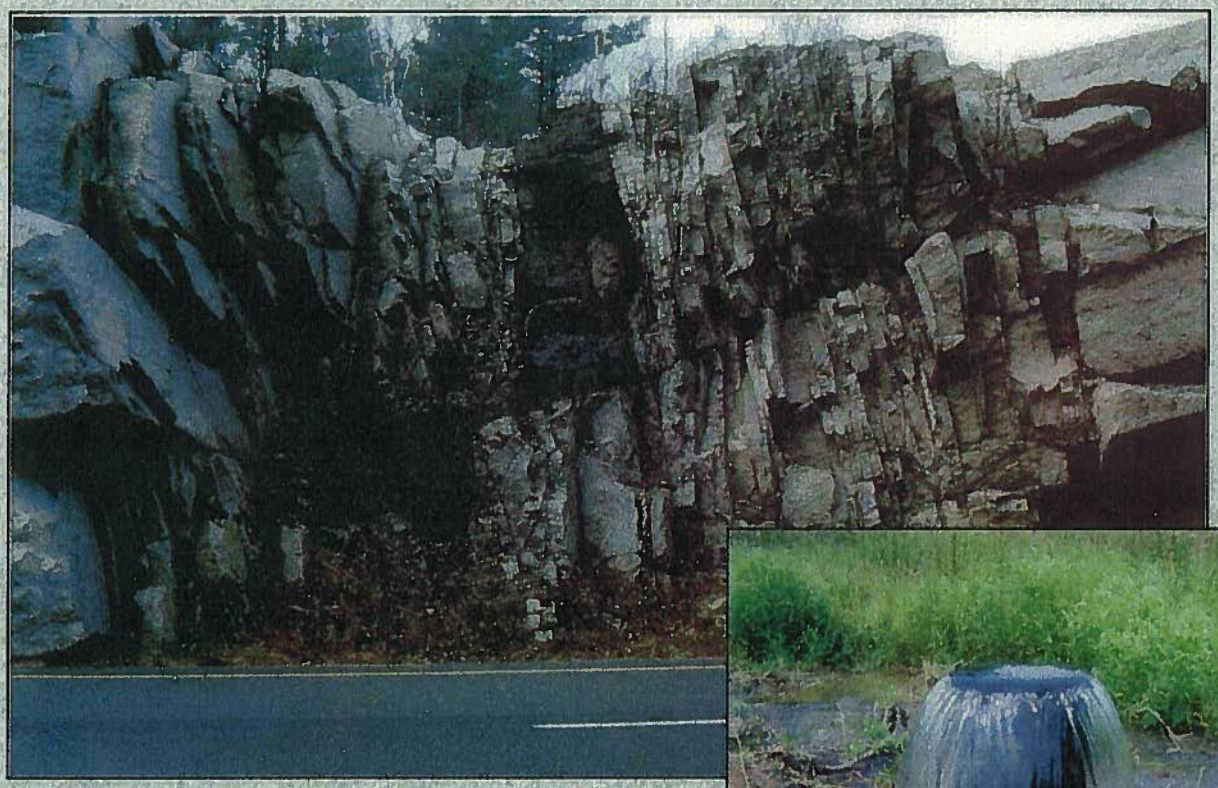
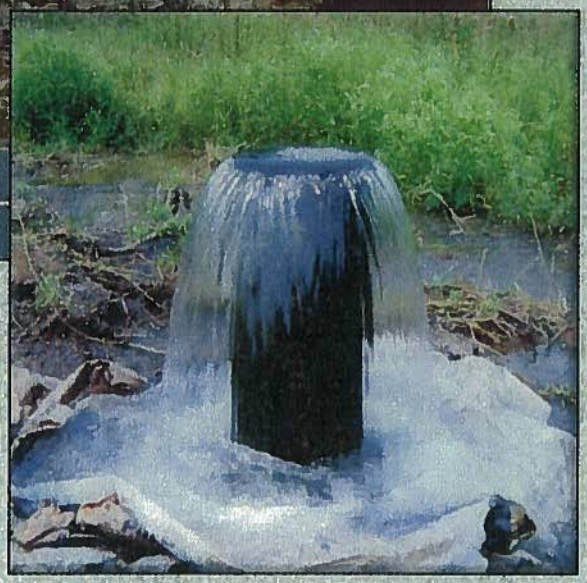
2011
WATER QUALITY TESTING
For the DRIP DRAINFIELD MONITORING NETWORK

WARRENTON-FAUQUIER AIRPORT

WARRENTON, VIRGINIA





February 2012

Presented to:

Mr. Anthony Hooper
Fauquier County

EMERY & GARRETT GROUNDWATER, INC.
56 Main Street • P.O. Box 1578
Meredith, New Hampshire 03253

New England **Mid-Atlantic** **South Atlantic**

Emery & Garrett Groundwater, Inc.
56 Main Street • P.O. Box 1578
Meredith, New Hampshire 03253
(603) 279-4425 *www.eggi.com* *Fax (603) 279-8717*

February 21, 2012

Mr. Anthony Hooper
Deputy County Administrator
Fauquier County
10 Hotel Street, Suite 204
Warrenton, VA 20186

Dear Tony,

Emery & Garrett Groundwater, Inc. (EGGI) has now collected groundwater samples in the vicinity of the wastewater "drip drainfield" treatment facility at the Warrenton-Fauquier Airport four times since June 2010 (Figure 1 and Table I). The fourth round of water quality sampling was completed on November 17, 2011, and was the second sampling round collected during 2011. This work is part of a groundwater monitoring program designed to evaluate the potential for nitrates (and other contaminants) to migrate off site in the groundwater.

Water samples were collected from four wells, including the three monitoring wells installed for this program, and an existing Airport Well. Multiple attempts were made by Airport personnel and EGGI to contact the owners of two off-site residential wells[1] regarding the collection of the fourth round of water samples (Figure 1). Neither owner responded to any of the requests and, subsequently, no water samples were able to be collected from the domestic wells during this most recent sampling round. Water samples from all four wells were analyzed for the following water quality parameters, in accordance with our original proposal.

- Field Chemistry, including pH, specific conductivity, oxidation-reduction potential (Redox)[2], and temperature
- Nitrate
- Total Kjeldahl Nitrogen (TKN)
- Ammonia
- Chloride
- Volatile Organic Compounds (VOCs), including MtBE

A portable submersible pump was used to purge water from Monitoring Wells FCA-1D and FCA-2. Once field chemical parameters stabilized[3], water samples were collected from each of these two Wells. Monitoring Well FCA-1S was sampled using a bailer after purging three well volumes of water. The Airport Well was sampled using the existing pump after an extended period of pumping to assure that water was being derived from the underlying fractures prior to sample collection. All samples were delivered to Chemtech in Frederick, Maryland, for laboratory analyses (Appendix A and Table I).

---

[1] The two off-site domestic wells are identified as Midland United Methodist Church and the Johnson Residence.
[2] The redox potential represents the tendency for a chemical species to acquire electrons. In general, a wastewater plume would be expected to have strongly negative redox values that reflect a reducing environment caused by wastewater utilizing all the available oxygen in the subsurface.
[3] Specific conductance, temperature, pH, and redox readings were recorded every few minutes during purging until each parameter stopped having any significant variation.

In summary, results of the fourth round of sampling suggest that there are no current adverse impacts to groundwater quality due to the operation of the wastewater "drip drainfield" treatment facility.

Levels of ammonia were detected above Virginia Groundwater Quality Standards (VAGQS) in May of 2011 in Monitoring Wells FCA-1S and FCA-2 at 0.242 mg/l and 0.278 mg/l, respectively.[4] Such levels of ammonia often indicate minor impairment of the groundwater quality in the immediate vicinity of the boundary of the "drip drainfield." However, during the most recent sampling round (November 17, 2011), ammonia was below the laboratory minimum detection level of 0.034 mg/l in the four wells sampled. This provides further evidence that there is no serious groundwater contamination occurring at this site causing a health concern to the local community.

Concentrations of nitrate (the oxidized form of nitrogen contamination) did not exceed 1.0 mg/l during the Spring or Fall 2011 sampling event.

The water sample collected from the Airport Well contained very low levels of the VOC methyl tert-butyl ether (MtBE). MtBE is a gasoline additive that is very soluble in water, allowing this substance to move quickly along groundwater flow paths. The detected level of 3.3 ug/l is moderately low, but is still above the DEQ zero tolerance policy for private wells and monitoring wells. A low concentration of MtBE can arise from very small surface spills of gasoline and may be transient in nature. According to the Airport manager, bottled water is currently used for human consumption at the office; therefore, no immediate health concerns are associated with this low level of MtBE detected in the Airport Well.

EGGI is planning to conduct additional groundwater sampling rounds through 2012, in accordance with the groundwater monitoring protocol; the first one will likely occur in March or April. The primary objective of this groundwater monitoring program is to continue to evaluate the impact that the drip drainfield may have on nearby consumers of groundwater. However, due to difficulties encountered in 2011 to obtain permission from both the Johnson and Church Domestic Wells, it is important that we receive some assistance from the County in obtaining permission to enter those properties to complete this sampling program. This will improve the overall effectiveness of the groundwater monitoring program and will help to more fully demonstrate that the off-site migration of groundwater contaminants is not occurring or adversely impairing local groundwater users.

I hope you find the information contained herein responsive to your needs. If you have any questions, please do not hesitate to contact me.

Best regards,

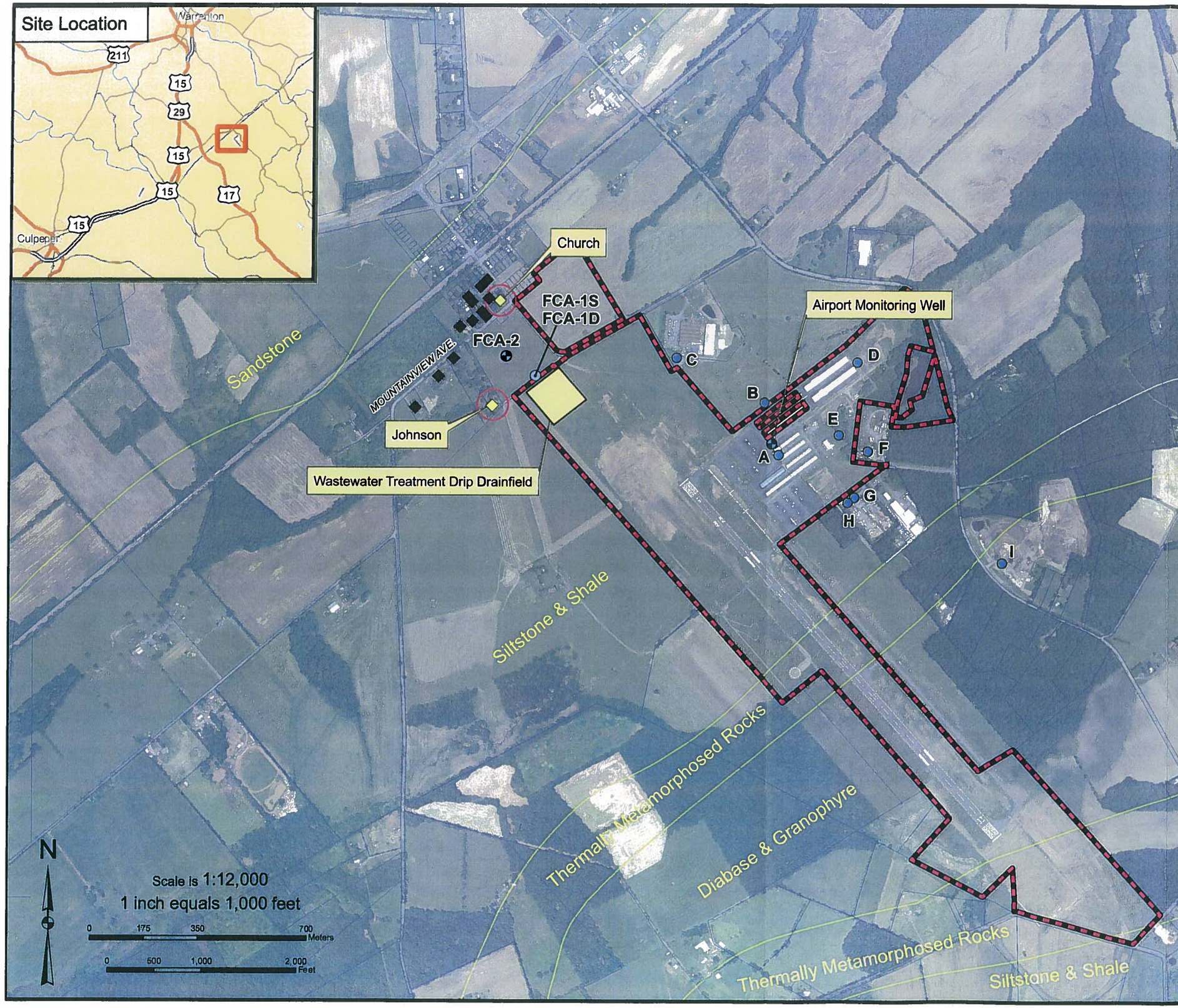
Ken Hardcastle, Ph.D., P.G.
Senior Structural Geologist

[4] The VAGQS standard for ammonia is 0.025 mg/l.

FIGURE

FIGURE 1

Warrenton-Fauquier County Airport Wastewater Treatment Disposal System on an Aerial Photographic Base Fauquier County, Virginia



Airport Property - Parcels 7809-78-6301-000 and 7900-51-6351-000

Existing house with possible residental well

Selected residential well used for the long-term groundwater quality monitoring program

FCA-1 Location of a pair of monitoring wells (one shallow well installed above bedrock and one well drilled into bedrock) designated FCA-1S and FCA-1D

FCA-2 Location of bedrock monitoring well

A Wastewater pumping stations

In Use

A - Office
B - Sky World
C - Ross Industries
D - Hangar

Not In Use

E - Repair Shop
F - Industrial Park
G - Empty Commercial Lot
H - Empty Commercial Lot
I - Mulch Plant

Bedrock Geology

Sandstone (Catharpin Creek Formation) - Dusky red micaceous sandstone.

Siltstone & Shale (Balls Bluff Siltstone) - Dusky red to gray calcareous siltstone.

Thermally Metamorphosed Rocks - Gray to dark gray metamorphosed sandstone and siltstone.

Diabase and Granophyre - Medium to dark gray diabase and pink to pale pink granophyre.

V:\Va\fauquier\FCA\midland_airport_Fig1-rpt.mxd

FIGURE 1

Emery & Garrett Groundwater, Inc.

TABLE

Table I

Groundwater Chemistry Results at the Warrenton-Fauquier Airport, Fauquier County, Virginia

Well ID	Sampling Date	Specific Conductance	Total Suspended Solids	Nitrate	TKN	Ammonia	Chloride	VOC Detected?	Methylene Chloride***	Acetone	MtBE*	Field Data: Water Level	pH	Specific Conductance	Redox	Temperature	Sampling Method
	VA Drinking	(umhos/cm)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(Yes or No)	(ug/l)	(ug/l)	(ug/l)	(feet)		(mmhos/cm)	(millivolts)	(Celsius)	
	Water Standard (MCL):	*NA*	*NA*	*10*	*NA*	*NA*	*NA*		*5*								
	Water Standard (SMCL):	NA	NA	NA	NA	NA	250										
	VA GQS:	NA	NA	5	NA	0.025	NA						5.5-8.5				
FCA-1S	6/17/2010	433	11.0	< 0.1	1.16	< 0.1	12.4	No	< 0.17	< 0.8	< 0.25	2.42	7.3	445	-5.6	16.2	Bailer
	12/26/2010	----	971	4.4	1.67	< 0.10	6.6	No	< 2	< 10	< 4	12.27	7.1	442	-13.3	18.5	Bailer
	5/17/2011	----	----	0.372	0.151^	**0.242**	7.7	No	< 0.41	< 0.5	< 0.35	3.26	----	----	----	----	Bailer
	11/17/2011	----	----	0.345	0.411	< 0.034	9.3	No	< 0.41	< 0.5	< 0.35	4.41	7.44	549	-36.9	13.5	Bailer
FCA-1D	6/17/2010	574	29.0	0.271	0.723	**0.387**	9.12	Yes	0.77	1.41	< 0.25	18.05	7.3	578	-8.2	16.0	Submersible Pump
	12/27/2010	----	6.50	0.8	1.67	< 0.10	6.2	No	< 2	< 10	< 4	23.73	6.4	542	-3.0	15.5	Submersible Pump
	5/17/2011	----	----	0.885	< 0.5	**0.098^**	7.8	No	< 0.41	< 0.5	< 0.35	16.77	7.3	549	-34.8	15.1	Submersible Pump
	11/17/2011	----	----	0.9	0.264	< 0.034	8	No	< 0.41	< 0.5	< 0.35	18.51	7.4	551	-23.2	15.7	Submersible Pump
FCA-2	6/17/2010	546	58.0	0.253	0.232	< 0.1	12.6	No	< 0.17	< 0.8	< 0.25	22.39	7.4	580	-10.0	17.2	Submersible Pump
	12/26/2010	----	110.0	< 0.5	0.84	< 0.10	15.0	No	< 2	< 10	< 4	25.40	7.1	606	-15.8	15.5	Submersible Pump
	5/17/2011	----	----	0.312	< 0.5	**0.278**	19	No	< 0.41	< 0.5	< 0.35	18.46	7.3	646	-35.2	15.3	Submersible Pump
	11/17/2011	----	----	0.328	0.216	< 0.034	16	No	< 0.41	< 0.5	< 0.35	23.25	7.4	631	-32.0	17.7	Submersible Pump
Church	6/17/2010	599	< 0.51	0.943	0.223	< 0.1	44.2	No	< 0.17	< 0.8	< 0.25	----	7.3	633	-6.3	18.3	Tap
	12/26/2010	----	< 1.00	0.8	1.12	< 0.10	20.0	No	< 2	< 10	< 4	----	7.3	569	-11.0	15.8	Tap
	6/8/2011	----	----	1	0.243^	**0.067^**	26.0	No	< 0.41	< 0.5	< 0.35	----	7.3	612	-35.4	17.7	Tap
Airport	6/17/2010	581	< 0.51	0.151	0.19	< 0.1	11.0	Yes	< 0.17	< 0.8	***1.98***	----	7.2	627	3.3	18.5	Tap
	12/26/2010	----	< 1.00	< 0.5	1.40	< 0.10	8.6	No	< 2	< 10	< 4	----	6.8	488	0.2	19.2	Tap
	5/17/2011	----	----	0.37	< 0.5	**0.127**	9.9	Yes	< 0.41	< 0.5	***2.4***	----	7.2	623	-30.0	20.3	Tap
	11/17/2011	----	----	0.29	0.528	< 0.034	10.0	Yes	< 0.41	< 0.5	***3.3***	----	6.8	582	-0.7	16.5	Tap
Johnson	6/17/2010	587	< 0.51	0.291	0.15	< 0.1	13.8	No	< 0.17	< 0.8	< 0.25	----	7.2	628	-1.1	15.8	By-pass Treatment
	12/26/2010	----	< 1.00	< 0.5	1.40	< 0.10	9.7	No	< 2	< 10	< 4	----	7.2	556	-16.4	15.6	By-pass Treatment
	6/8/2011	----	----	0.462	0.169^	**0.065^**	12	No	< 0.41	< 0.5	< 0.35	----	7.5	642	-44.4	16.3	By-pass Treatment

---- = not tested
< = not detected

5 = Bold text and yellow highlight indicate a concentration exceeding Virginia Groundwater Quality Standards (VA GQS)**.

5 = Bold and underlined text with light orange highlight indicate a concentration exceeding EPA Secondary Maximum Contaminant Level Drinking Water Standards. There were no Secondary Maximum Contaminant Level Drinking Water Standards that were exceeded.

10 = Bold and italic text with dark orange highlight indicate a concentration exceeding Virginia DEQ zero tolerance policy for MtBE*.

* DEQ has 'Zero Tolerance' policy for MtBE detected in private and/or monitoring wells. Any level of any petroleum contamination (including MtBE) should be reported to the DEQ. The DEQ will determine whether further action is required. In this case, due to the very low levels of MtBE detected, it is very unlikely that any action will be required. However, further monitoring of this well is recommended.

** Virginia Groundwater Quality Standards (VA GQS) is a measure by which the State assesses whether impacts to groundwater quality have occurred. These standards are not equivalent to EPA Drinking Water Standards (9-VAC-280-10 et seq Groundwater Standards - State Water Control Board).

MCL = Primary Maximum Contaminant Level.

SMCL = Secondary Maximum Contaminant Level.

***Methylene Chloride is also known as dichloromethane.

^The reported value is an estimate because it is below the limit of quantification, but greater than the method detection limit.

APPENDIX A

WATER QUALITY ANALYSES

Emery & Garrett Groundwater, Inc.

CHEMTECH 284 Sheffield Street, Mountainside, New Jersey 07092 Phone : 908 789 8900 Fax : 908 789 8922

Cover Page

Order ID : C4664

Project ID : FCA

Client : Emery & Garrett Groundwater, Inc.

Lab Sample Number	Client Sample Number
C4664-01	FCA-AIRPORT
C4664-02	FCA-MW2
C4664-03	FCA-1SHALLOW
C4664-04	FCA-1OEEP

I certify that the data package is in compliance with the terms and conditions of the contract,both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : Mildred V Reyes

Mildred V. Reyes, QA/QC Supervisor
2011.12.02 10:04:36 -05'00'

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

CHEMTECH

CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
B1111004 (908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO.
QUOTE NO. C4664
COC Number 020942

CLIENT INFORMATION

REPORT TO BE SENT TO
COMPANY: EMERY & GARRETT GROUNDWATER
ADDRESS: 56 MAIN ST
CITY: MEREDITH STATE: NH ZIP: 03253
ATTENTION: JEFF MARTS
PHONE: 603-279-4425 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: FAUQUIER AIRPORT
PROJECT NO. LOCATION: Virginia
PROJECT MANAGER: JEFF MARTS
e-mail: eggi@eggi.com
PHONE: FAX:

CLIENT BILLING INFORMATION

BILL TO: EMERY & GARRETT PO#:
ADDRESS: SAME
CITY: STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX: _____ DAYS *
HARD COPY: _____ DAYS *
EDD: _____ DAYS *
PREAPPROVED TAT: ☐ YES ☐ NO
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other _____
☐ EDD FORMAT _____

ANALYSIS

ANION
NH_3
TKN
VOLMS

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1	2	3	4	5	6	7	8	9	COMMENTS
								E	C	A							← Specify Preservatives A–HCl B–HNO_3 C–H_2SO_4 D–NaOH E–ICE F–Other
1.	FCA-AIRPORT	GW		X	11/17/11	1200	4	1	1	2							
2.	FCA-MW2	GW		X	11/17/11	1215	4	1	1	2							
3.	FCA-1 SHALLOW	GW		X	11/17/11	1300	4	1	1	2							
4.	FCA-1 DEEP	GW		X	11/17/11	1310	4	1	1	2							
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1. [signature]	11/17/11 1733	1. [signature]
RELINQUISHED BY	DATE/TIME	RECEIVED BY
2. UPS	11/18/11 10:05	2. [signature]
RELINQUISHED BY	DATE/TIME	RECEIVED FOR LAB BY
3.		3.

Conditions of bottles or coolers at receipt: ☒ Compliant ☐ Non Compliant
MeOH extraction requires an additional 4 oz jar for percent solid.
Comments:
Temp: 5°C (NJ)

Cooler Temp. 5°C
Ice in Cooler?: yes

Page 1 of 1

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☐ OVERNIGHT
CHEMTECH: ☒ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☒ YES ☐ NO

2

Revision 8/2007

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3

UPS CampusShip: View/Print Label

1. **Print the label(s):** Select the Print button on the print dialog box that appears. Note: If your browser does not support this function select Print from the File menu to print the label.

2. **Fold the printed label at the solid line below.** Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.

3. **GETTING YOUR SHIPMENT TO UPS**
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   Schedule a same day or future day Pickup to have a UPS driver pickup all your CampusShip packages.
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   Take your package to any location of The UPS Store®, UPS Drop Box, UPS Customer Center, UPS Alliances (Office Depot® or Staples®) or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.

   Customers with a Daily Pickup
   Your driver will pickup your shipment(s) as usual.

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CHEMTECH
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MOUNTAINSIDE NJ 07092

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CHEMTECH
284 SHEFFIELD STREET
MOUNTAINSIDE NJ 07092-2319

YR 11/18/11

NJ 078 9-61

UPS GROUND
TRACKING #: 1Z A17 04V 03 9393 9200

BILLING: P/P

Reference # 1: C4664 Part 1

CS 13.6.12. WNTNV50 21.0A 10/2011

CHEMTECH

CASE NARRATIVE

Emery & Garrett Groundwater, Inc.
Project Name: FCA
Project # N/A
Chemtech Project # C4664
Test Name: VOCMS Group1

A. Number of Samples and Date of Receipt:
4 Water samples were received on 11/17/2011.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: Ammonia, Anions Group1, TKN and VOCMS Group1. This data package contains results for VOCMS Group1.

C. Analytical Techniques:
The analysis performed on instrument MSVOA_G were done using GC column RTX-VMS which is 20 meters, 0.18 mm id, 1.0 um df, Restek Cat. #49914. The Trap was supplied by OI Analytical, OI #10 Trap , OI Eclipse 4660 Concentrator.The analysis of VOCMS Group1 was based on method 8260-Low.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria.
The Internal Standards Areas met the acceptable requirements.
The Retention Times were acceptable for all samples.
The MS {C4611-23MS} with File ID: VG038984.D recoveries met the requirements for all compounds except for 2-Chloroethyl vinyl ether[0%], Allyl chloride[122%] and Ethyl methacrylate[76%] .
The MSD {C4611-24MSD} with File ID: VG038985.D recoveries met the acceptable requirements except for 2-Chloroethyl vinyl ether[0%], Allyl chloride[124%] and Ethyl methacrylate[76%] .
The RPD recoveries met criteria .
The Blank Spike for {BSG1118W1} with File ID: VG038968.D met requirements for all samples except for Allyl chloride[130%], Bromochloromethane[140%] and Tetrachloroethene[160%] .
The Blank analysis did not indicate the presence of lab contamination.
The Initial Calibration met the requirements .
The Continuous Calibration File ID VG038966.D met the requirements except for Allyl chloride,Acrylonitrile,Acetone,Methyl Acetate,Methacrylonitrile and trans-1,4-Dichloro-2-butene but they were not detected in samples.
The Tuning criteria met requirements.

CHEMTECH

E. Additional Comments:

F. Manual Integration Comments:

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature Mildred V Reyes

Mildred V. Reyes, QA/QC Supervisor
2011.12.02 10:04:23 -05'00'

CHEMTECH

CASE NARRATIVE

Emery & Garrett Groundwater, Inc.
Project Name: FCA
Project # N/A
Chemtech Project # C4664
Test Name: Ammonia,Anions Group1,TKN

A. Number of Samples and Date of Receipt:
4 Water samples were received on 11/17/2011.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: Ammonia, Anions Group1, TKN and VOCMS Group1. This data package contains results for Ammonia,Anions Group1,TKN.

C. Analytical Techniques:
The analysis of Anions Group1 was based on method 300, The analysis of TKN was based on method SM4500 N Org B or C and The analysis of Ammonia was based on method SM4500-NH3.

D. QA/ QC Samples:
The Holding Times were met for all analysis except for FCA-AIRPORT, FCA-MW2, FCA-1SHALLOW and FCA-1OEEP for Nitrate.
Sample FCA-MW2 was diluted due to high concentrations for Chloride.
The Blank Spike met criteria for all samples.
The Duplicate analysis met criteria for all samples.
The Matrix Spike analysis met criteria for all samples.
The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.

E. Additional Comments:

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature Mildred V Reyes Mildred V. Reyes, QA/QC Supervisor
2011.12.02 10:03:02 -05'00'

CHEMTECH 284 Sheffield Street Mountainside NJ 07092 Tel

Laboratory Certification

State	License No.
New Jersey	20012
New York	11376
Connecticut	PH-0649
Florida	E87935
Maryland	296
Massachusetts	M-NJ503
Oklahoma	9705
Pennsylvania	68-548
Rhode Island	LAO00259
Texas	T10470448-10-1

Other:

DOD ELAP	L2219
Soil Permit	P330-11-00012
CLP Inorganic Contract	EPW09038
CLP Organic Contract	EPW11030

QA Control Code: A2070148

CHEMTECH

284 Sheffield Street Mountainside NJ 07092
Tel. 908-789-8900 Fax: 908-789-8922

DATA REPORTING QUALIFIERS- ORGANIC

For reporting results, the following " Result Qualifiers" are used:

Value	If the result is a value greater than or equal to the detection limit, report the value
U	Indicates the compound was analyzed for but was not detected. Report the minimum detection limit for the sample with the U. This is the detection limit attainable for this particular sample based on any concentration or dilution that may have been required.
ND	Indicates the compound was analyzed for but was not detected
J	Indicates an estimated value. This flag is used: (1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed.) (2) When the mass spectral data indicated the identification, however the result was less than the specified detection limit greater than zero. If the detection limit was 10ug/L, and a concentration of 3ug/L was calculated, report as 3 J.
B	Indicates the analyte was found in the blank as well as the sample.
E	Indicates the analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.
P	This flag is used for Pesticide/PCB target analyte when there is >25% difference for detected concentrations between the two GC columns.
N	This flag indicates presumptive evidence of a compound. This is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. For generic characterization of a TIC, such as chlorinated hydrocarbon, the flag is not used.
A	This flag indicates that a Tentatively Identified Compound is a suspected Aldol-condensation product.

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DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following " Result Qualifiers" are used:

J	Indicates the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).
U	Indicates the analyte was analyzed for, but not detected.
ND	Indicates the analyte was analyzed for, but not detected.
E	Indicates the reported value is estimated because of the presence of interference.
M	Indicates Duplicate injection precision is not met.
N	Indicates spiked sample recovery is not within control limits.
S	Indicates the reported value was determined by the Method of Standard Addition (MSA).
*****	Indicates the duplicate analysis is not within control limits.
+	Indicates correlation coefficient for the MSA is less than 0.995.
D	Indicates the reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
M	Method qualifiers **"P"** for ICP instrument **"PM"** for ICP when Microwave Digestion is used **"CV"** for Manual Cold Vapor AA **"AV"** for automated Cold Vapor AA **"CA"** for MIDI-Distillation Spectrophotometer **"AS"** for Semi -Automated Spectrophotometer **"C"** for Manual Spectrophotometer **"T"** for Titrimetric analysis **"NR"** for analyte not required to be analyzed
OR	**Indicates the analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis.**

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #:____C4664_____

	Completed
For thorough review, the report must have the following:	
GENERAL:	
Are all original paperwork present (chain of custody, record of communication, airbill, sample management lab chronicle, login page)	✓
Check chain-of-custody for proper relinquish/return of samples	✓
Is the chain of custody signed and complete	✓
Check internal chain-of-custody for proper relinquish/return of samples /sample extracts	✓
Collect information for each project id from server. Were all requirements followed	✓
COVER PAGE:	
Do numbers of samples correspond to the number of samples in the Chain of Custody and on login page	✓
Do lab numbers and client Ids on cover page agree with the Chain of Custody	✓
CHAIN OF CUSTODY:	
Do requested analyses on Chain of Custody agree with form I results	✓
Do requested analyses on Chain of Custody agree with the log-in page	✓
Were the correct method log-in for analysis according to the Analytical Request and Chain of Custody	✓
Were the samples received within hold time	✓
Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle	✓
ANALYTICAL:	
Was method requirement followed?	✓
Was client requirement followed?	✓
Does the case narrative summarize all QC failure?	✓
All runlogs reviewed for manual integration requirements	

1st Level QA Review Signature:___DHWANI GAJJAR_____ Date:__ 11/30/2011___

2nd Level QA Review Signature: Mildred V Reyes Mildred V. Reyes, QA/QC Supervisor 2011.12.02 10:00:16 -05'00' Date:_____

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	Emery & Garrett Groundwater, Inc.	Date Collected:	11/17/11
Project:	FCA	Date Received:	11/17/11
Client Sample ID:	FCA-AIRPORT	SDG No.:	c4664
Lab Sample ID:	C4664-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG038979.D	1		11/19/11	VG111811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.2	U	0.2	1	ug/L
74-87-3	Chloromethane	0.2	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.34	U	0.34	1	ug/L
141-78-6	Ethyl Acetate	0.2	U	0.2	1	ug/L
108-21-4	Isopropyl Acetate	0.2	U	0.2	1	ug/L
628-63-7	N-amyl acetate	0.2	U	0.2	1	ug/L
74-83-9	Bromomethane	0.2	U	0.2	1	ug/L
75-00-3	Chloroethane	0.2	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.35	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.45	U	0.45	1	ug/L
75-65-0	Tert butyl alcohol	0.5	U	0.5	5	ug/L
60-29-7	Diethyl Ether	0.27	U	0.27	1	ug/L
75-35-4	1,1-Dichloroethene	0.47	U	0.47	1	ug/L
107-02-8	Acrolein	0.5	U	0.5	5	ug/L
107-13-1	Acrylonitrile	1.8	U	1.8	5	ug/L
67-64-1	Acetone	0.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.2	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	3.3		0.35	1	ug/L
79-20-9	Methyl Acetate	0.2	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.41	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.41	U	0.41	1	ug/L
108-05-4	Vinyl Acetate	1	U	1	5	ug/L
75-34-3	1,1-Dichloroethane	0.36	U	0.36	1	ug/L
110-82-7	Cyclohexane	0.2	U	0.2	1	ug/L
78-93-3	2-Butanone	1.3	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.2	U	0.2	1	ug/L
594-20-7	2,2-Dichloropropane	0.2	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.35	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.2	U	0.2	1	ug/L
67-66-3	Chloroform	0.34	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.4	U	0.4	1	ug/L

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Report of Analysis

Client:	Emery & Garrett Groundwater, Inc.	Date Collected:	11/17/11
Project:	FCA	Date Received:	11/17/11
Client Sample ID:	FCA-AIRPORT	SDG No.:	c4664
Lab Sample ID:	C4664-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG038979.D	1		11/19/11	VG111811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
108-87-2	Methylcyclohexane	0.2	U	0.2	1	ug/L
563-58-6	1,1-Dichloropropene	0.39	U	0.39	1	ug/L
71-43-2	Benzene	0.32	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.48	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.28	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.46	U	0.46	1	ug/L
74-95-3	Dibromomethane	0.44	U	0.44	1	ug/L
75-27-4	Bromodichloromethane	0.36	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.1	U	2.1	5	ug/L
108-88-3	Toluene	0.37	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.29	U	0.29	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.31	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.38	U	0.38	1	ug/L
142-28-9	1,3-Dichloropropane	0.35	U	0.35	1	ug/L
110-75-8	2-Chloroethyl Vinyl ether	1.8	U	1.8	5	ug/L
591-78-6	2-Hexanone	1.9	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.2	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.41	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.27	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.49	U	0.49	1	ug/L
630-20-6	1,1,1,2-Tetrachloroethane	0.43	U	0.43	1	ug/L
67-72-1	Hexachloroethane	0.2	U	0.2	1	ug/L
100-41-4	Ethyl Benzene	0.2	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	0.95	U	0.95	2	ug/L
95-47-6	o-Xylene	0.43	U	0.43	1	ug/L
100-42-5	Styrene	0.36	U	0.36	1	ug/L
75-25-2	Bromoform	0.47	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.45	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.31	U	0.31	1	ug/L
96-18-4	1,2,3-Trichloropropane	0.5	U	0.5	1	ug/L
108-86-1	Bromobenzene	0.2	U	0.2	1	ug/L
103-65-1	n-propylbenzene	0.45	U	0.45	1	ug/L

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Report of Analysis

Client:	Emery & Garrett Groundwater, Inc.	Date Collected:	11/17/11
Project:	FCA	Date Received:	11/17/11
Client Sample ID:	FCA-AIRPORT	SDG No.:	c4664
Lab Sample ID:	C4664-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG038979.D	1		11/19/11	VG111811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
95-49-8	2-Chlorotoluene	0.43	U	0.43	1	ug/L
108-67-8	1,3,5-Trimethylbenzene	0.46	U	0.46	1	ug/L
106-43-4	4-Chlorotoluene	0.42	U	0.42	1	ug/L
98-06-6	tert-Butylbenzene	0.44	U	0.44	1	ug/L
95-63-6	1,2,4-Trimethylbenzene	0.38	U	0.38	1	ug/L
135-98-8	sec-Butylbenzene	0.46	U	0.46	1	ug/L
99-87-6	p-Isopropyltoluene	0.43	U	0.43	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.43	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.32	U	0.32	1	ug/L
104-51-8	n-Butylbenzene	0.41	U	0.41	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.45	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.46	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.2	U	0.2	1	ug/L
87-68-3	Hexachlorobutadiene	0.2	U	0.2	1	ug/L
91-20-3	Naphthalene	0.2	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.2	U	0.2	1	ug/L
74-88-4	Methyl Iodide	0.2	U	0.2	1	ug/L
107-05-1	Allyl chloride	0.2	U	0.2	1	ug/L
126-98-7	Methacrylonitrile	0.2	U	0.2	1	ug/L
110-57-6	trans-1,4-Dichloro-2-butene	0.2	U	0.2	1	ug/L
97-63-2	Ethyl methacrylate	0.2	U	0.2	1	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	57.4		61 - 141	115%	SPK: 50
1868-53-7	Dibromofluoromethane	52.7		69 - 133	105%	SPK: 50
2037-26-5	Toluene-d8	41.5		65 - 126	83%	SPK: 50
460-00-4	4-Bromofluorobenzene	36.5		58 - 135	73%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	592355	3.9			
540-36-3	1,4-Difluorobenzene	1056170	4.71			
3114-55-4	Chlorobenzene-d5	553166	9.68			
3855-82-1	1,4-Dichlorobenzene-d4	232094	13.39			

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Report of Analysis

Client:	Emery & Garrett Groundwater, Inc.	Date Collected:	11/17/11
Project:	FCA	Date Received:	11/17/11
Client Sample ID:	FCA-AIRPORT	SDG No.:	c4664
Lab Sample ID:	C4664-01	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG038979.D	1		11/19/11	VG111811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Emery & Garrett Groundwater, Inc.	Date Collected:	11/17/11
Project:	FCA	Date Received:	11/17/11
Client Sample ID:	FCA-MW2	SDG No.:	c4664
Lab Sample ID:	C4664-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG038980.D	1		11/19/11	VG111811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.2	U	0.2	1	ug/L
74-87-3	Chloromethane	0.2	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.34	U	0.34	1	ug/L
141-78-6	Ethyl Acetate	0.2	U	0.2	1	ug/L
108-21-4	Isopropyl Acetate	0.2	U	0.2	1	ug/L
628-63-7	N-amyl acetate	0.2	U	0.2	1	ug/L
74-83-9	Bromomethane	0.2	U	0.2	1	ug/L
75-00-3	Chloroethane	0.2	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.35	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.45	U	0.45	1	ug/L
75-65-0	Tert butyl alcohol	0.5	U	0.5	5	ug/L
60-29-7	Diethyl Ether	0.27	U	0.27	1	ug/L
75-35-4	1,1-Dichloroethene	0.47	U	0.47	1	ug/L
107-02-8	Acrolein	0.5	U	0.5	5	ug/L
107-13-1	Acrylonitrile	1.8	U	1.8	5	ug/L
67-64-1	Acetone	0.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.2	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.35	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.2	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.41	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.41	U	0.41	1	ug/L
108-05-4	Vinyl Acetate	1	U	1	5	ug/L
75-34-3	1,1-Dichloroethane	0.36	U	0.36	1	ug/L
110-82-7	Cyclohexane	0.2	U	0.2	1	ug/L
78-93-3	2-Butanone	1.3	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.2	U	0.2	1	ug/L
594-20-7	2,2-Dichloropropane	0.2	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.35	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.2	U	0.2	1	ug/L
67-66-3	Chloroform	0.34	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.4	U	0.4	1	ug/L

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Report of Analysis

Client:	Emery & Garrett Groundwater, Inc.	Date Collected:	11/17/11
Project:	FCA	Date Received:	11/17/11
Client Sample ID:	FCA-MW2	SDG No.:	c4664
Lab Sample ID:	C4664-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG038980.D	1		11/19/11	VG111811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
108-87-2	Methylcyclohexane	0.2	U	0.2	1	ug/L
563-58-6	1,1-Dichloropropene	0.39	U	0.39	1	ug/L
71-43-2	Benzene	0.32	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.48	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.28	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.46	U	0.46	1	ug/L
74-95-3	Dibromomethane	0.44	U	0.44	1	ug/L
75-27-4	Bromodichloromethane	0.36	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.1	U	2.1	5	ug/L
108-88-3	Toluene	0.37	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.29	U	0.29	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.31	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.38	U	0.38	1	ug/L
142-28-9	1,3-Dichloropropane	0.35	U	0.35	1	ug/L
110-75-8	2-Chloroethyl Vinyl ether	1.8	U	1.8	5	ug/L
591-78-6	2-Hexanone	1.9	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.2	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.41	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.27	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.49	U	0.49	1	ug/L
630-20-6	1,1,1,2-Tetrachloroethane	0.43	U	0.43	1	ug/L
67-72-1	Hexachloroethane	0.2	U	0.2	1	ug/L
100-41-4	Ethyl Benzene	0.2	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	0.95	U	0.95	2	ug/L
95-47-6	o-Xylene	0.43	U	0.43	1	ug/L
100-42-5	Styrene	0.36	U	0.36	1	ug/L
75-25-2	Bromoform	0.47	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.45	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.31	U	0.31	1	ug/L
96-18-4	1,2,3-Trichloropropane	0.5	U	0.5	1	ug/L
108-86-1	Bromobenzene	0.2	U	0.2	1	ug/L
103-65-1	n-propylbenzene	0.45	U	0.45	1	ug/L

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Report of Analysis

Client:	Emery & Garrett Groundwater, Inc.	Date Collected:	11/17/11
Project:	FCA	Date Received:	11/17/11
Client Sample ID:	FCA-MW2	SDG No.:	c4664
Lab Sample ID:	C4664-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG038980.D	1		11/19/11	VG111811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
95-49-8	2-Chlorotoluene	0.43	U	0.43	1	ug/L
108-67-8	1,3,5-Trimethylbenzene	0.46	U	0.46	1	ug/L
106-43-4	4-Chlorotoluene	0.42	U	0.42	1	ug/L
98-06-6	tert-Butylbenzene	0.44	U	0.44	1	ug/L
95-63-6	1,2,4-Trimethylbenzene	0.38	U	0.38	1	ug/L
135-98-8	sec-Butylbenzene	0.46	U	0.46	1	ug/L
99-87-6	p-Isopropyltoluene	0.43	U	0.43	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.43	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.32	U	0.32	1	ug/L
104-51-8	n-Butylbenzene	0.41	U	0.41	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.45	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.46	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.2	U	0.2	1	ug/L
87-68-3	Hexachlorobutadiene	0.2	U	0.2	1	ug/L
91-20-3	Naphthalene	0.2	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.2	U	0.2	1	ug/L
74-88-4	Methyl Iodide	0.2	U	0.2	1	ug/L
107-05-1	Allyl chloride	0.2	U	0.2	1	ug/L
126-98-7	Methacrylonitrile	0.2	U	0.2	1	ug/L
110-57-6	trans-1,4-Dichloro-2-butene	0.2	U	0.2	1	ug/L
97-63-2	Ethyl methacrylate	0.2	U	0.2	1	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	57		61 - 141	114%	SPK: 50
1868-53-7	Dibromofluoromethane	52.7		69 - 133	105%	SPK: 50
2037-26-5	Toluene-d8	40.6		65 - 126	81%	SPK: 50
460-00-4	4-Bromofluorobenzene	36.4		58 - 135	73%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	589988	3.89			
540-36-3	1,4-Difluorobenzene	1052040	4.71			
3114-55-4	Chlorobenzene-d5	554220	9.68			
3855-82-1	1,4-Dichlorobenzene-d4	225539	13.38			

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Report of Analysis

Client:	Emery & Garrett Groundwater, Inc.	Date Collected:	11/17/11
Project:	FCA	Date Received:	11/17/11
Client Sample ID:	FCA-MW2	SDG No.:	c4664
Lab Sample ID:	C4664-02	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG038980.D	1		11/19/11	VG111811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Emery & Garrett Groundwater, Inc.	Date Collected:	11/17/11
Project:	FCA	Date Received:	11/17/11
Client Sample ID:	FCA-1SHALLOW	SDG No.:	c4664
Lab Sample ID:	C4664-03	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG038981.D	1		11/19/11	VG111811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.2	U	0.2	1	ug/L
74-87-3	Chloromethane	0.2	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.34	U	0.34	1	ug/L
141-78-6	Ethyl Acetate	0.2	U	0.2	1	ug/L
108-21-4	Isopropyl Acetate	0.2	U	0.2	1	ug/L
628-63-7	N-amyl acetate	0.2	U	0.2	1	ug/L
74-83-9	Bromomethane	0.2	U	0.2	1	ug/L
75-00-3	Chloroethane	0.2	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.35	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.45	U	0.45	1	ug/L
75-65-0	Tert butyl alcohol	0.5	U	0.5	5	ug/L
60-29-7	Diethyl Ether	0.27	U	0.27	1	ug/L
75-35-4	1,1-Dichloroethene	0.47	U	0.47	1	ug/L
107-02-8	Acrolein	0.5	U	0.5	5	ug/L
107-13-1	Acrylonitrile	1.8	U	1.8	5	ug/L
67-64-1	Acetone	0.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.2	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.35	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.2	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.41	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.41	U	0.41	1	ug/L
108-05-4	Vinyl Acetate	1	U	1	5	ug/L
75-34-3	1,1-Dichloroethane	0.36	U	0.36	1	ug/L
110-82-7	Cyclohexane	0.2	U	0.2	1	ug/L
78-93-3	2-Butanone	1.3	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.2	U	0.2	1	ug/L
594-20-7	2,2-Dichloropropane	0.2	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.35	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.2	U	0.2	1	ug/L
67-66-3	Chloroform	0.34	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.4	U	0.4	1	ug/L

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Report of Analysis

Client:	Emery & Garrett Groundwater, Inc.	Date Collected:	11/17/11
Project:	FCA	Date Received:	11/17/11
Client Sample ID:	FCA-1SHALLOW	SDG No.:	c4664
Lab Sample ID:	C4664-03	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG038981.D	1		11/19/11	VG111811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
108-87-2	Methylcyclohexane	0.2	U	0.2	1	ug/L
563-58-6	1,1-Dichloropropene	0.39	U	0.39	1	ug/L
71-43-2	Benzene	0.32	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.48	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.28	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.46	U	0.46	1	ug/L
74-95-3	Dibromomethane	0.44	U	0.44	1	ug/L
75-27-4	Bromodichloromethane	0.36	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.1	U	2.1	5	ug/L
108-88-3	Toluene	0.37	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.29	U	0.29	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.31	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.38	U	0.38	1	ug/L
142-28-9	1,3-Dichloropropane	0.35	U	0.35	1	ug/L
110-75-8	2-Chloroethyl Vinyl ether	1.8	U	1.8	5	ug/L
591-78-6	2-Hexanone	1.9	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.2	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.41	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.27	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.49	U	0.49	1	ug/L
630-20-6	1,1,1,2-Tetrachloroethane	0.43	U	0.43	1	ug/L
67-72-1	Hexachloroethane	0.2	U	0.2	1	ug/L
100-41-4	Ethyl Benzene	0.2	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	0.95	U	0.95	2	ug/L
95-47-6	o-Xylene	0.43	U	0.43	1	ug/L
100-42-5	Styrene	0.36	U	0.36	1	ug/L
75-25-2	Bromoform	0.47	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.45	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.31	U	0.31	1	ug/L
96-18-4	1,2,3-Trichloropropane	0.5	U	0.5	1	ug/L
108-86-1	Bromobenzene	0.2	U	0.2	1	ug/L
103-65-1	n-propylbenzene	0.45	U	0.45	1	ug/L

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Report of Analysis

Client:	Emery & Garrett Groundwater, Inc.	Date Collected:	11/17/11
Project:	FCA	Date Received:	11/17/11
Client Sample ID:	FCA-1SHALLOW	SDG No.:	c4664
Lab Sample ID:	C4664-03	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG038981.D	1		11/19/11	VG111811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
95-49-8	2-Chlorotoluene	0.43	U	0.43	1	ug/L
108-67-8	1,3,5-Trimethylbenzene	0.46	U	0.46	1	ug/L
106-43-4	4-Chlorotoluene	0.42	U	0.42	1	ug/L
98-06-6	tert-Butylbenzene	0.44	U	0.44	1	ug/L
95-63-6	1,2,4-Trimethylbenzene	0.38	U	0.38	1	ug/L
135-98-8	sec-Butylbenzene	0.46	U	0.46	1	ug/L
99-87-6	p-Isopropyltoluene	0.43	U	0.43	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.43	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.32	U	0.32	1	ug/L
104-51-8	n-Butylbenzene	0.41	U	0.41	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.45	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.46	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.2	U	0.2	1	ug/L
87-68-3	Hexachlorobutadiene	0.2	U	0.2	1	ug/L
91-20-3	Naphthalene	0.2	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.2	U	0.2	1	ug/L
74-88-4	Methyl Iodide	0.2	U	0.2	1	ug/L
107-05-1	Allyl chloride	0.2	U	0.2	1	ug/L
126-98-7	Methacrylonitrile	0.2	U	0.2	1	ug/L
110-57-6	trans-1,4-Dichloro-2-butene	0.2	U	0.2	1	ug/L
97-63-2	Ethyl methacrylate	0.2	U	0.2	1	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	54.3		61 - 141	109%	SPK: 50
1868-53-7	Dibromofluoromethane	51.9		69 - 133	104%	SPK: 50
2037-26-5	Toluene-d8	39.6		65 - 126	79%	SPK: 50
460-00-4	4-Bromofluorobenzene	37.3		58 - 135	75%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	591909	3.89			
540-36-3	1,4-Difluorobenzene	1026710	4.71			
3114-55-4	Chlorobenzene-d5	532371	9.68			
3855-82-1	1,4-Dichlorobenzene-d4	221266	13.39			

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Report of Analysis

Client:	Emery & Garrett Groundwater, Inc.	Date Collected:	11/17/11
Project:	FCA	Date Received:	11/17/11
Client Sample ID:	FCA-1SHALLOW	SDG No.:	c4664
Lab Sample ID:	C4664-03	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG038981.D	1		11/19/11	VG111811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Report of Analysis

Client:	Emery & Garrett Groundwater, Inc.	Date Collected:	11/17/11
Project:	FCA	Date Received:	11/17/11
Client Sample ID:	FCA-1OEEP	SDG No.:	c4664
Lab Sample ID:	C4664-04	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG038982.D	1		11/19/11	VG111811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.2	U	0.2	1	ug/L
74-87-3	Chloromethane	0.2	U	0.2	1	ug/L
75-01-4	Vinyl Chloride	0.34	U	0.34	1	ug/L
141-78-6	Ethyl Acetate	0.2	U	0.2	1	ug/L
108-21-4	Isopropyl Acetate	0.2	U	0.2	1	ug/L
628-63-7	N-amyl acetate	0.2	U	0.2	1	ug/L
74-83-9	Bromomethane	0.2	U	0.2	1	ug/L
75-00-3	Chloroethane	0.2	U	0.2	1	ug/L
75-69-4	Trichlorofluoromethane	0.35	U	0.35	1	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.45	U	0.45	1	ug/L
75-65-0	Tert butyl alcohol	0.5	U	0.5	5	ug/L
60-29-7	Diethyl Ether	0.27	U	0.27	1	ug/L
75-35-4	1,1-Dichloroethene	0.47	U	0.47	1	ug/L
107-02-8	Acrolein	0.5	U	0.5	5	ug/L
107-13-1	Acrylonitrile	1.8	U	1.8	5	ug/L
67-64-1	Acetone	0.5	U	0.5	5	ug/L
75-15-0	Carbon Disulfide	0.2	U	0.2	1	ug/L
1634-04-4	Methyl tert-butyl Ether	0.35	U	0.35	1	ug/L
79-20-9	Methyl Acetate	0.2	U	0.2	1	ug/L
75-09-2	Methylene Chloride	0.41	U	0.41	1	ug/L
156-60-5	trans-1,2-Dichloroethene	0.41	U	0.41	1	ug/L
108-05-4	Vinyl Acetate	1	U	1	5	ug/L
75-34-3	1,1-Dichloroethane	0.36	U	0.36	1	ug/L
110-82-7	Cyclohexane	0.2	U	0.2	1	ug/L
78-93-3	2-Butanone	1.3	U	1.3	5	ug/L
56-23-5	Carbon Tetrachloride	0.2	U	0.2	1	ug/L
594-20-7	2,2-Dichloropropane	0.2	U	0.2	1	ug/L
156-59-2	cis-1,2-Dichloroethene	0.35	U	0.35	1	ug/L
74-97-5	Bromochloromethane	0.2	U	0.2	1	ug/L
67-66-3	Chloroform	0.34	U	0.34	1	ug/L
71-55-6	1,1,1-Trichloroethane	0.4	U	0.4	1	ug/L

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Report of Analysis

Client:	Emery & Garrett Groundwater, Inc.	Date Collected:	11/17/11
Project:	FCA	Date Received:	11/17/11
Client Sample ID:	FCA-1OEEP	SDG No.:	c4664
Lab Sample ID:	C4664-04	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG038982.D	1		11/19/11	VG111811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
108-87-2	Methylcyclohexane	0.2	U	0.2	1	ug/L
563-58-6	1,1-Dichloropropene	0.39	U	0.39	1	ug/L
71-43-2	Benzene	0.32	U	0.32	1	ug/L
107-06-2	1,2-Dichloroethane	0.48	U	0.48	1	ug/L
79-01-6	Trichloroethene	0.28	U	0.28	1	ug/L
78-87-5	1,2-Dichloropropane	0.46	U	0.46	1	ug/L
74-95-3	Dibromomethane	0.44	U	0.44	1	ug/L
75-27-4	Bromodichloromethane	0.36	U	0.36	1	ug/L
108-10-1	4-Methyl-2-Pentanone	2.1	U	2.1	5	ug/L
108-88-3	Toluene	0.37	U	0.37	1	ug/L
10061-02-6	t-1,3-Dichloropropene	0.29	U	0.29	1	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.31	U	0.31	1	ug/L
79-00-5	1,1,2-Trichloroethane	0.38	U	0.38	1	ug/L
142-28-9	1,3-Dichloropropane	0.35	U	0.35	1	ug/L
110-75-8	2-Chloroethyl Vinyl ether	1.8	U	1.8	5	ug/L
591-78-6	2-Hexanone	1.9	U	1.9	5	ug/L
124-48-1	Dibromochloromethane	0.2	U	0.2	1	ug/L
106-93-4	1,2-Dibromoethane	0.41	U	0.41	1	ug/L
127-18-4	Tetrachloroethene	0.27	U	0.27	1	ug/L
108-90-7	Chlorobenzene	0.49	U	0.49	1	ug/L
630-20-6	1,1,1,2-Tetrachloroethane	0.43	U	0.43	1	ug/L
67-72-1	Hexachloroethane	0.2	U	0.2	1	ug/L
100-41-4	Ethyl Benzene	0.2	U	0.2	1	ug/L
179601-23-1	m/p-Xylenes	0.95	U	0.95	2	ug/L
95-47-6	o-Xylene	0.43	U	0.43	1	ug/L
100-42-5	Styrene	0.36	U	0.36	1	ug/L
75-25-2	Bromoform	0.47	U	0.47	1	ug/L
98-82-8	Isopropylbenzene	0.45	U	0.45	1	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.31	U	0.31	1	ug/L
96-18-4	1,2,3-Trichloropropane	0.5	U	0.5	1	ug/L
108-86-1	Bromobenzene	0.2	U	0.2	1	ug/L
103-65-1	n-propylbenzene	0.45	U	0.45	1	ug/L

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Report of Analysis

Client:	Emery & Garrett Groundwater, Inc.	Date Collected:	11/17/11
Project:	FCA	Date Received:	11/17/11
Client Sample ID:	FCA-1OEEP	SDG No.:	c4664
Lab Sample ID:	C4664-04	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG038982.D	1		11/19/11	VG111811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
95-49-8	2-Chlorotoluene	0.43	U	0.43	1	ug/L
108-67-8	1,3,5-Trimethylbenzene	0.46	U	0.46	1	ug/L
106-43-4	4-Chlorotoluene	0.42	U	0.42	1	ug/L
98-06-6	tert-Butylbenzene	0.44	U	0.44	1	ug/L
95-63-6	1,2,4-Trimethylbenzene	0.38	U	0.38	1	ug/L
135-98-8	sec-Butylbenzene	0.46	U	0.46	1	ug/L
99-87-6	p-Isopropyltoluene	0.43	U	0.43	1	ug/L
541-73-1	1,3-Dichlorobenzene	0.43	U	0.43	1	ug/L
106-46-7	1,4-Dichlorobenzene	0.32	U	0.32	1	ug/L
104-51-8	n-Butylbenzene	0.41	U	0.41	1	ug/L
95-50-1	1,2-Dichlorobenzene	0.45	U	0.45	1	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.46	U	0.46	1	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.2	U	0.2	1	ug/L
87-68-3	Hexachlorobutadiene	0.2	U	0.2	1	ug/L
91-20-3	Naphthalene	0.2	U	0.2	1	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.2	U	0.2	1	ug/L
74-88-4	Methyl Iodide	0.2	U	0.2	1	ug/L
107-05-1	Allyl chloride	0.2	U	0.2	1	ug/L
126-98-7	Methacrylonitrile	0.2	U	0.2	1	ug/L
110-57-6	trans-1,4-Dichloro-2-butene	0.2	U	0.2	1	ug/L
97-63-2	Ethyl methacrylate	0.2	U	0.2	1	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	55.6		61 - 141	111%	SPK: 50
1868-53-7	Dibromofluoromethane	51.4		69 - 133	103%	SPK: 50
2037-26-5	Toluene-d8	41.4		65 - 126	83%	SPK: 50
460-00-4	4-Bromofluorobenzene	35.7		58 - 135	71%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	568816	3.9			
540-36-3	1,4-Difluorobenzene	1037890	4.71			
3114-55-4	Chlorobenzene-d5	530433	9.69			
3855-82-1	1,4-Dichlorobenzene-d4	217956	13.39			

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Report of Analysis

Client:	Emery & Garrett Groundwater, Inc.	Date Collected:	11/17/11
Project:	FCA	Date Received:	11/17/11
Client Sample ID:	FCA-1OEEP	SDG No.:	c4664
Lab Sample ID:	C4664-04	Matrix:	WATER
Analytical Method:	SW8260B	% Moisture:	100
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOCMS Group1
GC Column:	RTX-VMS ID : 0.18	Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VG038982.D	1		11/19/11	VG111811

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Hit Summary Sheet
SW-846

SDG No.: C4664

Client: Emery & Garrett Groundwater, Inc.

Sample ID	Client ID		Parameter	Concentration	C	RDL	MDL	Units
Client ID:	**FCA-AIRPORT**							
C4664-01	FCA-AIRPORT	WATER	Methyl tert-butyl Ether	3.30		1.0	0.35	ug/L
			Total Voc :		**3.30**			
			Total Concentration:		**3.30**			

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LAB CHRONICLE

OrderID:	C4664	**OrderDate:**	11/17/2011 5:12:50 PM
Client:	Emery & Garrett Groundwater, Inc.	**Project:**	FCA
Contact:	Jeff Marts	**Location:**	H31

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
C4664-01	**FCA-AIRPORT**	**WATER**			**11/17/11**			**11/17/11**
			VOCMS Group1	8260-Low			11/19/11	
C4664-02	**FCA-MW2**	**WATER**			**11/17/11**			**11/17/11**
			VOCMS Group1	8260-Low			11/19/11	
C4664-03	**FCA-1SHALLOW**	**WATER**			**11/17/11**			**11/17/11**
			VOCMS Group1	8260-Low			11/19/11	
C4664-04	**FCA-1OEEP**	**WATER**			**11/17/11**			**11/17/11**
			VOCMS Group1	8260-Low			11/19/11	

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Report of Analysis

Client:	Emery & Garrett Groundwater, Inc.	Date Collected:	11/17/11
Project:	FCA	Date Received:	11/17/11
Client Sample ID:	FCA-AIRPORT	SDG No.:	C4664
Lab Sample ID:	C4664-01	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Ammonia as N	0.1	U	1	0.034	0.1	mg/L	11/23/11	11/24/11	SM4500-NH3
Chloride	10		1	0.075	0.15	mg/L	11/18/11	11/18/11	300
Nitrate	0.29		1	0.027	0.1	mg/L	11/18/11	11/18/11	300
TKN	0.528		1	0.096	0.5	mg/L	11/22/11	11/22/11	SM4500-N Org B or C

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Emery & Garrett Groundwater, Inc.	Date Collected:	11/17/11
Project:	FCA	Date Received:	11/17/11
Client Sample ID:	FCA-MW2	SDG No.:	C4664
Lab Sample ID:	C4664-02	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Ammonia as N	0.1	U	1	0.034	0.1	mg/L	11/23/11	11/24/11	SM4500-NH3
Chloride	17	OR	1	0.075	0.15	mg/L	11/18/11	11/18/11	300
Nitrate	0.328		1	0.027	0.1	mg/L	11/18/11	11/18/11	300
TKN	0.216	J	1	0.096	0.5	mg/L	11/22/11	11/22/11	SM4500-N Org B or C

Comments:

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LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Emery & Garrett Groundwater, Inc.	Date Collected:	
Project:	FCA	Date Received:	
Client Sample ID:	FCA-MW2DL	SDG No.:	C4664
Lab Sample ID:	C4664-02DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	16	D	2	0.15	0.3	mg/L	11/18/11	11/18/11	300

Comments:

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LOD = Limit of Detection
D = Dilution

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B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Emery & Garrett Groundwater, Inc.	Date Collected:	11/17/11
Project:	FCA	Date Received:	11/17/11
Client Sample ID:	FCA-1SHALLOW	SDG No.:	C4664
Lab Sample ID:	C4664-03	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Ammonia as N	0.1	U	1	0.034	0.1	mg/L	11/23/11	11/24/11	SM4500-NH3
Chloride	9.3		1	0.075	0.15	mg/L	11/18/11	11/18/11	300
Nitrate	0.345		1	0.027	0.1	mg/L	11/18/11	11/18/11	300
TKN	0.411	J	1	0.096	0.5	mg/L	11/22/11	11/22/11	SM4500-N Org B or C

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
E = Value Exceeds Calibration Range
OR = Over Range

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Report of Analysis

Client:	Emery & Garrett Groundwater, Inc.	Date Collected:	11/17/11
Project:	FCA	Date Received:	11/17/11
Client Sample ID:	FCA-1OEEP	SDG No.:	C4664
Lab Sample ID:	C4664-04	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Ammonia as N	0.1	U	1	0.034	0.1	mg/L	11/23/11	11/24/11	SM4500-NH3
Chloride	8		1	0.075	0.15	mg/L	11/18/11	11/18/11	300
Nitrate	0.9		1	0.027	0.1	mg/L	11/18/11	11/18/11	300
TKN	0.264	J	1	0.096	0.5	mg/L	11/22/11	11/22/11	SM4500-N Org B or C

Comments:

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LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution

J = Estimated Value
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OR = Over Range

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Phone: (908) 789 8900 Fax: (908) 789 8922

LAB CHRONICLE

OrderID:	C4664	**OrderDate:**	11/17/2011 5:12:50 PM
Client:	Emery & Garrett Groundwater, Inc.	**Project:**	FCA
Contact:	Jeff Marts	**Location:**	H31

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
C4664-01	**FCA-AIRPORT**	**WATER**			**11/17/11**			**11/17/11**
			Ammonia	SM4500-NH3		11/23/11	11/24/11	
			Anions Group1	300		11/23/11	11/18/11	
			TKN	SM4500 N Org B or C		11/22/11	11/22/11	
C4664-02	**FCA-MW2**	**WATER**			**11/17/11**			**11/17/11**
			Ammonia	SM4500-NH3		11/23/11	11/24/11	
			Anions Group1	300		11/23/11	11/18/11	
			TKN	SM4500 N Org B or C		11/22/11	11/22/11	
C4664-02DL	**FCA-MW2DL**	**WATER**						
			Anions Group1	300		11/18/11	11/18/11	
C4664-03	**FCA-1SHALLOW**	**WATER**			**11/17/11**			**11/17/11**
			Ammonia	SM4500-NH3		11/23/11	11/24/11	
			Anions Group1	300		11/23/11	11/18/11	
			TKN	SM4500 N Org B or C		11/22/11	11/22/11	
C4664-04	**FCA-1OEEP**	**WATER**			**11/17/11**			**11/17/11**
			Ammonia	SM4500-NH3		11/23/11	11/24/11	
			Anions Group1	300		11/23/11	11/18/11	
			TKN	SM4500 N Org B or C		11/22/11	11/22/11	

END OF ANALYTICAL RESULTS

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