromofluoromethane				91.59	63-139			WG464222
Toluene-d8				96.06	84-116			WG464222
1,1,1,2-Tetrachloroethane	mg/l	0.0260	0.0252	104.	75-134	2.84	20	WG464178
1,1,1-Trichloroethane	mg/l	0.0275	0.0259	110.	67-137	5.75	20	WG464178
1,1,2,2-Tetrachloroethane	mg/l	0.0240	0.0240	96.0	72-128	0.111	20	WG464178
1,1,2-Trichloroethane	mg/l	0.0264	0.0251	106.	79-123	5.31	20	WG464178
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	0.0316	0.0307	126.	51-149	2.64	20	WG464178
1,1-Dichloroethane	mg/l	0.0253	0.0249	101.	67-133	1.49	20	WG464178
1,1-Dichloroethene	mg/l	0.0256	0.0244	102.	60-130	4.68	20	WG464178
1,1-Dichloropropene	mg/l	0.0236	0.0232	94.0	68-132	2.10	20	WG464178
1,2,3-Trichlorobenzene	mg/l	0.0252	0.0244	101.	63-138	3.21	20	WG464178
1,2,3-Trichloropropane	mg/l	0.0249	0.0248	100.	68-130	0.396	20	WG464178
1,2,3-Trimethylbenzene	mg/l	0.0238	0.0236	95.0	70-127	0.832	20	WG464178
1,2,4-Trichlorobenzene	mg/l	0.0242	0.0241	97.0	65-137	0.702	20	WG464178
1,2,4-Trimethylbenzene	mg/l	0.0222	0.0223	89.0	72-135	0.235	20	WG464178
1,2-Dibromo-3-Chloropropane	mg/l	0.0264	0.0239	106.	55-134	9.99	20	WG464178
1,2-Dibromoethane	mg/l	0.0259	0.0249	103.	75-126	3.62	20	WG464178
1,2-Dichlorobenzene	mg/l	0.0249	0.0247	100.	75-122	0.841	20	WG464178
1,2-Dichloroethane	mg/l	0.0261	0.0257	104.	63-137	1.72	20	WG464178
1,2-Dichloropropane	mg/l	0.0232	0.0224	93.0	74-122	3.50	20	WG464178
1,3,5-Trimethylbenzene	mg/l	0.0232	0.0234	93.0	73-134	0.790	20	WG464178
1,3-Dichlorobenzene	mg/l	0.0223	0.0228	89.0	73-131	2.03	20	WG464178
1,3-Dichloropropane	mg/l	0.0244	0.0240	98.0	77-119	1.48	20	WG464178
1,4-Dichlorobenzene	mg/l	0.0240	0.0235	96.0	70-121	2.22	20	WG464178
2,2-Dichloropropane	mg/l	0.0273	0.0257	109.	46-151	6.29	20	WG464178
2-Butanone (MEK)	mg/l	0.120	0.115	96.0	53-132	4.79	20	WG464178
2-Chloroethyl vinyl ether	mg/l	0.129	0.102	103.	0-171	23.4	27	WG464178
2-Chlorotoluene	mg/l	0.0237	0.0238	95.0	74-128	0.369	20	WG464178
4-Chlorotoluene	mg/l	0.0229	0.0228	92.0	74-130	0.460	20	WG464178
4-Methyl-2-pentanone (MIBK)	mg/l	0.123	0.113	99.0	60-142	8.96	20	WG464178
Acetone	mg/l	0.120	0.116	96.0	48-134	3.71	20	WG464178
Acrolein	mg/l	0.0989	0.0868	79.0	6-182	13.0	39	WG464178
Acrylonitrile	mg/l	0.114	0.110	91.0	60-140	3.01	20	WG464178
Benzene	mg/l	0.0239	0.0232	96.0	67-126	2.98	20	WG464178
Bromobenzene	mg/l	0.0231	0.0240	92.0	76-123	3.90	20	WG464178
Bromodichloromethane	mg/l	0.0276	0.0263	110.	68-133	4.98	20	WG464178
Bromoform	mg/l	0.0271	0.0270	108.	60-139	0.591	20	WG464178

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Quality Assurance Report
Level II

L445670

March 11, 2010

Analyte	Units	Laboratory Control Sample Duplicate Result	Ref	%Rec	Limit	RPD	Limit	Batch
Bromomethane	mg/l	0.0240	0.0230	96.0	45-175	3.98	20	WG464178
Carbon tetrachloride	mg/l	0.0281	0.0270	112.	64-141	4.22	20	WG464178
Chlorobenzene	mg/l	0.0246	0.0246	98.0	77-125	0.115	20	WG464178
Chlorodibromomethane	mg/l	0.0276	0.0268	110.	73-138	2.83	20	WG464178
Chloroethane	mg/l	0.0207	0.0196	83.0	49-155	5.79	20	WG464178
Chloroform	mg/l	0.0262	0.0262	105.	66-126	0.0604	20	WG464178
Chloromethane	mg/l	0.0179	0.0188	72.0	45-152	5.05	20	WG464178
cis-1,2-Dichloroethene	mg/l	0.0239	0.0236	96.0	72-128	1.29	20	WG464178
cis-1,3-Dichloropropene	mg/l	0.0250	0.0239	100.	73-131	4.33	20	WG464178
Di-isopropyl ether	mg/l	0.0232	0.0230	93.0	63-139	0.785	20	WG464178
Dibromomethane	mg/l	0.0253	0.0243	101.	73-125	4.04	20	WG464178
Dichlorodifluoromethane	mg/l	0.0284	0.0285	114.	39-189	0.368	24	WG464178
Ethylbenzene	mg/l	0.0237	0.0238	95.0	76-129	0.404	20	WG464178
Hexachloro-1,3-butadiene	mg/l	0.0271	0.0271	108.	67-135	0.00645	20	WG464178
Isopropylbenzene	mg/l	0.0243	0.0241	97.0	73-132	0.775	20	WG464178
Methyl tert-butyl ether	mg/l	0.0265	0.0250	106.	51-142	5.60	20	WG464178
Methylene Chloride	mg/l	0.0258	0.0253	103.	64-125	2.15	20	WG464178
n-Butylbenzene	mg/l	0.0250	0.0251	100.	63-142	0.577	20	WG464178
n-Propylbenzene	mg/l	0.0233	0.0234	93.0	71-132	0.808	20	WG464178
Naphthalene	mg/l	0.0252	0.0243	101.	56-145	3.47	20	WG464178
p-Isopropyltoluene	mg/l	0.0229	0.0228	92.0	68-138	0.691	20	WG464178
sec-Butylbenzene	mg/l	0.0234	0.0233	93.0	70-135	0.171	20	WG464178
Styrene	mg/l	0.0236	0.0233	94.0	78-130	0.881	20	WG464178
tert-Butylbenzene	mg/l	0.0237	0.0235	95.0	72-134	0.902	20	WG464178
Tetrachloroethene	mg/l	0.0230	0.0226	92.0	67-135	1.93	20	WG464178
Toluene	mg/l	0.0235	0.0222	94.0	72-122	5.83	20	WG464178
trans-1,2-Dichloroethene	mg/l	0.0249	0.0243	100.	67-129	2.63	20	WG464178
trans-1,3-Dichloropropene	mg/l	0.0261	0.0248	104.	66-137	5.28	20	WG464178
Trichloroethene	mg/l	0.0237	0.0222	95.0	74-126	6.90	20	WG464178
Trichlorofluoromethane	mg/l	0.0259	0.0254	104.	54-156	2.05	20	WG464178
Vinyl chloride	mg/l	0.0212	0.0209	85.0	55-153	1.57	20	WG464178
Xylenes, Total	mg/l	0.0708	0.0701	94.0	75-128	0.947	20	WG464178
4-Bromofluorobenzene				103.3	75-128			WG464178
Dibromofluoromethane				108.0	79-125			WG464178
Toluene-d8				103.0	87-114			WG464178
pH	su	6.40	6.40	99.0	97.9-100.8	0	20	WG464094
COD	mg/l	390.	391.	104.	90-110	0.256	5	WG464233
Nitrate	mg/l	8.20	8.23	102.	90-110	0.365	20	WG464039
Sulfate	mg/l	40.1	40.1	100.	90-110	0	20	WG464039
Sulfate	mg/l	38.8	38.8	97.0	90-110	0	20	WG464248
pH	su	6.40	6.40	99.0	97.9-100.8	0	20	WG464277
Phosphorus,Total	mg/l	0.908	0.926	91.0	85-115	1.96	20	WG464997
Phosphate as P	mg/kg	20.6	20.4	103.	85-115	0.976	20	WG464693

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Quality Assurance Report
Level II

L445670

March 11, 2010

Analyte	Units	Laboratory Control Sample Duplicate Result	Ref	%Rec	Limit	RPD	Limit	Batch
Nitrate	mg/l	8.20	8.20	102.	90-110	0	20	WG465496

Analyte	Units	Matrix Spike MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
1,1,1,2-Tetrachloroethane	mg/kg	0.0256	0	.025	102.	29-145	L445253-03	WG464222
1,1,1-Trichloroethane	mg/kg	0.0214	0	.025	85.8	23-147	L445253-03	WG464222
1,1,2,2-Tetrachloroethane	mg/kg	0.0238	0	.025	95.1	18-150	L445253-03	WG464222
1,1,2-Trichloroethane	mg/kg	0.0253	0	.025	101.	35-140	L445253-03	WG464222
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.0234	0	.025	93.6	10-145	L445253-03	WG464222
1,1-Dichloroethane	mg/kg	0.0191	0	.025	76.4	24-148	L445253-03	WG464222
1,1-Dichloroethene	mg/kg	0.0222	0	.025	88.8	10-149	L445253-03	WG464222
1,1-Dichloropropene	mg/kg	0.0209	0	.025	83.5	10-141	L445253-03	WG464222
1,2,3-Trichlorobenzene	mg/kg	0.0265	0	.025	106.	10-129	L445253-03	WG464222
1,2,3-Trichloropropane	mg/kg	0.0222	0	.025	88.7	30-148	L445253-03	WG464222
1,2,3-Trimethylbenzene	mg/kg	0.0225	0	.025	90.1	10-137	L445253-03	WG464222
1,2,4-Trichlorobenzene	mg/kg	0.0252	0	.025	101.	10-119	L445253-03	WG464222
1,2,4-Trimethylbenzene	mg/kg	0.0245	0	.025	97.8	10-145	L445253-03	WG464222
1,2-Dibromo-3-Chloropropane	mg/kg	0.0242	0	.025	97.0	19-145	L445253-03	WG464222
1,2-Dibromoethane	mg/kg	0.0256	0	.025	102.	24-145	L445253-03	WG464222
1,2-Dichlorobenzene	mg/kg	0.0241	0	.025	96.3	12-130	L445253-03	WG464222
1,2-Dichloroethane	mg/kg	0.0203	0	.025	81.1	21-155	L445253-03	WG464222
1,2-Dichloropropane	mg/kg	0.0218	0	.025	87.0	28-144	L445253-03	WG464222
1,3,5-Trimethylbenzene	mg/kg	0.0238	0	.025	95.4	10-135	L445253-03	WG464222
1,3-Dichlorobenzene	mg/kg	0.0252	0	.025	101.	10-129	L445253-03	WG464222
1,3-Dichloropropane	mg/kg	0.0239	0	.025	95.7	31-137	L445253-03	WG464222
1,4-Dichlorobenzene	mg/kg	0.0231	0	.025	92.4	10-121	L445253-03	WG464222
2,2-Dichloropropane	mg/kg	0.0202	0	.025	80.6	18-144	L445253-03	WG464222
2-Butanone (MEK)	mg/kg	0.0950	0	.125	76.0	21-143	L445253-03	WG464222
2-Chloroethyl vinyl ether	mg/kg	0.0666	0	.125	53.3	0-176	L445253-03	WG464222
2-Chlorotoluene	mg/kg	0.0236	0	.025	94.3	10-132	L445253-03	WG464222
4-Chlorotoluene	mg/kg	0.0233	0	.025	93.1	10-129	L445253-03	WG464222
4-Methyl-2-pentanone (MIBK)	mg/kg	0.101	0	.125	80.4	31-151	L445253-03	WG464222
Acetone	mg/kg	0.0908	0.00326	.125	70.1	13-158	L445253-03	WG464222
Acrylonitrile	mg/kg	0.0797	0	.125	63.8	20-154	L445253-03	WG464222
Benzene	mg/kg	0.0215	0	.025	86.2	16-143	L445253-03	WG464222
Bromobenzene	mg/kg	0.0233	0	.025	93.3	14-135	L445253-03	WG464222
Bromodichloromethane	mg/kg	0.0224	0	.025	89.5	27-139	L445253-03	WG464222
Bromoform	mg/kg	0.0251	0	.025	100.	21-144	L445253-03	WG464222
Bromomethane	mg/kg	0.0216	0	.025	86.4	0-180	L445253-03	WG464222
Carbon tetrachloride	mg/kg	0.0218	0	.025	87.3	12-149	L445253-03	WG464222
Chlorobenzene	mg/kg	0.0249	0	.025	99.4	17-134	L445253-03	WG464222
Chlorodibromomethane	mg/kg	0.0252	0	.025	101.	28-147	L445253-03	WG464222
Chloroethane	mg/kg	0.0190	0	.025	75.9	0-172	L445253-03	WG464222
Chloroform	mg/kg	0.0213	0	.025	85.2	28-138	L445253-03	WG464222
Chloromethane	mg/kg	0.0200	0	.025	80.0	10-158	L445253-03	WG464222
cis-1,2-Dichloroethene	mg/kg	0.0222	0	.025	88.7	21-147	L445253-03	WG464222
cis-1,3-Dichloropropene	mg/kg	0.0226	0	.025	90.2	17-145	L445253-03	WG464222
Di-isopropyl ether	mg/kg	0.0188	0	.025	75.3	31-153	L445253-03	WG464222
Dibromomethane	mg/kg	0.0229	0	.025	91.8	24-147	L445253-03	WG464222
Dichlorodifluoromethane	mg/kg	0.0261	0	.025	104.	0-192	L445253-03	WG464222
Ethylbenzene	mg/kg	0.0250	0	.025	100.	12-137	L445253-03	WG464222
Hexachloro-1,3-butadiene	mg/kg	0.0243	0	.025	97.0	10-123	L445253-03	WG464222
Isopropylbenzene	mg/kg	0.0246	0	.025	98.3	14-134	L445253-03	WG464222
Methyl tert-butyl ether	mg/kg	0.0162	0	.025	64.6	21-157	L445253-03	WG464222
Methylene Chloride	mg/kg	0.0196	0	.025	78.5	12-149	L445253-03	WG464222
n-Butylbenzene	mg/kg	0.0215	0	.025	86.2	10-130	L445253-03	WG464222
n-Propylbenzene	mg/kg	0.0234	0	.025	93.5	10-130	L445253-03	WG464222
Naphthalene	mg/kg	0.0257	0	.025	103.	0-146	L445253-03	WG464222

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Est. 1970

Municipal Engineering Services Company
Mark Brown
PO Box 97

Garner, NC 27529

Quality Assurance Report
Level II

L445670

March 11, 2010

Analyte	Units	MS Res	Matrix Spike Ref Res	TV	% Rec	Limit	Ref Samp	Batch
p-Isopropyltoluene	mg/kg	0.0248	0	.025	99.3	10-131	L445253-03	WG464222
sec-Butylbenzene	mg/kg	0.0240	0	.025	96.2	10-134	L445253-03	WG464222
Styrene	mg/kg	0.0254	0	.025	102.	10-140	L445253-03	WG464222
tert-Butylbenzene	mg/kg	0.0247	0	.025	98.8	11-137	L445253-03	WG464222
Tetrachloroethene	mg/kg	0.0254	0	.025	102.	10-131	L445253-03	WG464222
Toluene	mg/kg	0.0249	0	.025	99.8	12-136	L445253-03	WG464222
trans-1,2-Dichloroethene	mg/kg	0.0211	0	.025	84.4	10-143	L445253-03	WG464222
trans-1,3-Dichloropropene	mg/kg	0.0223	0	.025	89.1	16-147	L445253-03	WG464222
Trichloroethene	mg/kg	0.0234	0	.025	93.5	10-155	L445253-03	WG464222
Trichlorofluoromethane	mg/kg	0.0199	0	.025	79.7	10-154	L445253-03	WG464222
Vinyl chloride	mg/kg	0.0199	0	.025	79.5	10-159	L445253-03	WG464222
Xylenes, Total	mg/kg	0.0748	0	.075	99.7	10-138	L445253-03	WG464222
4-Bromofluorobenzene					102.3	59-140		WG464222
Dibromofluoromethane					92.35	63-139		WG464222
Toluene-d8					95.83	84-116		WG464222
Mercury	mg/kg	0.283	0	.25	113.	70-130	L445710-02	WG464108
Mercury	mg/l	0.00265	0	.003	88.3	70-130	L445674-05	WG464104
1,1,1,2-Tetrachloroethane	mg/l	0.0241	0	.025	96.4	45-152	L445244-04	WG464178
1,1,1-Trichloroethane	mg/l	0.0249	0	.025	99.5	31-161	L445244-04	WG464178
1,1,2,2-Tetrachloroethane	mg/l	0.0232	0	.025	92.6	49-149	L445244-04	WG464178
1,1,2-Trichloroethane	mg/l	0.0236	0	.025	94.5	46-145	L445244-04	WG464178
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	0.0289	0	.025	116.	14-168	L445244-04	WG464178
1,1-Dichloroethane	mg/l	0.0237	0	.025	94.7	30-159	L445244-04	WG464178
1,1-Dichloroethene	mg/l	0.0239	0	.025	95.8	10-162	L445244-04	WG464178
1,1-Dichloropropene	mg/l	0.0223	0	.025	89.3	14-162	L445244-04	WG464178
1,2,3-Trichlorobenzene	mg/l	0.0239	0	.025	95.5	32-143	L445244-04	WG464178
1,2,3-Trichloropropane	mg/l	0.0238	0	.025	95.1	48-148	L445244-04	WG464178
1,2,3-Trimethylbenzene	mg/l	0.0233	0	.025	93.0	36-141	L445244-04	WG464178
1,2,4-Trichlorobenzene	mg/l	0.0234	0	.025	93.8	27-142	L445244-04	WG464178
1,2,4-Trimethylbenzene	mg/l	0.0215	0	.025	85.9	29-153	L445244-04	WG464178
1,2-Dibromo-3-Chloropropane	mg/l	0.0230	0	.025	92.1	37-148	L445244-04	WG464178
1,2-Dibromoethane	mg/l	0.0238	0	.025	95.2	41-149	L445244-04	WG464178
1,2-Dichlorobenzene	mg/l	0.0243	0	.025	97.3	40-139	L445244-04	WG464178
1,2-Dichloroethane	mg/l	0.0245	0	.025	98.0	29-167	L445244-04	WG464178
1,2-Dichloropropane	mg/l	0.0213	0	.025	85.2	39-148	L445244-04	WG464178
1,3,5-Trimethylbenzene	mg/l	0.0222	0	.025	88.9	33-149	L445244-04	WG464178
1,3-Dichlorobenzene	mg/l	0.0215	0	.025	86.1	32-148	L445244-04	WG464178
1,3-Dichloropropane	mg/l	0.0228	0	.025	91.3	44-142	L445244-04	WG464178
1,4-Dichlorobenzene	mg/l	0.0228	0	.025	91.0	32-136	L445244-04	WG464178
2,2-Dichloropropane	mg/l	0.0245	0	.025	98.2	14-158	L445244-04	WG464178
2-Butanone (MEK)	mg/l	0.115	0	.125	91.8	32-151	L445244-04	WG464178
2-Chloroethyl vinyl ether	mg/l	0.00351	0	.125	2.81	0-175	L445244-04	WG464178
2-Chlorotoluene	mg/l	0.0229	0	.025	91.6	35-147	L445244-04	WG464178
4-Chlorotoluene	mg/l	0.0222	0	.025	88.6	33-147	L445244-04	WG464178
4-Methyl-2-pentanone (MIBK)	mg/l	0.111	0	.125	88.9	40-160	L445244-04	WG464178
Acetone	mg/l	0.114	0	.125	91.1	25-157	L445244-04	WG464178
Acrolein	mg/l	0.0816	0	.125	65.3	0-179	L445244-04	WG464178
Acrylonitrile	mg/l	0.108	0	.125	86.7	37-162	L445244-04	WG464178
Benzene	mg/l	0.0223	0	.025	89.3	16-158	L445244-04	WG464178
Bromobenzene	mg/l	0.0227	0	.025	90.6	37-147	L445244-04	WG464178
Bromodichloromethane	mg/l	0.0256	0	.025	102.	45-147	L445244-04	WG464178
Bromoform	mg/l	0.0256	0	.025	102.	38-152	L445244-04	WG464178
Bromomethane	mg/l	0.0182	0	.025	72.8	0-191	L445244-04	WG464178

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Municipal Engineering Services Company
Mark Brown
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Quality Assurance Report
Level II

L445670

March 11, 2010

Analyte	Units	MS Res	Matrix Spike Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Carbon tetrachloride	mg/l	0.0254	0	.025	102.	22-168	L445244-04	WG464178
Chlorobenzene	mg/l	0.0235	0	.025	94.1	33-148	L445244-04	WG464178
Chlorodibromomethane	mg/l	0.0259	0	.025	104.	48-151	L445244-04	WG464178
Chloroethane	mg/l	0.0162	0	.025	65.0	4-176	L445244-04	WG464178
Chloroform	mg/l	0.0252	0	.025	101.	37-147	L445244-04	WG464178
Chloromethane	mg/l	0.0203	0	.025	81.4	10-174	L445244-04	WG464178
cis-1,2-Dichloroethene	mg/l	0.0229	0	.025	91.6	29-156	L445244-04	WG464178
cis-1,3-Dichloropropene	mg/l	0.0236	0	.025	94.2	35-148	L445244-04	WG464178
Di-isopropyl ether	mg/l	0.0222	0	.025	88.9	39-160	L445244-04	WG464178
Dibromomethane	mg/l	0.0240	0	.025	95.8	36-152	L445244-04	WG464178
Dichlorodifluoromethane	mg/l	0.0303	0	.025	121.	0-200	L445244-04	WG464178
Ethylbenzene	mg/l	0.0228	0	.025	91.0	29-150	L445244-04	WG464178
Hexachloro-1,3-butadiene	mg/l	0.0258	0	.025	103.	28-144	L445244-04	WG464178
Isopropylbenzene	mg/l	0.0235	0	.025	94.0	35-147	L445244-04	WG464178
Methyl tert-butyl ether	mg/l	0.0240	0	.025	95.9	24-167	L445244-04	WG464178
Methylene Chloride	mg/l	0.0235	0	.025	94.0	23-151	L445244-04	WG464178
n-Butylbenzene	mg/l	0.0240	0	.025	96.0	22-151	L445244-04	WG464178
n-Propylbenzene	mg/l	0.0225	0	.025	89.8	26-150	L445244-04	WG464178
Naphthalene	mg/l	0.0234	0	.025	93.6	24-160	L445244-04	WG464178
p-Isopropyltoluene	mg/l	0.0217	0	.025	87.0	28-151	L445244-04	WG464178
sec-Butylbenzene	mg/l	0.0220	0	.025	87.9	32-149	L445244-04	WG464178
Styrene	mg/l	0.0228	0	.025	91.2	38-149	L445244-04	WG464178
tert-Butylbenzene	mg/l	0.0223	0	.025	89.1	36-149	L445244-04	WG464178
Tetrachloroethene	mg/l	0.0217	0	.025	86.6	13-157	L445244-04	WG464178
Toluene	mg/l	0.0216	0	.025	86.3	22-152	L445244-04	WG464178
trans-1,2-Dichloroethene	mg/l	0.0231	0	.025	92.4	11-160	L445244-04	WG464178
trans-1,3-Dichloropropene	mg/l	0.0241	0	.025	96.2	33-153	L445244-04	WG464178
Trichloroethene	mg/l	0.0221	0	.025	88.2	18-163	L445244-04	WG464178
Trichlorofluoromethane	mg/l	0.0245	0	.025	98.1	10-177	L445244-04	WG464178
Vinyl chloride	mg/l	0.0205	0	.025	82.0	0-179	L445244-04	WG464178
Xylenes, Total	mg/l	0.0669	0	.075	89.2	27-151	L445244-04	WG464178
4-Bromofluorobenzene					104.7	75-128		WG464178
Dibromofluoromethane					108.3	79-125		WG464178
Toluene-d8					102.7	87-114		WG464178
Arsenic	mg/l	1.14	0	1.13	101.	75-125	L445786-04	WG464156
Barium	mg/l	1.19	0.0150	1.13	104.	75-125	L445786-04	WG464156
Cadmium	mg/l	1.17	0	1.13	104.	75-125	L445786-04	WG464156
Chromium	mg/l	1.19	0	1.13	105.	75-125	L445786-04	WG464156
Lead	mg/l	1.19	0.0130	1.13	104.	75-125	L445786-04	WG464156
Selenium	mg/l	1.05	0	1.13	92.9	75-125	L445786-04	WG464156
Silver	mg/l	1.15	0	1.13	102.	75-125	L445786-04	WG464156
COD	mg/l	396.	0	400	99.0	90-110	L445670-04	WG464233
Nitrate	mg/l	5.16	0.120	5	101.	80-120	L445633-03	WG464039
Sulfate	mg/l	70.1	20.0	50	100.	80-120	L445633-03	WG464039
Arsenic	mg/kg	46.7	4.40	50	84.6	75-125	L445710-02	WG464140
Barium	mg/kg	153.	120.	50	66.0*	75-125	L445710-02	WG464140
Cadmium	mg/kg	42.8	0	50	85.6	75-125	L445710-02	WG464140
Chromium	mg/kg	64.8	21.0	50	87.6	75-125	L445710-02	WG464140
Lead	mg/kg	55.1	12.0	50	86.2	75-125	L445710-02	WG464140
Selenium	mg/kg	47.1	9.80	50	74.6*	75-125	L445710-02	WG464140
Silver	mg/kg	46.2	0	50	92.4	75-125	L445710-02	WG464140

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Quality Assurance Report
Level II

L445670

March 11, 2010

Analyte	Units	MS Res	Matrix Spike Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Sulfate	mg/l	142.	95.0	50	94.0	80-120	L445810-02	WG464248
Phosphorus,Total	mg/l	2.34	0	2.5	93.6	80-120	L445508-15	WG464997

Analyte	Units	MSD	Matrix Spike Duplicate Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
1,1,1,2-Tetrachloroethane	mg/kg	0.0239	0.0256	95.6	29-145	6.82	31	L445253-03	WG464222
1,1,1-Trichloroethane	mg/kg	0.0204	0.0214	81.4	23-147	5.18	32	L445253-03	WG464222
1,1,2,2-Tetrachloroethane	mg/kg	0.0220	0.0238	88.1	18-150	7.66	33	L445253-03	WG464222
1,1,2-Trichloroethane	mg/kg	0.0234	0.0253	93.6	35-140	7.63	29	L445253-03	WG464222
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.0230	0.0234	92.2	10-145	1.53	35	L445253-03	WG464222
1,1-Dichloroethane	mg/kg	0.0185	0.0191	74.2	24-148	3.01	31	L445253-03	WG464222
1,1-Dichloroethene	mg/kg	0.0212	0.0222	85.0	10-149	4.44	34	L445253-03	WG464222
1,1-Dichloropropene	mg/kg	0.0198	0.0209	79.4	10-141	5.13	34	L445253-03	WG464222
1,2,3-Trichlorobenzene	mg/kg	0.0213	0.0265	85.0	10-129	21.8	43	L445253-03	WG464222
1,2,3-Trichloropropane	mg/kg	0.0204	0.0222	81.5	30-148	8.49	32	L445253-03	WG464222
1,2,3-Trimethylbenzene	mg/kg	0.0210	0.0225	84.0	10-137	7.05	36	L445253-03	WG464222
1,2,4-Trichlorobenzene	mg/kg	0.0208	0.0252	83.4	10-119	19.0	44	L445253-03	WG464222
1,2,4-Trimethylbenzene	mg/kg	0.0233	0.0245	93.0	10-145	5.08	41	L445253-03	WG464222
1,2-Dibromo-3-Chloropropane	mg/kg	0.0231	0.0242	92.4	19-145	4.88	35	L445253-03	WG464222
1,2-Dibromoethane	mg/kg	0.0237	0.0256	95.0	24-145	7.60	31	L445253-03	WG464222
1,2-Dichlorobenzene	mg/kg	0.0222	0.0241	88.6	12-130	8.29	35	L445253-03	WG464222
1,2-Dichloroethane	mg/kg	0.0191	0.0203	76.4	21-155	5.99	29	L445253-03	WG464222
1,2-Dichloropropane	mg/kg	0.0203	0.0218	81.0	28-144	7.16	30	L445253-03	WG464222
1,3,5-Trimethylbenzene	mg/kg	0.0224	0.0238	89.5	10-135	6.36	39	L445253-03	WG464222
1,3-Dichlorobenzene	mg/kg	0.0221	0.0252	88.5	10-129	12.9	38	L445253-03	WG464222
1,3-Dichloropropane	mg/kg	0.0220	0.0239	87.8	31-137	8.56	29	L445253-03	WG464222
1,4-Dichlorobenzene	mg/kg	0.0208	0.0231	83.2	10-121	10.5	36	L445253-03	WG464222
2,2-Dichloropropane	mg/kg	0.0191	0.0202	76.6	18-144	5.18	32	L445253-03	WG464222
2-Butanone (MEK)	mg/kg	0.0900	0.0950	72.0	21-143	5.38	37	L445253-03	WG464222
2-Chloroethyl vinyl ether	mg/kg	0.0643	0.0666	51.4	0-176	3.53	50	L445253-03	WG464222
2-Chlorotoluene	mg/kg	0.0213	0.0236	85.3	10-132	10.0	37	L445253-03	WG464222
4-Chlorotoluene	mg/kg	0.0209	0.0233	83.7	10-129	10.7	38	L445253-03	WG464222
4-Methyl-2-pentanone (MIBK)	mg/kg	0.0975	0.101	78.0	31-151	3.11	36	L445253-03	WG464222
Acetone	mg/kg	0.0816	0.0908	62.7	13-158	10.7	34	L445253-03	WG464222
Acrylonitrile	mg/kg	0.0768	0.0797	61.4	20-154	3.73	35	L445253-03	WG464222
Benzene	mg/kg	0.0207	0.0215	82.9	16-143	3.93	31	L445253-03	WG464222
Bromobenzene	mg/kg	0.0213	0.0233	85.4	14-135	8.87	39	L445253-03	WG464222
Bromodichloromethane	mg/kg	0.0209	0.0224	83.8	27-139	6.58	30	L445253-03	WG464222
Bromoform	mg/kg	0.0230	0.0251	92.1	21-144	8.44	34	L445253-03	WG464222
Bromomethane	mg/kg	0.0212	0.0216	85.0	0-180	1.63	41	L445253-03	WG464222
Carbon tetrachloride	mg/kg	0.0209	0.0218	83.5	12-149	4.44	34	L445253-03	WG464222
Chlorobenzene	mg/kg	0.0233	0.0249	93.1	17-134	6.51	34	L445253-03	WG464222
Chlorodibromomethane	mg/kg	0.0231	0.0252	92.3	28-147	8.75	32	L445253-03	WG464222
Chloroethane	mg/kg	0.0185	0.0190	74.1	0-172	2.39	38	L445253-03	WG464222
Chloroform	mg/kg	0.0200	0.0213	80.0	28-138	6.40	30	L445253-03	WG464222
Chloromethane	mg/kg	0.0196	0.0200	78.5	10-158	1.85	35	L445253-03	WG464222
cis-1,2-Dichloroethene	mg/kg	0.0207	0.0222	82.6	21-147	7.10	31	L445253-03	WG464222
cis-1,3-Dichloropropene	mg/kg	0.0206	0.0226	82.2	17-145	9.28	32	L445253-03	WG464222
Di-isopropyl ether	mg/kg	0.0176	0.0188	70.5	31-153	6.51	29	L445253-03	WG464222
Dibromomethane	mg/kg	0.0218	0.0229	87.3	24-147	4.96	30	L445253-03	WG464222
Dichlorodifluoromethane	mg/kg	0.0258	0.0261	103.	0-192	0.861	38	L445253-03	WG464222
Ethylbenzene	mg/kg	0.0241	0.0250	96.6	12-137	3.61	36	L445253-03	WG464222
Hexachloro-1,3-butadiene	mg/kg	0.0203	0.0243	81.2	10-123	17.8	50	L445253-03	WG464222
Isopropylbenzene	mg/kg	0.0229	0.0246	91.5	14-134	7.19	37	L445253-03	WG464222
Methyl tert-butyl ether	mg/kg	0.0159	0.0162	63.8	21-157	1.28	31	L445253-03	WG464222
Methylene Chloride	mg/kg	0.0186	0.0196	74.4	12-149	5.27	31	L445253-03	WG464222

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Municipal Engineering Services Company
Mark Brown
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Garner, NC 27529

Quality Assurance Report
Level II

L445670

March 11, 2010

Analyte	Units	MSD	Matrix Spike Ref	Duplicate %Rec	Limit	RPD	Limit	Ref Samp	Batch
n-Butylbenzene	mg/kg	0.0196	0.0215	78.6	10-130	9.25	48	L445253-03	WG464222
n-Propylbenzene	mg/kg	0.0215	0.0234	86.0	10-130	8.36	40	L445253-03	WG464222
Naphthalene	mg/kg	0.0224	0.0257	89.7	0-146	13.7	43	L445253-03	WG464222
p-Isopropyltoluene	mg/kg	0.0218	0.0248	87.4	10-131	12.8	43	L445253-03	WG464222
sec-Butylbenzene	mg/kg	0.0218	0.0240	87.1	10-134	9.95	43	L445253-03	WG464222
Styrene	mg/kg	0.0232	0.0254	92.9	10-140	9.13	35	L445253-03	WG464222
tert-Butylbenzene	mg/kg	0.0224	0.0247	89.8	11-137	9.59	39	L445253-03	WG464222
Tetrachloroethene	mg/kg	0.0236	0.0254	94.5	10-131	7.14	35	L445253-03	WG464222
Toluene	mg/kg	0.0274	0.0249	110.	12-136	9.39	32	L445253-03	WG464222
trans-1,2-Dichloroethene	mg/kg	0.0202	0.0211	80.7	10-143	4.55	33	L445253-03	WG464222
trans-1,3-Dichloropropene	mg/kg	0.0206	0.0223	82.5	16-147	7.75	32	L445253-03	WG464222
Trichloroethene	mg/kg	0.0223	0.0234	89.2	10-155	4.75	33	L445253-03	WG464222
Trichlorofluoromethane	mg/kg	0.0196	0.0199	78.3	10-154	1.80	32	L445253-03	WG464222
Vinyl chloride	mg/kg	0.0200	0.0199	79.9	10-159	0.433	36	L445253-03	WG464222
Xylenes, Total	mg/kg	0.0740	0.0748	98.6	10-138	1.06	36	L445253-03	WG464222
4-Bromofluorobenzene				101.2	59-140				WG464222
Dibromofluoromethane				92.75	63-139				WG464222
Toluene-d8				95.31	84-116				WG464222
Mercury	mg/kg	0.283	0.283	113.	70-130	0	20	L445710-02	WG464108
Mercury	mg/l	0.00266	0.00265	88.7	70-130	0.377	20	L445674-05	WG464104
1,1,1,2-Tetrachloroethane	mg/l	0.0258	0.0241	103.	45-152	7.03	21	L445244-04	WG464178
1,1,1-Trichloroethane	mg/l	0.0281	0.0249	112.	31-161	12.1	23	L445244-04	WG464178
1,1,2,2-Tetrachloroethane	mg/l	0.0253	0.0232	101.	49-149	8.78	22	L445244-04	WG464178
1,1,2-Trichloroethane	mg/l	0.0262	0.0236	105.	46-145	10.3	20	L445244-04	WG464178
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	0.0320	0.0289	128.	14-168	10.1	24	L445244-04	WG464178
1,1-Dichloroethane	mg/l	0.0257	0.0237	103.	30-159	8.20	21	L445244-04	WG464178
1,1-Dichloroethene	mg/l	0.0261	0.0239	104.	10-162	8.54	23	L445244-04	WG464178
1,1-Dichloropropene	mg/l	0.0241	0.0223	96.2	14-162	7.49	23	L445244-04	WG464178
1,2,3-Trichlorobenzene	mg/l	0.0259	0.0239	103.	32-143	7.96	33	L445244-04	WG464178
1,2,3-Trichloropropane	mg/l	0.0265	0.0238	106.	48-148	10.8	23	L445244-04	WG464178
1,2,3-Trimethylbenzene	mg/l	0.0242	0.0233	96.8	36-141	3.97	25	L445244-04	WG464178
1,2,4-Trichlorobenzene	mg/l	0.0247	0.0234	99.0	27-142	5.39	30	L445244-04	WG464178
1,2,4-Trimethylbenzene	mg/l	0.0225	0.0215	89.9	29-153	4.61	27	L445244-04	WG464178
1,2-Dibromo-3-Chloropropane	mg/l	0.0278	0.0230	111.	37-148	18.8	27	L445244-04	WG464178
1,2-Dibromoethane	mg/l	0.0262	0.0238	105.	41-149	9.46	21	L445244-04	WG464178
1,2-Dichlorobenzene	mg/l	0.0256	0.0243	102.	40-139	4.94	23	L445244-04	WG464178
1,2-Dichloroethane	mg/l	0.0265	0.0245	106.	29-167	8.04	21	L445244-04	WG464178
1,2-Dichloropropane	mg/l	0.0233	0.0213	93.3	39-148	8.98	20	L445244-04	WG464178
1,3,5-Trimethylbenzene	mg/l	0.0237	0.0222	94.7	33-149	6.34	26	L445244-04	WG464178
1,3-Dichlorobenzene	mg/l	0.0224	0.0215	89.7	32-148	4.09	24	L445244-04	WG464178
1,3-Dichloropropane	mg/l	0.0248	0.0228	99.2	44-142	8.27	20	L445244-04	WG464178
1,4-Dichlorobenzene	mg/l	0.0242	0.0228	96.9	32-136	6.31	23	L445244-04	WG464178
2,2-Dichloropropane	mg/l	0.0285	0.0245	114.	14-158	15.0	23	L445244-04	WG464178
2-Butanone (MEK)	mg/l	0.128	0.115	102.	32-151	10.7	26	L445244-04	WG464178
2-Chloroethyl vinyl ether	mg/l	0.000775	0.00351	0.620	0-175	128.*	75	L445244-04	WG464178
2-Chlorotoluene	mg/l	0.0242	0.0229	96.7	35-147	5.42	24	L445244-04	WG464178
4-Chlorotoluene	mg/l	0.0232	0.0222	93.0	33-147	4.79	25	L445244-04	WG464178
4-Methyl-2-pentanone (MIBK)	mg/l	0.130	0.111	104.	40-160	15.8	28	L445244-04	WG464178
Acetone	mg/l	0.129	0.114	103.	25-157	12.6	26	L445244-04	WG464178
Acrolein	mg/l	0.0850	0.0816	68.0	0-179	4.08	39	L445244-04	WG464178
Acrylonitrile	mg/l	0.123	0.108	98.3	37-162	12.6	24	L445244-04	WG464178
Benzene	mg/l	0.0243	0.0223	97.0	16-158	8.27	21	L445244-04	WG464178
Bromobenzene	mg/l	0.0238	0.0227	95.0	37-147	4.74	23	L445244-04	WG464178

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Quality Assurance Report
Level II

L445670

March 11, 2010

Analyte	Units	MSD	Matrix Spike Duplicate Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Bromodichloromethane	mg/l	0.0270	0.0256	108.	45-147	5.12	20	L445244-04	WG464178
Bromoform	mg/l	0.0276	0.0256	110.	38-152	7.30	20	L445244-04	WG464178
Bromomethane	mg/l	0.0223	0.0182	89.2	0-191	20.3	35	L445244-04	WG464178
Carbon tetrachloride	mg/l	0.0285	0.0254	114.	22-168	11.7	24	L445244-04	WG464178
Chlorobenzene	mg/l	0.0251	0.0235	100.	33-148	6.30	22	L445244-04	WG464178
Chlorodibromomethane	mg/l	0.0274	0.0259	110.	48-151	5.74	21	L445244-04	WG464178
Chloroethane	mg/l	0.0197	0.0162	78.6	4-176	19.0	27	L445244-04	WG464178
Chloroform	mg/l	0.0267	0.0252	107.	37-147	5.79	21	L445244-04	WG464178
Chloromethane	mg/l	0.0183	0.0203	73.0	10-174	10.8	28	L445244-04	WG464178
cis-1,2-Dichloroethene	mg/l	0.0243	0.0229	97.0	29-156	5.76	22	L445244-04	WG464178
cis-1,3-Dichloropropene	mg/l	0.0257	0.0236	103.	35-148	8.71	21	L445244-04	WG464178
Di-isopropyl ether	mg/l	0.0233	0.0222	93.1	39-160	4.60	21	L445244-04	WG464178
Dibromomethane	mg/l	0.0253	0.0240	101.	36-152	5.49	20	L445244-04	WG464178
Dichlorodifluoromethane	mg/l	0.0322	0.0303	129.	0-200	5.91	26	L445244-04	WG464178
Ethylbenzene	mg/l	0.0241	0.0228	96.6	29-150	5.93	24	L445244-04	WG464178
Hexachloro-1,3-butadiene	mg/l	0.0277	0.0258	111.	28-144	6.91	33	L445244-04	WG464178
Isopropylbenzene	mg/l	0.0252	0.0235	101.	35-147	6.95	25	L445244-04	WG464178
Methyl tert-butyl ether	mg/l	0.0264	0.0240	106.	24-167	9.65	22	L445244-04	WG464178
Methylene Chloride	mg/l	0.0253	0.0235	101.	23-151	7.48	21	L445244-04	WG464178
n-Butylbenzene	mg/l	0.0260	0.0240	104.	22-151	7.86	29	L445244-04	WG464178
n-Propylbenzene	mg/l	0.0240	0.0225	96.0	26-150	6.68	25	L445244-04	WG464178
Naphthalene	mg/l	0.0265	0.0234	106.	24-160	12.6	37	L445244-04	WG464178
p-Isopropyltoluene	mg/l	0.0236	0.0217	94.5	28-151	8.31	27	L445244-04	WG464178
sec-Butylbenzene	mg/l	0.0237	0.0220	94.8	32-149	7.54	26	L445244-04	WG464178
Styrene	mg/l	0.0238	0.0228	95.1	38-149	4.20	23	L445244-04	WG464178
tert-Butylbenzene	mg/l	0.0242	0.0223	96.9	36-149	8.42	26	L445244-04	WG464178
Tetrachloroethene	mg/l	0.0233	0.0217	93.3	13-157	7.47	24	L445244-04	WG464178
Toluene	mg/l	0.0237	0.0216	94.7	22-152	9.35	22	L445244-04	WG464178
trans-1,2-Dichloroethene	mg/l	0.0247	0.0231	98.8	11-160	6.69	23	L445244-04	WG464178
trans-1,3-Dichloropropene	mg/l	0.0262	0.0241	105.	33-153	8.43	22	L445244-04	WG464178
Trichloroethene	mg/l	0.0233	0.0221	93.3	18-163	5.52	21	L445244-04	WG464178
Trichlorofluoromethane	mg/l	0.0273	0.0245	109.	10-177	10.6	24	L445244-04	WG464178
Vinyl chloride	mg/l	0.0219	0.0205	87.7	0-179	6.73	26	L445244-04	WG464178
Xylenes, Total	mg/l	0.0713	0.0669	95.1	27-151	6.47	23	L445244-04	WG464178
4-Bromofluorobenzene				101.8	75-128				WG464178
Dibromofluoromethane				108.2	79-125				WG464178
Toluene-d8				104.8	87-114				WG464178
Arsenic	mg/l	1.13	1.14	100.	75-125	0.881	20	L445786-04	WG464156
Barium	mg/l	1.22	1.19	107.	75-125	2.49	20	L445786-04	WG464156
Cadmium	mg/l	1.22	1.17	108.	75-125	4.18	20	L445786-04	WG464156
Chromium	mg/l	1.22	1.19	108.	75-125	2.49	20	L445786-04	WG464156
Lead	mg/l	1.18	1.19	103.	75-125	0.844	20	L445786-04	WG464156
Selenium	mg/l	1.04	1.05	92.0	75-125	0.957	20	L445786-04	WG464156
Silver	mg/l	1.15	1.15	102.	75-125	0	20	L445786-04	WG464156
COD	mg/l	390.	396.	97.5	90-110	1.53	5	L445670-04	WG464233
Nitrate	mg/l	4.92	5.16	96.0	80-120	4.76	20	L445633-03	WG464039
Sulfate	mg/l	67.9	70.1	95.8	80-120	3.19	20	L445633-03	WG464039
Arsenic	mg/kg	42.5	46.7	76.2	75-125	9.42	20	L445710-02	WG464140
Barium	mg/kg	139.	153.	38.0*	75-125	9.59	20	L445710-02	WG464140
Cadmium	mg/kg	39.0	42.8	78.0	75-125	9.29	20	L445710-02	WG464140
Chromium	mg/kg	57.3	64.8	72.6*	75-125	12.3	20	L445710-02	WG464140

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Quality Assurance Report
Level II

L445670

March 11, 2010

Analyte	Units	MSD	Matrix Spike Duplicate Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Lead	mg/kg	48.8	55.1	73.6*	75-125	12.1	20	L445710-02	WG464140
Selenium	mg/kg	43.4	47.1	67.2*	75-125	8.18	20	L445710-02	WG464140
Silver	mg/kg	42.0	46.2	84.0	75-125	9.52	20	L445710-02	WG464140
Sulfate	mg/l	142.	142.	94.0	80-120	0	20	L445810-02	WG464248
Phosphorus,Total	mg/l	2.33	2.34	93.2	80-120	0.428	20	L445508-15	WG464997

Batch number /Run number / Sample number cross reference

WG464222: R1124259: L445670-01 02 03
WG464108: R1124321: L445670-01 02 03
WG464104: R1124322: L445670-04 05
WG464178: R1124591: L445670-04 05
WG464141: R1124751: L445670-06 07 08
WG464094: R1124757: L445670-04 05
WG464156: R1124789: L445670-04 05
WG464233: R1124988: L445670-04 05
WG464066: R1125032: L445670-02
WG464067: R1125033: L445670-01
WG464078: R1125034: L445670-03
WG464039: R1125613: L445670-04 05
WG464140: R1125731: L445670-01 02 03
WG464248: R1126690: L445670-06 07 08
WG464277: R1127188: L445670-01 02 03
WG464997: R1128589: L445670-04 05
WG464087: R1128689: L445670-04 05
WG464693: R1128848: L445670-01 02 03
WG465212: R1131116: L445670-06 07 08
WG465496: R1132568: L445670-06 07 08

* * Calculations are performed prior to rounding of reported values .
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Quality Assurance Report
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L445670

March 11, 2010

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

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Mark Brown
Municipal Engineering Services Company
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Report Summary

Thursday March 11, 2010

Report Number: L448282
Samples Received: 02/19/10
Client Project: G10046.0

Description: Jackson County Transfer Station

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By: Jimmy Hunt

Jimmy Hunt , ESC Representative

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
NJ - TN002,NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

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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

Mark Brown
Municipal Engineering Services Comp
PO Box 97
Garner, NC 27529

March 11, 2010

ESC Sample # : L448282-04

Date Received : February 19, 2010
Description : Jackson County Transfer Station

Site ID :

Sample ID : SW-BG

Project # : G10046.0

Collected By : Mark Brown
Collection Date : 02/17/10 11:00

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Antimony	U	0.00021	0.0010	mg/l		6020	03/10/10	1
Arsenic	U	0.00025	0.0010	mg/l		6020	03/10/10	1
Barium	0.037	0.00036	0.0020	mg/l		6020	03/10/10	1
Beryllium	U	0.00012	0.0010	mg/l		6020	03/10/10	1
Cadmium	U	0.00016	0.00050	mg/l		6020	03/10/10	1
Chromium	U	0.00054	0.0020	mg/l		6020	03/10/10	1
Copper	U	0.00052	0.0020	mg/l		6020	03/10/10	1
Cobalt	U	0.00026	0.0010	mg/l		6020	03/10/10	1
Lead	U	0.00024	0.0010	mg/l		6020	03/10/10	1
Nickel	0.00047	0.00035	0.0010	mg/l	J	6020	03/10/10	1
Selenium	U	0.00038	0.0010	mg/l		6020	03/10/10	1
Silver	U	0.00031	0.0010	mg/l		6020	03/10/10	1
Thallium	U	0.00019	0.0010	mg/l		6020	03/10/10	1
Vanadium	U	0.00018	0.0020	mg/l		6020	03/10/10	1
Zinc	U	0.0026	0.010	mg/l		6020	03/10/10	1

U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD
RDL = Reported Detection Limit = LOQ = PQL = EQL
Note:
The reported analytical results relate only to the sample submitted.
This report shall not be reproduced, except in full, without the written approval from ESC.
.
Reported: 03/11/10 09:47 Printed: 03/11/10 11:08

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REPORT OF ANALYSIS

Mark Brown
Municipal Engineering Services Comp
PO Box 97
Garner, NC 27529

March 11, 2010

ESC Sample # : L448282-05

Date Received : February 19, 2010
Description : Jackson County Transfer Station

Site ID :

Sample ID : SW-DG

Project # : G10046.0

Collected By : Mark Brown
Collection Date : 02/17/10 11:15

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Antimony	U	0.00021	0.0010	mg/l		6020	03/10/10	1
Arsenic	U	0.00025	0.0010	mg/l		6020	03/10/10	1
Barium	0.038	0.00036	0.0020	mg/l		6020	03/10/10	1
Beryllium	0.0016	0.00060	0.0050	mg/l	J	6020	03/11/10	5
Cadmium	U	0.00016	0.00050	mg/l		6020	03/10/10	1
Chromium	U	0.00054	0.0020	mg/l		6020	03/10/10	1
Copper	U	0.00052	0.0020	mg/l		6020	03/10/10	1
Cobalt	U	0.00026	0.0010	mg/l		6020	03/10/10	1
Lead	U	0.00024	0.0010	mg/l		6020	03/10/10	1
Nickel	0.00076	0.00035	0.0010	mg/l	J	6020	03/10/10	1
Selenium	U	0.00038	0.0010	mg/l		6020	03/10/10	1
Silver	U	0.00031	0.0010	mg/l		6020	03/10/10	1
Thallium	U	0.00019	0.0010	mg/l		6020	03/10/10	1
Vanadium	U	0.00018	0.0020	mg/l		6020	03/10/10	1
Zinc	U	0.0026	0.010	mg/l		6020	03/10/10	1

U = ND (Not Detected)
MDL = Minimum Detection Limit = LOD
RDL = Reported Detection Limit = LOQ = PQL = EQL
Note:
The reported analytical results relate only to the sample submitted.
This report shall not be reproduced, except in full, without the written approval from ESC.
.
Reported: 03/11/10 09:47 Printed: 03/11/10 11:08

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L448282-04	WG466671	SAMP	Nickel	R1141448	J
L448282-05	WG466671	SAMP	Beryllium	R1141448	J
	WG466671	SAMP	Nickel	R1141448	J

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.

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.

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

Summary of Remarks For Samples Printed
03/11/10 at 11:08:27

TSR Signing Reports: 350
R4 - Rush: Three Day

Sample: L448282-04 Account: MUNENGGNC Received: 02/19/10 09:00 Due Date: 03/11/10 00:00 RPT Date: 03/11/10 09:47
relogged from L445670-04
Sample: L448282-05 Account: MUNENGGNC Received: 02/19/10 09:00 Due Date: 03/11/10 00:00 RPT Date: 03/11/10 09:47
relogged from L445670-05

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Municipal Engineering Services Company
Mark Brown
PO Box 97

Garner, NC 27529

Quality Assurance Report
Level II

L448282

March 11, 2010

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Antimony	< .001	mg/l			WG466671	03/10/10 22:26
Arsenic	< .001	mg/l			WG466671	03/10/10 22:26
Barium	< .002	mg/l			WG466671	03/10/10 22:26
Beryllium	< .001	mg/l			WG466671	03/10/10 22:26
Cadmium	< .0005	mg/l			WG466671	03/10/10 22:26
Chromium	< .002	mg/l			WG466671	03/10/10 22:26
Cobalt	< .001	mg/l			WG466671	03/10/10 22:26
Copper	< .002	mg/l			WG466671	03/10/10 22:26
Lead	< .001	mg/l			WG466671	03/10/10 22:26
Nickel	< .001	mg/l			WG466671	03/10/10 22:26
Selenium	< .001	mg/l			WG466671	03/10/10 22:26
Silver	< .001	mg/l			WG466671	03/10/10 22:26
Thallium	< .001	mg/l			WG466671	03/10/10 22:26
Vanadium	< .002	mg/l			WG466671	03/10/10 22:26
Zinc	< .01	mg/l			WG466671	03/10/10 22:26

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
Antimony	mg/l	0	0.000350	NA	20	L448141-02	WG466671
Arsenic	mg/l	0.00180	0.00170	4.60	20	L448141-02	WG466671
Barium	mg/l	0.0170	0.0173	0.580	20	L448141-02	WG466671
Beryllium	mg/l	0	0	0	20	L448141-02	WG466671
Cadmium	mg/l	0	0	0	20	L448141-02	WG466671
Chromium	mg/l	0	0	0	20	L448141-02	WG466671
Cobalt	mg/l	0	0	0	20	L448141-02	WG466671
Copper	mg/l	0	0.00156	NA	20	L448141-02	WG466671
Lead	mg/l	0	0	0	20	L448141-02	WG466671
Nickel	mg/l	0	0.000300	NA	20	L448141-02	WG466671
Selenium	mg/l	0	0	0	20	L448141-02	WG466671
Silver	mg/l	0	0.0000800	NA	20	L448141-02	WG466671
Thallium	mg/l	0	0	0	20	L448141-02	WG466671
Vanadium	mg/l	0	0	0	20	L448141-02	WG466671
Zinc	mg/l	0	0.00122	NA	20	L448141-02	WG466671

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
Antimony	mg/l	.0567	0.0531	93.7	85-115	WG466671
Arsenic	mg/l	.0567	0.0515	90.8	85-115	WG466671
Barium	mg/l	.0567	0.0527	92.9	85-115	WG466671
Beryllium	mg/l	.0567	0.0510	89.9	85-115	WG466671
Cadmium	mg/l	.0567	0.0533	94.0	85-115	WG466671
Chromium	mg/l	.0567	0.0556	98.1	85-115	WG466671
Cobalt	mg/l	.0567	0.0550	97.0	85-115	WG466671
Copper	mg/l	.0567	0.0550	97.0	85-115	WG466671
Lead	mg/l	.0567	0.0548	96.6	85-115	WG466671
Nickel	mg/l	.0567	0.0550	97.0	85-115	WG466671
Selenium	mg/l	.0567	0.0508	89.6	85-115	WG466671
Silver	mg/l	.0567	0.0558	98.4	85-115	WG466671
Thallium	mg/l	.0567	0.0538	94.9	85-115	WG466671
Vanadium	mg/l	.0567	0.0566	99.8	85-115	WG466671
Zinc	mg/l	.0567	0.0534	94.2	85-115	WG466671

Matrix Spike

Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Antimony	mg/l	0.0559	0.000350	.0567	98.0	75-125	L448141-02	WG466671
Arsenic	mg/l	0.0543	0.00170	.0567	92.8	75-125	L448141-02	WG466671

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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Est. 1970

Municipal Engineering Services Company
Mark Brown
PO Box 97

Garner, NC 27529

Quality Assurance Report
Level II

L448282

March 11, 2010

Analyte	Units	MS Res	Matrix Spike Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Barium	mg/l	0.0704	0.0173	.0567	93.6	70-130	L448141-02	WG466671
Beryllium	mg/l	0.0515	0	.0567	90.8	75-125	L448141-02	WG466671
Cadmium	mg/l	0.0536	0	.0567	94.5	75-125	L448141-02	WG466671
Chromium	mg/l	0.0557	0	.0567	98.2	75-125	L448141-02	WG466671
Cobalt	mg/l	0.0553	0	.0567	97.5	75-125	L448141-02	WG466671
Copper	mg/l	0.0543	0.00156	.0567	93.0	75-125	L448141-02	WG466671
Lead	mg/l	0.0530	0	.0567	93.5	75-125	L448141-02	WG466671
Nickel	mg/l	0.0547	0.000300	.0567	95.9	75-125	L448141-02	WG466671
Selenium	mg/l	0.0491	0	.0567	86.6	75-125	L448141-02	WG466671
Silver	mg/l	0.0556	0.0000800	.0567	97.9	75-125	L448141-02	WG466671
Thallium	mg/l	0.0540	0	.0567	95.2	75-125	L448141-02	WG466671
Vanadium	mg/l	0.0571	0	.0567	101.	70-130	L448141-02	WG466671
Zinc	mg/l	0.0542	0.00122	.0567	93.4	75-125	L448141-02	WG466671

Analyte	Units	MSD	Matrix Spike Duplicate Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Antimony	mg/l	0.0505	0.0559	88.4	75-125	10.2	20	L448141-02	WG466671
Arsenic	mg/l	0.0517	0.0543	88.2	75-125	4.91	20	L448141-02	WG466671
Barium	mg/l	0.0643	0.0704	82.9	70-130	9.06	20	L448141-02	WG466671
Beryllium	mg/l	0.0494	0.0515	87.1	75-125	4.16	20	L448141-02	WG466671
Cadmium	mg/l	0.0491	0.0536	86.6	75-125	8.76	20	L448141-02	WG466671
Chromium	mg/l	0.0533	0.0557	94.0	75-125	4.40	20	L448141-02	WG466671
Cobalt	mg/l	0.0520	0.0553	91.7	75-125	6.15	20	L448141-02	WG466671
Copper	mg/l	0.0506	0.0543	86.5	75-125	7.05	20	L448141-02	WG466671
Lead	mg/l	0.0478	0.0530	84.3	75-125	10.3	20	L448141-02	WG466671
Nickel	mg/l	0.0509	0.0547	89.2	75-125	7.20	20	L448141-02	WG466671
Selenium	mg/l	0.0470	0.0491	82.9	75-125	4.37	20	L448141-02	WG466671
Silver	mg/l	0.0510	0.0556	89.8	75-125	8.63	20	L448141-02	WG466671
Thallium	mg/l	0.0494	0.0540	87.1	75-125	8.90	20	L448141-02	WG466671
Vanadium	mg/l	0.0543	0.0571	95.8	70-130	5.03	20	L448141-02	WG466671
Zinc	mg/l	0.0497	0.0542	85.5	75-125	8.66	20	L448141-02	WG466671

Batch number /Run number / Sample number cross reference

WG466671: R1141448: L448282-04 05

* * Calculations are performed prior to rounding of reported values .
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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Municipal Engineering Services Company
Mark Brown
PO Box 97

Garner, NC 27529

Quality Assurance Report
Level II

L448282

March 11, 2010

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

Company Name/Address

Municipal Engineering
1140 Benson Rd.
Garner, NC 27529

Alternate Billing

Report to: Mark Brown

E-mail to: mbrown@mesco.com

Analysis/Container/Preservative

Chain of Custody
Page___of___

Prepared by:

ENVIRONMENTAL Science Corp
12065 Lebanon Road
Mt. Juliet TN 37122
Phone (615)758-5858
Phone (800) 767-5859

Project Description: Jackson County Transfer Station

City/State: Jackson County, NC

PHONE: (919) 772-5393
FAX: (919) 772-1176

Client Project No.: G10046.0

Lab Project #

Collected by: MARK BROWN

Site/Facility ID#

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 (Yes)
FAX?___No___Yes

CoCode (lab use only)
MUNENGGNC
Template/Prelogin

Shipped Via: Raleigh Service Center

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No of Cntrs	VOCs x 8260	Total RCRA Metals	Total Phosphorous	% Solids	pH	Nitrate (soluble), Sulfate (soluble) - WEXT	COD	BOD	Remarks/contaminant	Sample # (lab only)
HA-BG	G	SS	SURFACE	2/17/10	10:00		X	X	X	X	X	X				
HA1-12	G	SS	12"		10:15		X	X	X	X	X	X				
HA2-24	G	SS	24"		10:30		X	X	X	X	X	X				
SW-BG	G	SW	-		11:00		X	X	X		X	X	X	X		
SW-DG	G	SW	-		11:15		X	X	X		X	X	X	X		

*Matrix: SS-Soil/Solid GW-Groundwater WW-Wastewater DW-Drinking Water OT- Other_____

pH_____ Temp_____

Remarks:

Flow_____ Other_____

Relinquisher by:(Signature	Date:	Time:	Received by:(Signature)	Samples returned via: FedEx__ UPS__Other__	Condition (lab use only)
	2/18/10	11:18			
Relinquisher by:(Signature	Date:	Time:	Received by: (Signature)	Temp: / Bottles Received:	
Relinquisher by:(Signature	Date:	Time:	Received for lab by: (Signature)	Date: / Time:	pH Checked: / NCF:

Company Name/Address

Municipal Engineering
1140 Benson Rd.
Garner, NC 27529

Alternate Billing

Report to: Mark Brown

E-mail to: mbrown@mesco.com

Project Description: Jackson County Transfer Station

City/State: Jackson County, NC

PHONE: (919) 772-5393

FAX: (919) 772-1176

Client Project No.: G10046.0

Lab Project #

Collected by: MARK BROWN

Site/Facility ID#

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 (Yes)
FAX?___No___Yes

Analysis/Container/Preservative

Chain of Custody
Page___of___

Prepared by:

ENVIRONMENTAL Science Corp
12065 Lebanon Road
Mt. Juliet TN 37122
Phone (615)758-5858
Phone (800) 767-5859

CoCode (lab use only)
MUNENGGNC
Template/Prelogin

Shipped Via: Raleigh Service Center

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No of Cntrs	VOCs x 8260	Total RCRA Metals	Total Phosphorous	% Solids	pH	Nitrate (soluble), Sulfate (soluble) - WEXT	COD	BOD	Remarks/contaminant	Sample # (lab only)
HA-BG	G	SS	SURFACE	2/17/10	10:00		x	x	x	x	x	x				
HA1-12	G	SS	12"		10:15		x	x	x	x	x	x				
HA2-24	G	SS	24"		10:30		x	x	x	x	x	x				
SW-BG	G	SW	-		11:00		x	x	x		x	x	x	x		
SW-DG	G	SW	-		11:15		x	x	x		x	x	x	x		

*Matrix: SS-Soil/Solid GW-Groundwater WW-Wastewater DW-Drinking Water OT- Other_____

pH_____ Temp_____

Remarks:

Flow_____ Other_____

Relinquisher by:(Signature	Date:	Time:	Received by:(Signature)	Samples returned via: FedEx__ UPS__Other__	Condition (lab use only)
	2/18/10	11:18			
Relinquisher by:(Signature	Date:	Time:	Received by: (Signature)	Temp: / Bottles Received:	
Relinquisher by:(Signature	Date:	Time:	Received for lab by: (Signature)	Date: / Time:	pH Checked: / NCF: